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From nuclear bombs to decentralized threats: How has the nature of the concept of deterrence changed?

Diploma Thesis

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I hereby declare that I wrote this thesis individually based on literature and resources stated in references section.				
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List of Abbreviations

BBC British Broadcasting Corporation

ISIS Islamic State

MVČR Ministry of the Interior of the Czech Republic (Ministerstvo

vnitra České republiky)

OECD Organisation for Economic Co-operation and Development

TD Terrorism deterrence

UNSC United Nations Security Council

VEO Violent extremist organization

WMD Weapons of mass destruction

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Introduction

Efforts to find effective psychological tools to intimidate the enemy and avert an attack on his part without the use of violent measures date back to the theoretical work of the ancient military theorist Sun Tzu or Prussian war strategist Carl von Clausewitz. However, the increase in scientific interest in studying the concept of deterrence did not occur until post-World War II period, with the onset of the serious threat of the use of strategic nuclear weapons. Military strategists, scholars, and decision-makers closely focus on the policy of deterrence during the Cold War; however, their knowledge was limited only by the context of the reality of that period. Interest in studying the concept decreased with the decline of the threat of the immediate use of nuclear weapons. For its narrow conceptualization of strategic application, a number of scholars considered the concept of deterrence obsolete, unable to adapt to new decentralized threats in the form of terrorism, sea and air piracy, or cybercrime. However, many theorists and practitioners began to interpret and develop new approaches to the concept of deterrence, which could no longer be perceived only in its narrowly defined characteristics. Deterrence in their conceptions, a new definitional and typological conceptualization, obtains the form of strategies of ingenious psychological struggle with the adversary. Nevertheless, structural and descriptive ambiguities are significant for any individual conceptualization, moreover, the conceptual boundaries have not yet been clearly established.

This study aims to minimize these descriptive and structural ambiguities by introducing and comprehensively comparing the original understanding of the concept of deterrence with the current approach following the end of the Cold War. This current approach already takes into account the reduction of security of potential targets of an attack due to the greater fragmentation of threats and the increase in the number of non-state actors with significant attack capabilities. Author demonstrates on the development of theoretical studies of Thomas C. Schelling, Glenn Snyder, Robert Jervis, Colin S. Gray, Jeffrey W. Knopf, Alex S. Wilner, or Zachary Goldman a change in the range of characteristics inherent in the concept and outlines the development of conceptualisation of strategies adopted in the context of deterrence. The main goal of the study is to synthesize and appropriately complement existing conceptualizations of deterrence strategies primarily developed by Matthew Kroenig, Barry Pavel, Robert F. Trager, Dessislava P. Zagorcheva, and Jon-Paul Maddaloni. In their studies, these scholars present recent conceptualizations, the construction of which is also based on previous conclusions, assumptions, and empirical experience. However, the categories of strategies are characteristic by their significant lack of mutual exclusivity or an inappropriately

chosen form of typologization. This study aims to significantly reduce the mentioned deficiencies.

The research object of this qualitative descriptive-analytical study is the concept of deterrence. The author compares, analyses and complements existing knowledge in the field of study and conceptualization of deterrence. For these purposes, the author seeks to answer these research questions: How and why has the nature of the concept of deterrence changed over time? How can the concept of deterrence, and specifically terrorism deterrence, be satisfactorily defined to meet contemporary challenges? Which category configurations should consider terrorism deterrence strategies? Can the strategies of the concept of terrorism deterrence be satisfactorily typologized? And what form of typology should be chosen? The main attention of the study is focused specifically on the area of deterrence attempting to prevent terrorist attacks, i.e. terrorism deterrence as a response to one of the most significant threats mankind faces and the causes of countless serious conflicts. Terrorism represents a current and extraordinary threat in the international environment, manifested in the changes in structural relations between actors at all levels of society. Since the beginning of infiltration of terrorism threats at the global level, a number of scholars and practitioners have been trying to find effective tools for preventing terrorist attacks and also degrading of the underlying success of the attacks. Such an effective tool is a combination of the practices of psychological warfare with the enemy and the civil-military non-violent conflict prevention strategy offered by terrorism deterrence.

