

## **The Constancies, Reactivity and Processes for Security Reasons**

### **Summary**

The discussion about numerous problems of Security Studies, holistically also relates to evolvement of Safety Science, and problems stemming from various global factors, and technological advancement of scientific background. Unfortunately, very often it communicates the fragmentary vision of the new and important multi-dimensional treatment of this relatively new academic endeavor. The author of this essay relates some of the noticeable problems, and multiplicity of factors found in both, Security Studies and Safety Sciences, to lack of explanation of what common denominator is applicable to both of those categories. The author's arguments rest on the unitary vision of science. Security and safety, however, are still very often treated as the sub-branches of other disciplines, such as international relations for example, or natural and applied sciences. The main premises presented here rest mainly on observation of the studies about *security* and *safety* considered as hybrid sciences of multi-component issues. Respective of both, this calls for a need of acceptance of common philosophical grounds enabling this hybridity to turn into unitary, yet multi-dimensional vision of experts under rational goals searching for an independent, and holistic research platform able to observe problems of security and safety, under one scope of rationality.

**Keywords:** security studies, safety sciences, philosophy of security, philosophy of science, politics

### **General observations**

The Security Studies and Safety Sciences as an academic undertaking present various levels of scientific and academic consistency correlating with interdisciplinary and inter-dimensional spectrum of researches. The ever-changing political, social, technological, and scientific environment have expanded its agenda to limits surpassing the previous international and global interests, to the point where

additional association naturally evolved as an empirical backlash of various unforeseen aspects. Mostly as a reaction and in reference to natural, tangible factors of the global environment. At the same time, it did expand away from its original academic endeavors of History, Political Science and International Relation, into specifically Security<sup>1</sup> Studies and Safety<sup>2</sup> Sciences. And this extension is not necessarily connected visibly to previous, older base, when safety was not even a sub-field.

The technological and scientific developments immersed the military and socio-political spheres with hitherto unknown possibilities, making original undertaking too narrow of a subject, what lead to a process of scientific change and adaptability to new consciousness of dangerous world. At the time when potential susceptibilities of scientific progress became obvious, not considered as stemming just from threats<sup>3</sup> to national and social cohesion, but also as a form of risks<sup>4</sup> to structural integrity of society on different levels, and wellbeing of individuals, or social groups; the role of state, strategic, regulatory, organizational, and managerial problems became apparent. At the same time leading to necessity of questioning some of its previous bases of methodological enquiry. Needless to say, the fields of various security and safety studies has to be unified holistically. This unification is slowly evolving into a proper study based on immensity of researches, new theories, models and methods of empirical background.

Regardless of growth, it evolved into new branches of social sciences, with components of sometimes similar or sometimes different focus, but often overlapping values, for the practical and, especially, the academic realms – of security studies, and safety sciences. Now those two ranges of scientific possibilities are perhaps becoming more unified, within own association and praxis at first, surely by becoming more independent of other studies, than just a few decades ago. Since then, different value factors make those more reactive on own grounds. – In special case of safety sciences, many of its determinants are located within mostly technical sciences, that provide even more fuel for the growth of risks studies, and/or systemic threats.

Albeit, this surely creates even more extensions interlocking also with other sciences, ranging from natural sciences, through engineering and technology, medical and health sciences, to agricultural sciences, but continually also

<sup>1</sup> *Security*, as defined in Webster's New Twentieth Century Dictionary, Second Edition, William Collins + World Publishing, Co., Inc. 1975.

<sup>2</sup> *Safety*, op. cit.

<sup>3</sup> *Threat*, op. cit.

<sup>4</sup> *Risk*, op. cit.

with social sciences, and humanities. And this is what makes it methodologically – the hybrid sciences. In view of both technical and theoretical predicaments cutting across paths of security and safety, when widening spectrum of interests, and necessary methods of inquiry deepening its efforts, this hybridity is natural and reflective of measures applied to material data collected, theories and models built, rightfully with little ideological interests, and also, unfortunately, with little philosophical overview and outlook.

Overall, interest in security and safety matters are apparently growing because of changes in regional and global outlooks, as well as scientific and technological advancements, impacting states and societies on every level of certainty. This presents the new dilemmas, and often obvious threats to individual or state matters. Many of security experts are working on different subjects, not always from the same fields of scientific inquiry. Therefore, both theoretical and practical activities that many academicians are occupied with, are not yet fully integrated into a whole field of social science. Yet, just like with any other general matters of inquiry, this integration on philosophical and methodological level has to be achieved, if security studies and safety sciences are not to fall away from each other, or become mere sub-domains of other growing academic disciplines, with natural or created unity.

