

PREPARING TO EXPERIENCE THE UNEXPECTED THE CHALLENGES OF TRANSFORMING SOLDIERSHIP

KAISU LUOMA AND JUHA MÄLKKI

KAISU LUOMA ON KASVATUSTIETEEN MAISTERI HELSINGIN YLIOPISTON KASVATUSTIETEEN LAITOKSELLA JA JUHA MÄLKKI ON MAJURI JA VALTIOTIETEIDEN TOHTORI

Abstrakti

Sodankäyntiin sekä erityisesti siihen välittömästi liittyviin taistelutilanteisiin liittyy äärimmäisiä sekä ennakoimattomia piirteitä. Rauhan oloissa annettavan mutta sodan olosuhteisiin valmistavan koulutuksen tavoitteena on ollut (aina) sodan olosuhteiden jäljittäminen, jotta asevoimiin kuuluvalla henkilöstöllä olisi mahdollisuus selvittää sodan olosuhteista ja samalla säilyttää tehtävien täyttämiseen tarvittava toimintakyky. Sodan äärimmäiset olosuhteet toisaalta myös aiheuttavat, ohjaavat ja myös rajoittavat ajatteluumme ja toimintakykyämme. Sotilaan koulutuksen ikaikainen paradoksi onkin liittynyt pyrkimyksiin valmistautua sodan ennakoimattomuuteen ja kehittää siihen valmentavia opetusmenetelmiä ja oppimismahdollisuuksia. Erityisen vaikeaa on saada harjoitusolosuhteet vastaamaan niitä olosuhteita ja niitä todellisia tilanteita, joissa asevoimat joutuvat seuraavan sodan sotimaan. Artikkelissa lähestytään tätä kompleksista teemaa tarkastelemalla sitä mikä todellisuudessa tuottaa ennakoimattoman, äärimmäisen ja kaoottisen kokemuksen ja sitä millä tavoin näiden harjoittelu voisi ylipäättään olla mahdollista. Artikkelissa teoretisoidaan koulutuskulttuuriin liittyvän transformaation haasteita sotilaspedagogiikassa tarkastelemalla sotilaskulttuurissa toimivan sotilaan mukavuusalueen (comfort zone) reunoja ja niiden ärsyttämistä heräviä epämukavia tuntemuksia (edge-emotions) sekä niiden vaikutuksia ajattelulle ja tulkinnoillemme. Näitä tuntemuksia on mahdollista linkittää taistelustressin kokemukseen mutta yhtä lailla myös arkipäiväisiin inhimillisiin kokemuksiimme sekä tuntemuksiimme. Taistelun äärimmäisyyksiä on siis, tiettyjen reunaehtoien vallitessa, mahdollista harjoitella.

Introduction

Lloyd 1766: in our profession, many are to be found, who know every precept of it by heart; but alas when called upon to apply them, are immediately at a stand. They then recall their rules, and want to make every thing: the rivers, woods, ravines, mountains etc. subservant to them: whereas their precepts should only the contrary, be subject to these [...]

Henry H. E. Lloyd (1718–1783) pointed out that there were two parts to the art of war: a mechanical part that “may be taught by precepts” and by mathematical principles, and another part which has no name, “nor can it be defined nor taught. It is the effect of genius alone.” After a few decades, Napoleon Bonaparte and his armies shook the foundations of European military tradition and cultural heritage by putting these “enlightened” critiques into practice and taking full advantage of the “weaknesses” of current military thinking. The reason for Napoleon’s long run of victories lay in his opponents’ inability to understand his way of fighting and of devising effective responses. Napoleon’s army relied on new methods of training,

organizational changes and doctrinal innovations.¹ Napoleon also relied on the idea of a dispersed battlefield and dispersed operations (DO), and above all, he relied on knowing about the limits of his adversaries, i.e. their cultural-level “Achilles heels” stemming from their collectively followed and actualized habits of mind. This was basically the core of the non-mechanical part of the art of war which led Napoleon to triumph over his opponents, despite the fact that it was difficult to define or teach. In other words, Napoleon chose and exploited the line (or course) of least expectation², i.e. exploited the adversaries’ line or courses of natural expectation.

Complexity and uncertainty undoubtedly are, and have always been, characteristics of warfare. The defining element of this is that future war is expected to be always unexpected and in many ways chaotic. So the necessary and often-asked question is, how is it possible to prepare for the unexpected? Yet at the same time we have to keep in mind the well-known risk for militaries: that they would nevertheless be preparing for the past wars. Thus another necessary question is, how can we know whether we are preparing for the past war? And furthermore, if we somehow find ourselves leaning on the familiarities of the past, how is it possible to overcome this view that is expected to be limited in terms of future contexts? These three questions are very much intertwined. The orienting magnetism of the past is deceptively invisible as it is dressed in the clothes of normality. The tension between this normality and the unknown future and acting with knowledge gaps is also evident in Lloyd’s excerpt above, where the inductive interpretation of the current situation is overrun by the habits of expectation. Being able to interpret situations inductively is crucial when the situations are unexpected, that is, when we do not know in advance what is going to happen and thus cannot educate military leaders accordingly.

This portrayal of Napoleon’s art of war can be seen to include many of the current challenges of military pedagogy, although the actual theme of transforming the soldiership, i.e. the culturally constructed idea of soldier’s being, has been mingled with the themes concerning irregular warfare; terrorism, insurgency and asymmetric warfare. The most important player in irregular warfare is *not*, however, the state where the actual war is being fought,³ but the soldiership that is being exposed and challenged by the faces of war that “distinguish real war from war on paper”⁴. In the present-day argumentation concerning the theme of modern battlefield, perhaps too much emphasis is being put on the imagined changes on the conduct of warfare and the nature of the potential adversaries, instead of us as humans involved in warfare and the cultures that ultimately define each belligerent. Hence, warfare is always the “collision of two living forces”⁵ as it is based on two-sided interaction where both bel-

ligerents end up facing the true conduct of culturally influenced but also biologically functioning human behaviour.