Through his research, the author would like to contribute to the academic debate on a more precise conceptualization and definition of terrorist deterrence strategies. Conclusions could then contribute to considerations about the efficiency improvement of security of potential targets of attack, preventing terrorist attacks or reducing the success of such actions. The author is aware that the very idea of tools and processes that effectively prevent an impending terrorist attack is burdened by a critical discussion of the very functionality of deterrence. Arguments that terrorist actions are undeterrable usually presume irrational behaviour of aggressors, lack of clearly defined territory, or non-negotiable positions (see e.g. Connable, 2018; Huggins, 1993; Kielsgard, Hey Juan Julian, 2018; Knopf, 2012; Pape, 2005; or Purkitt, 1984). Notwithstanding the challenging difficulties caused by the fact that terrorism is a serious ideological threat. However, deterrence strategies are not adapted to combat any ideology; their primary goal is to prevent an offensive act, and thus communicate the need to resolve mutual conflict by less invasive measures. The characteristics of deterrence will be addressed in more detail in the following chapters. However, at this point, it is necessary to

minimize some concerns about the functionality of terrorism deterrence. The concept builds on the rational cost-benefit calculus of individuals involved in a terrorist act. Regardless of the ideology that these individuals profess, the vast majority of them is involved in the preparation and execution of the attack with the awareness of the goal, profit. Scholars Paul Davis and Brian Jenkins identify clear rational cost-benefit calculus within terrorist groups like al-Qaeda emphasizing that "... mission success is very important and leaders are in some ways risk-averse" (Davis & Jenkins, 2002, p. xii). The ardent nihilists and the clinically insane thus form the only exception, as Ben Connable argues; "... all others must undertake some form of cost-benefit analysis" (Connable, 2018, p. 12). Notwithstanding that if the arguments denying the effectiveness of deterrence strategies were correct, the world would face a dismal and unpreventable flood of terrorist attacks. Therefore, deterrence is relevant, effective, and necessary part of security strategy, especially when history proves that terrorist cells cannot be defeated using force alone. However, the critique of deterrence naturally appears in the academic debate. It is necessary to include criticism in the following chapters so that the study fulfils its purpose to comprehensively evaluate the existing research.

The main research tool of the study is qualitative descriptive analysis. In his research methodology, the author relies on the theoretical assumptions of scholars John Gerring, Richard A. Berk, Kevin B. Smith, or William G. Jacoby. These theorists highly value the research need for quality description. In their predominantly theoretical studies, they emphasize the necessity for analysis of empirical evidence in order to describe, classify and conceptualize facts for subsequent causal research. Descriptive analysis combines this goal of conceptualization with appropriate methods of measuring variables. In this study, the author focuses mainly on the evaluation of the appropriateness of existing typologies of terrorism deterrence strategies, followed by a proposal for his own conceptualization. The theoretical framework of descriptive analysis, which was deduced by John Gerring in particular, will be a suitable guide for this chosen method. In his works, J. Gerring often points out that descriptive research is overlooked by the scientific community as opposed to causal research. He demonstrates his claim on the significant difference between the number of academic publications devoted to causal inferences and those applying descriptive-analytical research (Gerring, 2012, pp. 729–733). The scholar states that descriptive-analytical studies receive less attention mainly due to their supposed "little intrinsic scientific value" (Ibid, p. 721). These works are predominantly associated with idiographic storytelling that is incapable to reach causal inference. Nevertheless, the task of the method of descriptive analysis is quite complex and causal

research is tightly bound with description; thorough causal inference could hardly be achieved without good descriptive research.

Scientists describe in order to explain. If we accept David Dessler's thesis that descriptive arguments have primarily an explanatory function rather than understanding one (Dessler, 1991) then it can be argued that descriptive-analytical studies have the same scientific weight as causal inferences. Moreover, the terms causal and descriptive should not be understood only as characterizations of the type of evidence available for causal deduction but also (or primarily) as forms of argumentation. Thereafter, "... descriptive argument is an argument about a descriptive relationship, which may or may not have causal implications" (Gerring, 2012, p. 724). Descriptive relationships can take various classification and typologizing forms, which in his taxonomy clearly represent the already mentioned J. Gerring (2012, p. 725). The taxonomy distinguishes five types of description arguments: accounts, indicators, associations, syntheses, and typologies, and it is examined in more detail in the chapter describing the method of descriptive analysis (Chapter 2.1.). Each argument responds to different methodological criteria; their correct application makes it possible to structure the facts appropriately. And well-structured arguments can provide a supporting theoretical framework for possible causal research. The aim of this study is not to create a comprehensive theoretical framework but to attempt to conceptualize existing descriptive arguments in the field of terrorism deterrence strategies more appropriately, logically. Such a more logical typology can subsequently be used by other scientists as a theoretical and methodological framework for their causal inferences.