Achieving this unity is going to be difficult and will require an agreement among perspicacious academicians, able to find a formula nullifying differences, and transforming rather unruly set of categories, arising from the overlapping of disciplines and scientific grounds. Without philosophical outlook this might be a gruesome task. Security after all, is not technical enough to be a subjects of just, let's say, engineering; and safety does not refer only to a new level of integrity of an ontological "object", or an "epistemological" outlook. Both reflect the processes of different levels of natural human existence, on the universal scale, where the nature of it all still has to be deciphered, and the Universe must be understood with *ecological consciousness* – of those who study it, as whole unit, even if considered simply, and at the most, a category set, or category of sets, when we ponder upon on the meaning of value intrinsic to the name itself (ecology comes from gr. oikos – meaning "house", and logically implies the interaction within whole unit, and consciousness implying at first an intersubjective knowledge, later – the true awareness of the world, what can be checked looking into its etymology).

The so called, and abstract, notion of "objectivity", came late in scientific thought, and is a new domain. Human cognitive processes and scientific applications turning into evolutionary, and sometimes also revolutionary achievements,

cannot, therefore, rely just on an “objectivity” of nature. Although, the importance of this is known since the ontological outlook of the ancient and modern philosophers, considered by some as the founders of present-day scientific rationality. It was not an autonomous term at first. Hence, currently we must remember both the Popperian outlook<sup>5</sup> that the author accepts, as not the only way, but one of the necessary ways to understand the cognitive process of scientific reasoning, but also accepts the sometimes irrational ways of science noticed by critics like Paul Feyerebend<sup>6</sup>.

There are also other means, by many forgotten, that enabled the rationalization of methodological application of various discoveries along the way of growth leading to virtual and augmented reality world. Being in this world, with obvious technological advancement should also provoke any academician to look at the process of science as a whole conscious statement connected to its “naturalism” vested in the Universe. This is also undeniably applicable to studies of security and safety, since empirical reactivity of those is evident. Without it no science would be possible. And problems of security and safety could not be analyzed with proper perspective of verification process, which must be logical and empirical at the same time, that is - abstract from reality as in mathematics, and sensual as in experience.

Strange as it may seem, but this was brought to modernity also with applicability of alchemical discipline, regardless of its metaphysical background. It was done by those philosophers and writers of science, who accepted the main premises of past experiential ways, without which the theoretical outlook of modern and contemporary scientific ways simply would not be possible. What includes the Copernican revolution made possible by understanding how the science “was done” in the past. Assumed in this outlook, of course, is the alchemy as part of general cognitive processes, and knowledge that philosophy also participates and intertwines with other fields of research. Alchemical science should be understood, of course, the way it is written about it in XVIIc. by Polish alchemist – Michael Sendigivius, in his very famous those days, the *Novum Lumen Chymicum*<sup>7</sup>:

“Yet this glorious truth is even now capable of being apprehended by learned and unlearned persons of virtuous lives, and there are many persons of all nations now living who have beheld Diana unveiled. But as many, either from ignorance or from a desire to conceal their knowledge, are daily teaching and inducing others to believe that the soul of gold can be extracted, and then imparted to other substances; and thereby entice numbers to incur great waste of time,

<sup>5</sup> K. Popper, *Logika odkrycia naukowego*, Wydawnictwo PWN, Warszawa 2002.

<sup>6</sup> P. Feyerebend, *Dialogi do wiedzy*, Aletheia, Warszawa 1999.

<sup>7</sup> M. Sendigivius, *Novum Lumen Chymicum*, in Eng. <https://www.alchemywebsite.com/newchem1.html>.

labour, and money: let the sons of Hermes know for certain that the extracting of the essence of gold is a mere fond delusion, as those who persist in it will be taught to their cost by experience, the only arbitress from whose judgment seat there is no appeal. If, on the other hand, a person is able to transmute the smallest piece of metal (with or without gain) into genuine gold or silver which abides all the usual tests, he may justly be said to have opened the gates of Nature, and cleared the way for profounder and more advanced study”.

