Passive Defence as far as Asymmetric Warfare is concerned: Increased Threshold of National Resistance

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INTRODUCTION

Formation of primitive civilizations in the world has always been concurrent with outbreak of war. During history, human beings took actions such as taking shelter in caves, making armors and shields, building strong and high forts, excavating ditches to save the life and supply the security of a group aiming at preventing enemy’s surprise attacks. The defensive walls and embankments of the time when human being started living in the world are still in place and their shape has developed parallel to the development of aggressive and defensive weapons during every historical period. With the new approach in the recent wars taking many years, the ability of countries in technology and use of weak and vulnerable points of the enemy and advanced technologies led to asymmetry of warfares from the innovative methods to access a superior position and weaken the enemy's will. This new approach made changes to the general structure of future wars and also changed the identity of the future wars. Of course the meaning of asymmetric warfare is as old as the concept of war and it means to attack the enemy's weak points using new and unknown tools and at the same time to avoid confronting the enemies' abilities and it is as old as the war itself [9].

The countries that have tasted the destruction and damages of war pay special attention to passive defence to protect their national assets and vital resources and attach special place to it in their defensive strategy [11].

The revolution in IT and communication made asymmetric warfare to change to the symbol of war in contemporary era. Thus the main issue of this paper is how passive defence is implemented and how vulnerability is minimized in the asymmetric warfares of today.

It seems that to implement passive defence in the wars of today which happen using advanced technologies, actions have to be taken in two areas: The first aspect is the software aspect of asymmetric warfare where the first issue is to inform the people which is of special importance because passive defence will bring about positive mental and psychological effects on the citizens and soldiers due to increasing the military power of the countries and managing the situation behind the war fronts and the second aspect is the cultural defence and defence of psychological operation which are important. The non-passive defence leads to protection of forces...
for damaging the enemies at the right time and place and to deprive the enemies of freedom of action and innovation [7]. When the human resources are equipped with insight, the enemies' tricks can be defused and also the general atmosphere within the level of society and international thoughts to protect human beings can be found as one of the most important passive software defence actions in the asymmetric warfare, but in hardware wars, use of passive defence principles such as concealment, resistant forts, dispersion, coverage, etc. are of special importance.

Passive Defence and its goals:

From lexicology point of view the word defence in Farsi 'Padafand' consists of a prefix 'pad' which means 'anti, against and standing' and wherever this prefix stands in the beginning of a word, it gives an opposite meaning to the word. The second part of the word in Farsi 'afand' means 'attack, conflict and animosity' [6]. Thus 'padafand' as one word means defence and passive defence is a set of unarmed actions that reduce the vulnerability of human being, buildings, installations, equipment and state veins against the hostile and destructive operation of the enemy [14] and the goal of implementing it is to reduce the vulnerability of human force and the vital, sensitive and important equipment and structures of the country despite the hostile and destructive attacks of enemies and continued activities and infra-structural services and supply of vital needs and continued administration of the country in critical conditions as a result of war [12]. One of the other goals of passive defence could be referred to as follows:

- Protection of territorial integrity, national security and independence of the country.
- Protection of life of humans.
- Increased morale of people and protection of state defensive ability at the time of enemy's attack.
- Supply of vital needs of the society at the time of crisis.
- Saving weapon costs and human resources.
- Reduced ability of identification, targeting, precision of targeting weapons of the enemy for attack.
- Increased survival, continued operation and vital activates and services of vital, sensitive and important military and non-military centers of the country when they are exposed to threats, crises and wars.
- Reduced vulnerability and damages to installations, equipment and human resources of the vital, sensitive and important military and non-military centers of the country against the enemies' operations and threats.
- Stratagem and imposing more costs on the enemy and reinforcement of deterrent aspect.
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- Protection of self ability to continue activities and production and service operation.
- Depriving the enemies of freedom and initiative and creation of difficult situation for them in the operation scene.
- Imposing higher costs on the enemy through making it waste its limited resources and concentrate on false objectives.
- Distribution of wealth, population, national assets in the general atmosphere of the country through removal of concentration, land arrangement and dispersion of the key infrastructures and vital, sensitive and important centers of produced key products (power plant, refinery, industrial, military, food and water projects).
- Creation of necessary preparedness to confront the enemy in asymmetric conditions of threats [15].

