Agent-Centered Military Doctrines on Asymmetric Warfare as a New Approach

Seyed Ali Mortazavian Farsani and Ali Asghar Agha Balazadeh
Department of Political Sciences, Central Tehran Branch,
Islamic Azad University, Tehran, Iran

Abstract: Military doctrine play a crucial role at various levels (strategic, operational and tactical) to describe and explain military approach of states such as how to mobilize and support involved forces, describe and illustrate the campaign, explain the best approaches to drive forces. Military doctrine with an agent centrality and approach is considered as the main core of forming practices of military operations on asymmetric warfare. In this research, researchers have tried to introduce agent-centered military doctrines on asymmetric warfare as well as providing an appropriate model for that. The research approach was inductive and it was done in a qualitative way. According to grounded theory, data collection has been done through interview, reviewing relevant documents and theorizing based on systematic approach in three main steps: open coding, axial coding and selective coding. Findings have been organized in 53 categories and 6 contents (propositions); the position and relations of each content have been determined in the paradigm model and six related theorems have been extracted. In order to explain the pattern of agent-centered military doctrines, sex contents include asymmetric environment (casual conditions; agent-centered doctrine (central category); information technology and communication, logistics, social networks an media (intervening conditions) idea, cultural, social, ideological ideas (context and underlying); leadership development, education system based on asymmetric warfare, mythologize and create authority, discoursing based on ideology purposes, symbolization (actions and interaction strategies) should be noticed so that it can finally leads to the contents of agent-centered doctrine (outcome). Accordingly, it has been provided the final model of agent-centered military doctrine on asymmetric warfare and six final relevant propositions.

Key words: Military doctrine, social and cultural ideas asymmetric warfare, ideology, grounded theory

INTRODUCTION

War as one of the oldest events in the history of humankind has always been of interest to military and civilian experts. Wars have caused dramatic changes in human societies as far as it can be considered a mutual relationship between war and industrial progresses and social developments.

At the beginning of the industrial revolution in Europe and the arrival of human into modern era, wars have also taken on a new face. By using modern technology, wars have triggered great events during the last hundred years which have been resulted in heavy casualties, displaced millions of people and changes in the political geography of the countries. In modern times, war has always sought to achieve political goals after the failure of diplomatic process. In order to impose the will to the opposite party, war has been posed by the politicians as an instrument of violence.

One of the challenges in wars is a possible imbalance of involved forces in terms of number and IT equipments

which often will lead to change the practices in the campaign (tactical level) by the weaker party. Today, thee practices are known as asymmetric warfare. The more obvious thing in asymmetric warfare is that acting forces rely more on factor "human and their motivations" compared with conventional structures and complex formations in classic and modern armies. The centrality of human in these wars due to its natural characteristics including the ability to take emerging and unpredictable actions creates a dynamic and complex environment in the campaign that faces providing calculations and interactive solutions by the command and control systems equipped with the most advanced military supercomputers with serious problems and challenges. In fact asymmetric warfare are the high point of machine conflict (modern and mechanical structures) in contrast to the power and speed of human thought (smart and soft power) as the main agent and factor in the campaign (Fernandez, 2004).

Given that the military doctrines play a crucial role at various levels (strategic, operational and tactical) to describe and explain military approach of states such as

Corresponding Author: Seyed Ali Mortazavian Farsani Department of Political Sciences, Central Tehran Branch,
Islamic Azad University, Tehran, Iran

how to mobilize and support involved forces, describe and illustrate the campaign, explain the best approaches to drive forces; military doctrine with an agent centrality and approach is considered as the main core of forming practices of military operations on asymmetric warfare.

Given above mentioned, how is an appropriate model for military doctrine (agent-centered) in asymmetric warfare?

Asymmetry: Asymmetric warfare is a war in which the involved parties not fit together and are not in the same level in terms of access to military facilities. Therefore, there is the likelihood of unilateral use of military force by the superior power against other party. In asymmetric warfare unlike symmetric approaches asymmetric threats features include unexpected actions, respond to which may not match with a set of principles and reasonable estimation. Asymmetric attacks cause shocking effects in command and managements system of devices and defense organizations of the opposite party. The amount of damages that asymmetric operations are brought into the target never fit with the spending of invader in the time dimension because despite of the campaign being tactical, it has heavy consequences at the strategic level.

Doctrine of asymmetric warfare: Doctrine is thinking, thought or fundamental valid rules that are offered in a special area. Later, the term was used for set of thoughts, actions, political and military policies to achieve goals and/or to advance them, using which requires an understanding of requirements and correct and logical decision-making (Boyd and Pilot, 1982).

