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Interdisciplinary Approach to Polemological Research

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Abstract

The phenomena of war and peace, since the beginning of time have been the subject of interest of thinkers, philosophers, rulers and politicians. The basis for them, was the essence of their research, production, nature and meaning in the lives of individuals, societies and states. Through many centuries they tried to identify and understand the phenomenon of war, while searching for the means and methods that could eliminate them. Referring to the historical experience, it should be noted that war and armed conflicts constitute a social phenomenon, which requires a multidisciplinary, complex needs of research. Categories: interdisciplinarity, as well as similar to the category of multidisciplinary, as well as the transdisciplinarity, are relatively young language resources, although in many scientific disciplines is already quite weak (especially in the humanities), in the other, however (in the social sciences), it seems that is only just emerging. This issue will be devoted in article, with particular focus in its analysis of the polemology and troubleshooting related to wars and armed conflicts. Polemologic knowledge about war and armed conflicts, in addition to theoretical, has also important practical part. It is associated with the belief that reality (social world) is multidimensional and its understanding, should take into account the different contexts and perspectives. Therefore, the development of polemology should be based on mutual, effective cooperation of various sciences, disciplines and scientific disciplines (while maintaining the specificities of individual scientific disciplines). As a result of the implementation of the designed intent of the examination procedure, the aim of the work is to indicate depending on the polemology related sciences. In addition, assessment the degree of interdisciplinarity and indicate action that should be taken for peace.

Keywords: academic disciplines, armed conflicts, polemology, interdisciplinarity, war

Introduction

The question of interdisciplinarity and the related phenomenon of discipline approach are discussed today without a doubt to the Meta level issues. Thanks to polemology, it is possible to notice the need of overcome the legacy of division in science due to the nature of the test items, that migrate through areas of many disciplines, theories, and research tools developed in different communities of thought within cognitive objectives are formulated differently.

Participation of sociology, psychology, geography, political studies, economics and other disciplines not only enriches the traditional polemological studies in the field of methods (especially when the facts look for their relevance to the theory), but extends the field of observation. Therefore, the cause of wars should be considered more comprehensively. The concept of the complex war introduced H. Barnes, who ranks the causes of wars in the following order: biological, psychological, sociological, economic and political.

The main research problem was formulated in the form of a question: What relations take place between polemology and selected academic disciplines? The research area of article is related to the academic disciplines, and their relationship with wars and armed conflicts as well as polemology. The aim of the research is to show the relationships and dependencies of selected academic disciplines and polemology. Main hypothesis claims that selected humanities, social sciences and technical sciences, according to their research area have influence on the image of war. As research methods were applied: analysis of source materials and literature on the subject, inference, deduction and synthesis of selected theories including the polemological approach.

Literature Review

One of the new theories, associated with polemology, wars and armed conflicts, was established by S. Pinker. He believes that the war is a way of wasting another, competitive community. This is confirmed by the number of civilian victims of armed conflicts. In the 20th century, it was 54 million, which is more than 60% of all killed. In the 90 this indicator was even bigger and was, depending on the region of the conflict, from 75 to 90 percent¹.

In addition, S. Pinker argues that, brutality of our species is decreasing, not increasing for millennia (...) Violence is reduced for a long time and today we are living in the most peaceful period in the history of our species². This is largely due to the „the formation of states that institutionalized violence and urban development (...)and also the fight against illiteracy, the prevalence of women's rights and the enlightenment praise of reason, which we have learned to approach the conflicts in a rational, not impulsive way³.

¹M. Rotkiewicz, *Man is Man for man*, Politics nr 19 (2755), 2010, p. 66.

²M. Rotkiewicz, *An even more wonderful world*, Politics nr 3 (2842), 2012, p. 59.

³M. Gawrońska, *Can we kill a fly today?*, Newsweek, 5-11.03.2012, p. 80.

Polemologist P. Sorokin, in his book *Social and Cultural Dynamics* (vol. III), has conducted detailed studies on war and war losses in Europe. He calculates the number of killed and injured in the European wars in the long term period. As the basis for determining the size of the losses P. Sorokin received the status of the numbers of troops, the number of years of war and the percentage loss of the army within a year. The latter calculated as the average number of battles of the war. Based on these numbers, P. Sorokin has determined, the absolute number of killed and wounded ones of the belligerent. It multiplied the number of years of war by the state army numbers and received the product applies the average percentage of losses”⁴.

In conclusion, P. Sorokin based his calculations on the following criteria:\

- the duration of the state at war,
- the size of the armed forces,
- the percentage of the armed forces to the number of inhabitants,
- war losses in absolute numbers,
- the relationship of losses to the size of the army,
- the relationship of losses to the entire population.

Also, in the book *Social and Cultural Dynamics*, P. Sorokin has posted a number of charts and tables showing the results of his research. Worthy of note are the tables on the number of wars with the length of their duration⁵ as well as the size of the army and the loss in population. They have been presented in relation to periods of historical and individual countries, for example France, Germany, Greece, Russia or Austria-Hungary⁶.