A quality description leads in some instances to more precise, more valid, more complete descriptions of reality. However, the author is also aware of the difficulties of descriptive inference. One of its serious problem, and very likely the fundamental one, is the considerable leeway: multiple perspectives often exist for any given subject, each more or less valid. "As a consequence, there is usually more than one plausible answer to the innocent question: What is that?" (Gerring, 2012, p. 739, bolded by the author). Such a problem, when it is difficult to distinguish which definition of a concept best corresponds to a given phenomenon and vice versa, also concerns deterrence. The author therefore tries to minimize this problem in the study by applying the theoretical framework of the logic of concept structures. The theory developed by Gary Goertz makes it possible to structure the definition in the breadth of its most inclusive and exclusive form. Such a structuring of the definition of deterrence will subsequently be very helpful in considering the form of a new typology of the concept. The theory will be elaborated and applied in more detail in the following chapters.

Nevertheless, it is necessary to realize that even with the application of the logic of concept structures, the difficulties of descriptive inferences will not be completely eliminated.

Multiple studies of the same subject also face the problem of sort of pseudo-innovation. Scholars rarely build upon one another's research; they offer new re-evaluations of selected previous descriptive inferences in an effort to present a more appropriate, relevant, logical concept of the subject. Scientists rarely cover the entire extensive research, and their work thus becomes derivative rather than innovative. They "... apply a terminological gerrymander, but the overal semantic territory remains much the same" (Gerring, 2012, p. 740). Such a way of scientific work raises doubts about innovation, and therefore about the scientific contribution itself. Moreover, if the differences between the studies are only of a terminological nature. Reality is ambiguous and any inferences are inseparable from it. The author is aware of these essential limits of his research and tries to respond appropriately to them, e.g. by presenting selected lexical problems and proposing their solutions. The consequences of these problems are also substantially eliminated by the fact that research on terrorism deterrence is not yet broad enough to create fundamental differences in its research. However, due to the ambiguity of the world and language, it is not in the author's capacity to avoid increasing the obscurity of some features when elucidating others.

The study considers broadly defined concepts of deterrence and terrorism. It is difficult to completely avoid normative judgments in their descriptive analysis. The problems of generalization and ethnocentrism are also associated with these objects of analysis. The author builds his research on conclusions that other scholars considered important and to some extent widely applicable. However, the generalizability is questionable when research and knowledge of deterrence are embedded predominantly in the Anglo-Saxon academic tradition. This fact makes it fundamentally difficult to transfer theoretical concepts to another cultural environment. The author of this study also decides what should be part of deterrence characterization or strategies and what should not. Furthermore, deterrence as such constitutes a significant and necessary component of an overall counter-terrorist strategies facing the very same difficulties. Existing conceptualizations of deterrent strategies attempt to consider as many terrorist activities as they could be applied on in order to prevent them. The author attempts to do the same when evaluating the existing research and proposing a new typology. Nevertheless, the study is not able to bare the complexity of all intervening variables, so it does not have the capacity to consider all possible cases of the use of strategies. However, despite these limits, author seeks to make the study a beneficial contribution to the current academic debate on the need of the deterrence inclusion in counter-terrorism strategies and its form.

The academic debate on the concept of deterrence and its inclusion in counter-terrorism strategies was recently properly summarized by U.S. Army's LTC Jon-Paul Maddaloni in his scientific work *Add deterrence to the strategy against ISIS* (2017). He provides a detailed view on the concept deterrence, its evolution and application against 'violent extremist organizations' while generates and synthesizes arguments and conclusions of prominent scholars in the field of deterrence and terrorism deterrence as such. Overview and analysis of inferences of scientists like Thomas C. Schelling, John F. C. Fuller, Zachary Goldman, or Alex S. Wilner also form the framework of the author's characterization of the research subject. Nevertheless, the selection of authors is not sufficient for the needs of this study. Moreover, the scientific work of J.-P. Maddaloni is primarily focused on the aim of qualitative comparative research, i.e. to confront two counter-terrorism strategies of both the United States and Israel applied in fight with the Islamic State in order to test the theoretical framework of terrorism deterrence. However, in his effort to appropriately typologize terrorism deterrence strategies, the author bases on the taxonomy presented by J.-P. Maddaloni in his study.

