

A PARADIGMATIC APPROACH TO SECURITY SCIENCES

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ABSTRACT:

T.S. Kuhn's concept of paradigm differentiates between mature sciences and pre-paradigm sciences. In the case of the latter, it is possible for various approaches to compete with one another. Polish security sciences are currently occupied with seeking paradigms. On the one hand, this search may lead to a homogenisation of opinions within the discipline, or to opposing views on the other. This search is a consequence of evolving opinions within the field, which has a relatively short history in Poland, and constitutes an attempt at determining its defining features. This paper presents various approaches to the concept of paradigm posited by researchers of broadly-defined security, which, as a consequence, constitute evidence of security's multi-paradigmaticity. The research problem is to answer the question of whether the approaches presented in this paper actually constitute the basis necessary to formulate a set of coherent scientific foundations of the discipline, as analysed from a paradigmatic point of view.

KEY WORDS:

scientific theory, paradigm, security sciences

INTRODUCTION:

Science is a special kind of knowledge, as well as a product of human activity. Life sciences were the first to emphasise the importance of the sci-

entific method and prove its validity. For obvious reasons, we may assume that “security” possesses special properties which draw researchers from various scientific disciplines who attempt to research the phenomenon. These researchers utilise various sets of terms and research methods. Paradigms also constitute an interesting issue for social sciences, including security sciences. These discussions constitute attempts at finding patterns or models of the discipline’s object of study. A review of the relevant literature demonstrates that the contexts in which paradigms are perceived may constitute evidence of various intentions intersecting. On the one hand, they may explicate and scientifically reinforce the formal and material object of study. On the other hand, however, they may point to a constant evolution of the concept of security, which renders it impossible to agree to a singular approach within the discipline of security sciences. At the same time, there appears not to be another discipline so riddled with debates concerned with security and seeking its own identity, including from the paradigmatic point of view.

The concept of paradigm can be found in Powszechna Encyclopedia Filozofii, which defines it as follows: “(Greek *parádeigma* – pattern, model; Latin *paradigma* – pattern, example) – originally a term used for Platonic ideals, which constituted the original forms of things which change; currently: in linguistics – the set of declension or conjugation forms of a particular type of words; in rhetoric – an extremely clear and typical example used to illustrate the subject at hand”. This understanding proved to be too narrow for Thomas S. Kuhn, who defined it as a set of concepts and theories defining the foundations of a given scientific discipline at a given time. In his opinion, paradigms constitute “universally recognised scientific achievements that, for a time, provide model problems and solutions for a community of practitioners”. As a scientific point of view, they constitute a method of posing and solving questions for schools of thought. For this to become possible, one must first operationalise concepts and agree to the rules of reasoning, in order to build the discipline’s intersubjective foundations. Defining a set of terms specific to security sciences would render this significantly easier, as it would emphasise its semantic autonomy and define its object, subject, system, variables, etc.

The simple answer to the question concerning the object of study in security sciences should be security. However, even at the meeting of the Humanities and Social Sciences Section of the Polish Central Commission for Degrees and Titles, which formally founded the discipline in the coun-

try, the object was agreed to comprise military and non-military security systems and how they function on various organisational levels. Security is not a homogeneous term – it comprises numerous smaller “attributes”, e.g. social, political, economic and cyberspace (security). The concept of security includes assertions of value, typical of social sciences and the humanities, and which are absent in life sciences. In addition, its scope certainly does not render it easier to define what the leading paradigm is.

Systematising scientific knowledge within security sciences facilitates the development of a security science paradigm. The multitude of approaches (concepts) may be perceived as a transition (pre-paradigmatic) period, or as a permanent state which proves that the concept of paradigm cannot be correctly applied to this area of human cognition. At this point, one may venture a claim that, currently, the contribution of security sciences to generating knowledge about security is miniscule in comparison with other disciplines.

The majority of security scientists assume that the field can indeed be transformed so as to match a paradigm. Certain researchers even posit that some paradigms (e.g. those posited by Burrell and Morgan) constitute contenders to the title of the dominant paradigm in security studies.