P. Sorokin, as one of the precursors of polemology, in the early stages of his research, focused on the relationships of society and culture, and then in the next stage, he referred them to the phenomenon of war. He defined culture as „the total sum of all, which is made or modified by a conscious and unconscious activities of two or more units coming together and influencing each other's behavior”⁷. Based on the analysis of various aspects of human nature, knowledge, art, ethics, war, rights over the centuries, P. Sorokin suggested the distinction of two opposing, irreconcilable with each other types of culture: the ideational and sensate. Both are identified as ideal types, non-existent in its pure form in any historical period. In turn, the real culture adopt different indirect, mixed forms, one of which the main P. Sorokin described as idealistic.

Clashing cultures or civilizations, calls the damming of the conflict and could lead to war. This aspect P. Sorokin shows in formulating the theory of cultural-abrasion and pressure of cultures – and his considerations are going to a significant extent the definitions of war, that criterion adopt intensity, as it were, and sustained as a result of loss – first of all human losses.

⁴B. Urlanis, *Wars and the population of Europe*, National Economic Publisher, Warsaw 1962, p. 418.

⁵An interesting calculation made by P. Sorokin is the fact that since the beginning of the year 1925, countries such as France, United Kingdom, Austria or Russia, for nearly half or more than half of the entire history of the states were able to conduct wars.

⁶P. Sorokin, *Social and Cultural Dynamics*, t. III, American Book Company 1937, p. 289-334.

⁷After: P. Sztompka, *Sociology of social change*, Publisher Znak, Kraków 2005, p. 150.

Findings

Philosophy is a field of knowledge, that from the very beginning of its existence (from 2500 years) was the only rational, critical tool of overview of the social and political reality. Until the 19th century, completely determined any used by scholars and political practitioners, ways of understanding justice, security, war and peace. From the Greek historian Thucydides, author of the *Peloponnesian War*, through the philosophical systems of Plato, Aristotle, the medieval Christian philosophy, materialistic and idealistic philosophical systems of modernity – any discourse on war, violence to the right of military intervention, sovereignty, etc., were purely philosophical concepts.

From the 19th century to today, philosophy is in Western culture, intellectual definitive verification tool concerning methodology and axiology of social sciences. Hence, lack of knowledge of even the basics of the history of philosophy, the policy actually completely exclude man from the ranks of experts from polemology and irenology. Therefore, both polemology and irenology, must, necessarily, use the methodology and system of philosophy, acting actually philosophy, or, in other words – modern and extremely important philosophical discipline.

Philosophy, although customarily stands out within several disciplines, provides a comprehensive view of reality. Thus, philosophy, allows to discover mutual conditions between the various areas of social life. Hence, for centuries, thanks to the philosophy, it is not a secret for better educated part of the Europeans that the socio-economic position and instilled religious beliefs, directly affect the views of the ethical, moral and political man that awareness is always a consistent monolith. Systems of philosophy, policy, responding to questions about the source and legality of wars, have always ethical facilities, which was conditional upon, in turn, by a particular philosophy of man, often also metaphysics.

In summary, links to the interdisciplinary approach of philosophy and polemology, indicate the possible directions of their development in that context. Actually, it is difficult to imagine a contemporary development of any social doctrine in terms other than interdisciplinary, with at least two reasons.

Another science related to polemology is *history*. Historian, on the nature of things cannot present phenomena in space and time, display elements and volatility, may not find a common language with the focus for reflection here and now his colleagues, representing the social sciences. Interdisciplinary research, carried out by a group of professionals, representing different disciplines, centered on a particular research topic, which in this case is polemology, can produce interesting results. However, we need to take into account the diversity of methodological approaches – participants of the research groups, must be equipped with the basic knowledge relating to the analysis tools of other sciences, such as sociology, philosophy or geography, represented by other members of the research team.

The main categories of research, common to the polemology and history, are presented in table 1.

Table 1. *Interdependent Areas in the Studies of History and Polemology*

| |
|---|
| • analysis and interpretation of historical sources |
| • military history |
| • historical experience |
| • the history of the art of war |
| • theories of war |
| • historiography |
| • the legacy of the wars of the past |
| • the etiology and the genesis of war |
| • the accuracy of historical wars |

Source: author.

History is, in a sense, the canvas other sciences, as well as research methodology, without which any projects or theories could not arise, therefore, studies on the history of science shows that the formulation of the sciences and disciplines related to the refine research questions, research methods and techniques limited to earlier problems. In this way, each subdiscipline is trying to extract their own areas of research interests, develop specific methods for their exploration of its own theoretical approach (e.g. the history wars).

