

# Perception Warfare: a perspective for the future

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*In the ongoing discussion of information warfare, perception is a central element and a key factor for success. In this text we will discuss the relation between information and perception warfare.. Most literature discusses information warfare and very few references to perception warfare have so far been found. In this text we will assume that something that we could call perception warfare exists and we will make an attempt to describe what perception warfare could look like. We argue that perception warfare is not something new, but has mostly been discussed as implicit part of other concepts of war. By making perception warfare the object and making it visible, we hope to obtain greater attraction to the concept. It is reasonable to believe that we constantly are objects for perception attacks, but what makes it perception warfare? This paper should be seen as a first inventory of the problems in an area in which more research needs to be done.*

Traditional warfare is a high-risk business in which human life is sacrificed to achieve the goals by going into combat. In the perspective of humanity, a statesman or commander always has to consider if his goals can be achieved without using the war machine. Clausewitz taught us that the goal of a combat is not always the destruction of the enemy's force; the objective can be attained as well without the combat taking place at all.

In most forms of warfare, the illusion of winning and losing is central, and none of the participants wants to be the loser. It is a question of how the participants perceive the occurrence in the context of their situation. Perception warfare is the concept of how to create occurrences that give illusions of all as winners in their own way. It is a combat of the commanders' minds<sup>1</sup>.

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<sup>1</sup> With the concept Commander we don not necessary just one individual, Instead we see the Commander as the executive, which could be a group of individuals.

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We argue in this text that what combats in the past and in the future have in common is forcing our will on the counterpart. In developed countries physical violence is not accepted, and the society will prevent the use of physical violence with all means. In this context it is not trustworthy to prevent violence in society with one hand and with the other hand create forces for high conflicts missions. Still much remains to be done before we see a world without violence, if ever, and we must, therefore, see perception warfare as a complement to other forms of combat. The assumption is that a decision-maker, commander, will avoid violence if possible and use other techniques to achieve similar goals if it is possible, which is a question of humanity. This assumption could be questioned by saying that it is unethical to attack other people's minds, i.e. to 'brain wash' and that perception attacks could take place in secrecy without any declaration of war. Both arguments are strong and we cannot deny their relevance. However, in this text we will not take any stand points on the ethical questions remained focused on the attempt to describe the concept of perception warfare.

### **The traditional view of warfare and information warfare**

Warfare can be seen as struggles between competing entities or as military operations between enemies. The goal is to weaken or destroy each other. Warfare can be described in many forms, such as war of intervention, war of opinion or national war (Jomini, 1992). The main interest in literature seems to be on different forms for intervention, for example by air, biology, chemical and information warfare. Handel (1996) argues that the definition of war is a question of the level of analysis. A part of the confusion could be explained by differences in analytical frameworks and definitions. What is common for all description is that we consciously try to achieve goals by using force.

Perception warfare is not the same as information warfare, but there are many similarities. A few years ago we made an attempt to describe different perspectives of the concepts for information warfare (see Friman, Sjöstedt and Wik, 1996)<sup>2</sup>. The main conclusion of this study was that the philosophies behind the concept of information warfare are not something new, but still new technology gives new possibilities. One example is to attack the source of information with information as weapon. In the discussion up until today the main focus of information warfare has been technology solutions to create control over the information flow surrounding the crisis. Concepts or techniques like command and control warfare, intelligence based warfare, electronic warfare, psychological warfare, hacker warfare, economic information warfare and cyber warfare were invented to show different applications of information warfare (Libicki, 1995). Other concepts are propaganda, deception warfare and

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<sup>2</sup> In a study at the Swedish Institute of International Affairs.

misinformation. Still, the aim of all these concepts is a combat of controlling information, and using information to create an intentional output.

Experiences from the field and exercises have shown that it is very difficult to control the actual output from an information warfare activity.<sup>3</sup> The same individuals were shown to act differently with the same information on different occasions, which indicates that the available information does not itself explain the output and that the problem is more complex than a strict relation between information and output. One explanation to the complexity is that individual and groups create different pictures of the situations depending on rational and emotional influences, which in a longer term results in different activities.

The assumptions for effects in information warfare are built on the law of great numbers in statistics, in similarity to general business marketing approaches. The expected output is measured on a sample, but gives no guarantee that the populations in reality will make the same activities. In statistics the interest is to predict outcomes for a given population and it is hazardous to predict single individuals' acts. In sociology some individuals' acts, so-called leaders', will guide how others act, so-called followers. To create an effective information activity the focus should be on the leaders that indirectly will affect the followers. We can see this as direct business marketing, which has shown to have a greater impact than general business marketing. In direct marketing, statistics are shown to be of minor importance in relation to quality data of the individual.

