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THE SECURITY (CULTURE) RHOMBUS. REDEFINING SECURITY ENVIRONMENT

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ABSTRACT

Goal The goal of this article is to present the author's definition of security environment. It constitutes a redefinition and expansion of the narrow (four-element) approach presented in the *White Book on National Security of the Republic of Poland*. I propose a broad, eight-element approach.

Methods I redefine security environment based on several premises. The first is the concept of the triangle of (the need for) security – the existence of this triangle necessitates and is sufficient for the need for security to arise. The second premise is the existence of the rhombus of security (culture), which necessitates and is sufficient for security to manifest, i.e. for the need for security to be satisfied.

Results The above premises lead to the conclusion that the narrow approach to security environment should be ontically expanded to include elements comprising the triangle of the (need for) security and the security (culture) rhombus. This results in an eight-element definition of security environment.

Conclusions The article illustrates an important issue in the security sciences – the need to expand the definition of security environment. I present and justify an alternative to the narrow approach to security environment, which is based on the narrow definition presented in the *White Book on National Security of the Republic of Poland*.

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KEYWORDS

security environment, redefining security environment, security rhombus, security triangle

INTRODUCTION

In the security sciences, security is defined differently by individual scholars¹. Most frequently, these definitions refer to the term's etymology, that is the Latin word *securitas*, which is a combination of two other Latin words: se – without, and cura – concern. The sum of these two words can thus be translated as *without concern*.

Linguists and most scholars interested in *security* understand the term to mean primarily a situation² a particular person (or group) finds itself in where no need arises to expend any effort to engage in protecting, caring, supervising more diligently or controlling, and where no need arises to counteract the effects of such situations.

Jarmoszko, in his analysis of the etymology of the Polish word for security (*bezpieczeństwo*), demonstrates that the term "piecza" could also refer to a *problem* or *suffering*, e.g. physical pain, which can be directly associated by some with the sensation of burning (Polish *pieczenie*). In this context, the expression "bez pieczy" refers to being free from concerns, worries or pain.

This points to a fact which is very important from the perspective of the security sciences, and which may appear paradoxical: *threat* is a key element of the *security sciences*, as without identifying it, *security* could not exist. To be more precise, **threat** gives rise to **the need for security**. It is only when this need arises that we begin to invent and take actions aimed at ensuring **security** – the desirable and sought-after *freedom from threats*.

Threat and its counterpart stem from sources rooted in three intertwined *environmental* spheres of human existence: the natural, social and broadly-defined technical sphere. Humans strive to create a *security envi*ronment for themselves, which refers (in simple terms) to a sphere where

See e.g. J. Gierszewski, Bezpieczeństwo społeczne. Studium z zakresu bezpieczeństwa narodowego, Warszawa 2013, p. 7; L.F. Korzeniowski, Podstawy nauk o bezpieczeństwie, Warszawa 2012, p. 49. S. Jarmoszko, Antropologia bezpieczeństwa. Kontury naukowej tożsamości, Siedlce 2015, p. 33.

² Situation – a category used in the social sciences, introduced by Thomas in 1928; implies that the circumstances in which a given individual or group (*security*) subject finds itself in are assessed subjectively.

hazards occur more rarely than outside of it, and where they are neutralised faster and more effectively than beyond its boundaries.

The White Book on National Security of the Republic of Poland focuses a great deal on the term security environment. However, as a long-time scholar of security, I believe that it is necessary to expand the definition of security environment provided in the White Book..., and would like to present an alternative to the narrow approach to security environment in the form of my own, broad approach.

However, it is important to first present the premises which led me to its development.

THE TRIANGLE OF (THE NEED FOR) SECURITY

Both the need for security and the *security sciences*, whose purpose is to help us satisfy this need, can only arise in the ontological and epistemological³ environment determined by the existence and functioning of the three constituent parts (and their respective terms) presented below. The area of this environment is marked by the shape that I refer to as the security triangle (securitological triangle). In actuality, it is the triangle of the need for security, which comprises the following.

1. SUBJECT – a being existing in the time and space of its existence and actions.

A subject is a human individual or social group possessing either an individual or collective consciousness and self-awareness, a unique identity and the full capacity to act deliberately and sovereignly.