Military pedagogy describes the demand both to locate and define the present state of the art of war and the lines of natural expectation, and to be able to change or transform soldiership in order to make progress instead of repeating the habits of the past. Actually, weaknesses in one's habits of mind can be seen as the very object of such transformation. We may still be in the middle of a technological revolution concerning military equipment and the communication methods.⁶ Despite of the fact that these innovations are constantly changing the conduct of war, it is reasonable to recall, that the human being beside the advanced and constantly inclining materials, is still the same as he was hundreds and even thousands of years ago. Corporally, we are equally unarmed in the front of the harsh battlefield conditions, equally incapable of perceiving irrational decisions and regrettably powerless while trying to renounce violence.⁷ Hence, one of the continuous challenges of military pedagogy is how to support a soldier's ethicality as well as personality and competences in order for him/her to be able to cope with the modern battlefield.

Within discussions on military pedagogy, transformation of soldiership has been claimed to be needed in order to build more adequate grounds for operating on modern battlefields.⁸ Action competence and cognitive readiness, among other suggestions concerning the goals of transformation, are offered as conceptual tools for preparing for the unexpected. However, what is still missing is an understanding of the transformation itself.⁹ That is to say, we have the goals and guidelines of the transformation, but the logic and process of the transformation itself is unexplored: how does it happen? How do we transform ourselves into the action-competent soldiers of the modern battlefield? What is the transformation like that would build the ethicality of the soldier and support their personal development and emancipation?¹⁰ And furthermore, what does it mean to transform ourselves for the paradoxical mission of being prepared for the unexpected?¹¹ In this it is essential that we aim to understand *why we are not yet there*, that is, *what is it that keeps us the way we are*, and above all, *what is it that we are now* since we obviously are not there yet, as the military organisations seems to be in a need of transformation.¹² Only then can we understand and aim to foster transformation. However, these essential viewpoints have been largely neglected within discussions on military pedagogy. Perhaps this is so because in these questions concerning the transformation of soldiership, the individual and psychological dimensions are intertwined with the social and sociological, and are shaped by the current art of war that mirrors the mindsets of society.¹³ Therefore we

will undoubtedly fall short of understanding the prerequisites for a transformation of soldiership if we examine individual competences apart from the cultural and organizational context of the soldier's actions, or if we reduce the context to mere material and technological elements without the influence of the human collective. Instead, we need an understanding of the *individual within his or her context*, and *how the context lives within the individual*.

These questions and issues can be seen to be at the heart of action competence, the core construct of military pedagogy. In this paper we attempt to tackle this challenging issue at the crossroads of the personal development of the soldier and the efficiency of the military organization. The bases of our approach are found in the Transformative learning theory of Jack Mezirow¹⁴ which, as an adult learning theory, provides an excellent basis for examining the transformation of soldiership and action competence based on the following viewpoints. First, the theory deals with transformation in the context of learning. Second, it takes into account the earlier experiences and existing habits of mind and habits of expectations as the basis for learning. Third, it recognizes the influences of socialization and the cultural context on the mindset of an individual while mapping the terrain for finding one's own voice. The fourth viewpoint, and most interesting one in terms of complex military contexts, is that transformative learning theory has at its core meaning-making, interpretation and understanding, as well as also considering the situations in which we do not automatically understand – that is, it deals with making meaning in situations of chaos and meaninglessness.¹⁵ Thus it points to the very core of the military pedagogical challenges of preparing for the unexpected and making decisions in the face of uncertainty.

In the considerations of this article Mezirow's theory is utilized in order to approach issues that may be seen to lie on the borderline between the fields of military pedagogy and military psychology. That is to say, we aim to take into account both influences of the stressful context to soldier's cognitive performance and the issues related to learning to deal with and prepare for these. In this it is needed to build a bridge between the educational considerations focusing on learning¹⁶ and the psychological considerations on the effect of affect to one's performance¹⁷. Thus the focus of the article is not on action competence per se or military psychological considerations per se, but on aiming to grasp a phenomenon at the crossing of these two and thus deepening understanding of the development of action competence and transformation of soldiership as an educational endeavour. In the following, our examination is located and anchored to the central concepts of military pedagogy, that

is, action competence and cognitive readiness. After that we explore the experience of the unexpected and consider the possibilities and challenges of change in our habits of mind within military culture. We conclude the article by introducing the notion of “Revolution in Learning Affairs” which emphasizes an unutilized reservoir of human self-awareness to enhance military performance.

Action competence and cognitive readiness – the beacons of transforming soldiership

On the individual level there are already beacons pointing to the direction and goals of such a transformation by highlighting the essential qualities of a modern soldier. Here we examine the issue with the help of the concepts of action competence by Toiskallio¹⁸ and cognitive readiness by Fletcher.¹⁹ Action competence highlights a holistic conception of the human being as the basis for military pedagogy.²⁰ It includes practical wisdom and points to decision-making in situations where it is not enough to rely on application of formulas, but where instead we must be able to make decisions without complete information and act in unexpected situations. According to Toiskallio,²¹ identity and self-knowledge are at the heart of action competence, and are the ultimate source of meaning and experience as they penetrate through all our knowledge. Although highlighting the soldier’s competence from an individual viewpoint, Toiskallio also emphasizes that we are always within our social and cultural contexts that shape our identities and perception.²² However, he does not finish paving the road for us, but instead presents the following crucial questions: “How is the action competence of soldiers (soldiers and officers at all levels) developed? And, what are the requirements of action competence in various practical tasks, and how are they reached?”²³ As an answer this call, it is our purpose here to take part in the discussion by presenting a viewpoint concerning theorizing the development of action competence. We attempt to bring together the concepts introduced by Toiskallio, and to work out the relations between them in order to build a ladder to the transforming of soldiership and enhancement of the action competence of soldiers by focusing on the necessary understanding of what we are today, that is, our habits of mind that orient and limit our practical wisdom.

Another viewpoint concerning the competence requirements of a modern soldier is presented by J. Dexter Fletcher. His conception of cognitive readiness emphasizes the cognitive components that are essential for the soldier to be able to act creatively in complex, unexpected and chaotic situations. In these kinds of situations no previous training will fully suffice and one must respond immediately without being

able to consult with senior officers. Fletcher's list of components of cognitive readiness includes situation awareness, memory, transfer, meta-cognition, automaticity, problem-solving, decision-making, mental flexibility and creativity, leadership including interpersonal competencies, and emotion.²⁴ Cognitive readiness can be seen as a cognitive-scientific interpretation of action competence.²⁵ In addition, Fletcher²⁶ acknowledges that we create the world through our perceptions and are thus reacting to a reality according to our construction of it. However, although Fletcher acknowledges this essential constructive character of our cognitive processing, he does not go further to examine the nature and orientation of this construction process that can be seen to affect all components of cognitive readiness.