Asymmetric warfare:

In wars, the opponents are often different from each other. These differences are sometimes minor and have not much impact on the outcome of war, but they are sometimes very important to put one side in a superior position and other in an inferior position [5]. This type of war is called asymmetric warfare. Asymmetric war is a military term. To define this type of war, it is a type of war in which the involved opponents are not at the same level as far as technology and military abilities are concerned. That is why the used methods for both sides to fight each other are different [10].

The Ministry of Defence of the UK emphasizes about asymmetric warfares that the increased dependence of the West on very advanced technology will bring about superiority of the military power in the battlefield and as a result, the opponent will also use asymmetric weapons and arms to confront [17].

Passive defence as far as asymmetric warfare is concerned:

Taking passive defensive actions in the current asymmetric warfares to confront hostile aggressions and to reduce the damages and casualties resulting from air, land and sea strikes of the belligerent country is a fundamental issue whose vast area encompasses all the infrastructures, vital and sensitive military and non-military, political, communication and connection centers such as ports, airports, bridges, key and sensitive infrastructures and products such as power plants, refineries, huge industrial complexes, guidance and command centers and population centers of the people of the country, and protection of national and economic security and undefeatability at war are remarkably dependent on overall planning and organization in the vital issue of passive defence [3].
Asymmetric warfare is a war that could be very vast and dispersed and the identity of this war requires necessary preparedness in every spot that it might happen and both people and the forces in the scene can be provided with the required preparedness and training whether hardware or software ones. Hence it could be said that asymmetric warfare has two aspects, one is the soft aspect which is called soft war. In this aspect IT and communication such as mass media, internet, etc. are used and the second aspect is asymmetric warfare which has hardware aspect including military attack on other countries such as the attack by the coalition forces on Iraq and or 9/11, etc. as the examples of asymmetric warfare in the hardware aspect.

Due to the two aspects of asymmetric warfare in the contemporary era, passive defence should also happen in two soft and hard aspects because in asymmetric warfare, the country which is not superior as far as arms and technology are concerned should use war tactics such as war and escape, concealment, stratagem, coverage, dispersion, etc. which are part of the defensive principles that could defeat the enemy at different war arenas.

**Passive defence as far as software of asymmetric warfare is concerned:**

Passive defence deals with certain issues as far as asymmetric warfare software is concerned that leads to reduction of damages and rifts in good beliefs of individuals of the society during war and following it. This defence reduces the degree of effectiveness of soft attacks and increases the power of reconstruction of thoughts within a short period following it. In this aspect, the following actions are important.

**A. Publicizing and news information:**

Passive defence describes deep and complete information to prevent negligence and change of information to intelligence as necessary. For this purpose the information resources should be increased in the same front and the correct indicators of analyzing the people should enhance. Expansion of the press and media, political, economic and social debates and support by the Judiciary for information is one of the necessities of passive defence to create preparedness in people to analyze the issues correctly [24].

Asymmetric warfare is performed in the soft aspect through virtual environment using the communication technology such as mass media, internet, etc. For this reason, to confront it, the virtual environment should be used. Thus information regarding asymmetric warfare is mainly distributed through mass media and internet using the following two methods:

1. **Concentrated confrontation (official):**

Concentrated confrontation is a task which is undertaken by the government and is materialized by using the government tools and the official bases of government. The goal of this confrontation is to defeat the enemy in propaganda against the country as well as to develop correct information in favor of the country. In this method, auditory and visual media and news outlets of the governments should become active to confront.

2. **Non-concentrated confrontation (non-official):**

This type of confrontation should be performed by the people and public users of internet in the countries. The goal of non-concentrated confrontation is to create the atmosphere to support inside the country and the atmosphere to protest against war and belligerent country outside the country. This is done through public sites by ordinary internet users. In this way, the users, producing weblogs, images, sending emails, preparing reports and news analyses, electronic chats, filling the memory of belligerent websites, creating comments, campaigns and opinion polls, protests, etc. confront the enemies’ attacks [1].