The second typology, the logic and scientific contribution of which the author analyses, is presented in Matthew Kroenig and Barry Pavel's article *How to Deter Terrorism* (2012). Both scholars were "... the principal authors of the first-ever U.S. government-wide strategy for deterring terrorist networks" (Ibid, p. 21). They present their experiences in this article providing detailed view on evolution of the deterrence concept. Mentioning new interpretation of deterrence as a one element of a broader strategy, both authors focuses on strategies for deterring terrorism and deconstruction of terrorist network. But even though the article provides a clear basic insight into the essence of the transformation of thinking about the concept of deterrence, for a more detailed analysis of its evolution, the author chooses the studies of Robert Jervis, Jeffrey W. Knopf, Ben Connable, or Wojciech Lorenz. These authors describe very clearly and in detail the changes in thinking about the concept over time and the academic debate that the changes have provoked. The crucial scientific work in the field of analysis of the evolution of deterrence is the article by Robert Jervis Deterrence Theory Revisited (1979); the scholar staged in it the development of scientific research on deterrence strategies into three waves of evolution. The other above-mentioned scientists subsequently followed up on Robert Jervis by describing and analysing the fourth wave, which in the academic field is characterized by an intensified interest in deterrence and an increase in scientific studies.

In their article *Deterring terrorism: It can be done*, researchers Robert F. Trager and Dessislava P. Zagorcheva (2006) also describe in detail the evolutionary development of thinking about the deterrence concept. However, their scientific work is important to the author

of this study primarily because it offers a third method of classifying deterrent strategies. Their conceptual framework is created on the basis of different criterions than those of J.-P. Maddaloni or M. Kroenig and B. Pavel. Furthermore, R. F. Trager and D. P. Zagorcheva's strategic figure is one of the early attempts at a more elaborate, more comprehensive classification of deterrent strategies. All three conceptualizations fulfil the function of a superstructure of a robust theoretical framework of deterrence as well as forms of classification of descriptive arguments, on the basis of which the author creates his design of strategic conceptual framework of terrorism deterrence. Moreover, R. F. Trager and D. P. Zagorcheva's article clearly outlines the main topics of scientific discussion and especially the critique of terrorism deterrence. Both scientists make their own counter-arguments against criticism, defending the position of deterrence in a large-scale strategy of counter-terrorism campaign.

The backbone of the study consists of key scientific works in the field of deterrence research, which, with their scope of thinking about the concept, copy four waves of evolution. Ascending, they are Thomas Schelling's Arms and Influence (1966), Robert Jervis's Deterrence Theory Revisited (1979), Colin S. Gray's Maintaining Effective Deterrence (2003), and the articles Contemporary deterrence theory and counterterrorism: A bridge too far by Alex S. Wilner (2014) and Navigating deterrence: Law, strategy, and security in the twenty-first century by Zachary Goldman (2015). In each of these scientific works it is possible to observe an expansion of thinking about the concept of deterrence and at the same time a gradual specification of the field of application of deterrence strategies. However, the evaluation of these changes will be the subject of the following chapters. The objective assessment will also be supported by critical contributions, which leading representatives recently include William Huggins, Robert A. Pape, Richard Betts, or Mark D. Kielsgard and Tam Hey Juan Julian. In their scientific contributions, the authors challenge an uncritical perception of deterrence as an effective strategy in fighting with terrorism. Although the author of the study justifies opinions predominantly in favour of deterrence, he considers it necessary to confront current scientific research with critical argumentation.