As one of the historical aspects, that we should replace is the theory of polemologist Q. Wright, who stated that the civil wars such as the war in France in the 17th century, British war of the Roses in 15th century and civil war in the 17th century, the thirty years ' war from the perspective of Germany, the war for control of the Iberian Peninsula 1807-1814, Taiping rebellion, yielded much more loss of life and economic losses than modern international war⁸.

In the context of interdisciplinary studies, involving polemology and history, it is important to keep in mind with the following content: „War is a historical necessity, because it is made up of all the forces, fighting and conflicting in turbulent pipe life, until they will emerge with a new form of being called the state and for a period of a viable coexistence and interoperability of the masses-until a new conflict⁹”.

Interdisciplines arise if we discover problems, which solution exceeds the capabilities of the isolated disciplines (in the case of religious studies and polemology, for example, the Crusades). Interdisciplinarity in this case involves the recognition of the borders of the explanation regardless of the existing disciplines and theories. The above statement is part of the output for the establishment of common research areas of polemology and *religious studies* (table 2).

⁸Q. Wright, *A Study of War*, University of Chicago Press, Chicago 1942, volume I, p. 247, after: H. J. Morgenthau, *Politics between nations. Fight for power and peace*, Publisher Difin, Warsaw 2010, p. 336.

⁹S. Peliński, *War: cultural and social issues*, Bydgoszcz 1925, p. 14.

Table 2. *Common Research Areas for Religious Studies and Polemology*

| |
|---|
| • human, as a basic study of religious studies and polemology |
| • religion as a war theme |
| • influence of spiritual leadership in the course of the war |
| • the Decalogue and the war |
| • the phenomenon of war in religions |
| • phenomena that govern the world (in the context of religion and polemology) |
| • the phenomenon of religious wars |
| • the implications of the religious wars of the past and future |

Source: author.

Religion and war are phenomena that affect one another. The statement that a comprehensive description, analysis and explanation of war and armed conflict does not fit within a monodisciplinary approach (taking into account only one aspect, dimension or level of organization) is a good starting point for the creation of a multidisciplinary program involving religion and warfare. Continuing, the monodisciplinary approach is unable to explain all aspects of the war. Understanding the multidimensional nature of war conditions grows gradually. Representatives of different disciplines, by means of different research methods, should tackle the various aspects of the war in different religions.

It is important to maintain research vigilance and ability to respond to research problems that do not fit within the traditional disciplinary framework (religious wars) in the correlation of research in polemology and religion. Such an attitude requires a thorough knowledge of the possibilities and limitations of one's own discipline, as well as the courage to undermine their own - both individual and disciplined - beliefs, perceptions of their limitations, and the willingness to undertake the risk of leaving the established schemes (including the institutional framework of the church).

Defense can be regarded as a specific instrument for the safety of an individual, a social group or society, to survive in a particular environment. However, defense was usually seen with the state institution. Consequently, its main focus should be on the survival of the state in a territorial and institutional context. *Defense studies* as a discipline related to polemology has a number of common research areas (table 3).

Table 3. *Common Categories of Defence Studies and Polemology*

| |
|---|
| • defense system of state |
| • the theory of the art of war |
| • organization and conduct of defensive military operations |
| • command and training of troops |
| • armed conflicts, war |
| • evolution and methodology of using armed struggle to achieve the goals of the war |
| • understanding the determinants of achieving victory in the armed struggle |
| • the etiology of the armed conflicts and war |

Source: author.

It is therefore possible to conclude that today's defense studies refer to the state as a political, legal, sociological, social and cultural category. On the other

hand, from the structural point of view, the focus of defense studies is to create conditions for the defense of the state. „Defense studies have become the heirs of significant areas of the theory after the military sciences, hence the justification that they create the criteria (produced knowledge, subject and object of research, scientific method, language of concepts, social need for research) as a scientific discipline is a truism”¹⁰.

The subjects of defense studies (formerly philosophy, art of war and later military science) are located in many areas of scientific knowledge belonging to different fields and disciplines. Hence, by identifying it, one cannot refer to: anthropology, ethnography, martial arts, philosophy, political studies, technical sciences, economics, praxeology, sociology, administration, polemology and security.

Despite presented in table 3.4. common research categories for defense studies and polemology, it is important to point out issues related to the direct conduct of research in this category. The interdisciplinary experience of polemology and defense studies deals with three levels of individual experience: cognitive, research and practical. In the first situation, experiencing interdisciplinarity can be related to the process of acquiring knowledge, collecting, transmitting, using (in theory, research and practice). In the second, the interdisciplinary experience relates to research practice (eg planning and implementation of research projects, analysis, elaboration and presentation of research results). The third level is related to the practice, in particular the didactic activity.

In conclusion, it is worth pointing out one more aspect of interdisciplinary research: unfortunately there is a negative phenomenon, which is the widespread use of knowledge in other fields in an inadequate way. The theories and research of experts in related fields are sometimes treated as a source of mental orthogonal insights. Such „scientific decoration" consists in gold-meditation, attractive quotes that fill the line, assist the author in exposing his or her issue, or giving it an emotional dimension.