**B. Cultural defence and psychological operation defence:**

In psychological operation and war, it is highly important that the people of one society do not commit suicide fearing death. This preparedness should exist in the people and the society and should be able to confront the psychological war and operation of enemy and its threats that are imposed on the software structures of the society from this angle such as culture, identity, religious issues, historical issues, etc. and it should be able to display the national morale and necessary resistance against the threats of enemies and should not reduce the psychological morale and pressures at the society level. This mental and psychological preparedness can also reduce a remarkable portion of the enemy’s hardware threats and can reduce the enemy’s actions to achieve goals. Hence the necessary investment has to be made both in software area, i.e., humanities and in hardware area, i.e., the engineering and medicine sciences. This preparedness should be tried and invested at the level of the society as a general culture and the society should be able to create and develop this culture as a dialogue governing the society [21].

Therefore psychological defence operation and cultural defence to confront psychological operation is one of the basics of asymmetric warfare that could have the following characteristics:

1. To make the members of the society psychologically prepared to foil the enemy’s tricks by their insight and awareness.
2. To organize the suitable cultural infrastructures and psychological operation in the aspects of human resources and material resources to confront the threats.
3. To prepare general atmosphere at the level of the society and international opinions to protect people’s supports.
4. To pursue psychological operation of the enemy and to conduct defence operation and prevent its effect on the addressees.
5. To perform psychological attack operation against the enemies at different levels [25].

Asymmetric cultural attack considering the five mentioned principles requires determination of responsibilities and duties at the following different levels.

1. **Strategic level:**
   This level of asymmetric cultural defence is responsible for policy-setting, guidance, coordination, support and macro-supervision. The duties of organizations and relevant bodies and their interaction are defined at this level.

2. **Operational level:**
   Cultural defence and psychological operation at operational level, policies and defined programs at strategic level are materialized considering the situation of mission and conflict and crisis region.

3. **Tactical level:**
   At this level mainly the units such as divisions, regions and mobilized zones to fulfil this duty become active. The level of tactic is the main aspect of mission and conflict (physical and non-physical) in the asymmetric defence and requires more investment and precision. Of course at this level, some concentrated actions are also predictable such as formation of quick cultural reaction unit that reacts in a concentrated fashion. This level needs suitable education and equipment.

4. **Technical level:**
   This level is usually defined for the smallest involved units and pays more attention to the morale of the soldiers and implementation of limited and field defensive measure (psychological operation in passive defence, 2008).

**Passive defence as far as hardware aspect of asymmetric warfare is concerned:**

The following actions could be taken in the hardware aspect of passive defence of asymmetric warfare:

A. **Concealment techniques:**
   Concealment is one of the used principles in passive defence and it could be used because of the following reasons in asymmetric warfare:
   1. Frequent travels at night by the forces in asymmetric warfare due to being active and adopting war and escape tactics and compliance with the principle of surprise attack, thus if the forces do not comply with the modern concealment techniques at night, the enemies can detect and foil their movements by thermal imaging cameras.
   2. Due to the asymmetric nature of the future wars, deployment of forces in the camps and shelters will be tactical. Thus these camps and shelters should be concealed in a way not to be detected by the satellites and airplanes and not to be identifiable by other sensors so that the forces can rest and recover there easily. At this stage, it will also be necessary to use concealment well. Without using suitable concealments, these camps and shelters will be quickly detected and destroyed by the enemy.
   3. The other important reason that clarifies the necessity to use concealment is that the countries are formed by deserts, forests, mountains and urban regions geographically speaking and if the forces want to frequent, fight or evade the enemies in these regions, they should have suitable equipment and arms considering the type of land and plant coverage of the region. Otherwise, they will be detected quickly and attacked by the enemy. Also if the enemy gets close to these regions, it has to use the modern concealment tools not to allow the thermal imaging cameras to detect them.
   4. The important issue that emphasizes the necessity of concealment is that in asymmetric war, defence is layer by layer and fluid and no embankment can be built when delivering the operation to operating units and building trenches behind it, but the soldiers should prepare suitable barriers during delivery and use them gradually. To hide these trenches from being seen by spatial, aerial and land devices of the enemy, they should be concealed properly so that the soldiers could use them easily when fighting, evading, attacking or hiding the enemy.
B. Making resistant forts or defensive architecture:

One of the fundamental principles of passive defence is to create fortifications and to play a fundamental role to secure structures to protect the installations, equipment, human resources, vital, sensitive and important centers when a threat occurs and this could have remarkable effects on promoting the military ability, continued operation and elevated threshold of resistance. On the other hand, using different sciences and technologies in wars and current conflicts, having programs and special solutions to confront it are necessary.