The field of concept study is framed by the already mentioned theory of the logic of concept structures developed by Gary Goertz. The author discusses it in more detail in the first subchapter of the very first, broader chapter. This chapter deals specifically with the concept of deterrence and it is divided into five subchapters; the second subchapter defines the concept observing changes in characterization of deterrence and in its used strategies over time. The subchapter is intended to outline to the reader how the concept of deterrence is defined, what features are characteristic of it and why there has been a change in thinking about the application

of deterrence. The following subchapter deals with the broader context of changes in thinking about the concept. In it, the author describes the evolution of the academic debate in four waves and summarizes the key differences in deterrence understanding between the Cold War era and the post-September 11 period. In the fourth subchapter, the author clarifies some lexical ambiguities related to the definitions of deterrence in the literature. With this analytical overview, the author would like to reduce the ambiguities between the concepts of deterrence, compellence, inducement, or pre-emption/prevention, which in different contexts are often misinterpreted and intertwined. The subchapter also clarifies the relationship between deterrence actions and coercive ones.

This extensive review leads to the last subchapter, in which the author applies the logic of concept structures to the current interpretation of deterrence. With different interpretations, it is in some cases difficult to distinguish whether or not this is an example of the use of a deterrence strategy. The structuring of the concept according to the mentioned theory allows to imagine the extent to which the use of the concept in the study is considered; the author can thus decide whether to consider a more exclusive or inclusive version of the concept. Furthermore, the very structuring of the use of deterrence will also be very helpful in typologizing the concept. The latent structure of the concept reveals the probable attributes of deterrent strategies that distinguish them from other coercive strategies. Thus, the subchapter creates a basis for the subsequent division of strategies in the conceptual framework.

The second part of the study focuses on the analytical description of terrorism deterrence strategies and their appropriate classification. Primary, for increasing orientation in the subject of the study the author discusses a definition of terrorist acts to which deterrence strategies are applied. The first subchapter presents the method of descriptive analysis discussed in detail in the studies of scholars John Gerring, Richard A. Berk, Kevin B. Smith, or William G. Jacoby. The author chooses the appropriate form of typology of strategies within it on the basis of evaluation of existing conceptualizations. Before this evaluation, however, he focuses on terrorism deterrence in the context of general scientific interest. Specifically, the author points out the division of individual actors involved in the terrorist network and the stages of preparation and execution of the terrorist action, as presented in their scientific contributions by Alex S. Wilner or Michael J. Powers.

The whole chapter continues with a thorough presentation of three conceptual frameworks of terrorism deterrence strategies and an evaluation of their assets and shortcomings. These are the already mentioned typologies designed by R. F. Trager, D. P. Zagorcheva, M. Kroenig, B Pavel, and J.-P. Maddaloni. Subsequently, the practical

demonstration of the method of descriptive analysis concludes the entire research part of this study. The result is a proposal for a new conceptualization of terrorism deterrence strategies. The three previously evaluated established conceptual frameworks serve as initial models for an appropriate classification procedure. The conclusion of the thesis summarizes the findings obtained in individual sections and outlines the potentially most suitable method of typologizing terrorism deterrence strategies. In addition to the main research questions, the individual (sub)chapters put themselves partial and auxiliary research questions that will help to reach partial conclusions.

1. Concept of Deterrence

This whole chapter deals with the very concept of deterrence, which is applied in international relations, as part of the national security strategy, or in specific areas of law, such as regulatory law (see e.g. Chilton & Weaver, 2009; Glaser, 2011; Thornton, Gunningham & Kagan, 2005). The author considers and analyses the concept as an effective tool in the psychological struggle against acts of terrorism, both at the international and national level. The question of national-transnational levels does not play a significant role in relation to terrorism. Analyses of data on acts of terrorism indicate that prime-target countries at risk of international terrorism must also apply counter-terrorism policies to domestic terrorism in order to prevent its spill-over at the transnational level (see e.g. Enders, Sandler & Gaibulloev, 2011). However, this study only considers examples where deterrence is applied by a legitimate power holder in a territorial unit with a monopoly on the use of power¹ either against its counterpart or against non-state actors.

The chapter focuses on the latent structure of the concept of deterrence. For this purpose, the author examines in detail the evolution of reflections on the nature and use of deterrence. The study pays particular attention to the change in thinking about the scope of deterrence, the scientific discussion about this change, and its reasons. A thorough understanding of the causes of change and a current conception of deterrence is essential to an attempt to structure the meaning of the concept. The most appropriate description and analysis of the internal structure of deterrence is necessary for the subsequent continuation in the chapter devoted to the specific focus of the concept, i.e. terrorism deterrence. In his study, the author strives for a logical process leading from anchoring of general definition of the concept to typology within its specific branch.