2. VALUES - goods which are important to that *subject* at the time and in the space that they are in.

A value is an abstract or material good which is important to a given subject, a clearly defined, expressed and valuable idea or item which is the object of important needs of individuals and groups, strongly influencing the choice of methods and means used by these subjects (simply put – it is a valuable, desirable good and an object of human striving, a source of meaning for human thinking and acting).

³ Ontology – the study of being, the manner in which someone or something exists, as well as a system of terms and relations between concepts within a given field; epistemology - explicates the subject, contents, methods, criteria and processes of human cognition.

3. THREATS to possessing *values* by a given *subject* and achieving further *values* desired by that *subject*.

A **threat** is a conscious or unconscious unfavourable situation of a given *subject*, whereby there exists a significant risk of losing (or negatively affecting) the non-material and material *values* possessed by the *subject*, or losing opportunities for further *growth* (regressing), which would allow the *subject* to obtain more needed *values*. (Note: the same risk may be less significant or insignificant for a different *subject*). **Security is the opposite of threat**.

A situation where a complete *securitological triangle* does not manifest, i.e. only two of its elements exist (a *subject* and unthreatened, vital *goods*) and where there is no **need** to be concerned about *values*, as they could be always easily achieved, could only truly occur in paradise.

If, at some point in time and space, one could find "certain freedom from threats" (which is, to digress, the *ideal type*⁴ of security, as well as its most ancient definition) – then the need for achieving the opposite of hazard would not manifest, thus precluding the need to conduct research on security, which would not exist as a phenomenon.

Note – a conclusion which is pertinent to the discussion arises at this point:

If a society does not feature a (complete) security triangle, the need for security cannot manifest!

The need for security itself is insufficient to give rise to security. The need only serves to awaken human ambitions and, optionally, provoke actions aimed at creating an *environment* where, for many different cases, the probability of situations opposite to *hazard* increases. This is the need that humanity has attempted to satisfy for thousands of years by inventing and **perpetuating** certain elements in this *environment*. These elements are knowledge, skills, experiences, morale and proper and effective methods and means of action, which help humanity to achieve the goal discussed here. These achievements, which are part of our culture, constitute **security culture**.

⁴ According to Weber, an *ideal type* is an abstract archetype which possesses characteristics important for a given social phenomenon; the concept of *ideal types* can be used to compare the form of a given social phenomenon with its intellectually-shaped, abstract archetype; as an example – to compare a particular system of administration to the *ideal type of bureaucracy*.

THE RHOMBUS OF SECURITY (CULTURE)

What we refer to as security can only arise in a concrete ontological-epistemological *environment* comprising clearly defined elements and categories which represent it (i.e. the terms corresponding to these elements). The range of the conditions necessary to create this *environment* can be presented in the form of an abstract, onto-epistemological shape which I refer to as the **security (culture) rhombus** (*securitological rhombus*). **The security rhombus** comprises the four interconnected elements listed below:

- **1. SUBJECT** understood to refer to a **security subject**, existing in a particular point in time and space and under the influence of natural and social conditions, which also constitute elements of the environment and its effect.
- **2. VALUES** the definition of the term is analogous to the definition of its counterpart in the *security triangle* (**goods** important to a given *subject*).
- **3. THREATS** the definition of the term is analogous to the definition of its counterpart in the *security triangle*
- **4. SECURITY CULTURE** a humanity-specific generator of a social energy possessed by a given group or individual *subject*. This energy grants the subject resilience and the broadly-understood ability to defend itself from *threats*. **Security culture** (**sc**) comprises the entirety of recorded material and immaterial human achievement, forming in a given time and place a source of military and non-military constituents of broadly-defined human resilience and defence; it enables individual or collective *subjects* to (a) maintain the necessary level of *security*, (b) restore it (should it decline) and (c) increase it (if necessary); *security culture* ensures and stimulates the development of individuals and social groups; **sc** is analysed with respect to the following areas: (1) mental-spiritual⁵ (the individual dimension of the *social reality*), (2) communal-legal-organisational (the group dimension of the *social reality*) and (3) material (the physical dimension of the *social reality*).