In general, it can be stated that security and defense issues are inextricably linked. Many issues cannot be resolved separately, especially in terms of systematic analysis, which in a methodological sense can be a basis, especially in qualitative research.”¹¹. In spite of the above, it seems reasonable to separate the defense studies from security studies. In the context of wars and armed conflicts, *a security study has a number of relationships with polemology* (table 4).

¹⁰A. Czupryński, M. Chmielecki, *Basics of scientific research in the art of war*, National Defence University, Warsaw 2012, p. 100.

¹¹B. Szulc, *Methodological and epistemological dilemmas of security sciences and defense sciences*, [IN:] K. Raczkowski, K. Żukrowska, M. Żuber (ed.), *Interdisciplinarity of security studies*, Publisher Difin, Warsaw 2013, p. 28.

Table 4. *Links to the Research of Security Studies and Polemology*

| |
|--|
| • identification and evaluation of risks at global, national and local level |
| • internationalterrorism |
| • security policy |
| • modern securitysystems |
| • phenomenon and social processes that affect international security |
| • theory of security |
| • diagnosing and predicting security |
| • geopolitical and geoeconomical considerations of security |
| • the correlation between periods of peace and war |

Source: author.

It is important that there is a ruling institution in every country that has a monopoly on the legitimate use of violence and thanks to that it can eliminate the causes of conflict that could lead to the outbreak of civil war. Punishing the strikers, they get their potential followers motivated to attack on others for profit. This in turn leads to the neutralization of the „trap”, in which each of the mating mutual distrust of the community, is tempted to carry out a pre-emptive attack to prevent a motivated profit motive, attack the opponent. On the other hand, the system of rights that precisely determines the penalties for specific offenses and impartially imposes them may remove the urgent need for retaliation and the accompanying culture of honor. People can be sure that someone else will scare away their enemies, so that they do not have to keep their belligerent attitude.

In the case of a study of the correlation between the security studies and polemology, it is worth noting that the interdisciplinary study begins where idealization assumptions are not well fulfilled, where the factors that are from the point of view of a given discipline prove to have a significant impact on the studied phenomenon. And when it turns out that the phenomenon was constructed too abstractly in relation to cognitive needs. In addition, interdisciplinary research takes place, as is known, always in a context. In this case, war and security.

According to the SIPRI (Stockholm International Peace Research Institute) war is a greater armed conflict in which military divisions subordinate to two or more governments, or one government and at least one organized and armed organization”¹². In addition, when they are classified, they use a numerical indicator, according to which if at least 1000 people were killed in armed conflict in a given conflict, it is treated as a war.

War, in the theory of G. Simmel, is one of the characters of the conflict, more specifically – externalization of internal conflicts, from which the community cannot deal with (...) War – says Q. Wright, referring to the Simmels theory of the conflict is socially recognized form of conflict”¹³. By combining research aspects of *sociology* and polemology (table 5), it is possible to see war and armed conflict in a completely different side. Its determinants, causes and consequences take on different contexts by referring to sociological and demographic theories. An example might be: „the

¹²S. Dworecki, *From conflict to war*, Publisher BUNIK, Warsaw 1996, p. 122.

¹³F. Ryszka, *Politics and war*, National Publish Institute, Warsaw 1975, p. 57.

positive influence of the war can, however, manifest itself not only by strengthening the sense of community in those in which it was before, but also by instilling it to those who did not know it first (...) While strengthening the unity of the community, war implements one of the conditions of individualization the community: its internal closeness to a whole”¹⁴.

Table 5. *Areas of Common Research Interests in Sociology and Polemology*

| |
|---|
| • theories about the causes, features, duration of the conflict |
| • social change of society, and the image of war and armed conflict |
| • war as a social process, armed forces as a social structure |
| • individual as a cause of war |
| • short-term and long-term social effects of war |
| • war as a form of social life |
| • the test sequence of human behavior in a situation of war and armed conflict |
| • social diagnostics of the population participating in the war |
| • sociotechnics and how they affect image of wars |
| • the motivations of the commanders, soldiers and civilians involved in the war |
| • analysis of the war as a social phenomenon |

Source: author.

During the analysis of elements common to sociology and polemology, it was possible to distinguish variables that are characteristic of the emergence of wars and armed conflicts. These include the inequality of resources, in particular wealth and power. There are further social divergences, referring to the extent to which behavior in a conflict situation is under the supervision of others. The variables of social diversity, on the other hand, refer to the degree of communication in interpersonal networks, which determines the duration of peace in a given socio-cultural area.

P. Sorokin noted that reference in sociology and war are sometimes misinterpreted. He stated that „the types of scientific activity are extremely different in terms of sentences, directives, methods and problems. The observation that sociological discussions are available to people without special preparation, and the alleged accusation that sociology, by lack of strict methods, is not clearly distinguished from journalism and philosophy, does not apply to sociology that is blamed on the triviality of problems with precise methods of research”¹⁵.