Asymmetric doctrine should be capable of creating the following four essential attributes when use its principles so that it can meet operational needs of forces in an asymmetric environment and atmosphere: uncertainty, unexpectedness, initiative, adaptation (Caslen and Charles, 2011).

Structure and agent: The structure essentially means context. It refers to an underlying, in the framework of which social, political and economical events form and find meaning. However, political scientists consider more things by restoring to the concept of context or underlying. They refer in particular to regular nature of social and political system. They refer to the fact that institutions, actions, daily routines and customs may find some kind of order or structure over time. Therefore, resorting to the concept of political context is based on the assumption that political behavior tends to be regular (Hay, 1995). The agent can be simply defined as the ability

or capability of an agent to act consciously through effort to reach its goals or intentions. As the concept of structure is not exactly the same as the context, the concept of agent also involves more that just political action or behavior. This concept includes particularly free will choice or option. In other words, the actor could be treated differently and choosing between methods of potential action has been the result of actor's conscious thinking or at least it could be so. In this case, the concept of agent is linked with a series of other concepts such as sustainable rethinking (the ability of actor to rethink and reflect in the consequences of pervious actions), rationality (the capability of actor to choose methods of treatment which will meet a certain number of demands with maximum likelihood) and motivation (a desire and motivation, through which actor try to reach a specific purpose or goal) (Hay, 1995).

Research objects: Explain an appropriate model for agent centered military doctrine in asymmetric warfare. Explain dimensions and components of agent-centered military doctrine model.

Research questions: What is an appropriate model for agent-centered military doctrine in asymmetric warfare? What are dimensions and components of agent-centered military doctrine model and their relationship with each other?

MATERIALS AND METHODS

Considering the lack of literature about the appropriate model for agent-centered military doctrine and the need to recognize its dimensions and comprehensively explain factors affecting on it in the subject territory, this exploratory study and its orientation is fundamental because it seeks to create better knowledge and understanding of studied phenomenon. Accordingly, the research is done to answer this question: what are significant and essential factors in the agent-centered military doctrine? Therefore, it has been dealt with to identify and explain factors affecting the agent-centered military doctrine by reviewing documents and applying expert interview. The research approach was inductive and it was done in a qualitative way because the vast majority of quantitative survey-based studies have not much to say about the learning mode of Doing, Using and Interacting (DIU) (Strauss and Corbin, 1998). To some extent, this leads to difficult result to make complex relational and institutional factors operational that are base for Doing, Using and Interacting (DIU). Doing, using

and interacting to learning is somewhat more diverse, although inductive and qualitative approaches are dominant. Thus, qualitative research has been formed to help researcher in order to understand human beings and social and cultural contexts where humans live. Research paradigm is interpretivism paradigm.

In the research, it was used systematic approach. This approach (which was dealt with in joint works by Strauss and Corbin (1994) uses inductively a systematic set of approaches to explain a theory for a phenomenon.

According to a systematic approach, theorizing is done in three main steps which are provided in the following discussion: open coding, axial coding, selective coding.

Analysis process in theorizing begins with data coding. Coding is the process of creating code to explain the concepts, features and messages existed in the certain part of the data. For coding, researcher should carefully read the text of data, extract concepts and key terms through the large amounts of data and determine a code for each of them that the process is called coding. This cods play a key role in theorizing. They are considered as elements of a theory. Consistent with data coding, resulted contents and dimensions are organized in the paradigm model (Strauss and Corbin, 1994) as follows.

RESULTS AND DICUSSION

Data analysis: At this stage, it was taken place to create more than thousand lines of code in open coding phase and to produce moa that thousands related components, more than 53 dimensions and 6 themes.

First step (open coding): Open coding refers to the part of analysis that deals with titling and classification of phenomenon as data has shown. It requires asking questions and applying comparisons. The product of titling and classification is concepts, i.e., the main elements to create the grounded theory. Open coding includes data analysis and coding, identifying classes and interpreting them based on the characteristics of each class. In addition, open coding splits into separate segments; they are studied to obtain similarities and differences between them. The meaning of fragmentation and conceptualization is that each incidents, events and ideas existed in the data will be given a name. This name is a tag or a sign that will be used instead of by that incident, event or idea. In the next stage, the concepts themselves are classified based on their similarities that

this is called categorization. The title assigned to categories (dimensions) is more abstract than concepts (components) which collectively constitute that category. Categories are of high conceptual power because they can gather concepts and sub-categories around their center. A title or name that is chosen for categories should have the highest correlation with the data which category indicates and so it is consistent enough with data that one can quickly remember and think about what it says. The results of open coding process of the research are listed in Table 1 in terms of categories derived from the concepts.