Note – another key conclusion arises at this point:

When the *security triangle* is expanded to include a fourth, onto-epistemological element – *security culture*, forming a *security rhombus* – then it becomes possible to act with the aim of meeting the *need for security* of

⁵ C.G. Jung, O zjawisku ducha w sztuce i w nauce, Warszawa 2011.

a given subject (protection from and defence against *threats* to maintaining and expanding important values in the *subject's* possession).

The existence of the security rhombus thus constitutes a necessary and sufficient condition for *security* to manifest, which means that the narrow approach to *security environment* must be ontically expanded.

SECURITY ENVIRONMENT, NARROW APPROACH - WHITE BOOK ON NATIONAL SECURITY OF THE REPUBLIC OF POLAND

All the above-mentioned elements of the *security rhombus* "operate" every day in a particular *environment*, not an eco-social vacuum. **A number of such** *security rhombi* form in every *environment*, **comprising the defined constituents and certain interrelations.** These *security rhombi* function and impact the *environment* differently and, this should be made clear – are frequently more or less, directly or indirectly, interdependent.

The primary purpose of every *security subject* is to influence in every manner possible the environment it exists in so that they can modify it in a way which results in an *environment* which is both favourable and which constitutes something more – a *security environment*, that is one which both passively and actively protects the *subject* from various *threats*.

It should be noted that the fundamental legal act binding in Poland, the Constitution of the Republic of Poland, defines the *security of the state*, that is of the central *security subject*, by focusing on the category of *citizen security*⁶. Article 5 of the Constitution clearly stipulates that the *state* is synonymous to the *citizen collective* inhabiting it, i.e. it is related to the concept of *nation* in the political sense, that is a collective *subject*, the suzerain *de facto* constituting the *state*⁷.

Thus, it is important to activate the entirety of Polish society. In this context, the role of the elites, i.e. leading researchers and politicians, is of particular importance as regards the affirmation of and exemplifying attitudes aimed at increasing the level of nation-wide dedication to the domestic security environment. The glossary of the fundamental terms used in the White Book on National Security of the Republic of Poland contains the following definition of security environment.

Definition – White Book on National Security of the Republic of Poland

⁶ More on this topic in can be found in W. Kitler, *Bezpieczeństwo narodowe RP. Podstawowe kategorie. Uwarunkowania. System*, Warszawa 2011, pp. 16–22.

⁷ The Constitution of the Republic of Poland of 2 April 1997 (Journal of Laws 1997 no. 78 item 483), Art. 5.

The security environment of a given security subject comprises "the internal and external, military and non-military (civilian) security conditions (the conditions for the realization of the interests of the given entity in the field of security and the attainment of the goals designated by such entity in this regard), characterized by using four basic categories, i.e.: opportunities, challenges, risks and threats"8.

The constituents of security environment listed in the definition are explicated in the White Book on National Security of the Republic of Poland as follows:

- [1] "Security opportunities circumstances which arise independently of the will of the given entity (phenomena and processes occurring within the security environment) which are favourable to the realization of interests and the attainment of objectives of the entity in question in the field of security.
- [2] Security challenges problematic situations giving rise to decision-making dilemmas faced by the given entity when adopting its course of action with regard to security issues. If security challenges are not properly addressed or responded to, they may, in effect, transform into actual security threats.
- [3] **Security risks** risks of occurrence of consequences of the actions of the given entity within the sphere of security which are unfavourable to the entity in question.
- [4] Security threats direct or indirect destructive influences affecting the given entity. It is the most classic factor which appears within the security environment; threats can be divided into potential and real threats, subjective and objective threats, external and internal threats, military and non-military threats, threats related to crises and armed conflicts as well as intentional and accidental (fortuitous) threats"9.

REDEFINITION - A BROAD APPROACH TO SECURITY **ENVIRONMENT**

The concept of the security rhombus and accepting the premise that the shape is the "nuclear" necessary and sufficient condition for security to manifest both have a range of consequences. The result is the need to ontically

⁸ Biała Księga Bezpieczeństwa Narodowego Rzeczypospolitej Polskiej, Warszawa 2013, p. 247.