PARADIGMATISATION OF SCIENTIFIC THEORIES

Concepts and claims which emerge within the discipline of security studies should constitute systematised sets of scientific theories. Many of those attempt to define the concept of security itself. A great deal of those attempts refer the semantics of the word while also pointing to its essence, which is for security subjects to exist unthreatened and be free to develop so as to achieve their goals. Researchers frequently forget that security should be defined within the context of threat, i.e. by defining what the threat is and who is threatened. This subject-object criterion points to a concrete cognitive category of security and the possibilities of studying it. Thus, the claims (sets of axioms) can be transformed into theories. In empirical sciences (which security sciences are part of), a theory would encompass a particular category of security (e.g. national security systems), and not security in the general (unclear) sense. The purpose of scientific theories is to, among others, pose appropriate scientific problems and develop the correct solutions. Paradigms may prove useful in this regard.

If we assume that security studies can be identified as an inductively systematised set of claims, then these claims should not be contradictory,

in addition to being complete and decidable. According to T. Kuhn, paradigms are primarily means of explicating revolutionary changes in science. “In the course of a scientific revolution, problems which are considered important, even valid, as well as the assessment criteria for proposed solutions, the means used by researchers to perceive the world around them, as well as the language used to describe phenomena – it all changes, and it is impossible to translate the descriptions written using the new language into the previously-used languages, and the same is true in reverse. Most importantly, however, the active foundations of the thinking style also change”. This claim is also important when we take into account how security sciences emerged as a scientific discipline, one which constantly builds its object of cognition.

Thus, it is no wonder that numerous authors point out the fact that security sciences as a discipline lacks a dominant paradigm and that the field is currently at the pre-paradigm level of development. Adopting a single paradigm in security studies would determine the dominant point of view from which security is studied. It should be emphasised that security, due to its multi-dimensionality, requires inter- or transdisciplinary research, which is why it is necessary to cross the boundaries between particular research fields and disciplines, as well as utilising the theoretical and methodological achievements of other disciplines, including philosophy, history, sociology, psychology, education, economics, management, law, political science, military, medical and life sciences.

To create a paradigm for security sciences, it is thus necessary to overcome theoretical incompatibilities and conduct a synthesis of various other sciences. To learn how the emergence of security sciences changed and helped progress research on security, it is necessary to look into the ontology of security-related research, in particular to find the answer to the question regarding its object of cognition, and whether it meets the requirements every scientific discipline must meet. In other words, it must grow the body of knowledge related to studying security, as well as implementing innovations with regard to the research on security conducted as part of other disciplines, and contributing to scientific progress (by constructing scientific theories).

Security cannot always be confined to axioms and numerical data as theory itself is insufficient. Social facts constitute the most important and basic source of information in this case. They are what inspire researchers to pose questions (e.g. what is the social problem of security) and seeking

solutions (what is its origin). The question must be relevant from the point of view of security, problematic and possible to be studied. Attempts at formulating the fundamental assumptions as to the specificity of the object of cognition and determining the dominant paradigm are thus valid. Attempting to determine *what security is* determines the question of *what security is about*, i.e. what is the scope of scientific analysis. Yet another question is *what should be studied and how?* A question that is also yet to be answered is what security phenomena should be studied by security sciences.

It can generally be assumed that two categories of facts constitute the object of security studies. The first group comprises repeatable phenomena occurring within the field of security, which are explicable with the help of theory. The other category comprises singular facts whose nature is not understood. This distinction is not between social and natural phenomena. It is more about the method of explicating security-related phenomena using already existing theories or interpreting them using a conceptual model developed within the field of security sciences. The goal is to construct a model (description) of security which uses functional relations to explicate the current state of affairs. The main goal of security sciences is to seek true, objective and well-grounded knowledge. Posing research problems, formulating hypotheses and their methodologically-grounded verification would surely lead to discovering the laws governing particular areas of security. However, it is important to remember that our knowledge of the real world is always tentative and disputable.