This was an important understanding of alchemy as a science. Similarly, the new level of sensitivity to its own genre has to be achieved by Security Studies and Safety Sciences, defined by security – threat “exchange”, on one side, and safety – risk, on the other. Such method was also understood in the past and used in ancient studies. After all, it is the same scientific coin, with practical adaptability to various domains of individual and common matters. In democratic societies under the umbrella of political agenda, that’s the fact. Not as an extension of any given “science” or previous academic categories, usually connected to political and military security, with variations thereof, but as a final stage of development of a new level of security and safety studies – a discipline with its own “nervous system” sensitive to external and internal occurrences, impacting every single human existence. Not just focusing on the military, subversive, or political threats, but on any type of phenomena that may bring threats and risks of diverse nature, to state, society, individuals, property, tangible and intangible structures, etc.

Within implicit, yet rationally developed extensions of a discipline focusing on general problems previously contained by other studies, this new science in essence must present its own syntheses. The synthesis will be hard to achieve without bringing again to light, what the European philosophy has been doing since its inception in ancient times. As we understand this beginning, the model for synthesis was presented by Thales of Miletus upon noticing that what is visible on the individual level can be generalized if multiplied, and what is multiplied can be brought rationally to every individual level. Logically we can notice the thinking pattern relating directly to established later, the deduction and induction processes needed for proper natural law identification. This itself, even then, was not a new discovery, and quite possibly resting on ancient understanding of general law of alchemy (before it was dressed in this name), was stated in terms of mythical figure of *Hermes Tresmigestos* and one of his formulas of law of nature: *As above, so below. As below, so above. For the understanding of essence of things.*

And we don’t have to treat it as a metaphysical concept, but a simple methodology that had very practical implication for creation of the new sciences

by philosophy, and the natural sciences after the Renaissance. The Modernity, after all, became possible because of return to, and re-evaluation of the most ancient studies of nature, creating proper fundamentals for verification of truths. To answer how is it possible, and what is the relevance of such premises for contemporary study of security or science of safety, is not the main goal of this essay, but we can notice how reflective the nature of things is, when we consider that this is exactly how virtual and augmented realities are created. Those, are also the new determinants for security studies and safety science, where simple empirical reactivity is not enough, because once the threats or risks are noticed, it may be too late.

And this brings especially the comprehension of the necessity for either, methodological continuity, to appropriate degree, and extension, or new theories and new methodological perspectives. Granted, in many case, since security also presupposes potential for the opposite, it will entail as well, the praxeological understanding and involvement with methods used for particular tasks. Over all, it means that security studies are evolving naturally, and that's how it happens in the real world, counting in the constant formulas, reactivity to new security environment implying some kind of adaptation – both ontological and epistemological, and grasping of ever-changing processes detailing the phenomena.

## Focused observations

The processual change of an academic study is not a new experience. Anyone observing development of various academic studies must be aware, that this a common occurrence. Discussion on framing of security within proper academic independence is rather long and bumpy. It is taking place at least since the end of the XXc. And for some, it was already then “a cottage industry” – the problematic of its placement and definition already visible even in 1977, in regards to its many agendas, usually connected to various academic stances, practical concerns, ideological persuasions, or strategic interests, and, of course, various opinions – as was observed by David Baldwin in “Review of International Studies”<sup>8</sup>, those days.

Right away we can notice, however, that shaping of this social science field of knowledge is rather rough and unfinished. For example in the OECD classification of disciplines, in its revised in 2006 edition (and up to now this is the last revision), the Security Studies are not even listed, neither is Safety Science<sup>9</sup>.

<sup>8</sup> D. A. Baldwin, *The concept of security*, „Review of International Studies” 1997, 23, pp. 5-26.

<sup>9</sup> Revised Field Of Science And Technology (Fos) Classification In The Frascati Manual, OECD, Feb 26, 2007 <https://www.oecd.org/science/inno/38235147.pdf>.

Perhaps to academicians, this is not a big surprise, since it is not easy to unify 880 thematic contents<sup>10</sup>, starting from A and *abolitionism*, to W – and ending with *world wars*. This is the number of topic presented by digital library – JSTOR (short for Journal Storage).

From the standpoint of a researcher, the aforementioned is reflective of somewhat typical acceptance of a dual character of processes revolving around continuity and transmutation on different level of cognitive character. And this is also reflected in security studies. Settled, its methodology is still at large, but similar concern also applies to other academic disciplines, even those over a hundred years old. As it is the general case with academic fields within the discipline of Social Sciences, for example Political Science. The similar case is also with the International Relations, that was instituted in 1930's mostly by historians and political scientists, but evolved into practical experience of its descriptions, as aiming its focus on global issues of those days<sup>11</sup>. Hence, the author notices some similarities, as to fundamental expressions used to define Security Studies and Safety Sciences, in previous academic endeavors. In a general sense, more general than categorical definitions and model building, as intertwined with theoretical norm acceptance and latter divagations, in sense of empirical experience and abstraction thereof, both reflective of the Socratic outlook on knowledge.