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¹ Without preferring a generalizing view of a (neo)realist tradition in the International Relations, the author will consider deterrence as a solely strategic policy of one state against another in several cases. This is because the original studies on the use of deterrence were embedded in the American realistic academic tradition. The transition from a realistic perception of the world to (neo)liberal approaches to international relations will then be evident on the illustrated change in considerations about the breadth of the use of deterrence strategies.

1.1. Designating Concept Structures

On Wednesday, January 6, 2021, the process of official certification of the results of presidential elections from the previous year took place in the Congress of the United States. However, this procedure was disrupted that day by the intrusion of a mob of President Donald Trump's supporters into the Capitol building. Many participants in the attack allegedly intended to thwart the effort of Congress. According to media coverage, some of these rioters were very well equipped for this intrusion, some with incendiary devices. During the intrusion, scores of District of Columbia Metropolitan Police and U.S. Capitol Police officers were injured, one of them was killed, while four civilians have died as well (Beaujon, 2021; Sacco, 2021, p. 1). Shortly after the incident, a debate opened among analysts whether the attack may be treated as an act of terrorism, and domestic terrorism in particular, and whether the perpetrators should be considered domestic terrorists. Most of them claim that the incident fulfils the characteristics of domestic terrorism as defined for instance by the Code of Federal Regulations or Section 802 of the USA PATRIOT Act (Sacco, 2021, pp. 1–2). However, the same scientists disagree as to whether participants in the intrusion should be called domestic terrorists; many of them prefer the terms insurrectionists, violent participants, or rioters².

It is evident that this illustrative case, which is inherently close to the subject of this study, acquires only some defining features of concepts that should be able to satisfactorily classify it among other similar cases. Should not the intrusion of the U.S. Capitol on January 6, 2021 be considered an act of terrorism just because a large number of analysts refuse to attribute rioters a terrorist status? Can this act be satisfactorily included alongside the Oklahoma City bombing of 1995 or the Boston Marathon bombing of 2013, the nature of which fulfils the generally shared notion of domestic terrorism? The way to a positive response paved, for instance, the extremely broad inclusive definition of domestic terrorism contained in the USA PATRIOT Act (McCarthy, 2002, p. 105). Nevertheless, many other concepts, including deterrence, face similar difficulties. As will be seen in the following chapters, more and more situations today evoke the application of deterrence strategies than they would have done thirty years ago. Such a situation, when scientists and strategists detect an ever-growing number of cases as the application of deterrence strategies, can lead to a negative consequence of diluting the meaning of the concept. The literature calls this situation 'the traveling problem' (Berglund & Souleimanov, 2019, pp. 2–3).

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² For a more detailed debate on the nature of the attack on U.S. Capitol of January 6, 2021, see, for example, Beaujon, 2021; Byman, 2021; Kornfield, 2021; Paradis, 2021; or Sacco, 2021.

In his seminal article, Giovanni Sartori (1970) explained the problem in more detail. He assumed that concepts are characterised by an intersecting set of attributes. For concepts to be properly defined, all the necessary and sufficient conditions for something to fit into a certain category must be correctly composed. According to this logic, a concept that does not contain even a single trait cannot be included in a certain category, such as, for instance, the case of using deterrence strategies or the act of terrorism. Therefore, G. Sartori argues that a concept denoting an ever-increasing number of cases must obtain a looser connotation, since it must be related with fewer features if it is to "travel" further. Social scientists generally and almost uncritically accepted this argument and put into practice until David Collier and James E. Mahon, Jr. (1993) challenged it. For both scholars, "... there may be no single attribute that category members all share" (1993, p. 847). Not every defining feature may be present in all cases of application of deterrence strategies. However, certain commonalities contained in a given category bind them together. "If one trait is missing, then the presence of some other substitutable attribute is enough for the situation to meet the definitional requirements." (Berglund & Souleimanov, 2019, p. 3). An attack on the U.S. Capitol can thus be categorized as domestic terrorism alongside the 1995 Oklahoma City bombing although it may not contain all the defining features of the category. As a result, concepts associated with certain commonalities can "travel" virtually further.