We believe that it is the commander, the decision-maker, that is the main focus of information activities. Examples that confirms this beliefs are the US doctrine by expression such "The ultimate goal is the human decision-making"<sup>4</sup> and in the Swedish information war studies marks that "the most important goal [for information warfare] is to influences a participants ability to rational decision-making"<sup>5</sup>. The picture of the situation is essential for the group's or organisation's further actions, and that the combat of information warfare actually is perception warfare of the creation of this picture. The public will be influenced by the leader's statements and indirectly affected by the commander's beliefs. This perspective is common with propaganda but differs in terms of objective. In perception warfare the object is the key person and propaganda is directed more to public opinion. Mao TseTung ("On the protracted war", 1938) once said that "*In order to win victory we must try our best to seal the eyes and the ears of the enemy, making him blind and deaf, and*

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<sup>3</sup> Data mainly collected at the Staff excises at the National Defence College and exercise at the Swedish National Wargaming Centre (1994-1999).

<sup>4</sup> US Joint Publication (JP) 3-13, October 98.

<sup>5</sup> A free translation from the Swedish ASTA Study part III.

*to create confusion in the minds of enemy commanders, driving them insane*". His statement addresses what we can see as perception warfare.

So far, very few articles are found that explicitly address the issue of perception warfare. One of the first found references is Glenn and Peterson's (1995) work, in which the issue of perception warfare is explicitly discussed in the context of psychology in information warfare, which seems to be a common way of looking at perception. The question of perception is traditionally assigned as a concept in psychological warfare, so called PSYWAR, in terms of perception management<sup>6</sup>. We argue that the question of perception is central for success, not only in the context of information or psychological warfare, and that the concept of perception warfare deserves to be a topic in its own merit and not just a part of other concepts. It is not unlikely that, like an information war, we could in the future face a perception war, and the concept of perception warfare seems to be highly relevant for further study.

The concepts of perception warfare are not something new, but technology to support this type of warfare is of great interest today. We can also assume that the price, risk and effectiveness of using perception warfare can be seen as attractive. We need a deeper insight of the meaning of perception warfare to understand its relevance in terms of warfare.

### **Essential element of perception warfare**

Pepper (1967) viewed perceptual acts as conscious activity links between received sense data to the environment. In its simplest form, perception requires a perceived object and the observer. When we say, "I see a chair" the chair is the objective reference, and I is the observer. Philosophically, we could argue whether there is an objective reference independent of the sense data that we perceive. Idealist philosophers have been concerned with the sense data as their main focus, and realist philosophers concerned with the independence of the observer and the references of the perceptual act. Depending on our philosophical standpoint we will differ in objectives. Pepper, as a cognitive psychologist, advocates a synthesis between idealist and realist perspectives. He does this by focusing on the observer as active participant in a perceptive process, which give a focus on the nature of perception.

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<sup>6</sup> US DoD defines perception management as: Actions to convey and/or deny selected information and indicators to foreign audiences to influence their emotions, motives, and objective reasoning, and to intelligence systems and leaders at all levels to influence official estimates, ultimately resulting in foreign behaviours and official actions favourable to the originator's objectives. In various ways, perception management combines truth projection, operations security, cover and deception, and psychological operations. (U.S. Department of Defense "Dictionary of Military Terms", Greenhill Books, London 1990) In UK the definition of Perception Management could be described as sum of strategic psyops, strategic deception, civil affairs and public affairs.

To clarify what we mean with perception warfare we have created a theoretical example of perception attack and defence. Assume that part A has a source that gives A a competitive advantage to part B. If B has the interest to limit the advantage they can destroy the effects of the source or they can try to manipulate part A's perception of the source importance in relation to other objects. The last attempt could be achieved by many means, but with a common ground of manipulating part A's logic of how they look at the source. This manipulation can only be achieved by the knowledge of the participant's perceptive process. We need to be aware of which patterns create their nature of perception.

Humans seem to have limited abilities to perceive a situation (e.g. Miller, 1956). Simon (1987) has shown that what differs a novice and a grand master chess player is the ability to see patterns in situations that follow known structures, but if there is no structure, the grand master has no advantage. Similarly to this discovery, an attack on the perception is an attack on the commander's ability to find structures in his view of the situation. By losing the structure the commander cannot see the patterns of logic. Inversely, an attack could create structures that create patterns, which makes the commander's act in certain ways.

The problem is that humans have been shown to be unpredictable, and it is a complex task to predict the actual result of a perception attack. Still the insight of perception warfare gives us a view of what is important to protect and can be manipulated in competitive situations. The core questions are how does the commander create his situation awareness, and which pre-understanding could we assume he has? The processes of the commander's situation awareness and his attitudes will be the main objects for a potential attack and the key sources to protect. Sun Tzu stated "*He who understands how to use both large and small forces will be victorious*"(Griffith, 1971, p 82). With this Sun Tzu probably meant that we must see different levels of issues/components that can lead us to success. Sun Tzu concluded that a confused army leads to another's victory. His concept of confusion can be seen as lost control of the situation or as an uncertain situation.

### **The first victim in war is the truth**

Reports from recent studies of modern warfare have shown that the ability to create situation awareness is a key factor to control and succeed in warfare. We could describe modern war as the battle of trust. In a battle of trust we search not only for the truth like a journey for the Holy Grail, but instead we attempt to control the truth.