⁹ Ibidem, p. 248.

expand the narrow definition of *security environment* for the purpose of certain analyses. The justification for this thesis lies in the fact that the narrow definition lacks the elements necessary to ontically complete the scholarly picture of *security environment*, a deficiency identified based on the existence of these elements in the culturalist and eco-social concept of the *security rhombus*.

The approach presented here partially originates from the holistic approach of social ecology. Taking into account the fact that the basic typology of hazards encompasses internal and external threats, I reject approaches which refer to security environment as the surroundings of a security subject. This may appear true to individual and small-sized group subjects. A subject located in e.g. a forest will feel a strong sense of dread caused by the environment, and will attempt to create a security environment for itself by building a fire, for example. However, the interior of the *subject* also generates hazards, even latent, yet still existing, resulting in the somatic effects of stress, which can be observed on the outside. Thus, the interior and the exterior of a security subject also constitute parts of its security environment, which is why, when analysed from this holistic research perspective, security environments also comprise entire security subjects. Irrespective of this, the theory is a universal construct which is supposed to function both in relation to individual and larger security subjects, e.g. nation-states. In relation to the latter subjects, hardly anyone believes that their security environments are their surroundings and that the issue of internal threats can be ignored.

The essentially holistic, **socio-cultural** (or **culturalist**) **perspective** of the *security sciences* led me to attempt to expand the definition of *security environment*. **Social ecology** (**human ecology**) is a *social science* which is of utility for the inter- and trans-disciplinary *security sciences*, including in relation to research on *security environment*. The discipline analyses the spatial organisation of human communities and the mutual influence of the spatial organisations of such collectives and the behaviour and actions of individuals.

As an example, Znaniecki, when referring to cities (which can in general terms be assumed to constitute a type of *security environment*), describes them as a "non-spatial, humanist whole which manifests in human experience and action. Humans [as *security subjects*] may inhabit an urban area and thus consider themselves its 'residents'; the spatial conditions influence their life; [...] they are [however] not only bodies, but also

experiencing and active subjects, and [...] it is not that they are in the city [...] – the city is within the sphere of their common experience and actions, they create it [also as a security environment] in the form of an extremely complex social structure"10.

Security environment elements in the broad approach:

1. Security subject and its three related factors: 1b) time, 1c) space: the location and conditions in which the subject exists, 1d) influences and interrelations. The interior of the *subject*, its exterior (boundaries) and environment holistically constitute a security environment, similar to a researcher who, as a participating observer of reality, is an element which contributes to it. The unclear nature of this may lead those with less experience with interpreting the definition of security environment to erroneously separate the security subject from its environment, which results in an abstract separation of this being from its environment, so distinctly in fact that the surroundings of the security subject are conflated with its security environment (this has also occurred in the relevant literature, and such sources are easy to find). This non-holistic interpretation of the important sphere of reality that is security environment, an interpretation that is far removed from the socio-cultural approach and social ecology, may lead to being unable to conduct the full scope of research on *security*. This approach precludes researchers from studying internal threats (which are also security environment constituents), or dismisses internal threats as part of the studied *security environment*. This would be a valid approach if the interior of *subjects* was not considered an integral part of their *secu*rity environments. I believe that a subject's security environment is the sum of its interior, exterior, surroundings and the elements listed below. The theory utilised by the security sciences should be universal and offer utility in the case of both individual and collective security subjects - be it individual humans or entire states. In order to achieve cognitive enhancement¹¹, let us deliberately refer to socially-important common knowl-

¹⁰ F. Znaniecki, J. Ziółkowski, Czym jest dla Ciebie miasto Poznań? Dwa konkursy: 1928/1964, Warszawa - Poznań 1984.