With this challenge, the scholars divided themselves into those who prefer the classical approach to the definition of concepts represented by G. Sartori, and those using family resemblance concepts, as do D. Collier and J. E. Mahon. Gary Goertz describes this fundamental difference in the perception of the logic of concept structure in detail in his book Social Science Concepts: A User's Guide (2006, pp. 1–50); Christofer Berglund and Emil Aslan Souleimanov then apply his theoretical framework in their article (2020). Both scholars focus on the latent concept structure of asymmetric conflicts. In their article, they attempt to structure the concept appropriately so that other scientists can more easily classify a certain conflict into the category of asymmetric conflicts and to reduce confusion in debates on the topic. At the beginning, both scientists stipulate that " ... asymmetric warfare is often understood as conflicts involving belligerents who differ either in terms of their legal status, power capabilities, or strategies" (Berglund & Souleimanov, 2019, p. 3). They conclude that the structure of the concept consists of the three terms mentioned, which they then insert into the table. According to the occurrence or absence of individual terms, they divide the meaning of concept into peripheral, regular, and classical one (ascending according to the increasing number of occurrences of terms, see Table 1).

Different legal status	Different capabilities	Different strategies	
Yes	No	No	
No	Yes	No	Peripheral meaning
No	No	Yes	
Yes	Yes	No	
No	Yes	Yes	Regular meaning
Yes	No	Yes	
Yes	Yes	Yes	Classical meaning

Table 1. Types of asymmetric conflicts (Berglund & Souleimanov, 2019, p. 8; adapted by the author)

Thus, Ch. Berglund and E. A. Souleimanov have clarified the criterions presence of which indicates an asymmetric conflict. At the same time, they raise the question of whether the existence of two or only one attribute is sufficient to classify a conflict into this class of conflicts. "Is one dimension perhaps more fundamental than the others?" (Berglund & Souleimanov, 2019, p. 3). Nevertheless, this important question on which scientists are unable to agree belongs rather to the field of measurement methods and instruments³. However, measuring variables is not the aim of this study and therefore the author will leave this question without another of the many answers. The primary goal of the study is to find a suitable form of typology for the division of individual terrorism deterrence strategies. And the logic of concept structure will be very helpful; an application of G. Goertz's theoretical framework (as made by Ch. Berglund and E. A. Souleimanov) to the concept of deterrence constructs the structure of terms in the current understanding of the deterrence. This structure will then help in considering the form of the typology and its design.

Qualitative research works with an extensive range of techniques for measuring dependent and independent variables. Many of these tools have evolved in recent years. Without presenting an exhaustive list, some of them can be mentioned: item-response models (see e.g. Box-Steffensmeier, Brady, & Collier, 2008, pp. 119–151), measurement of social identities including name-based techniques (see e.g. Abdelal, Herrera, Johnston, & McDermott, 2009), the automated content analysis of political texts (see e.g. Monroe & Schrodt, 2008), crisp-set/fuzzy-set measurement (see e.g. Vis 2012), or experimental techniques for measuring values and beliefs (Sniderman & Grob, 1996). To answer the question of the necessity and sufficiency of the presence of certain variables, the author would recommend using the method of qualitative comparative analysis (according to the number of cases, it is necessary to choose crisp-set or fuzzy-set measurement; see e.g. Pennings, Keman & Kleinnijenhuis, 2005, pp. 137–141; or Seawright, 2005).

In addition, the logic of deterrence structure illustrates the extent to which the author considers the concept in his study. In accordance with the use of the theory by Ch. Berglund and E. A. Souleimanov, it is possible to determine the structural form of classical meaning of concept as well as family resemblance concepts. This determination evokes the degree of exclusiveness and inclusiveness of the concept; while the classical approach works with the concept as highly exclusive, the approach of D. Collier and J. E. Mahon makes it possible to consider a large degree of inclusiveness of the concept. The author is aware that adherence to a higher degree of inclusiveness of a concept can be understood as supremely buck-passing. However, the logic of concept structure responds to the vastness of reality; it is more appropriate to think of a certain act as suitable for the application of deterrence and possibly to exclude it after thorough consideration than to reject it a priori as unsuitable for deterrence. The very fact of changing the nature of the concept over time demonstrates the necessity to change the approach to deterrence, which is illustrated in the following chapters. The author attempts to place the current structure of the deterrence concept into the table in the last subchapter of this section of the study.