However, we have to remember, nonetheless, that currently there are already the general provisions of scientific thinking, leading also to context of categories used in security studies: the formulas, the categories, definitions, models, and theories. Very important, as they are, those can be very dormant, too dormant for evolutionary science of security, if it ever evolves into science. Surely, at least and at last, it has found its proper place within the fields of the Polish academics; The most important component easily observable here is its multiplicity of issues and, therefore, the accelerating change of outlook on security and safety. This change occurs, because of added and constantly flowing data of interest, with continuity – of the cognitive process – amidst the informational chaos, and final ability to sense the rhythm and sequences of the whole. Those fields of study, as any other dealing with the natural universe in its growth, becomes independent in a sense, that within its “own” logic it is able to cover descriptively (with description leading to coherent theory, and/or to praxeological or technological significance), methodologically and methodically, its specific reactive interests of researches and empirical verification assurance. This, of course, applies to any

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<sup>10</sup> JSTOR, security topics; <https://www.jstor.org/security-studies/topics/>.

<sup>11</sup> A. Zammit, *Strategic Studies versus Security Studies: a history, Part I*, <https://andrewzammit.org/2016/04/25/security-studies-versus-strategic-studies-a-history-part-1/>.

scientific and academic fields, since this is the simple process of replicatory nature (in both, the natural and semantical sense – as if in Alfred Korzybski's general semantics' explanation of our cognitive process<sup>12</sup>). Hence, nothing special here, when it comes to "our" Security Studies and Safety Sciences.

We are still looking at this phase at the common universals of the academic language, that any discipline can use as its own source. It is actually the type and amount of data gathered in the name of a discipline, that is the beginning of its relative independence. If the information gathered in the name of a discipline can be later synthesized towards internal own division of general and particular goals for both, practical and theoretical interests, we will notice how the abstractly developed "nervous system" will contextually allow to develop ability to cover previously unnoticed phenomenon. And observing the stages of various disciplines' development in the span of half a century, we can notice that momentum in security studies, and later in safety sciences, fits the above description. Security studies slowly but surely cease to be just an extension of the military sciences or the political science, but is growing to its own independence. Such statement is more true now, than three or four decades ago, but this is not withholding the understanding that material base of evaluation of the real problems, must be examined constantly. And this may not be done without formulas encompassing the material values imposed by coexistences of tangible and intangible factors, that might be recognized as a proper phenomenon intertwined within human cognitive process, leading to abstract solutions, yet, so easily adaptable to material world. Granted, material world changes within a process, that still can be understood, as some do through binary character of a human cognitive process, yet, the author believes it is rather something more along the starting lines of Jerzy Stańczyk's<sup>13</sup> judgment in his great analysis of security understanding: "In order to better understand the surrounding world, especially in relation to more or less real and abstract objects, it is the human trait to create concepts"<sup>14</sup>. It is in relation to those, that something fantastic happens to human creativity, expansion of knowledge boundaries, technological advancements etc., and with our ability to unify our minds with the universe, through human intersubjective exchange, trespassing the previous boundaries of knowledge.

<sup>12</sup> See: A. Korzybski, *Science and Sanity, An Introduction to Non-Aristotelian Systems and General Semantics*, Institute of General Semantics, Brooklyn, New York 1994 <https://pl.scribd.com/doc/30623770/Alfred-Korzybski-Science-and-Sanity>.

<sup>13</sup> J. Stańczyk, *Formułowanie kategorii pojęciowej bezpieczeństwa*, FNCE, Poznań 2017 (eng. title: *Formulation of the conceptual categories of security*).

<sup>14</sup> *Ibidem*, p. 17.



Still, we have to remember that this is not just the problem of a steady evolution and potential numerical growth of its various fields and agendas, that may develop into closed particularity of our Security Studies or Safety Sciences, the way it is with Natural Studies or Humanities. Where, in the first case, we notice the ever-changing topics in adherence to a “paradigm shift”, as in discussion between Thomas Kuhn and Karl Popper, and critical approach towards the understanding of scientific ways<sup>15</sup>; and in the second, we have to notice that Humanities have an imprint within, of an ethical idealism dating back to antics, with strong platonic underlayment.