Polemology, in view of the aforementioned variables, is able to develop theories related to the periodicity and rhythm of wars. Moreover, a broad approach to this problem reveals unobserved aspects such as the real impact of the group conflict on the probability of an armed conflict. Such awareness, and the formation of group conflict, gives the opportunity to distinguish the following conditions that affect the course of the war:

- technical (leadership and unifying ideology),
- political (the ability to organize),

¹⁴M. Szerer, *Sociology of war*, Kraków 1916, p. 50, 57.

¹⁵S. Ossowski, *On the peculiarities of social sciences*, State Scientific Publisher, Warsaw 1983, p. 170.

- social (ability to communicate).

One of the first issues emerging from the sociological point of view is the changes brought by war in the mutual relations of individuals and communities. We deal with the problems of these relations very often in the social sciences, and we encounter them in various forms, such as the influence of individuals on the community and vice versa. What they owe to each other is how far their mutual demands can go, and so on. The war, the result of which, by issuing a judgment on the fate of the community, decides how the individual paths of the life of its members will be arranged, and brings the momentary exaltation of coercion. Only the tension to the highest degree of merging activity can at this time ensure the future development of units on the same line as it was before¹⁶.

War, its impetus stimulates the community to intensify its activities in which national forces are trained. Already from the gymnasium, the war works for the well-being of the community, and the tempo of its chances of success in the race for existence¹⁷. War adds impetus to social wandering, and it further strengthens the development momentum of the community and increases the resources of its forces for future work. It creates an outlet for the power that the community has developed in itself, but which dole out in it, unable to reveal itself.

War is only one way in which people kill other people. In most parts of the world, the war is gradually transforming into lesser-scale violence, for example in ethnic conflicts, gang wars, bloodshed and single killings.¹⁸

War itself, in its motives and objectives, undergoes relatively little rationalization, and further delays its development in other spheres of human activity. If not repeated in the history of war, progress in rationalizing economic life would be greater. The same can be said in other spheres of human life. „The gradual rationalization of war is a phenomenon that does not exclude the fact that war was and remains one of the less rational, less intelligible and understandable manifestations of human life¹⁹.

War is also the economy, the acquisition of means to meet needs, the enrichment of individuals, the earning. It is not production in the strict sense, because the new goods that people produce in connection with the war are relatively small. It is mainly about the passage of violence, already existing goods, from hand to hand. War is economically very unreasonable. Part of the cost is the loss of lives of many people - the size is largely unpredictable. The size of other losses is more apparent. Their counter weight - future, uncertain profits²⁰.

According to G. Bouthoul, war is primarily a matter of sociological and demographic nature. In all cases, war is a collective murder, organized in the atmosphere of exaltation of the notion of death, whether as murder or sacrifice. The circumstances that predispose the nation to war are the possession of young people at their disposal and a certain higher technical potential. The excess of youth and

¹⁶M. Szerer, *Sociology...*, op. cit, p. 38.

¹⁷Ibid, p. 64.

¹⁸S. Pinker, *Tabula rasa. Disputes about human nature*, Gdańsk 2005, p. 433.

¹⁹A. Krzyżanowski, *Sociology of war*, p. 21.

²⁰Ibid, p. 90.

overpopulation do not lead to war itself, but overcrowding brings other destructive factors such as hunger, emigration, etc. Unlike the slow ways of destruction, war creates unexpected demographic shifts. In addition, G. Bouthoul believes that war is not the mean, but the goal of the means. Aggressiveness can be temporary, transient, limited to individual or small group. War impulse, on the other hand, is a general and profound state. Often it is more a state of universal acceptance, approval of past violence, than the image itself. A citizen of a state where public opinion considers war as necessary does not usually think of acts of violence that will take place. If it is not military, the struggle is very weak, and even worse, its own death or wound, but it accepts the idea of a general sacrifice. Psychologically, war is always the death of others. War impulse is a spiritual state, but it does not induce acts of violence. It is rather a sense of the need for a period of violence and destruction. First is the conviction, only later the action, sometimes only the passive consent to the cataclysm, which is considered inevitable²¹.

Psychology has put forward the question of whether war is a „natural state”, or is it imposed on individuals by individuals who are egoistic? The question, as well as others, has made psychology a science that correlates with polemology. Common research interests are presented in table 6.

War, as a particular state of society, causes individual and social groups to live in specific circumstances. It is necessary, separate than in the state of peace, social contacts and the process of socialization of the individual in the conditions of war. In unfavorable conditions of war, with the increase of aggressive behaviors, anxiety and distances from social contacts, the psychosocial needs determine the membership of the group²².