After 9/11, the American Federal Crisis Management Organization concentrated on a detailed fashion on passive defence to make the buildings more resistance in order to reduce the risk of terrorist threats and prepared different arrangements considering different applications and also created secure shelters in every building to be used at the time of natural disasters or human-made threats [6]. Making resistant fortifications as a shield will increase the defensive power and will have positive effect on the need for security and will help human’s survival. The effect of passive defence in the fortifications (architecture and urban development) can reduce the vulnerability against the different natural risks in addition to reducing the damages of human-made threats (war and air strikes, etc.).

Designing buildings considering the defensive principles and taking multi-purpose tools at different times is called ‘defensive architecture’ [19]. At the time of cold war, architectural arrangements in urban development and architecture were considered vastly in the East and the West and perhaps these arrangements are still vastly used in all countries, even Switzerland that is a neutral and impartial country. Defensive architecture is not necessarily for bombing, but also for other phenomena such as surprise attacks including destructive actions, physical protection of sensitive spots, water and electricity power plants, etc. Architecture and spotting and locating the construction of such infra-structural installations should be in a way that firstly it is difficult to attack them (such as being situated in a valley) or secondly if it is attacked, entry to it is difficult and bombing it will bring about the least damages. It is precisely like that in urban design, for example the spot where the high rise buildings are located is very important. Lookout posts in different parts of the city (mosque towers) can detect where the enemy forces are located [2]. Designing of defensive architecture should take the following factors into consideration:

**Spotting:**
(Suitable use of nature) whether in natural threats or artificial threats

1. Dispersion: Reduction of risk in investment
2. Concealment technique and stratagem (Suitable use of nature, materials and construction materials)
3. Creating turbulence in the enemies’ sight
4. Fortifications: Construction of suitable structure against the power of explosion as well as use of different aerodynamic shapes and spatial architectural design to intimidate and frighten the enemies.
5. Urban furniture: How to use urban elements to prevent the damages of the explosion consequences and natural threats.
6. Interior designing: How to use architectural space to prevent possible damages.
7. Ability of reconstruction: Use of suitable design to restrict the damages of explosion and quick and cheap refurbishment (Farzamshad, 2007: 130).
8. Multi-entrance and exit design to be tricky: Due to high costs of demolition of infra-structural installations, the enemy tries to bomb the entrances and for this reason tricky entrances should be installed. Use of local construction materials and special construction materials is necessary for showing reaction to the different waves and cybernetic view of enemy which is used for identification.
9. Multiple functions of spaces: Multi-use of urban space and elements during peace and war and for example use of Iraq of mosque minaret or tower for lookout post [2].

C. Stratagem and surprise attack:

The history of wars narrate numerous cases of stratagem plans and surprise attacks. The examples that indicate that war has always had stratagem and surprise attacks and all wars were based on that [4]. But in asymmetric war and war with one asymmetric power, stratagem and surprise attack are of high significance. Stratagem can change the unbalanced powers to balanced ones. That is why in asymmetric war, stratagem is of high importance and the following could be done to deceive the enemy:

1. Construction of maquettes against the power of explosion as well as use of structural installations should be in a way that firstly it is difficult to
2. Giving wrong information through different channels to deceive the enemy.
3. Replacing war equipment and troops from one region to another region to confuse the enemy [22].

Preparation of deceiving and false maquettes, giving false information and replacing war equipment are the most effective passive defence and will have the following outcomes if accompanied by concealment and coverage of real targets:

1. Misleading the enemy from actual and important targets toward false and unimportant ones.
2. Imposing more costs and casualties on enemy.
3. Maximizing the power.
4. Weakening the morale and energy of the enemy.
5. Reducing the damages to equipment and installations and casualties.
6. Surprise attacks on enemy and making them confused before taking any action.
7. Maintaining power to continue activity, increasing resistance threshold and continuing operation and services [23].