Those who take sides here, are sometimes forgetful, though, of Socratic provisions of self-consciousness and recognition of cognitive abilities, in view of seeing a human being as a changing process itself. Hence, we also have to keep in mind the phenomenological understanding of Edmund Husserl’s intersubjectivity and need for balanced re-examination of science<sup>16</sup>; This is not just the problem of philosophy, its descriptive but sometimes idealistic ontology, not the self-referential study of own problems, as it often may be the case, and epistemological theories and models relating to it. After all, many factors determine the problems of security. For example, Marek Adamkiewicz notices the problem within the existential dimension of philosophical thought, weighing those on the “fear of death” scale, to which the author of this essay also adheres, in mutual understanding of the heaviest burden on individual mind – much more in reference to transience, than to disappearance of biological life, that is physical human unity<sup>17</sup>. Of course, excellent discussion on the topics of general issues of philosophy of security, is presented also by Janusz Świniarski. So at least here in Poland, the studies are evolving, but not living philosophy behind.

## Final comments

The evolution of any academic studies has similarities, and academic growth is rational if it answers various intellectual predicaments, providing a common

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<sup>15</sup> See: T. S. Kuhn, *Struktura rewolucji naukowych*, Aletheia, Warszawa 2001, and K. Popper, *Logika odkrycia naukowego*, PWN, Warszawa 2002.

<sup>16</sup> See: E. Husserl, *The Crisis of European Sciences and Transcendental Phenomenology*, Northwestern University Press, Evanston 1970.

<sup>17</sup> See: M. Adamkiewicz, A. Warchał, *On the existential security in view of the Greco-Roman conceptions on transience*, „Studia Bezpieczeństwa Narodowego/National Security Studies” 2017, No. 12; also, of the same authors and in the same periodical: *On the existential security in view of the medieval philosophy conceptions on transience*, „Studia Bezpieczeństwa Narodowego” 2018, No. 13 and: *On the Existential Security in View of the Modern Philosophy Conceptions on Transience*, „Studia Bezpieczeństwa Narodowego/National Security Studies” 2018, No. 14.

denominator of formulas and understanding. And in this case, as a subject of universal studies, there is still a long way to go before independence from other sciences, but its Copernican revolution emanates from beyond of the horizon. But is this just the philosophical problem as, to some extent, that was is deliberated here? No, although for many, not excluding the author, academic studies without philosophical background will be only a half-fulfilled prophecy, because of one important component missing – its ability to differentiate and later connect, with logical explanation, opposites or different values in one common denominator. In theory, since in practice we need to look even deeper into pre-philosophical mind. But will we find problems of security and safety there? Yes, always. Those are known since the beginnings of written records, as the exploring mind is able to notice, and need for the elements of the holistic approach to security is noticed here. It is done by the passive observer, and in noticeable form of an essay, yet, based on experience with both, the Security Studies and Safety Science within the academic settings. This enables, from author's perspective: the de-limitation of outward practical and methodical stances, necessary to find solutions for, so called, "real problems". For, as quantum mechanics gives the evidence, that the process itself is both, internal – external exchange of mind and senses together.

In the case of Security Studies and Safety Sciences, the problem and its involvement rests of course not only on general semantics, as in Korzybski, and semantical understanding, as is observed, among the other problems, by Stańczyk. Those are some of the possible roads taken and tools created along the way of transmutation of various necessary elements, that in unison add up to better understanding of human abilities. For many years since original conception, we could notice, as was shown the subjugation of Security Studies' perspective stemming from Political Science and International Studies, holding within its similar scopes many issues of security connected to it. Adapting the growth of understanding of security issues, and later its steady separation from political and military studies, still resting on material appraisals, of course. What is somewhat different from semantical and theoretical issues.

However, we cannot exclude those from extending and deepening the rationality, not just structuralism of the issues, that can, and often have to be resolved before security – threat dualism is understood. It is always a dualism referring to our mind and body, but in organic unison. From the philosophical standpoints, those are very important for understanding any scientific endeavors, but it is not necessarily enough. Even if we multiply similar objects of security predicaments, we will still be left without full understanding, missing components, and one common denominator

connecting them all: The ancient formula of the law of science of life: “As above, so below, as below, so above, for the understanding of essence of it all”. This is, and always have been the formula for understanding of any scientific effort, its independence curtailed by own obligation to true knowledge. Without it the verification process of “truth” in “matter” would not be possible. The author understands that this independence can be verified by ability to present in logical descriptive form its own empirical data, since we live in the age of data collection. However, its transmutation into real tangible factors making our lives safer, or at least more comfortable, still implies that we have to continuously search for rational connection of a full development: into practice of a tri-contextual character, known from mother of all empirical sciences as: the continuity – reactivity – processual change.

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