Table 6. *Research Links of Psychology and Polemology*

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|--|
| • human as a base entity taking part in the war |
| • discovering the mechanisms and laws governing human behaviour during wars and armed conflicts |
| • the perception of enemies and psychological aspects of the interaction between soldiers |
| • the relationship of mental processes and physical participants of armed struggle |
| • the role of the individual and society in wars |
| • psychological background of human aspirations |
| • personality, character and individual conditioning influencing the image of war |
| • psychological problems of life in the military |
| • psychology of combat |
| • strategies and motivation of commanders and soldiers |
| • the evolution of human behavior during the war |
| • the impact of war and armed conflict on the psyche of the soldiers and the civilian population |

Source: author.

²¹G. Bouthoul, *Les Guerres, Eléments de Polémologie*, Publisher Payot, Paris 1951, after : G. Picon, *Panorama of modern thought*, Publisher Libella, Paris 1967, p. 210-211.

²²M. T. Frankowski, *Man in extreme conditions. Sketches from the sociology of war and army*, Publishing Agency ULMAK, Warsaw 2001, p. 12.

When entering into the organization of social relations, during the war, a man is forced to count on a new system of interpersonal relations, we must reinterpret the current behavior. In addition, we should be able to use the collective experience contained in the norms and traditions of the war. Distorted by war, psychosocial processes cause valuable traditions to be negated by less valuable customs.

In societies in which are constantly disputes and wars, the ability to use violence becomes one of the most important male virtues. Killing enemies and doing more warfare ensures a high status man, and murder can be even a compulsory element of the ritual of adulthood²³.

Q. Wright claimed that there was no clear difference between approach and attitude, as against the war. So you can say that private attitudes are probably influenced by personal (war-related) aspects of war - death, destruction, killing, invalidity, glory, adventures, refugee, economic benefits. On the other hand, the assessment of these possibilities and events depends on inherited impulses of self-preservation and family feelings, from social norms acquired through education, religion and group experience, and from the personal position formed by the overlap of the past, ordering to reconcile their own impulses with social demands.

According to Q. Wright, public is aiming to express public aspects of the war: national defense, its own policies, national ideals, international law, world politics, human well-being, justice and progress. In this context, it is also worth looking at the influence of culture on human aspirations²⁴.

The research links of psychology and polemology should be carried out not only by less or more accidental compilation of scientific problems, but also by their cooperation, which would allow the same phenomena to be studied at different levels of analysis simultaneously (eg level of analysis of behavior and level of analysis of operations occurring on internal mental representations). Such an analysis is often very difficult, eg each of the analyzed levels refers frequently to the concept of consciousness (conscious behavior, conscious representation, conscious system), but its understanding, operationalization and related specific research questions posed by polemology and psychology are far different.

In conclusion, the basis for going beyond the field of one specialty (polemology) and reaching for another (psychology), and even others (sociology, history), requires openness to other research areas and at least retrospective knowledge of them.

War was from old times the subject of profit and loss calculations. The human loss account, especially tragic and especially strong on the imagination, was probably one of the most important stimuli for scientific analysis of the war, but certainly not the only one. The calculation of losses and profits was accompanied by the idea of war as it was the highest risk for the parties involved in the conflict. We can even assume that scientific calculations are currently being conducted to prevent war. It is advisable to investigate war and armed conflicts (one and the same object) through various disciplines with their specific methods and being foreign” in their own language. Therefore, *economics* is a science that correlates with polemology. Their common areas are presented in table 7.

²³S. Pinker, *Tabula rasa...*, op.cit., p. 462.

²⁴Further information on P. Sorokin's theory on the influence of culture on human aspirations can be found in F. Znaniecki's, *Method of sociology*, Scientific Publisher PWN, Warsaw 2008, p. 65-120.

Table 7. *Categories Which Implies Economics and Polemology*

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|---|
| • production, distribution and consumption of goods during wars and armed conflicts |
| • human needs in the course of wars |
| • internationaleconomic relations |
| • functioning of the economy in time of war |
| • peace economics and economics of war |
| • strategic raw materials as a conflict category |
| • the technological revolution |
| • military expenses |
| • professionalization of the armed forces and reinforcing production |
| • the economic mechanisms that drive the course of wars and armed conflicts |

Source: author.

In the case of research, from the point of view of polemology and economics, the subject of analyzes using the theoretical resources of these disciplines makes a war - a systemic phenomenon. At the same time, models developed within one discipline (economics) can be transferred, at least to some extent, to the other discipline (polemology). The typical problems that arise are the questions: How can economic models describe wartime processes? How can economic models describing the emergence of economic structures be used to model socio-economic processes influencing conflict? Such studies of war require the cooperation of economists with polemologists, and their purpose is to understand how general categories obtain detailed exegesis in the disciplines of discourse.