Second steps (axial coding): Axial coding is the second steps of grounded theory according to Strauss and Corbin narration (Strauss and Corbin, 1994). The purpose of this step is to create a relationship between produced categories in open coding phase. This is done based on a model and overall model called "paradigm model" and it helps theorist to develop studied theory of social process easier. The basis of communication process in axial coding was on focus and determining a category as a central or main category. Then other categories as sub categories following the different titles of paradigm model will linked to the main category (Strauss and Corbin, 1994). The purpose of axial coding is to create a relationship between produced categories in open coding phase. While open coding splits data into concepts and categories, axial coding links data through a link between a category and its sub-categories. Different sections of paradigm model include.

Causal conditions: These conditions cause the creation and development of phenomenon or central category. These conditions are constituted by a set of categories with their features which have the greatest impact on the formation of central category.

Central category: Phenomenon or central category is an idea (idea, thought); phenomenon that is base and process center. A category which is chosen for central category, should be enough abstract that one can link other key category to it.

Context: Context is called to certain conditions which affect on strategies. It is difficult to differentiate it with causal conditions. In comparison with causal conditions which is a set of active variables, these conditions are constituted by a set of concepts, categories or underlying variables.

Table 1: Results of open coding process

Contents (propositions)	Dimensions (categories)	The number of components (concepts) components
Asymmetric environment	Complex structure	20
	Nonlinearity	21
	Irregular look to war	22
	Lack of uniformity of wars	41
	Emphasis on contingency	26
	Chaotic	20
	Uncertainty	21
	Modern and fluid form of irregular wars	24
	Asymmetric structure	34
	ambiguity in asymmetric campaign	22
	Looking at war as art	21
Environmental factors	Information and communication technologies	37
	Logistics	50
	Media and social networks	54
Realization of doctrine	Leadership development	36
	Education system based on asymmetric warfare	50
	Myth-making and authorization	41
	Discoursing based on targets	50
	Symbolization	23
	Internalization of social ideas	50
Institutional factors	Idea	46
	Social/cultural ideas	34
	Ideology	33
	Appropriate environment in agent-centered doctrineIdea-centered maneuver plan	51
	Idea-centered missions	22
	Existing interaction-centered manpower based on ideas	31
	Effectiveness of the system as a tool for interactive relationships and agent centrality	45
	Create common will from common sense and agent's situational awareness in the campaign	41
	Unit of direction and unit of command based on common sense derived from ideology and social/cultural ideas	30
	Intellectual planning and decision-making	22
	Instability and asymmetric structures (fractal)	25
	High dynamics of operations	22
	Time and place contingency of operations	24
	Subjective and idea-centered targeting in tactics campaign	42
	High rhythms of decision-making and operations (quality time)	22
	Debilitation of structure-based forces and detect, determine and counter with agent-centered actions	22
Agent-centered operations doctrine	Will regarding agent freedom in operations campaign	22
	Unique and idea-centered tactics	20
	Create and disseminate idea-centered operations	41
	Improve operations	22
	Horizontal and vertical interactive development of operation networks between different classes	22
	Create and upgrade operations	20
	Easy organizational control	25
	Organic and contingency organization	20
	Implication of order	20
	Lack of organizational control	20
	Rely on individual creativity	20
	Automatic discipline and self-motivated	22
	Probability-oriented	24
	Unpredictable	26
	Decentralization	20
	Initiated	23
	Assign operation to the agent in all classes	24