Both of the above scholars highlight "preparing for the unexpected" as the guiding principle to be kept in mind in military education. However, this phrase is in many ways a slippery one. Once we have been able to achieve preparedness in terms of knowledge and expectations, things would no longer be unexpected. Actually, in order to structure our goals and methods we need to differentiate between the different uses of the phrase. Probably the more common way to interpret it is to highlight the difference between the unknown future and the presumably known present, and aim to bridge this gap of knowledge and understanding with education. Thus we would in a way try to predict the unexpected and diminish the chaos by controlling it (deductively), that is, we would try to make it more expected than unexpected.

The other way to understand 'preparing for the unexpected' would refer to 'preparing to *experience* the unexpected,' that is, a more inductive approach where the unexpectedness is accepted and we are ready to face the fact that our expectations will not be sufficient in order to understand what is happening. In this we are again at the heart of Lloyd's excerpt concerning whether we let our expectations dictate what we make of our experience/perception (deductively) or *whether we are able to use a more inductive view* to base our decisions on. The latter viewpoint at the same time opens a way to the basis of cognitive readiness by raising the question concerning the orientation of our cognitive capacities and knowledge construction. However, the purpose here is not to contest the idea of cognitive readiness but to approach it from another point of view and thus complement it and examine the basis of it. For Toiskallio, the development of judgment is essential in enhancing action competence, as there is a challenge for the soldiers to be able to improve their abilities to interpret, handle and understand information.²⁷ Thus a more detailed understanding of 'preparing for the unexpected' appears to be also at the heart of the development of action competence.

The human factor – experiencing the unexpected

Despite the fact that the unexpected has long been seen as a characteristic of war, the emotional-level meaning and experience of these kind of circumstances have rarely been paid attention to with regards to educational spheres. However, in order to understand the challenges of soldiers' action competence, we need to look more closely at the very notion of unexpectedness. How is it possible to know anything about the unexpected, or even to know about the experience of meeting with the unexpected? However, since we are talking about the unexpected, we are at the same time expecting it. Therefore it is not completely unexpected. What do we actually know about unexpectedness or chaos? Maybe it is easier to approach the issue from the opposite direction; that is to say, what is it when it is *not* unexpected or chaotic? Presumably it is expected and probably also very clear. Interestingly these words appear to come together in *understanding*: Expectedness can be experienced in a situation that is understandable, and on the other hand it can be regarded as unexpected or *chaotic* when we are not able to cope with an environment, when we do not understand what is happening either in a situation or within ourselves.²⁸ Thus the situation is not *understandable* in terms of our previous experiences and *expectations*²⁹ and we may feel *anxious* and even fearful, as there is no sense of *safety* based on situations being *understandable* and the future being predictable in terms of our previous assumptions.³⁰ More precisely, in the case of chaos we are not able to make meaning in the light of our *meaning perspective*, which is the orienting frame of reference or personal paradigm that comprises our values, attitudes, knowledge and feelings and is shaped by language, culture and personal experiences.³¹

The basic logic of our mental functioning can be seen in this: we are able to understand things only within the light of our previous understanding; we in a way grasp the unexpected with our expectations, and the result is our subjective perception and interpretation of the situation.³² This is also highlighted by Huhtinen, who mentions that "in the great blooming, buzzing confusion of the outer world we pick out what our culture has already defined for us, and we tend to perceive that which we have picked out in the form stereotyped for us by our culture."³³ This refers to our basic predisposition to interpret in the light of our meaning perspectives. This oriented and subjective base for interpretation enables us to understand with the help of our previous experiences and our personal histories and expectations of the future. Further, it enables us to locate the experiences within our personal histories and experiences, since at the very core it yields us the awareness that it is I who is experiencing this. At the same time this subjective construction of meaning makes our view limited, simplistic and in a way bi-

ased. We block certain aspects out of our awareness in order to avoid anxiety and make situations seem more understandable. This orientation of our perceptions and interpretations results in a predisposition to think, feel and act within a *comfort zone*³⁴ of familiar meanings.³⁵ The frame of reference for understanding is our personal paradigm called the meaning perspective, and inability to understand or chaos is experienced as anxiety. Therefore, chaos can be seen to be more our subjective experience of *not being able to understand* than a characteristic of the external environment.

In addition to the formation of our perception and our understanding, the previous examination brings us to the *experience* of facing the unexpected, as emotions were shown to be deeply intertwined with the more cognitively focused interpreting and understanding. We may be unaware of our emotions when things are happening as expected, whereas emotions arise especially when our expectations do not yield us an understanding of the situation. Often we talk about the situations of war being unexpected and chaotic, which leads us to realize that we are forced to act in such situations along with knowledge gaps, and we may focus on our existing knowledge and the extent to where it reaches. This mostly epistemic and cognitive discussion is in need of a more experiential viewpoint in order to understand the case of making decisions in unexpected situations and to enhance the action competence of the soldier so that they may be able to cope with these kinds of situations.³⁶ How do we actually experience such situations? Are we comfortable because we *knew* that the situation was supposed to be unconceivable, or do we experience insecurity and a lack of competence when our expectations are recognized as insufficient in interpreting what is going on in the situation?³⁷ And further, how do these feelings affect our decision-making?