D. Dispersion/Decentralization:
To show the importance of dispersion/decentralization in asymmetric war, the role of air force in asymmetric war is pointed. It is correct that the factor of victory in jungles is the infantry and as John Mearsheimer, the theoretician of International relations says with regard to the importance of infantry in his book called: 'tragedy of powers' comparing the first and second world wars and other wars, victory in one war depends on infantry and the power of their maneuvers. Thus as long as the country in question is not occupied by the infantry and land forces, it cannot be said that the country was defeated [19]. But before attack by the infantry, the air force will start operating and since the ability of air force is to destroy vital and crucial centers of a country such as crippling its economy and politics, the correct confrontation will be through active defence as well as passive defence (in compliance with principles of defensive architecture in the buildings). This could reduce the damages of air strikes to a large extent. The good example is North Korea that adopted fundamental measures through its policies and strategies to decentralize and disperse the main element to it was the passive defence actions and serious defensive considerations, security and economic considerations in building and erecting vital centers such as pyongyang subway which is 9.5-10.5 m deep and is resistant against any normal and abnormal weapons or to prevent construction of huge complexes and massive key infrastructures and to pay attention to the construction of vital and sensitive centers in small and dispersed form in different parts of the country, erection of huge underground tunnels, building of hundreds of small ports with the loading capacity of one or two ships in the seashore of the country, construction of key roads with underground tunnels in the borders to facilitate military transport of arms and construction of Nampo big dam in the vicinity of Taedong River in the western shores of North Korea to use it for economic and defensive purposes [20].

E. Coverage:
Coverage is concealment and protection of installations, equipment, weapons and human resources from the enemy. It is performed through security and covert coverage. Security coverage means the actions that are mainly taken regarding fixed installations and virtual and unreal activities for the enemy [18]. In this method, more coverage takes military geography into consideration. Logically it should be believed that military geography will have an effective impact on the issue of fighting in the future [8]. The geographical factors could be used in two ways in the asymmetric war as the factor to cover and win. Use of geopolitical and geo-economical positions to cover the economic, political and military interests and use of environmental factors to attack and or defend against the enemy considering the conditions of every region and the possibility to use suitable tactics are of this type [8]. The region is suitable for covering the equipment and installations at the time of war. But the physical coverage consists of the actions that are taken temporarily in physical terms to prevent detection of the target. Creating smoke and or strong steam is one of these measures [18]. For example, using rubber smoke by putting a remarkable number of tires in fire (400 to 500 tires) around the important factories and sensitive centers to hide them to mislead the ultra-red missiles and the airplanes of the allied forces in the war with Iraq was an example of the asymmetric warfare [15].

Conclusion:
Taking passive defensive actions in the current wars in order to reduce the consequences of enemy's attacks and the damages from air, land and sea strikes is a fundamental issue and its vast area affects all key infrastructures, vital, sensitive and important military and non-military centers such as refineries, power plants, ports, airports, bases and major military bases, political guidance and decision-making centers, population centers, etc. To achieve the passive defence objectives including reduction of ability and capacity of identification systems, target-finding and targeting precision of the enemies' attacking weapons, reduction of vulnerability and damages to the installations, human resources and equipment, maintaining self-ability to continue activities and production and service operation, increased threshold of people's resistance and forces against the enemy's attacks, imposing higher costs on the enemy by making it to waste its limited resources on false and deceiving targets and removal of the principle of saving forces, high defensive ability of the country, etc. are the passive defence principles including spotting, concealment techniques, coverage, stratagem, dispersion, discord, replacement, resistance and notification that should be observed. It should be noted that defensive thought basically originates from the defensive policies of the countries and as a result using passive defence to confront the threats and to reduce the damages from threatening attacks of the enemy such as air.
Considering the approaches of asymmetric warfare at present that happen in two soft and hard aspects, it is necessary to defend in the two aspects and since passive defence is cheaper and more economical than active defence, the countries try to make the best of the principles of passive defence in the wars of the current world.

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