A TAXONOMY
OF DECEPTION BASED ACTIONS IN WAR

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Deception during wartimes is probably as old as the armed conflicts themselves. Logic to mislead your adversary is efficient and potential payoff by using it can be gained quickly. Deception is traditionally employed not only in the military but also in political, economic, and commercial context. The paper presents an extensive categorization of military deception measures, and analyzes them at a manner which may contribute to the awareness rising of its vast opportunities among military commanders.

Key words: categorization, criteria, military deception.

1. INTRODUCTION

The success of military operations largely depends on the correct assessment of the adversary military forces. One of the main goals of modern warfare is to prevent the intelligence collection of the adversary forces or to impede obtaining intelligence data about the location, activities and intentions of their own units. In reaching this goal military deception (camouflage) [1] is of essential importance.

Deception in war is probably as old as the armed conflicts themselves. Logic to mislead your adversary is efficient and the payoff from it can be implemented very quickly. Deception is traditionally employed in political and military conflicts. In fact, it is inherent to all human relationships; it is an intentional activity to gain advantage over the adversary.

Deceiving the enemy is an integral part of military science and art and it requires time, effort and resources. One of the most important factors in achieving the tasks of military operations is misleading the enemy and quite often it has determined the outcome of fights, battles and engagements.

In publications of leading powers like the United States and Russia military deception is the subject of study, at both doctrinal and scientific research level [2, 3, 4, 5]. Military deception is mentioned in a number of national documents [6] related to the Armed Forces of the Republic of Bulgaria, but studies on this issue as a whole do not exist.

2. A CATEGORIZATION
OF MILITARY DECEPTION MEASURES

The analysis of literary and doctrinal sources found that the most comprehensive definition of military deception goes as follows: “A series of processes, actions and events executed in order to induce an adversary to take operational actions to the detriment of their own interests by manipulating their response decision-making process which is achieved by knowingly and intentionally bringing to their knowledge a combination of real, manipulated, incomplete and/or incorrect information” [7].

Studies on the subject show that theories on issues related to military deception have been developed [8, 9, 10, 11], but the classifications presented in them do not fully cover the whole range of classification criteria. One of the most common classifications mentioned in the
military doctrines and works of authors examining the issues of deception (misleading the enemy) is made on the basis of the level and the scale these actions are executed.

Depending on its scale [12], military deception (also known as trickery [13]), is subdivided into:
- military deception at the strategic level;
- military deception at the operational level;
- military deception at the tactical level.

**Military deception at the strategic level**

Its goal is to impede the ability of the strategic decisions of the adversary to successfully protect their national interests and objectives. Strategic deception is used to affect the capability of adversary national leaders and senior military commanders to make accurate decisions. The desired result is to influence enemy strategic objectives, policies, and operations in favor of our own interests and those of our allies. The purpose of strategic deception is to create favorable conditions that will contribute to the accomplishment of the strategic objectives of the war. It is the responsibility of the military - political and strategic command.

**Military deception at the operational level**

At the operational level, the goal is to affect the ability of the adversary operational levels to make decisions for successful conduct of military operations. The focus is to undermine the capability of the adversary operational commanders to make decisions and carry out operations. The operational deception affects the decisions of the adversary commanders before, during and after the battle, so that the achieved tactical result can be used at the operational level. The operational military deception is used to conceal preparations for operation at a front or army level, to mislead the adversary about the intended mission, the main and other key areas, objectives and tasks of the operation, as well as the strength, location and readiness of the troops. Implementation of military deception at operational level is the responsibility of unit commanders and headquarters.

**Military deception at the tactical level**

Military deception at the tactical level focuses on the possibility to affect the ability of the adversary tactical commanders to make accurate and timely decisions. The aim is to influence the ability of adversary commander to make decisions regarding the conduct of battles and engagements. Deception is employed to the adversary commanders before and during a battle. Tactical military deception has to assist and support operational efforts in this direction [14].

The planning of these activities is carried out by the commanders and the headquarters of the divisions, units and formations [15] usually in a unified design, aimed at achieving strategic, operational or tactical effect. Rare are the occasions in which opposing forces are deceived by using single or one-time actions or events. The combination of various techniques, methods and means matched with the real action leads to the desired effect or result.