A common way to view emotions is to regard them as basically negative and disturbing, something that must be controlled in order for one to be able to think rationally. As a consequence, emotions are viewed to be in need of controlling and excluding if soldiers are to perform complex tasks in stressful and confusing modern military contexts.³⁸ However, Antonio Damasio's recent brain research has shown that emotions have a fundamental and more complex meaning in respect to both our cognitive functions such as interpretation and decision-making, and to producing quick reactions in critical situations by directing attention. It is the emotions that direct our attention based on our previous experiences of on similar situations and at a very basic level support our life-support systems that aim at the maintaining of life.³⁹ In terms of mental functions, emotions support the consistency of the meaning perspective by directing attention to the comfort zone and arousing negative feelings when the comfort zone is being exceeded. Thus the anxiety that arises when one is unable to

understand, basically serves the consistency of consciousness by directing attention to the familiar aspects and by resisting questioning of our meaning perspectives that include the basic assumptions and values on which our identities are based.⁴⁰

This brings us back to Lloyd's excerpt concerning the inductive interpretation of the situation. In the light of the discussion above it can be seen that the experience of unexpectedness is most of all an emotional experience of the threat of chaos resulting from being unable to understand. How are we actually going to cope with the unexpected if our understanding is leaning on the expected? According to Mezirow, "if we are unable to understand, we often turn to tradition, thoughtlessly seize explanations by authority figures, or resort to various psychological mechanisms, such as projection and rationalization, to create imaginary meanings."⁴¹ Using Lloyd's terms, this can be seen as a mechanistic application of rules and thus "making nature subservient" in order to create imaginary meanings and understandability which would make us feel more in safe.⁴² The basic motivation for this simplistic interpretation and compulsive leaning on our previous expectations stems from our basic need to avoid anxiety and chaos, and to seek safety and the comfort (zone).⁴³ Thus our interpretation of the situation can be seen to serve more our need to bring about ostensible understandability and safety than our objective of inductive understanding of the situation itself. The more emotionally threatening the situation is, the more likely we are to exploit reason in order to bring about safety through simplistic interpretation and thus might lose sight of the original task of understanding the environment.⁴⁴ Therefore when the comfort zone is being exceeded, the (edge-) emotions first and foremost motivate us to restore the balance, that is, to perceive and interpret things in the light of our expectations in order to *feel* the world as understandable. Thus the mere control of emotions would not help to allow inductivity in our thinking, or flexibility and ethicality in our practical wisdom. Rather it may decrease the flexibility even more if one's thinking is tied to controlling the unwanted emotions. In terms of the social dimension, there is similarly a great temptation for choosing collectively accepted alternatives that would not bring about social discrepancies and cause unpleasant feelings.

Preparing to exceed the comfort zone

The above-introduced nature of decision-making and interpretation in unexpected situations has profound implications for military pedagogy and the education of soldiers. It underlines the experience of facing the unexpected that can be seen to be at the heart of preparing for the unexpected. In order for the soldier to be able to act cre-

actively, responsibly and ethically in unexpected situations, they must be able to cope with the edge-emotions, that is, become aware of and *understand the edge-emotions*, the anxiety and the feeling of being threatened by chaos that result from being unable to understand the situation. Anxiety and feeling threatened by chaos were shown previously to depend on our meaning perspective. Therefore our meaning perspective and the related edge-emotions appear as the very source to be worked on in order to prepare for the unexpected.

Working on our edge-emotions refers to accessing and engaging them and trying to understand them as being a result of our expectations appearing insufficient in explaining the situation. When the comfort zone is being exceeded, our thinking tends to narrow in favour of restoring the balance and returning to work within the comfort zone.⁴⁵ However, the very emotions arising on the edges of the comfort zone are the key to both bringing understandability to a chaotic situation and being able to reflect on our assumptions in order to enhance our action competence and widen the scope of our cognitive readiness. In fact, the ingredients of the experience of chaos or anxiety can be seen to be the assumptions or expectations being challenged since they do not yield an understanding of the situation in the way one had expected. The edge-emotions in a way cover a contradiction or conflict within the meaning perspective. Thus becoming aware of edge-emotions and giving them meaning is necessary in order to reach the assumptions behind the emotions that limit our thinking.⁴⁶ Giving meaning to such emotions or trying to understand them paradoxically enables us to bring understandability to the chaos and thus makes it possible for us to diminish its effect and allow more capacity for decision-making and interpreting the situation.

However, as the basic function of these edge-emotions itself is to support the consistency of the meaning perspective by directing attention back to the comfort zone, they are not very easy to manage. As a matter of fact, we tend to direct attention away from them, create imaginary meanings in order to bring safety and understandability to a situation, or interpret the emotions as being an indication of the harmfulness of the situation.⁴⁷ Even though these predispositions have their base in the life-support system, only in our own culture we have *learned to neglect* these emotions and the crucial possibilities for learning and extending our comfort zone that they contain. This is precisely why we *can* also learn to accept and acknowledge them, and practice dealing with them in order to release our cognitive capacities in the cases of chaos.

In fact, these emotional experiences at the edges of the comfort zone bring out a dimension of human experience that is similar in both war and peacetime contexts. This offers a link between wartime and peacetime contexts that are often seen as different

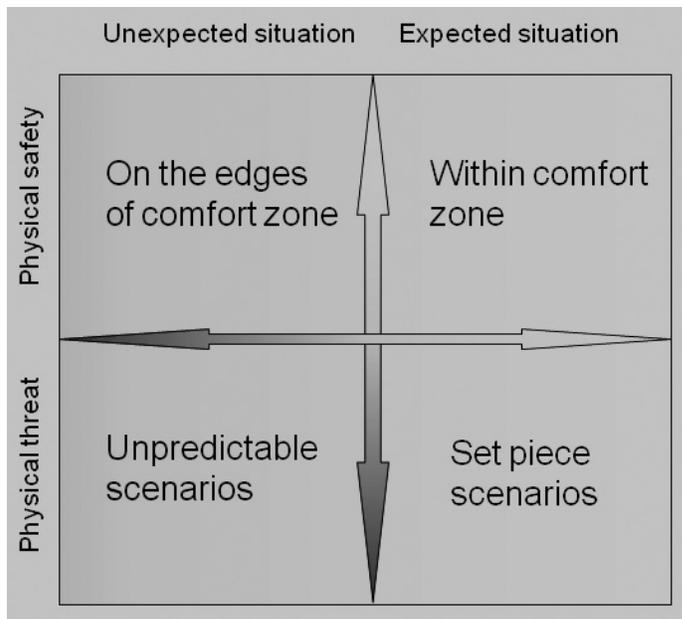


Figure 1: The domains of military education and activity

spheres of a soldier's action. However, based on the above examination of military habits of mind, it is possible to discern situations with regard to whether the comfort zone is being exceeded and, on the other hand, whether one is physically safe or in danger. These two dimensions are linked together in the figure above. The vertical dimension represents physically experienced threat on the lower part and feeling of safety on the upper part. The contexts of war and peace may be seen as examples of these, respectively. However, in the war context it is also possible to feel oneself relatively safe, if one is not in immediate contact with hostile intentions, for instance, and thus this would be placed on the upper part of the figure despite the context of war. There are fundamental differences between perception and understanding of warlike situations. That is to say, this dimension emphasizes the nature of the situation from the viewpoint of a certain individual rather than from a nation's, for instance.