¹¹ Cognitive enhancement is a factor related to expanding, increasing and developing human intellectual abilities, including cognitive processes, emotions and senses. Cf. N. Bostrom, A. Sandberg, Cognitive enhancement: methods, ethics, regulatory challenges, "Science and Engineering Ethics" 2009, 15(3), pp. 311-341, DOI: 10.1007/ s11948-009-9142-5. It may involve various types of actions aimed at improving and expanding the base range of human mental abilities, i.e. increasing IQ and awareness,

edge, which informs our everyday actions. A person who lands on e.g. an unknown planet will consider their new environment, which requires a great deal of courage, as their current security (and threat) environment. When looking at a screen which displays the astronaut's movements in the form of a glowing dot, we may erroneously disregard internal threats. This speculation is not purely theoretical – I am of the opinion that the functioning of the administration, for example, when analysed from the perspective of the security sciences, frequently and erroneously disregards the internal constituent of the personal aspect of human security. Similar applies to states - certain depictions of states present them as points surrounded by neighbours. An inexperienced observer will gloss over the parts (territory) of the state's security environment where the need for internal security arises. The culturalist and eco-social perspectives prevent these errors from occurring due to a holistic approach whereby a subject is part of its environment, including its interior, boundaries, exterior and the three conditions: 1b) its time of existence/action, 1c) the space and spatial conditions in which the subject exists and 1d) the influences and **interrelations** in which the *subject* is "submerged".

2. Values are an element of the *security rhombus* and a broad definition of *security environment* must also include them. From the perspective of practical science, the opinion of Krzyżanowski¹², according to which directing actions is impossible without making *values* the central element, is a valid thesis. It should also be noted that both *values* and the *security sciences* feature trans-disciplinary connotations. According to Kluckhohn (1905–1960), Values are concepts which are either concrete or possible to arrive at, referring to that which is desirable, typical of an individual or group, and that which influences the choice of available means, measures and goals when one has to act¹³.

enhancing creativity or memory, or expanding human perception. Cf. A. Sandberg, N. Bostrom, *Converging cognitive enhancements*, "Annals of the New York Academy of Sciences" 2006, 1093(1), pp. 201–227.

L.J. Krzyżanowski, O podstawach zarządzania: paradygmaty, modele, metafory, filozofia, metodologia, dylematy, trendy, Warszawa 1999, p. 199.

¹³ C. Kluckholm, Values and Value – Orientations in the Theory of Action. An Exploration in Definition and Classification, [in:] Toward a General Theory of Action, T. Parsons, E. Shils (eds), New York 1962, p. 395. See also: Theories of Action and Morality: Perspectives from Philosophy and Social Theory, M. Alznauer, J.M. Torralba (eds), Zürich – New York 2016.

- 3. Threats to security subjects situations involving a conscious or unconscious probability of losing (or otherwise diminishing) important values possessed by a subject or losing the ability to develop and achieve further, precious, necessary values; in short, threats are potential or actual destructive actions targeting the ability to maintain and expand via one's own development the values important to a given subject.
- 4. **Security culture** is another element of *security environment*¹⁴, constituting a complete socio-cultural system, which does not exist in the narrow definition of security environment (and the typology of its constituents). It encompasses all recorded human achievements enabling subjects to deal with threats.
- 5. **The needs and development of a security subject** are also elements of its security environment, which are not included in the narrow definition of this human-specific environment. Needs are the reverse side of values they constitute a factor which motivates security subjects to develop and act in a way which helps them to pursue their interests. When one analyses the social functioning of security, one arrives at a conclusion which is important from the perspective of applying the security sciences. The conclusion relates to the relation between values, needs and development and security culture. Another thesis advanced by me, based on the work of Krzyżanowski, states that values which a subject strives to attain (as a result of the need to attain them) influence actions (development) via motivations and attitudes and constitute parts of the security culture the criteria according to which individual and collective goals are set15.
- 6. **Opportunities** of a *security subject* are situations which render it easier to pursue its interests and achieve goals related to security.
- 7. Challenges to security subjects are situations which give rise to the need to consider and make difficult decisions, situations which always involve decision-making by a security subject, and which result in actions related to the *subject's* development, and thus its *security*.
- 8. Risks for security subjects involve percentage-based estimates of negative effects occurring as a result of certain actions or - 8b) uncertainty, resulting from the sense of possibility of unclear circumstances and hindrances arising.

¹⁴ See: S. Antonsen, Safety Culture: Theory, Method and Improvement, Burlington 2009.