Besides “depending on the scale” criterion there are other criteria whose application would bring more clarity and completeness in the presentation of the importance and nature of deception. A more extensive classification will help achieve efficiency in determining the methods, the techniques and approaches for incorporating deception in operations and tactical actions.

Deception can be also subdivided depending on human perceptions intended to be affected into:
- visual - when targeted at changing visual perceptions, images, videos, etc;
- sound - when targeted at distortion of the data of the sound (signal) intelligence;
- light - used mainly at night to provide unreal data or dazzle the adversary;
• heat - used for distortion of data for non-existent real objects or a change of the information about them;
• analytical - when a change in the decisions of the adversary management bodies is sought through documents, maps or other means;
• electronic - when it is directed to modify the actual data in media, the internet, cyber space, etc.;
• combined - a combination between some of the above mentioned.

The distance from which the enemy can observe our own positions or our own actions is crucial for the degree of realism that is necessary to be achieved. The visual deception has to present realistic and complete images that are beyond any doubt. In the simulation of objects or military formations, deception must necessarily include personnel and movement of combat and providing equipment. Adversary forces would expect to observe certain types of silhouettes of equipment and traces on the ground surface. If dummies of equipment are used, then the number of tracks must be equal to the number of actual equipment belonging to the mimed formation. It is advisable these traces to be made with real equipment for complete reliability. Visible evidence of military activity and life on the site has to be furnished as well. For example, waste corresponding to the characteristics of the actual formation type has to be scattered in the site.

By comparing pictures made at different times, adversary forces could easily notice the lack of movement in a particular area. Therefore, moving dummies and ruse, operation of real military equipment and activities performed by real staff (if possible) increase the likelihood the adversary to be misled. All these activities should be performed regularly, including at night and in bad weather.

Sound deception of the enemy is achieved by sending forth sounds that mimic the sounds of the battlefield in order to bring them to the attention of the enemy. This type of deception is designed for the enemy sensors of sound intelligence and the human ear. The rule to be obeyed to make the deception convincing is that what the enemy sees needs to be confirmed with the appropriate sounds. If a visual simulation is exposed to enemy observation tools, the sound simulation must accurately match the visual.

The sources used for the presentation of the sound image can be either real sources or simulators. The real sounds should be mixed with those which are artificially produced because if only artificial sounds are sent forth they are most unlikely to be successful. The reproduced sounds must come from places which the enemy expects to be occupied by the counterfeit units or equipment. For example, the intelligence of the adversary forces will not believe the sounds of tanks coming from an impassable swamp.

With the advancement of warfare technology, equipment allowing simultaneous monitoring of visual, thermal and electronic image has become available. It hampers the actions of misleading and requires a combination of different methods and techniques in planning adversary deception to prevent them getting reliable information.

Depending on the means used to mislead the enemy, military deception can be classified as:
• physical - in this type of deception a combination of military forces and resources is applied to achieve the desired result;
• technical - resources and related to them operational techniques are applied to convince the opposing forces in the existence of certain information or to deny it. It is required to use all available technical resources (stations, computer systems and media);
• administrative – the used resources, methods and techniques are designed to convey documentation and other material evidence [16] to the enemy or to deny their existence. The deception is accomplished primarily by means of military documents (graphic or textual).
All these types of deception may be used independently or in combination with others depending on the current situation and the options available. Physical means are activities and resources used to convince the adversary in the existence of certain information or to deny it. Physical means include operational activities and resources as follows:

- Movement of units;
- Drills and training activities;
- Tactical actions;
- Logistics activities, including the creation and transfer of stocks of material resources;
- Events on unit assessment;
- Intelligence activities;
- Camouflage (includes concealment, masking, mixing and distortion of the shape of the site);
- Use of dummies and decoys [16].

Dummies and decoys are widely used to deceive the enemy in the visual spectrum and they constitute an imitation of a real object in the battle space, while the decoy is used to attract the attention of the enemy in the wrong direction. When a dummy is used with the purpose of attracting the attention of the adversary forces in the wrong direction, it is called a decoy. It should be noted that the decoys need to be specially manufactured. Damaged or not liable to repair combat equipment which is not in operational mode can be used, as long as it has no visible damage that would reveal that it does not represent real threat to the enemy [17].