The horizontal dimension, on the other hand, represents the experience of the situation in terms of mental comfort. The right-hand side represents circumstances which we often consider "normal" in the sense that the situation is experienced to be expected enough and we are able to cope with it automatically and thus may not even be aware of the properties of the situation. That is to say, we are able to stay in our comfort zone as the world seems understandable and nothing challenges our basic beliefs and values. Respectively, the left-hand side represents circumstances in which the comfort zone, the experienced normal order of the world, is being questioned, for example since the situation is unexpected and we are not able to understand what is

happening and to cope with it. A similar experience may also be caused if someone questions our basic assumptions and values.

By considering both of these dimensions, the Figure 1., illustrates four different kinds of contexts and the similarities and differences between them. It is important to notice, however, that the classification draws exaggerated lines between differences among different contexts, for instance between set piece scenarios and unpredictable scenarios. However, this distinction is important in order to understand the difference between acting in expected and unexpected situations. Within set piece scenarios our life is threatened but we may, nevertheless, experience the situation as understandable. However, in the cases of unpredictable scenarios, in addition to the physical threat, we experience the situation as threatening also from the mental point of view, as we are not able to understand the situation and stay within the comfort zone of familiar meanings. As a consequence, unpleasant feelings, i.e. edge-emotions, are aroused, which orient us back towards the comfort zone. That is to say, we thus aim to restore the balance and understanding and aim to bring back the experience of being able to understand, as was shown earlier. This kind of situation brings about new challenges in terms of maintaining responsible and creative decision-making, as the circumstances orient us towards shortcuts to comfort instead of maintaining flexible thinking and rigorous judgment.

However, an interesting viewpoint to these chaotic situations inherent in battlefield conditions is opened by the similarity between the unpredictable scenarios of battle and the physically safe environments which nevertheless challenge our comfort zone (lower and upper left side, respectively). Despite the differences presented, these two contexts share crucial similarities that may be benefited from in military training. Both of these situations challenge the comfort zone and arouse edge-emotions, and consequently distract our judgment. Thus the very element that distinguishes unpredictable scenarios from set piece scenarios is nevertheless possible to experience in educational settings. Therefore it is possible to enhance one's practical wisdom and action competence of making decisions in the middle of unexpected situations by learning to work on edge-emotions in educational settings.

Biologically we have the emotional support for quick reactions in critical or dangerous situation, such as escape, attack, and searching for safety.⁴⁸ Thus, when soldiers act in situations that are physically dangerous, they are already facing unpleasant feelings that stem from our biological life-support systems aiming to warn us of danger. However, it is nevertheless a matter of our mental capabilities to make decisions and aim to act in terms of our objectives and strategies. In the previous paragraphs

it was emphasized that our experience in the face of the unexpected is crucial in determining the flexibility of our thinking and decision-making. Therefore we need to be prepared to *experience* the unexpected in order to enable the best possible flexibility in our thinking. This is possible, for example, by learning to acknowledge the edge-emotions that are already present in our everyday actions. Another way is to challenge our normal ways of thinking that then trigger edge-emotions and enable us to learn to manage them. Either way, the idea in familiarizing ourselves with these emotions is that it may reveal the limits of our cognitive capability as well as the biases of our interpretation, as these emotions automatically orient our thinking towards the comfort zone and to neglect the complexity of the situation. Furthermore, these emotions are the gate-keepers of our long-held assumptions that orient our thinking in the first place. Thus this kind of training may also transform our meaning structures into more flexible ones, as we may learn to become more sensitive to the habits of mind that solidify our thinking when unquestioned.

Understanding the cultural level obstacles to adopting new ideas

Armed forces unavoidably follow the cultural habits and expectations of the surrounding society. It is extremely difficult for military organizations to adopt new methods concerning the art of war, i.e. the general idea of using military organization to gain advantage over the opponent. The art of war has its roots in the forms of cultural-level self-evidencies, manners and habits (i.e. comfort zones) which produce concrete obstacles to adopting the essential core from the art of war. In particular, emotional-based learning methods may arouse subconscious or even uncovered resistance. One example is the German First World War military teaching and learning method *Künstliche Aufregung*, which was designed to artificially stimulate minds and bring about an atmosphere of chaos in the middle of military exercises. Finnish officers refused to put this method into practice domestically in the early 1920s because it did not suite the “national character” of the Finns.⁴⁹ What was not understood was not carried through. Similar blocks and mental obstacles were created in front of any deep reforms concerning ideas on the art of war.⁵⁰ Leadership methods and practices hidden in the system of discipline are especially more difficult to alter. Problems arise particularly when organizations try to locate their habits of mind, as it is extremely difficult to see the actual appearance of them through the lens of culturally constructed meaning-making. The attempts are even more difficult if the objective is to understand adversaries and their military thinking, or to locate the nature of their art of war, the practice they are following.