Actions and interaction strategies: Actions and interactions represent targeted behaviors, actions and interactions which are adopted in response to central category under the influence of intervening conditions. These categories are called strategies. However, they are also referred to as process.
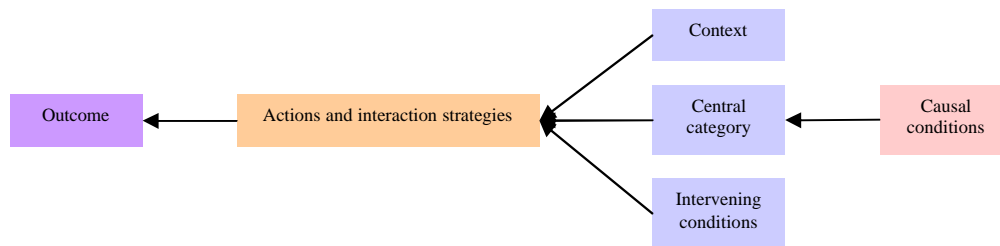
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                                      │   Context    │
                                      └──────────────┘
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│ Outcome  │◄────│ Actions and interaction   │◄────│   Central    │◄────│   Causal     │
└──────────┘     │ strategies                │     │  category    │     │  conditions  │
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                                      ┌──────────────┐
                                      │ Intervening  │
                                      │ conditions   │
                                      └──────────────┘
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Fig. 1: Paradigm model (Strauss and Corbin, 1994)

Intervening conditions: Intervening conditions are general and structural conditions that facilitate or restrict the intervention of other factors.

Outcome: Categories, in associated with which theory was offered and are the result of actions and interaction strategies, are called outcome. This category is the same title (conceptual name or label) that is considered for produced framework or plan.

After defining central category with re-coding data, a variety of conditions affecting on central category (context and intervening conditions) and actions and interaction strategies that are created to manage and control or respond to central category (they are also called strategies) and their outcomes will be defined. Figure 1 is the result of reanalyzing data based on paradigm model that represent the results of axial coding in the research. As shown in Fig. 2, it has been tried in axial coding phase to re-process data based on paradigm model in addition to select a category as central category. Thus, according to above characteristics that were addressed by Strauss about central category, "agent centered doctrine" category or dimension has been considered as central category. It was tried to define casual conditions, intervening conditions, context and outcome for central category using produced categories in the open coding phase as well as gathered data.

The purpose of grounded theory is not just to describe phenomenon but produce theory. In order to analysis become to theory, concepts should regularly link together. Selective coding is the main step of theorizing that deals with to create theory based on the results of two pervious coding steps (that as preliminary steps and providing the opportunity for theorizing provide preliminary categories and relations as structures and the main principles of theory). Thus, it systematically links central category to other category and modify categories which need more improvement and development. In this stapes, it is tried to offer a theoretic narration for the phenomenon by juxtaposing categories around central category as well as create a systematic relation between concepts and categories around the major field (Charmaz,

2000). Therefore, selective coding is integration and improvement process (remediation) of categories so the researcher sets categories to offer and form a theory (image) by creating a rhythm and a special arrangement between the categories. The resulting theory includes ideas and examples which can be used in future research. This theory can be expressed in a set of hypothesis (primary and secondary) (Creswell, 2005). As indicated in the study, agent-centered operations doctrine has been studied and explored. In the study of this phenomenon, new categories were appeared, based on which tables of open coding were set. Then, based on paradigm model with central category "agent-centered doctrine" as a main theme in selective coding phase, categories have more developed and relations have created between them and central category.

Formation of agent-centered military doctrine model on asymmetric warfare: War in its evolution and development path has been always faced with both subjective and objective look. Its objective look has been sought to exercise power in the physical realm such as occupying positions and cities. Its subjective look has been sought victory through domination of the minds. Both approach have long and the same history.

The larger, more complex structures and military organizations and a mechanical regular and linear look from systems order has led to the formation and distribution of organizational duties based on structures output that requires to set out regulations and duties of human resources in the determined frameworks. According to the system centrality, stability and symmetry is completely obvious in the formulation of its components. Therefore, the overall look in terms of symmetry and systematic order of fighting has been formed in two forms: regular, in which armies fight faced with an army of another country and irregular, during which an army of a country or specific force of it fight with regular army or militia inside or outside the home country in order to achieve political-military target and even civilian (terrorist) target. Due to the inefficiency and disruption of communication, command and control

Context and underlying

- Idea
- Social-cultural ideas& context
- Ideology

Action and interaction strategies

- Leadership development
- Education system based on asymmetric warfare
- Myth-making and authorization
- Discoursing based on targets
- Symbolization
- Internalization of social ideas

Central category: agent-centered doctrine

- Create and disseminate idea-centered operations
- Improve operations
- Horizontal and vertical interactive development of operation networks between different classes
- Create and upgrade operations
- Easy organizational control
- Organic and contingency organization
- Implication of order
- Lack of organizational control
- Rely on individual creativity
- Automatic discipline and self-motivated
- Probability-oriented
- Unpredictable
- Decentralization
- Initiated
- Assign operation to the agent in all classes

Asymmetric environment of causal conditions:

- Chaotic
- Complex structure
- Emphasis on contingency
- Uncertainty
- Lack of uniformity of wars
- Irregular look to wars
- Nonlinearity
- Modern and fluid form of irregular wars
- Ambiguity in asymmetric campaign
- Looking at war as art
- Asymmetric structures

Outcome: environment of agent-centered military doctrine

- Idea-centered maneuver plan
- Idea-centered missions
- Existing interaction-centered manpower based on ideas
- Effectiveness of the system as a tool for interactive relationships and agent centrality
- Create common will from common sense and agent's situational awareness in the campaign
- Unit of direction and unit of command based on common sense derived from ideology and social/cultural ideas
- Intellectual planning and decision-making
- Instability and asymmetric structures (fractal)
- High dynamics of operations
- Contingency time and place of operations
- Higher tempo of decision-making and operations (quality time)
- Debilitation of structure-based forces and detect, determine, and counter with agent-centered actions
- Subjective and idea-centered targeting in tactics campaign
- Will regarding agent freedom in operations campaign
- Unique and idea-centered tactics

Intervening conditions

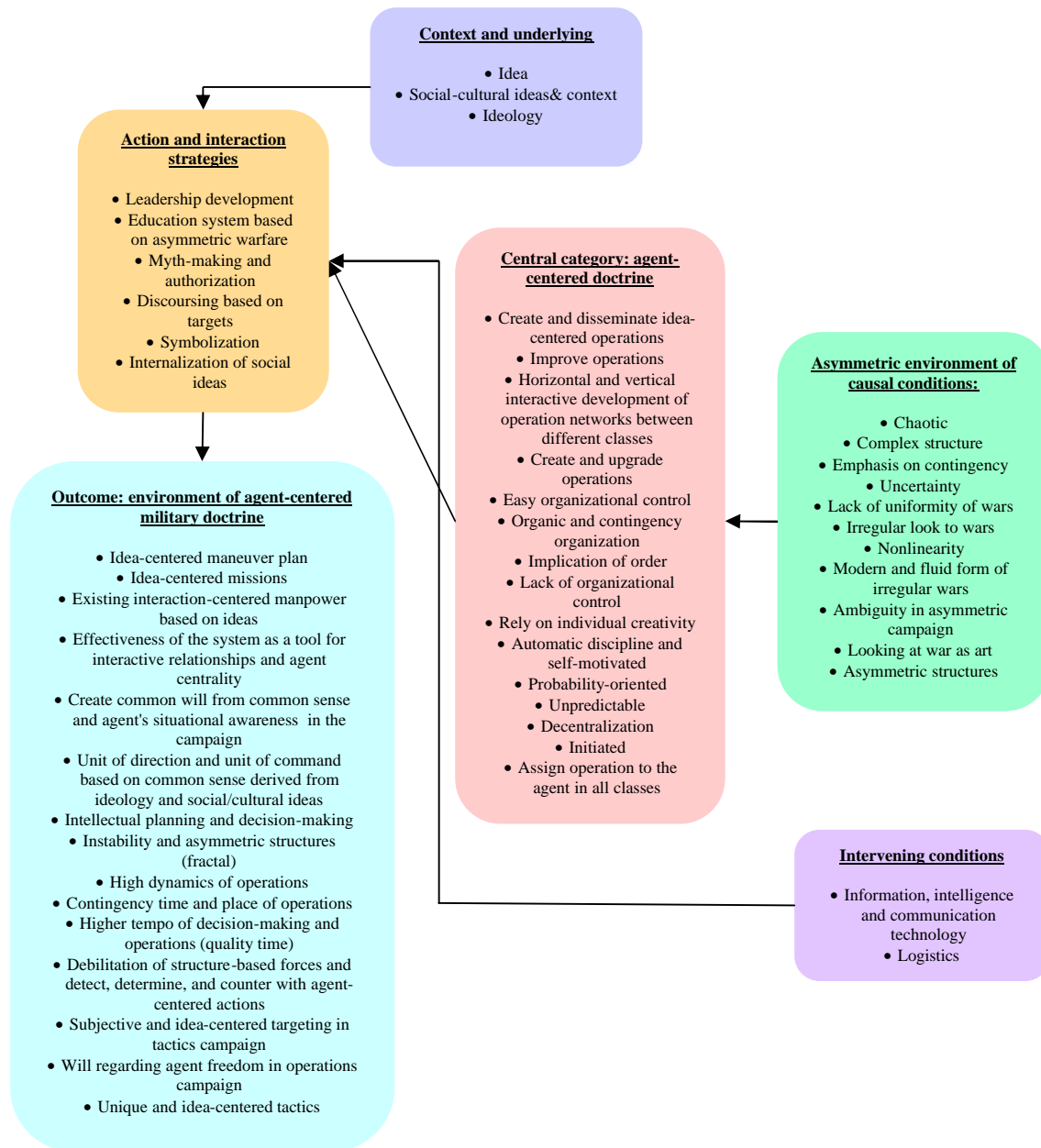- Information, intelligence and communication technology
- Logistics