PARADIGMATIC RESEARCH ON SECURITY

Research on “security” began based on the grounds of other research disciplines. Contrary to T. Kuhn’s intentions, it also assumes the existence of numerous paradigms. It appears valid to select one of them, or to accept the multi-paradigmaticity of security sciences. The latter approach renders it possible to notice particular relations between various scientific fields, in addition to laying the foundations for the search of an interdisciplinary or transdisciplinary paradigm for the phenomenon of security.

Until the emergence of security sciences (in Poland), the interest of the social sciences in security-related issues was moderate and markedly selective. The groundbreaking event in this regard was the attack of Islamic terrorists belonging to Al-Qaeda on several targets in the U.S. on September 11 2001 (an event which primarily registered in the social conscious-

ness in the form of the two towers of the WTC in New York collapsing). This fateful date is considered to be the watershed moment marking a new era of security (or lack thereof) in the world.

The methodological aspects of security, on the other hand, were developed as part of disciplines dealing with issues of security, i.e. philosophy, political science, economics, sociology, praxeology and strictly military sciences. The emergence of security as an autonomous research field was accompanied by the emergence of a relatively autonomous security methodology. Numerous theoretical descriptions have been and are created, in addition to discussions taking place within the community and within certain groups.

An analysis of the resulting achievements leads to a simplified conclusion that the evolution of the security paradigm is the progression from the paradigm of “national security” (based in realism) to “international security” (based in idealism or liberalism), the paradigm of “global security” (based in constructivism) and finally to the paradigm of human security which takes into account the multi-paradigmaticity of security sciences.

Thus, Ladislav Hofreiter lists three base research fields which, according to him, serve as the “breeding grounds” for security sciences, i.e. the social, life and technical sciences. He also lists three paradigms for studying security: the state-centric paradigm, which focuses on defending the country from military and non-military threats, the human-centric (personal) paradigm, which focuses on the security of particular people and the securitological paradigm, which perceives security as a dynamic, universal, complex phenomenon with a structure which is both vertical and horizontal. Securitology is considered to be a practical science which operates from the point of view of mitigating threats to the existence, development and proper functioning of people and organisations. What makes this field distinct is its eclectic epistemological and methodological approach, which features a holistic and dialectical approach, applying systemic analyses, crossing the boundaries between fields of research and utilising the methods and theoretical achievements of various disciplines.

Ryszard Zięba's security science paradigms are based in a division stemming from the field of international relations. He points to three basic approaches to security, i.e. the realist approach, which focuses on the security of the state and which emphasises the military (force) factor, the liberalist approach, which prefers non-military methods of shaping security and being open to non-state participants in international relations, as

well as the constructivist approach, which is based in the assumption that no objective social reality exists – it is a social construct, a product of living in society and a result of its multitude of interpretations.

The first two paradigms assume that the social world should be studied in the same way as the natural world. Thus, the two constitute positivist paradigms. They both assume that security exists as an objective entity, irrespective of the researcher. It comprises phenomena and events which are causally-related. It also assumes that security knowledge should be based primarily on observations.

Constructivism, on the other hand, is a post-positivist approach. It posits that the social world is a world of culture, i.e. values. When studying security, it is impossible to eschew subjectivity. Jan Czaja notes that “cultural security is an aspect of human security, which itself is often underappreciated. It comprises individual security and the sense of group identity, both of which are very typical of our post-modern world. It comprises – but is not limited to – freedom of thought, conscience, speech, life style, ethnicity, gender, a sense of belonging to associations and unions, and also encompasses cultural and political competitiveness”.

At this point, it should be remembered that every scientific paradigm comprises two types of philosophical premises: ontological and epistemological. The former refer to questions about the nature of being and things, about what security is and what it applies to. The latter refer to questions about scientific cognition, about the possibility and scope of human cognition in relation to security. Another aspect is the methodology and research aim of the researcher, as well as the means of accumulating knowledge and interpreting results. When defining the scope of security research, it is also important to take into account the system of values, i.e. the relation with the cultural context.