The dummies used can be permanent and/or dummies made of materials at hand with the efforts and resources of troop formations involved in the operations. Currently Bulgarian army does not have permanent dummies of military equipment available that can be used in operations. The Armed Forces of the leading armies as USA, China and Russia have such samples which are commercially available and can be purchased on the market of special products together with the materials used to make them according to information provided by the manufacturer. They are designed in a way to reflect the energy from the infrared spectrum and the energy emitted by the radars, which provides the dummy to be indistinguishable from the real military equipment.

Technical means are material resources and the associated operating techniques used to convince the adversary forces in the existence of certain information or to deny certain information. Different technical devices can be used for:

- Deliberate emission;
- Change of the direction of emission;
- Energy and sound absorption [16];
- Energy and sound reflection.

The effectiveness of the sound methods increases at night or when the place from where they originate is concealed with the help of other technical means - for example, aerosols or fumes. The more inefficient the visual intelligence of the adversary forces, the more they rely on other kinds - sound in particular. The sound range depends on weather conditions, vegetation, topography, temperature and humidity.

Depending on the method to be applied military deception can be defined as:

- active - when coupled with active [18] actions against adversary forces to achieve a certain effect;
- passive - when active actions are not taken against the adversary forces;
- direct - when the measures are taken directly towards the object of deception;
- indirect - when the undertaken measures are directed towards other objects and systems, but they aim at influencing a change of decision of the object of deception;
- combination - when active and passive actions are applied against adversary forces.
Depending on the needed effect, military deception can be categorized as follows:

- **blocking** - when suspension or delay of certain actions of the adversary forces is aimed at;
- **encouraging** - when the aim is to urge the adversary forces to undertake certain actions;

Depending on the type of tasks, the events on the misleading of the adversary forces can be carried out by:

- concealment;
- mimicry;
- demonstration;
- disinformation.

Concealment uses events and methods of camouflage which exclude or impede the identification of exposing signs by the adversary forces, thus protecting the formations, their actions and sites. Concealment can be used to hide the preparation for combat actions, to mislead the enemy as to the availability, state and readiness of units and formations, their armament, the way the firearms are used and the warfare. It can be achieved by compliance with the camouflage discipline, using the camouflage properties of the area, the conditions of limited visibility and by the use of engineering and technical ways and means. Concealment should be conducted by the formations permanently without specific instructions from the senior commander (headquarters).

Mimicry reproduces unmasking signs, inherent to real sites. It envisages the creation of false positions and areas of formations' deployment, fake sites using mock equipment and other means of camouflage, by constructing mock sites, and by imitating signs of activity of units and formations.

Demonstration (demonstration actions) is a set of deliberate display of real military unit movement, rearrangement, concentration and warfare. Its aim is to paralyze the adversary forces in secondary directions or to display the concentration of a large amount of forces and resources in certain areas. It is usually conducted with limited forces and resources allocated by units and formations. The formations participating in the demonstration may not know the real purpose of their tasks. This is done in order to maximize the reality of the demonstration [19].

Disinformation is designed to provide the adversary with false and misleading information of different nature. It is one of the most powerful means of operational camouflage due to the large number of tools and the methods for their implementation. Disinformation is carried out in strict accordance with the design of the commander to conduct the operation and to mislead the adversary force.

According to the type of operations [20], in which adversary deception is planned, organized and incorporated, the deception can be:

- in combat operations (defensive, offensive operations);
- in security and stabilization operations;
- in peacekeeping operations.

The content of the actions related to adversary deception in each one of the above mentioned operations is identical, but the methods and the effects sought after will be different.

Depending on the location, the activities concerning military deception are planned and carried out depending on the area of operation and can be:

- in the zone of the operations;
- the close zone of operations;
- the deep zone of operations;
- the rear zone of operations;
- in the area of influence;
- in the area of interests.

The place where the misleading actions will occur is of great significance in the operations planning, as according to the determined critical points and importance of each operation, it is necessary to estimate the distribution of forces and resources. If misleading
actions in defensive operations concentrate mainly in the zone of close and rear operations, in the offensive operations the concentration is primarily in the zone of deep operations. It is necessary to have a detailed planning and accounting for the effects and results of adversary deception designed for the area of influence and area of interests, especially in stabilizing operations, since substantial damage rather than advantage can be induced.