Referring to the current international situation, it is important to correlate wars and armed conflicts to the future. This direction has been identified as one of the future areas of common research interest in economics and polemology. The severe economic crisis that began in 2008 and continues to grow, has recently become drastically sharpened, has become a starting point for growing criticism of the economy of the armed forces, the defense industry and armed conflict. Furthermore, the social consequences of its actions are being criticized. However, they are also an impulse to reflect on the changes and constructive remediation of modern world reality. Although such radical ideas are not yet in place, the idea of moving to a social (not military) market economy is in the current trend.

Polemology recognizes that the causes of wars should be at the economic level, mainly political: alliances, coalitions, changes of opinion under the influence of ideology and propaganda or religion²⁵. Therefore, correlations between the *political studies* and polemology have also been presented (table 8).

War science is a kind of research that requires from researcher a professional, comprehensive knowledge of more than one discipline (eg. political studies or geography) to accomplish a research goal that is impossible to achieve within a single discipline.

Political scientist B. de Mesquita has „analyzed the causes of the 251 military conflicts that have been taking place in the world over the past two centuries, and

²⁵Z. Cesarz, E. Stadtmüller, *Political problems of the modern world*, Publisher of the University of Wrocław, Wrocław 1996, p. 80.

concluded that in most cases the aggressors correctly estimated that a successful invasion would serve the interests of their country”²⁶.

Table 8. *Relationship of Political Studies and Polemology*

| |
|--|
| • war as continuation of the policy |
| • exercising political power |
| • international relations |
| • movements and politicaldoctrines |
| • state and its functioning during the period of the war |
| • state as a side of to the conflict |
| • internal and external policy of state |
| • transformation of forces, military alliances |
| • evolving the map of political influence in the world |
| • formulation of strategies and systems of national security |

Source: author.

Political studies gives synonyms of openness, susceptibility to new ideas, going beyond the rigid in this discipline inefficient models of scientific activity. They are the expression of criticism of the present state and the desire to change it. In addition, through interdisciplinary approaches in polemological studies, progress will be made in solving theoretical and empirical problems, previously analyzed separately by particular disciplines (political studies). The use of research methods in the field of political studies allows not only to re-interpret the effects described by polemology, but also to propose new research hypotheses, which could not be worked out using the methodology of only one of the scientific disciplines. It seems that such an approach in the study of war and armed conflict should be applied as widely as possible.

Today's research is not an isolated system, but its reconstructions are possible in close connection with other systems, especially with the state (law, administration, financing, evaluation, etc.) and business (finance, dependency, management, evaluation, verification, etc.).

Diplomacy is one of the possibilities for resolving wars and armed conflicts in the future. It is diplomacy, which allows us to see the intrinsic value of internal initiatives and to understand that the solutions imposed by the winners are very rare (if any) regulating these problems. Only the participants of the conflict (internal or international) can best identify their needs and develop the techniques they need to meet them. These aspirations may be translated into the language of peace initiatives, negotiation programs, and a deeper doctrinal-ideological justification.

Geography, as one of the natural sciences, was listed as a science related to polemology by its nature and subject matter. Common areas for both specialties are shown in table 9.

Conducting research on wars and armed conflicts worth of discussing is an approach that links them to geography. Because of the specific characteristics of the research object itself - war (complex, multidimensional and variable) - a

²⁶S. Pinker, *Tabula rasa...*, op.cit., p. 451.

multidisciplinary approach is required. Some issues, especially large, variable and difficult to grasp, do not fit within one discipline but require a broad, over-disciplinary approach, an open-minded approach, and inspirations from outside the discipline of geography. Polemology and related wars require different perspectives (specific triangulation) or even an integrated, common approach combining the elements of geospatial perspectives to capture complexity of armed conflict. The multidimensional approach, which provides the perspective of wars from a geographic perspective, is a promise if we do not capture the whole complexity of the problem which is investigating, at least its most important features, much closer to that of polemology itself.

Table 9. *Correlative Areas of Geography and Polemology*

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| • geopolitical theories |
| • geographical space and armed conflicts |
| • natural environment and activities of societies |
| • geography of population |
| • geography of war |
| • the impact of geographical environment on the course of wars |
| • criteria for geographical and geopolitical presence of wars |
| • descriptive and analytical approach to the war |
| • climatology and weathermodifications |

Source: author.

The goal of all geographers is to understand the phenomenon and not to be confined by methodology. Particularly in military geography, the use of methods that are not (traditionally, formally) assigned to the field should not be denied. It is therefore advisable to use the methodology of polemology, provided that they are applied professionally, properly and comprehensively. And for that reason, I think it makes sense to develop this scientific specialty, because it gives some insight into the world and some methods. It also gives a sense of making research in particular discipline.

Informatics pervades many areas of sciences, being a tool to support a given field, research methodology or research topic, widens its perception. Therefore, there are relationships between informatics and polemology. The subjects of research, common to engineering and informatics, and polemology are also listed (table 10).