Krzysztof Drabik emphasises the interdependence of culture and security: “The striving to achieve personal security is a manifestation of general and universal cultural tendencies. Thus, it is confirmed that shaping security is part of culture”.

Perhaps, in order to understand the essence of security, it is not required to adopt a universally-accepted definition, but to define the correct paradigms.

Striving to define the paradigm of security, one must first refer to the particular parts of security, i.e. the subject, object, environment and sur-

roundings. A review of the relevant literature indicates that there exist a plethora of opinions on the identity of security sciences, as well as their subject and object of study.

For a very long time, security has been approached from the structural point of view, primarily focusing on institutions and the organisation of the state, the purpose of which is to protect and defend security subjects. Individual humans (i.e. personal security) appear more rarely as the main point of reference in security analyses.

In simple terms, it could be said that a paradigm within the context of security sciences is a way of approaching security. Thus, it is worthwhile to once again analyse T. Kuhn's definition and list what a security science paradigm should determine, i.e.:

- what should be analysed and studied in the area of security,
- what research questions should be like and how they should be constructed,
- how research should be conducted,
- what methods should be implemented and how research results should be interpreted.

Andrzej Glen claims that the correct approach in the search of a paradigm matching the needs of security sciences is to use the four paradigms defined by Gibson Burrell and Gareth Morgan, i.e. functionalism, radical structuralism, interpretivism and radical humanism, in a complementary fashion for the purposes of studying security. An argument for this solution is the treatment of humans, their rights and freedoms as subjects. This classification is a result of an objective and subjective epistemology of the studied phenomena. Objective epistemology is related to the ontology of realism and determinism, according to which the reality studied exists irrespective of the "human mind". Subjectivism, on the other hand, encompasses nominalism and voluntarism, according to which reality does not exist in actuality and irrespective of the human mind. This is part of the essence of security, which is comprised of objective and subjective categories. Relevant literature on the subject frequently emphasises that a threat to values important for a given subject (which are part of its security) can be perceived subjectively (i.e. based on the perception of the perceiver) and/or objectively (as real). The above-mentioned radical humanism and interpretivism are related to subjective perception, and radical structuralism and functionalism – to the objective aspect.

Functionalism focuses on the issue of security (as a common need) and overcoming various conflicts using collaborative means. The ideal state is that of a balance between security subjects participating in exchanges (regulation). It thus postulates objectivism and questionnaires as a method of conducting diagnostic surveys.

The radical structuralism paradigm is based on the assumption that the social reality exists objectively and needs to be reconstructed (changed). Research on security should encompass mechanisms closely related to life sciences and concerned with power, instrumentalism and domination. The following diagnostic survey techniques are used by researchers in this regard: in-depth interviews, observation, discourse analysis and comparative analysis.

The interpretive paradigm focuses on describing interdependencies in complex social structures and organisations. The key to developing a scientific theory is to define and understand the meaning of security from the point of view of an involved observer. The research methodology focuses on fieldwork and text analysis. Methods used include in-depth interviews, case studies, observation and critical text analysis. The research does not lead to quantification, but to understanding.

The radical humanism paradigm appears to be the closest to post-modernism. It is the least homogeneous cognitive approach of all the paradigms. Its main features include subjectivism, cognitive relativism and scientific incoherence.

Coalescing security-related knowledge, which is spread across numerous paradigms and research approaches, appears difficult. After all, apart from Burrell and Morgan's paradigms, which contend for the title of the dominant paradigm, there are also other paradigms, e.g. Guba and Lincoln's or Ritzer's. For Ryszard Wróblewski, neoclassical realism is the most useful approach to security sciences.

A correctly-chosen paradigm should yield an approximated model of reality (security) and indicate how to correctly improve it. It should relate to the general idea of security and the mechanisms of ensuring it. Considering the above-mentioned methods of classifying paradigms, one can hope that the list does not end here. If individual security is perceived as a real entity independent of human cognition, one could assume that researchers should be able to conduct an objective, external observation. Thus, they would choose the positivist (or post-positivist) paradigm and the related quantitative research methods, characterised by nomothetic ex-

planations. On the other hand, in situations where security is approached within the context of relative concepts, ones which are indescribable and which elude all generalisation, one should elect to apply the constructivist paradigm and the related qualitative strategies, characterised by idiographic explanations. Paradigms should be approached from the point of view of their research utility, i.e. the aim of the study and the structure of the phenomenon studied.