¹⁵ L.J. Krzyżanowski, O podstawach zarządzania..., op. cit., p. 206.

The broad definition of *security environment* thus comprises eight elements, and is based on the narrow, four-element definition. In addition to **opportunities**, **challenges**, **risks** and **threats**, the broad definition, due to the fact that it accepts the premises of the *triangle of (the need for) security* and the *security (culture) rhombus*, also comprises the following four elements: the **security subject** and the **time and space** of its actions and existence, as well as its **influences and interrelations**; **values**; **needs and development** and **security culture**.

CONCLUSIONS

The article illustrated an important issue in the security sciences – the need to expand the definition of *security environment*. The aim was to present an alternative to the narrow approach to *security environment* (the four-element approach provided in the *White Book on National Security of the Republic of Poland*), and thus the article contains a presentation and justification of a broad (eight-element) approach to *security environment*, which is based on several premises:

- 1. The fundamental **premise was the existence of the abc security triangle** as a condition necessary for the need for security to manifest, where (a) is a *subject*, (b) is a *value* (or values) important to that *subject*, (c) *are threats* to the *subject's* possession of the values and development towards further values. In actuality, it is the **triangle of the need for security**.
- **2.** The second premise was that the existence of a security triangle is a condition necessary and sufficient for the need for security to arise it is also a necessary (though insufficient) condition for the security itself to manifest, even without the fourth element of reality, i.e. the tool used by a *subject* to build security.
- 3. The third premise was the existence of the *abcd security rhombus*, where a, b, c and d correspond to: (a) a *security subject ss*, (b) the *values* important to the *ss*, (c) *threats* to the values and development to achieve further values, (d) *security culture*, as a universal human tool for preventing and combating threats.
- **4.** The existence of the security rhombus was assumed to constitute a necessary and sufficient condition for *security* to manifest, which means that the narrow approach to *security environment* must be ontically expanded.

These premises led to the conclusion that the security environment of a given security subject comprises eight elements:

- 1. security subjects and their temporal and spatial coordinates, which include: 1(b) time of action, 1(c) space of existence, 1(d) influences and interrelations
 - 2. values
 - 3. threats
 - 4. security culture
 - 5. needs and development
 - 6. opportunities
 - 7. challenges
 - 8. risks.

BIBLIOGRAPHY

- Antonsen S., Safety Culture: Theory, Method and Improvement, Burlington 2009.
- Biała Księga Bezpieczeństwa Narodowego Rzeczypospolitej Polskiej, Warszawa 2013.
- Bostrom N., Sandberg A., Cognitive enhancement: methods, ethics, regulatory challenges, "Science and Engineering Ethics" 2009, 15(3), pp. 311-341, DOI: 10.1007/s11948-009-9142-5.
- Gierszewski J., Bezpieczeństwo społeczne. Studium z zakresu bezpieczeństwa narodowego, Warszawa 2013.
- Jarmoszko S., Antropologia bezpieczeństwa. Kontury naukowej tożsamości, Siedlce 2015.
- Jung C.G., O zjawisku ducha w sztuce i w nauce, Warszawa 2011.
- Kitler W., Bezpieczeństwo narodowe RP. Podstawowe kategorie. Uwarunkowania. System, Warszawa 2011.
- Kluckholm C., Values and Value Orientations in the Theory of Action. An Exploration in Definition and Classification, [in:] Toward a General Theory of Action, T. Parsons, E. Shils (eds), New York 1962, pp. 388–433.
- Korzeniowski L.F., Podstawy nauk o bezpieczeństwie, Warszawa 2012.
- Krzyżanowski L.J., O podstawach zarządzania: paradygmaty, modele, metafory, filozofia, metodologia, dylematy, trendy, Warszawa 1999.
- Sandberg A., Bostrom N., Converging cognitive enhancements, "Annals of the New York Academy of Sciences" 2006, 1093(1), pp. 201-227.
- The Constitution of the Republic of Poland of 2 April 1997 (Journal of Laws 1997 no. 78 item 483).
- Theories of Action and Morality: Perspectives from Philosophy and Social Theory, M. Alznauer, J.M. Torralba (eds), Zürich - New York 2016.

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