Depending on the type of the object [21] of the adversary deception we can speak of:

- collective - actions taken are designed to affect a wide audience and are aimed primarily at the collapse of morale and will of the adversary to fight;
- individual - it is aimed at adversary decision makers.

Actions, activities and events related to military deception can be planned and implemented on a unified plan or independently; over a period of time or once only; by applying always the same techniques or combined methods.

Depending on the period of time the actions are conducted, the adversary deception can be subdivided into:

- deception activities before the real actions [22];
- deception activities along with the real actions;
- deception activities after completion of the real actions.

Technical and administrative events, designed to conceal one’s own activities and to create wrong impression about the real intentions and goals in the adversary are usually planned and carried out before the real actions. Military deception along with real actions is implemented mainly for demonstrative purposes. Efforts are directed to divert the fighting power of the adversary forces from the direction of decisive tactical actions and to transfer it to secondary. Actions, measures and activities related to the adversary deception after completed real actions is usually applied in order to conceal the intentions of subsequent operations; to create a certain public opinion or to divert the intelligence of adversary forces from the created unfavorable conditions for their own or neighboring units.

3. DECEPTION MEASURES AND THE GULF WAR

There are a lot of cases which illustrate the development of the strategy of a military deception and the opportunities to employ deception based actions in the time of war, but one of the most successful demonstrations of adversary deception occurred during the first Gulf War when the military formation known as “Troy” was involved [23]. This formation, consisting of 460 people, managed to create a “ghost division” (fake division) with only five tanks, a few wheeled vehicles, 4th Psychological Operations Group, small units of the United States Marine Corps and British Army.

Battle group “Troy” took up an offensive position, covering an area usually taken up by a division. The aim was to make the enemy believe that there was an American division deployed against them. Models of armored vehicles, artillery guns and helicopters as well as a set of loudspeakers to achieve the illusion by emitting sounds of tanks, trucks and helicopters were included in the operation. This acoustic emission confused the Iraqi posts for sound intelligence. Part of Iraqi intelligence officers attempted to prove the sound authenticity, but they were prevented to do it by Apache helicopters and attack aircraft A-10 Thunderbolt II, which were in the state of readiness to render support to the military deception operation.
Before long, the Iraqis stopped investigating the origin of the sounds and took for granted the fact that they were facing a military formation with the size of a division at least. This successful deception blocked a large number of Iraqi troops and allowed the other units of the coalition to redeploy for the next flanking maneuver.

The strength of an American division is approximately 17,000 to 21,000 people, i.e. the ratio of imitating forces and resources to imitated ones is 1:36 to 45. If we compare these figures with the concept of the Soviet military science that the ratio of imitating to imitated resources should be about 1:3, it can be inferred that these actions are an extremely successful example of adversary deception employment.

The last example shows that skillful planning, organization and use of contemporary technical equipment combined with skillful performance may enhance the efficiency of deception operations significantly over the conventional military science concepts of it.

4. CONCLUSIONS

It is possible to deceive opposing forces through the use of multiple methods, forms and techniques, and by applying specific approaches, techniques, tactics and procedures. There may be different goals and objectives; different effects may be sought after in order to achieve certain results.

Military deception can be practiced at all levels of command and control using various assets and resources. In short, this is a very diverse part of military science and art which incorporates elements of many of its subdivisions, which combined in a certain way are used to fulfill the mission and ultimately to reach the desired end result.

NOTES AND REFERENCES

[1] In allied publications of the USA and NATO, actions related to employing deception to adversary forces is referred to as “masking”.
[12] According to the Military Doctrine of the USA.
[13] In sources from Russia the classification related to military deception refers to it as military trickery.
[18] The active actions include the whole set of military and non-military, fatal and non-fatal actions.
[21] The “subject” of the military deception is the one who plans and executes the military deception actions, and the “object” of military deception is the one against whom the military deception is conducted (i.e. the adversary).
[22] The term “real actions” is used as unifying both combat and stabilizing actions.