New paradigms continue to emerge in security sciences. Security is studied in both objective and subjective terms due to the fact that there still exist numerous theories confirming both of these types of epistemology. We are currently observing the paradigm of science undergoing changes, especially in the social sciences – turning away from the concept of the element and towards the concept of the whole (system). This orientation is the most popular and widely-used one. Another shift is the turn from using concepts related to structures in lieu of studying processes. In security sciences, the systemic paradigm has been gaining ground.

CONCLUSIONS

Security sciences are marked by a diversity of posited paradigms, although it is uncertain whether all of them can be possibly applied in practice. At this point, one can assume that none of them has so far been accepted as the dominant paradigm. The lack of distinct subdisciplines featuring different methods, objects of study or research approaches results in the main criterion for paradigm selection being ideas grounded in other social sciences.

In light of the above analysis, one should assume that one of the key factors in building effective, lasting models of security is basing them on appropriate paradigms. One paradigm is insufficient in this regard, and it is valid to apply the principle of multi-paradigmaticity to security sciences. Attempts (perhaps futile) are made to apply the paradigm category to this research discipline. Perhaps, in contrast to its original meaning, one should not treat the paradigm as a pattern typical of a given narrow discipline, but instead approach it as a term which describes the entire body of opinions of security scientists.

Identifying the actual state of knowledge can serve as the starting point in this context, rendering it possible to determine the current research problems. Currently, security studies borrow paradigms and methodolog-

ical instruments from other social sciences, but we do not know which of those should be have priority when studying security.

The claim that security sciences have a multi-paradigmatic structure should be considered valid. However, one may at the same time doubt as to whether the above is equivalent to accepting that security sciences are actually at the pre-paradigm stage (which would mean accepting that achieving the paradigm stage may be impossible).

An analysis of T. Kuhn's idea as a proposal from the perspective of the philosophy of science, followed by applying the model of science he reconstructed to security sciences, appears to render valid the following remarks.

Firstly, the issue of security cannot be confined to one field of study, and as such will always be influenced by theories formulated by researchers from other disciplines, thus rendering the acceptance of one paradigm more difficult, but also rendering it possible to study security in an inter- or transdisciplinary fashion.

Secondly, it appears necessary for security sciences to make a choice of its methodological base (conditions of methodological cognition), which would result in the paradigms being elaborated upon and enable researchers to select appropriate research instruments. Attempting to determine *what security is* determines the question of *what security is about*, i.e. the extent to which security is valid as an object of scientific analysis, which in turn should result in the shrinking of the scope of security sciences.

Thirdly, due to the ambiguity of existing ideas, security should be described by applying multiple paradigms, which set the direction for, inspire and consolidate the scientific community.

Fourthly, security sciences are based in various paradigms, a fact which manifests in research approaches and preferred methods of describing and interpreting security, thus increasing the probability that research is objective.

Fifthly, the purpose of security sciences should be to seek or develop comprehensive models of security as a system capable of counteracting particular military and non-military threats. Security subjects must feel their security is not threatened as a result of a well-functioning system.

A commonly-accepted theory of security would be more likely to emerge if we were able to detect the set of variables which characterise security. Weather forecasters, even if they do not possess knowledge of

advanced meteorological theories, at least know what measurements to use when describing the phenomena they analyse. This is also extremely impactful with regard to the teaching process.

The utility of security sciences is tied to the praxeological paradigm. The practical utility of the discipline increases with the range of security-related phenomena it is capable of explaining. A paradigmatic description in a more concrete form (determining a class of problems “worth studying” and the “benefits” of explaining them) entails a relativisation of the cognition of this phenomenon. If one were able to detect the set of variables which apply to security, the chances of developing a worthwhile theory of security would increase.

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