Naturally, any standing army needs collective and officially approved habits of mind and mindset, but also a clear mutual understanding of how and why things are done in a particular way. This is extremely important because military effectiveness is based on ensured collective behaviour, formalities and traditions. However, military concepts are not just clichés to military organisation. It is preparing to face the utmost extremes in the battlefield while it must be ready to subdue the enemy's will to resist or even to destroy the enemy. The core of military know-how is based on how certain commonly and widely used military concepts, i.e. military terminology, are understood and also emotionally felt. For professional soldiers, words like "defence," "attack" or "ambush" includes certain emotional-level presumptions, as they involve certain "feelings." Therefore any major organisational "transformation" is likely to face resistance – at least, if the modification is attached to patterns of behaviour or widely used military terms or concepts. Resistance is not just an act of insubordination. It is rather an attempt to keep the basic military structure and its "way of doing things" untouched as well as an attempt to keep concepts comprehensible enough.⁵¹ At the final stage of the Second World War, American observers did not understand the importance of German stubbornness in defending some islands in the English Channel: The observers could find no rational reasons for that kind of behaviour, as this defence lacked sensibility in military strategic point of view. Very likely the Germans were practicing distributed command (*Führen mit Auftrag*), which were unfamiliar to the Americans at that time. German military education had produced a functionality based on meaning-making that was absorbed mentally (emotionally) as well as physically. The commanders had absorbed the idea of "defence" in a way that they (probably) could have felt it physically, and especially if there was a danger that the mission might lead to failure. Merely the fear of this could launch an emotional reaction of "disgrace," which probably improved battle performance. Cultural ignorance was reciprocally felt. German observers (Prisons of War) did not understand how the American military system could operate at all.⁵²

Transformation of soldiership

The cultural level barriers to adopting new ideas discussed above at the same time call for understanding of the individual challenges of transformation. In terms of action competence and coping with complex situations, two essential questions need to be addressed: First, what is the width, breadth and flexibility of our meaning perspective that defines our comfort zone, the scope of our cognitive functions as well as

the boundaries of our practical wisdom? Second, *how do we cope with the anxiety* that arises when we do not understand or when things do not happen as expected, that is, when the comfort zone is being exceeded? In a more context-specific way we need to ask: What does the culturally and organizationally shaped meaning perspective of a soldier look like? What are the limits of the military mind? How do the military organization, culture and art of war shape the meaning perspective of a soldier? And further, what kind of influence does this have on action competence and performance in unexpected situations?

In order to learn to manage something that is on the edges of our comfort zone, we need transformative learning in the literal sense of the word. Developing action competence in these terms cannot be a matter of the more common (assimilative) way to learn, that is, adding elements into and according to our prevailing meaning perspectives and habits of mind. To the contrary, we need to be able to *transform* the very meaning perspective that orients our normal thinking and keeps us within the self-evident normal conceptions of normality that limit our scope of cognitive functions, thinking, feeling and acting,⁵³ that is, our lines of natural expectation. Our habits of mind, conceptions of normality and most of all our emotional patterns are based on the cultural self-evidences that also mirror the values and habits of the previous generations. When we are socialized into our culture, we absorb and acquire the emotional patterns and values even though on the conscious level we are living in a different time and assume that we are different from the generations before us.⁵⁴ However, in terms of learning and development these dispositions make us more likely to learn in order to confirm our current meaning perspective rather than to aim to transform it.⁵⁵ How is it then possible to bring about transformation, if we have a predisposition to protect our existing habits of mind and resist challenging them? Transformation presupposes becoming aware of our current meaning perspective and questioning it, in other words, critical reflection.⁵⁶ However, the intactness of the meaning perspective is protected by the anxiety (i.e. edge-emotions) that arises at the edges of comfort zone, thus resisting critical questioning of assumptions. Therefore the key to transformation can be seen to be the very same edge-emotions that previously were shown to be at the core of preparing to experience the unexpected.

Thus, in terms of preparing for the unexpected and enhancing action competence, we need a transformation of soldiership on two intertwined levels. First, we need to be able to transform the very habits of mind and the emotionally anchored conceptions of normality that orient us towards the past wars and thus prevent us from being sensitive to future unexpectedness. Second, on the emotional level we need to

learn and practice to becoming aware of and managing the painful feelings (i.e. edge-emotions) that precisely aim to preserve our prevailing habits of mind by directing attention back to the comfort zone of normal thinking. Thus the two levels of transformation come together in the edge-emotions which are the very elements that guard our prevailing habits of mind and prevent us from extending our view.

The ethical core of soldier's action competence

The above levels defining the transformation of soldiership are also closely related to the objective of the soldier being an ethical and responsible agent. The grounds for our decisions are hidden from ourselves if we do not understand the influences of the emotions. That is to say, how can we be responsible agents and decision-makers if we are not aware of the cognitive and emotional bases that direct our perceptions and interpretations?⁵⁷ We have an amazing capacity or potential to be able to think about the way we feel, and this should be enhanced and practiced within military education. Soldiers' spheres of activities are the extreme contexts in battle areas where normalities and comfort zones are often exceeded. These instances are always emotional matters, as our basic mental functions work according to our habits of expectation and emotional patterns, and these have their own intrinsic agendas of maintaining life and ensuring comfortable mental functioning by supporting the meaning perspective and staying in the comfort zone.

We do not understand the unexpected by virtue of our normal thinking that aims to keep us within the comfort zone. Aiming to understand the unexpected requires sensitivity to perceiving something that does not automatically yield meaning to us. We must be able to cope with our personal insecurity because we experience a lack of competence when our expectations are recognized as insufficient. In order to cope with the unfamiliar we must start by confronting the *unfamiliar within ourselves*, that is, what to us seems self-evident to the extent that we are not even aware of it – our most natural ways of thinking, feeling, interpreting and acting that we have acquired in socialization and through personal experiences.⁵⁸ What are the ways of working that to us seem to need no grounds but appear as justified by virtue of being generally accepted as well as common sense? What are the building blocks of our identities, the building blocks of our organizational values, the organizational cornerstones that within us take the form of emotional responses in order to favour certain viewpoints and to avoid and deny others?

This also brings out the ethical responsibilities of the educator. Working on the ed-

ges of the comfort zone is a possibility for learning that, however, can be easily taken advantage of and exploited in terms of manipulation and purposefully causing pain to the learners. Therefore the implied values of personal growth, ethicality and responsibility apply most of all to the educator.⁵⁹ Becoming aware of one's feelings and emotions as well as the assumptions behind them is the starting point and the objective of both the educator and the learner, but no norms can be stated concerning the kind of thoughts and feelings this kind of learning may provoke. Thus those within the hypothetically manipulative educator's range can also figure out the manipulative logic of the teacher and bring that up along with other experiences.

Revolution on learning affairs?

It is possible to detect two lines of training that are crucial for any military. It is also important to distinguish between them.⁶⁰ The first line of training concerns ensuring functional action by familiarizing the soldier for the strenuous circumstances and patterns of action that also bring about coherence in the midst of chaos. The second line of training, on the contrary, aims to prepare the soldiers to be able to act in situations when these patterns and habitual actions are not enough to be able to cope with the situation and to decide on the course of action, but judgment and contextual understanding is needed.