A traditional philosophical question is what is true, which is a question without a true/strict answer. The discussion often ends in the conclusion that it depends on the situation. Our approach to this topic is that truth is a social construction,

based on agreements and belief structures. This view means that what is true for me is not necessarily true for you, but in most cases there is an agreement on what seems to be the general view of reality. The truth then is something related to a norm system.

The traditional concepts of information warfare assume that there is one truth and that the war is about manipulating the ability to see the truth picture of the situation. But without just one truth, information warfare will also have to create the information for the general view of reality, in other words what people believe to be true. Influencing the norm system is a process that takes a long time, which stands in conflict with the common discussion of information warfare. Information warfare implies clear goals that should be received in a relatively short period (e.g. Codevilla, 1992).

War is a chaotic situation with high uncertainty. The first thing lost in war is the ability to create a view of what seems to be true. Both the observer and the norm system will be questioned. Rumours and misinformation will make it even harder to value how truthful accessible information is and we will be forced to act on incomplete information. In this situation we still will have an opinion about what to believe or not, which is built on how we perceive the situation. What seems to be true or not will be based on individual belief structures that could change over time. Trustworthiness is a social construction and could be extended, manipulated. Perception warfare is not about damaging the truth, it is about creating the truth. In both perspectives truth is the victim.

### **The Commander's Picture of the Situation**

To understand how to interrupt the creation of the commander's picture of the situation we need to understand what the commander is doing. An abstract description is to see commanders as a cybernetic system in which he acts by decisions, which could be explicit in judgements, planning etc, based on his picture of the situation. The result of the action gives new inputs, which changes the picture of the situation that necessitates new acts (e.g. Rosnay, 1979).

The commander's picture of the situation could be described in terms of situation awareness created on observations and pre-understanding. His pre-understanding is unique for each commander and is contextual, which explains why the same information inputs can lead to different acts.

This situation awareness is built on rational and emotional factors. Their parts of the picture are logical in the sense of rationality and structures, but parts seem ill-rational built on emotion. We can describe the logical part in models and thereby predict, but we just have intuitive feelings about the emotional part.

The vulnerability of the commander is his mind and how he comprehends the situation. "Capture their minds and their hearts and souls will follow"<sup>7</sup>. The mode of his mind will create a picture of how he sees the actual situation. This picture is not necessarily true, but still guides how the commander will act. The commander will continue to value how well he believes that he has control of the situation in terms of uncertainty and risks. Control is constructed by logical explanations of the situation, with information structured into patterns. By searching for more information he will attempt to limit the uncertainty.

In this perspective, perception warfare is the ability to interrupt the commander's picture of the situation in a controlled way, the art of influencing decisions. It is important that this interruption is controlled. Otherwise there is a risk for unwanted activities from the commander.

An important note is that no commander wants to be seen as a loser. In a successful perception attack all participants will have the illusion that they are the winners. The goal is to create a perception that everyone is a winner. It is not a zero sum game: the success of one part is the other part's defeat. Even though in reality one wins more than the others do. The perception of the situation is the key element for how the commander will act.

### **The true enemy is your mind**

If individuals are facing perception warfare activities, the mind is the gravity centre for the attack. The ability for a commander to create a satisfactory picture of the situation is crucial for further activities. The true enemy in perception warfare will be the commander's own mind and not primarily the counterpart. The counterpart will try in every way to create a vision for the observer that suits its goals. It is in the commander's mind that the actual picture of the situation is created.

The question then is how to defend our mind, which in many aspects has characteristics that resemble the problem with computer viruses and Trojan horses, but that needs other solutions. In the computer world the best safety measure is to disconnect the computer from the surrounding world by using stand-alone machines, and access codes. This method is not suitable for individuals who need socialisation activities with others. Instead we need to find new ways for verification and authorisation that help us discover perception attacks.

An open mind is the qualification for creative problem solving, but at the same time an open mind is vulnerable to external interference. The perception warfare is a combat on an individual level with the commander as a subject. The key element is to create uncertainty in issues that the commander values as

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<sup>7</sup> The reference is unknown.

important. Uncertainty is then created in terms of lost control. When we have lost control we have also lost the perspectives of what we are doing in a longer range, and risk becoming a follower instead of being a leader. It is becoming a follower that gives the opportunity for the competitors to direct our coming acts. The leader is often easier to identify as an object than the followers. To be able to take control we need to know what the commander as an observer finds important and how they value this factor. For example, if he finds that being in time is important, we can stress him by delaying information. But this is not enough. How late can information be and still be seen as being on time? The question of perception is a question of attitudes, which is the basis of how we value the situation.

The end-state of a perception war is changes of mindsets and change of manifestation of the will. Unlike traditional war both parts in a perception war could have the illusion that they are the winners.

### **Concluding remarks**

In this paper, we have tried to clarify the concept of perception warfare. The main purpose has been to define directions for future research, rather than to discuss any problem in depth. That will have to be done in future work. However, it should be clear even from this discussion that there is a lot that we do not know, and that a lot of work needs to be done before we can create perspectives of perception warfare. To conceptualise what is outlined, we will have to work through a series of steps and studies.



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