Fig. 2: Operation model of agent-centered doctrine

system based on predetermined regulations and scenarios as well as accepting their inefficiency, when the military structures seriously become involved in the campaign particularly near urban areas, they develop their approach to raise latitude of enforcement category in the arena of operation in order to enhance the effectiveness of units and individual. In other words, they assign how to decide about category to themselves according to mission statement and commander intent while maintaining the structures and military formulations in order to avoid chaos during battle.

Theoretical propositions: Theoretical propositions represent the overall relationships between central category and other categories so that it will eventually lead to outcome. Propositions include relations and conceptual structure which was illustrated in Fig. 2. In the research, six propositions are discussed as following

based on research story and agent-centered military doctrine model. Since, grounded theory leads to conceptual relations to be produced, each of the following propositions can be studied and assed in terms of hypothesis in the future researches.

Proposition 1: The environment of asymmetric warfare contains complex structure, uncertainty, irregular look to war, chaotic, looking to war as art, ambiguity in asymmetric campaign asymmetric structure, nonlinearity, emphasis on the contingency of actions, lack of uniformity of wars and new and fluid form of irregular wars that affects central category as causal conditions.

Proposition 2: Create and disseminate idea-centered operation, improve operations, horizontal and vertical interactive development of operation networks between different classes, create and upgrade operations, easy organizational control, organic and contingency organization, implication of order, lack of organizational control, rely on individual creativity, automatic discipline and self-motivated, probability-oriented, unpredictable, decentralization, initiated and assign operation to the agent in all classes affect on actions and interaction strategies.

Proposition 3: Information and communication technology, logistics and media and social networks affect on actions and interaction strategies as intervening.

Proposition 4: Leadership development, education system based on asymmetric warfare and myth-making and authorization are as context and underlying that affect on actions and interaction strategies.

Proposition 5: Environment of agent-centered military doctrine includes consequence and result of creating idea-centered maneuver plan, existing interaction-centered manpower based on ideas, create common will from common sense and agent's situational awareness in the campaign, unit of direction and unit of command based on common sense derived from ideology and social/cultural ideas, intellectual planning and decision-making, instability and asymmetric structures (fractal), high dynamics of operations, time and place contingency of operations, high rhythms of decision-making and operations (quality time), debilitation of structure-based forces and detect, determine and counter with agent centered actions, subjective and idea-centered targeting in tactics campaign and unique and idea-centered tactics.

Proposition 6: Idea, ideology and social-cultural ideas as context factor affect on actions and interaction strategies.

CONCLUSION

In the research, various significant subjects and dimensions has been studied about agent-centered doctrine. So far, the concept of asymmetric warfare has addressed on a large scale and as a necessity in the studies but it seems that components, elements and relations between them has been not addressed as a model in order to achieve "agent-centered" military doctrines. On the other hand, studies conducted inside and outside the country about asymmetric warfare have often emphasized on the atmosphere and description of the consequences of asymmetric attacks occurrence. Therefore, current research provides theoretically an appropriate framework for aimed subject in the research according to the country conditions. After explaining agent-centered military doctrine model and designing primary and secondary strategies in the research, outcome of agent-centered doctrine would address as following:

- Idea-centered maneuver plan
- Idea-centered missions
- Existing interaction-centered manpower based on ideas
- Effectiveness of the system as a tool for interactive relationships and agent centrality
- Create common will from common sense and agent's situational awareness in the campaign
- Unit of direction and unit of command based on common sense derived from ideology and social/cultural ideas
- Intellectual planning and decision-making
- Instability and asymmetric structures (fractal)
- High dynamics of operations
- Time and place contingency of operations
- High tempo of decision-making and operations (quality time)
- Debilitation of structure-based forces and detect, determine and counter with agent-centered actions
- Subjective and idea-centered targeting in tactics campaign
- Will regarding agent freedom in operations campaign
- Unique and idea

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