The first line is related to the fact that all regular armies are training their soldiers to face the chaotic battlefield conditions somehow. Usually particular and appropriate functions, action or motions are repeated hundreds of times in order to achieve the level of muscular memory. These functions must be trained constantly if they are to be performed in battlefield conditions where intensive and even paralyzing stress level may block all cognitive capability and even normal bodily functions. Stress level may raise the beat of the heart as high as 180 per minute, even without any physical activity.⁶¹ These kinds of bodily experienced conditions may be seen as direct consequences of the real battle.

The second line of military training complements the first line by focusing on the mental flexibility of the soldier to be able to act in situations that may not be managed with previously rehearsed patterns of action. Broadening one's comfort zone and learning to cope at the edges of it is important for any professional. However, for a soldier facing the extreme conditions of war, this may be seen to be of even greater significance. In fact, the conditions of war may be seen to challenge one's comfort zone in unforeseeable ways and so it is a matter of training to diminish the restrictive

effects that these harsh conditions bring about to our judgment, understanding and decision-making. In addition, it must be noted that the organizational culture and the accompanying patterns of behaviour play also a role in determining the ways in which we habitually manage these situations.

Soldiers, and especially professional ones, need continuous mental, emotional, intellectual and spiritual training to be able to make sense of what they do not at first understand, or what they might bypass over subconsciously. Every method which supports soldiers in practicing self-directed discipline helps. For example, simulators may be used as stimulators to help individual soldiers, teams or groups find their self-evident assumptions and their comfort zones. This state of affairs may cause unpleasant feelings, especially when situated in the middle of a familiar, routine-based exercise. Emotions rise to the surface if the simulated exercises do not lean on meanings which are familiar to the soldiers. The most effective way to use simulators is *not* to use them to train to kill or destroy more efficiently, but to learn to handle uncomfortable situations which could lead to unconsidered behaviour and decisions which are not ethically justified. We need to work with our cultural and mental Achille's heels to be able to handle and control our inner-directed behaviour which may be more familiar to our adversaries than to us. This kind of training also supports the qualities that are essential for recovering from post-traumatic stress disorder.⁶² In therapeutic treatment the ability to acquire a depth of emotional processing and to increase it, together with reflection on emotions, has been shown to be related to good therapeutic outcomes. Attending to one's emotions and conceptualizing them enables one to reflect and to create new meanings to explain the experience as well as to share one's experience with others.⁶³ Learning to make meaning and to process one's emotions can thus be important for the soldier in order to understand and be able to process his or her experiences alone or with others both while on duty and after home-coming.

Naturally, military effectiveness is based on ensured and especially sufficiently predictable collective courses of action. This is the lifeblood of a military organization, as it must create certain habits of expectations, routines and collectively accepted "ways of doing things," in order to maintain its functionality during extreme battlefield conditions. Waging war is a serious and unpredictable business and therefore simple but functional forms of behaviour, action, regular patterns, as well as collective and officially approved habits of mind and mindset are of great value. Clear methods of leadership and control methods were needed in battlefield conditions in order to handle chaotic situations. During the 19th century there appeared to be no

need to instruct leaders on the unpredictability of the battlefield because they learned to handle unfamiliar and chaotic situations through experiencing the real battle. Training methods were therefore focused on ensuring that troops were disciplined enough, as there was seemingly no need to train for tolerating uncertainties and the emotional and cognitive reactions brought about by the ultimate experiences of battle. This kind of attitude to instruction remained intact through the centuries. We are still, in the middle of our technological innovations, almost incapable of reaching the essential core of military education. That is to say, we are lacking sufficient methods to be able to reach the circumstances similar to mental and physical threats.

We are definitely focusing too much on making our future soldiers interoperable land warriors equipped with data- and sensor fusions. Besides developing the technical capability of soldiers, we should focus all the more on instructing soldiers to be more ethically competent. The true challenge for any professional soldier is to achieve sufficient level of knowledge on the subject. On the other hand, we may question whether the professional soldiers are more competent in the field of ethical activities if compared to normal citizen-soldiers? What are the true boundary lines of civil and military education and the methods of teaching the subject?

Transformation is needed, as traditional European soldiership is still emotionally closer to “trench mentality” than to the abilities needed in dispersed operations (DO). It is not that we do not want to change – rather we may have insufficient means to make real changes happen. Modernizing the current methods of learning and teaching is perhaps not enough – perhaps we need a Revolution in Learning Affairs (RLA). Military cultures may not contain the easiest foundations for any kind of mental transformation as collective habits of minds and mind sets are bound in the traditions and in rigid disciplinary methods. During the Napoleonic era, there was only minor importance on the education of individual combatants who were seen to be group players in large formations. These formations were constructed from living bodies and the technology played important but not essential part of the actual fighting capability. Nevertheless, there has been no real change, transformations not to mention revolutions, concerning *how the actual fighting influences the living human body*. It is highly probable that even the future soldier will experience this dramatic occurrence similarly, especially, if they are still defined as human beings and not as machines.