Table 10. *Correlative Areas of Informatics and Polemology*

| |
|---|
| • information processing of historical, present and future wars |
| • design, construction and modification of weapons |
| • development of military technology |
| • information war |
| • cyberspace |
| • robotics |
| • information technology |
| • military engineering |
| • future wars |
| • new conditions and combat environment |

Source: author.

As elements of correlating polemology and informatics can be mentioned: projection of future conflicts (information processing); analysis and forecast of the force system (information processing); identification of the aggressiveness lines (fronts of polemology); lines of aggression within the states. It is advisable, in future polemological studies, to pay more attention to aspects of information, its flow and its impact on the possibility of war and armed conflict.

It is also advisable to refer to irenological issues, because the path to the study of peace leads by learning the anatomy of war. By studying the sources, the matter and the probability of a war, we can determine the conditions for peace. Peace is non-violence and broad international cooperation (information processing).

The polemologist J. Bloch claimed that the arms race („shield and sword”), that is arms, defense and offensive equipment, both on land and at sea, would lead to a situation that neither the economy could handle with it in the broad sense concepts (transport, communication, supply, medical service), neither the state system, nor the psychological power of society. In addition, J. Bloch was the precursor of the comprehensive application of quantitative methods. Since then, the war has become increasingly objectively measured in economic and political literature.

In a polemological context, it is worth pointing out the elements of informatics that influence the formulation of war rules, their functions, etiology, and anatomy. Among them are the following: system and comprehensive study of war and peace using simulation programs; cyberwar; hybrid war; information sphere. By extending these aspects, polemologists should use in their future research the methods used in informatics. These are: programming and software engineering; inference and decision support; job scheduling theory; theory of computational complexity of algorithms and discrete problems; computerized multi-criteria decision support systems; graph theory and operational research. These methods can enrich the existing theories of polemology and contribute to the increased probability of future wars and armed conflicts.

Often, in the context of information technology, it is linked to cyberspace, but these concepts are incompatible because:

- „informatics is a set of scientific and technical disciplines dealing with information processing,

- cyberspace is the notion of an undefined space consisting of the creation of human activities in the field of informatics in the fields of engineering and technology”²⁷.

Informatics, in recent years, has largely changed the perception of security. Cyberspace is a new dimension. The dimension of society, resulting from research in the field of engineering and technology. The new aspect is the cybersecurity, where a large emphasis is placed on risks arising from the concept of cyberspace as a battlefield, the definition of cyberwar, infowar, net war which concerns around military state of war.

Conclusion

Generally, interdisciplinarity, as demand reality across scientific disciplines, is, in a sense, added value. This is due to the fact that an overview of the test of reality from the perspective of the various branches of scientific broadens, deepens, modifies and clarifies the research results, what science is certainly beneficial.

In the way of further research also require the following aspects:

- whether the goal is to provide interdisciplinary knowledge for the purposes of other than sciences and resonance in different scientific disciplines (both in the field of research and education)?
- is it possible to form a multidisciplinary language, define what is the role of the language, concepts, translations from one discipline to the other?
- when we can say that the issue is interdisciplinary?
- specify the form objects for interdisciplinary studies,
- identify the differences of the interdisciplinary scientific and disciplinary non-scientific knowledge and the ratio of interdisciplinary research to traditional scientific disciplines.

About interdisciplinarity we can discuss only in interdisciplinary way, this means in an interdisciplinary group. However, it requires a good awareness of the methodological disciplinary partners in such a discussion – a strong sense of the identity of the represented disciplines, awareness of its methodological limitations, weaknesses and made of suppositions, and high culture, especially openness on the counter and ready to review its position. Interdisciplinary and transdisciplinary approach can thrive only on a foundation of strong disciplinary research, otherwise there is a danger that under the guise of interdisciplinarity will be boomed scientific dilettantism and disciplinary erosion.

The research results also showed that polemology in its research should be more targeted. Such a belief leads to dialogue in science, creative imagination, which result can be limited to: reinventing the original and important now polemological issues;

²⁷T. Muliński, *Security in IT terms*, [IN:] K. Raczkowski, K. Żukrowska, M. Żuber (ed.), *Interdisciplinarity...*, op. cit., p. 127.

creating new interdisciplinary research projects; creating practical alternatives; change makers in science (creation of new fields and disciplines).

The research shows the general approach to science – it should be interdisciplinary. Many of the reasons indicates that the currently having any scientific discipline, requires knowledge of the covariate (ignorance) with a range of other scientific disciplines.

The conclusions of the study can be used in the field of theory and practice, as well as guidelines for further research, for example indicators in the formula of interdisciplinary projects. Presented in the work of the applications are evolving in the direction of thinking that polemology is an important scientific branch and specialty, should be developed in the future. Presented interdisciplinary approach of polemology, requires the correct framing her covering, and define criteria of science and scientific disciplines that may correlate with it in the future. Therefore, in the future review of interdisciplinarity of polemology, should take place in a group of experts in various fields, which will allow for a broader approach to the problems.

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