Notes

- 1 Paret 1990, 123–142.
- 2 Liddell Hart 1991.
- 3 The mainstream of this kind of studies can be detected from; Kiras 2008, 229–231; Carrick, Connelly & Robinson 2009.
- 4 Clausewitz 1989, 119.
- 5 Clausewitz 1989, 77.
- 6 see Lonsdale 2008, 54–58.
- 7 see Grossman 2007, 30–49 (Fear, Physiological Arousal and Performance); Shalit 1988, 57–82 (Orgins of Aggression).
- 8 see Mäkinen 2006; Toiskallio 2004.
- 9 Toiskallio 2004, 107–130.
- 10 See Pulkka & Raviv 2007; Toiskallio 2005.
- 11 See also Mäkinen 2006.
- 12 see Lonsdale 2008, 54–58.
- 13 Hartman 2000, 23–32.
- 14 Mezirow 1991; 2000; 2009.
- 15 Mezirow's theory deals with the transformation of adults' meaning perspectives. In addition to examining this kind of transformation within a military context, we also read the theory backwards and extend it to a context beyond its normal range of application by examining the challenging issue of preparing for the unexpected on the basis of Mezirow (1991); Luoma, 2009.
- 16 See e.g. Mäkinen 2006; Toiskallio 2000; 2004; Royl 2005.
- 17 See e.g. Bartone 2006; Litz 2007; Tenenbaum, Edmonds & Eccles 2008; Wallenius, Larson & Johansson 2004. See also sports psychological considerations on the linkage between affect and performance as well as on managing the influences of stress to performance; Baumeister 1986; Golden, Tenenbaum & Kamata 2004; Forgas 1995; Gould & Tuffy 1996; Hanin & Stambulova 2002; Johnson, Edmonds, Tenenbaum & Kamata 2007; Jones 2003).
- 18 Toiskallio 2000; Toiskallio 2004; Toiskallio 2005.
- 19 Fletcher 2004.
- 20 Toiskallio 2000; Toiskallio 2004; Toiskallio 2005; Royl 2005.
- 21 Toiskallio 2004.
- 22 Toiskallio 2000.
- 23 Toiskallio 2000, 58.
- 24 Fletcher 2004.
- 25 Toiskallio 2004.
- 26 Fletcher 2004.
- 27 Toiskallio 2000.
- 28 See Luoma 2009.
- 29 Mezirow 1991; 2000; 2009.
- 30 See Luoma 2009.
- 31 Mezirow 1991; 2000; 2009.
- 32 See also Damasio 1999.
- 33 Huhtinen 2004, 90-91.
- 34 *Comfort zone*, according to the Merriam-Webster dictionary, refers to the temperature range in which body maintains a heat balance without shivering or sweating, that is, the range in which one is comfortable. The term is also used for the level at which one functions with ease and familiarity, thus pointing to a more human scientific approach (Merriam-Webster Online Dictionary 2008. Retrieved May 18, 2008, from [http://www.merriam-webster.com/dictionary/comfort zone](http://www.merriam-webster.com/dictionary/comfort%20zone)). Within adult education, a mental safe territory, i.e. protective belt, is discussed in the work of Anita Malinen. She bases her view on an analysis of the adult experiential learning theories of Knowles, Kolb, Mezirow, Revans and Schön and concludes with the concept of personal experiential knowing, which orients one's thinking and thus "saves the learner from becoming confused by the 'ocean of anomalies'." Consequently certain paths are avoided and the safe territory may be maintained by building up eclectic hypotheses. Within literature applying Jack Mezirow's theory, the term comfort zone is generally used to refer to the limited set of behaviors in which one is comfortable; See Malinen 2000; Mezirow 1991.
- 35 Mezirow 1991; 2000; 2009; Luoma 2009.
- 36 See Toiskallio 2004.

- 37 See also Tenenbaum *et al.* 2008.
- 38 See Fletcher 2004; Cf. Within military psychology and sport psychology the complex role and inevitable presence of emotions has been acknowledged, and rather than emphasizing a mere control or aim to exclude emotions, it is paid attention to awareness of the effects of these and aiming to utilize the emotions in performance by re-interpreting them (see e.g. Tenenbaum *et al.* 2008).
- 39 Damasio 1999; See also Berridge & Winkielman 2003.
- 40 Luoma 2009.
- 41 Mezirow 2000, 3.
- 42 See also Malinen 2000.
- 43 Luoma 2009; See also Greenberg & Paivio 2003; Greenberg & Pascual-Leone 2006.
- 44 For the effects of stress and affect to performance, see Tenenbaum *et al.* 2008; also Bartone 2006; Baumeister 1986; Forgas 2005; Golden *et al.* 2004; Gould & Tuffy 1996; Hanin & Stambulova 2002; Johnson *et al.* 2007; Jones 2003; Litz 2007; Wallenius *et al.* 2004.). In this article, however, it is focused on how the affect may influence one's *interpretations* and how one may try to diminish the extent of these influences.
- 45 Luoma 2009.
- 46 Dewey and Mezirow, among others, consider problematic situations or disorienting dilemmas a trigger for reflection and transformation (see also Toiskallio 2000. As well, for Malinen, a discrepancy, i.e. second-order experience, is essential for adult experiential learning, as it is seen to stimulate a shift in personal knowing. Second-order experience brings about doubt and negative feelings while realizing continuity in terms of the personal experiential knowing. However, in these views it is not acknowledged that the contradictions in assumptions are not automatically reachable in the assumably rational analysis, but are intertwined with the emotional and social dimensions of meanings, which may also orient our thinking to avoid the contradiction itself. In order to understand the practical prerequisites and challenges as well as the obstacles of reflection, it is necessary to consider the emotional and social dimensions of reflection along with the cognitive. This redefinition is based on an elaboration by Luoma of Mezirow's conceptions on reflection.
- 47 See Luoma 2009; Damasio 1999. According to Damasio, we often interpret our emotions as being an indicator of the quality of the environment, for example whether we *think* the situation is good or bad for us or whether the decision being made seems to us good or bad. Many times this is very useful as our emotions automatically direct our attention and may cause us to want to avoid dangerous situations or to approach pleasant ones. However, this arousal of emotions is determined in relation to our meaning perspectives, and thus, instead of assessing the characteristics of environments, the emotions may also lead us to assess the situations or decisions based merely on our habits and personal preferences without being willing to consider other alternatives equally (Luoma 2009).
- 48 Damasio 1999.
- 49 Malmberg 1920.
- 50 Mälkki 2008.
- 51 Mälkki 2008.
- 52 Shils & Janowitz 1948.
- 53 See Mezirow 1991; Florian 2000; Illeris 2007; Illeris 2004; Kegan 2009.
- 54 Mälkki 2008; Mezirow, 1991; Brookfield 2000.
- 55 See Luoma 2009.
- 56 Mezirow 1991; 2000; 2009.
- 57 See Pulkka & Raviv 2007. Toiskallio 2005.
- 58 See also Florian 2000.
- 59 See also Mezirow 1991.
- 60 See also Tenenbaum *et al.* 2008.
- 61 Grossman 2007, 34; See also Tenenbaum *et al.* 2008.
- 62 Grossman 2007; See also Palosaari 2007.
- 63 Greenberg & Paivio 2003. Greenberg & Pascual-Leone 2006.

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