It should be noted that, as in the case of article Ch. Berglund and E. A. Souleimanov (2020), in this study it is necessary to regard the conceptualization and operationalized categories of strategies with tolerance. Findings are always contingent upon a specific interpretation of a key concept and ultimately by the options of choosing a particular conceptualization (Gerring, 2012, p. 735). As mentioned in the introduction, the Anglo-Saxon scientific tradition has long prevailed in the field of the study of deterrence. Although this fact does not affect the validity of the findings, the author will take it into account in the following chapters. Nevertheless, before conceptualization itself, it is necessary to focus on the constitutive element of description, the latent concept structure of deterrence. Its research must be also treated with caution; it faces considerable problems with the overabundance of reality as well as the ambiguities of language (Ibid, p. 738). As Max Weber noted, "... a description of even the smallest slice of reality can never be exhaustive" (1949, p. 78). Such a description, which also creates lexical and definitional ambiguities, can never be considered authoritative. The author is fully aware of all these difficulties, and in following lines, he deals with them in detail before applying the theory of the logic of concept structure to deterrence.

1.2. Changing Nature of the Deterrence Concept

1.2.1. Concept of Its Time or Capable of Adaptation?

Until recently, there was a clear trend in China to refer to the ancient military theorist Sun Tzu and his seminal work *The Art of War* as a theoretical source of soft power for China's peaceful development strategy. In 2012, the Chinese Ambassador to the United Kingdom, Liu Xiaoming, confirmed this inclination when explaining the strategic thinking of his home country: "*China has the deterrence and wisdom to win without fighting. But if needed, China has the courage and capability to win through fighting. This is the essence of The Art of War and the soul of China's military strategy today.*" (Whyte 2015) In his speech, the Chinese Ambassador did not accidentally mention the military strategy of deterrence. It was Sun Tzu who was aware of the negative effects of the war, which threaten the stability of the state, and who believed that armed conflicts could be prevented by ingenious non-invasive measures of psychological struggle. The ancient Chinese strategist noted that the highest ability of a leader is to know the intentions of his enemy well and to opt for a strategy with which to subdue him without a fight (Sun Tzu & Griffith, 1963, pp. 77, 83; Whyte 2015). With these assertions, Sun Tzu laid the first theoretical foundations of the strategic concept of deterrence over 2 500 years ago.

The amount of scientific work on deterrence theory and practice is extensive and extends to warfare strategists such as Sun Tzu or Carl von Clausewitz. Significant scholar Colin S. Gray claims, that "[d]eterrence as an idea is probably as ancient as human society" (Gray, 2003, p. 1). It is possible to argue with this statement as it raises a well-known questions that are characteristic of concepts described especially in the 20th century, such as totalitarianism (see e.g. Harloe, 2018; or Stanley, 1987): Is deterrence a unique concept of the modern world, or can its characteristics be observed in military strategy much earlier? Is it a strategic uniqueness of one specific period, or a universal concept with the possibility of adapting to the conditions of changing reality? References to the works of Sun Tzu and C. von Clausewitz and the current considerable interest in the use of deterrence strategies suggest that this is most likely a concept capable of adapting to different challenges of space and time. However, thirty years ago, a significant number of scientists and strategic practitioners would hardly be able to accept such an assertion. For them, the concept of deterrence was inextricably bonded with the historical

era of the Cold War and the then threat of the use⁴ of weapons of unconventional combat, i.e. strategic nuclear weapons⁵.

However, the position of these scholars is understandable. Mostly, a misinterpretation of C. von Clausewitz's work together with the then understanding of deterrence in the context of the time led them to the argumentation firmly tying the strategic concept of deterrence to the Cold War period and largely admitting counterarguments about deterrence's ability to adapt to changes. The position of the United States and the Soviet Union as superpowers together with the presence of strategic nuclear weapons on the both side of the Atlantic Ocean in fact precisely fulfilled conditions for initiation of C. von Clausewitz concept of 'absolute war'. The Prussian military theorist provided and characterized this concept in order to create a non-existent normative ideal by which the intensity of real war could be measured. Nevertheless, in the strategic arrangement of the Cold War conflict, it was seemingly possible to fulfil the definition of absolute war, which is to be (1) a completely isolated act (2) occurring suddenly and which (3) must not be produced by previous events in the political world (Huggins, 1993, p. 3; Von Clausewitz, 1976, p. 78). Therefore, the strategy of deterrence understood mainly as an attempt to reduce the risk of enemy's (retaliatory) nuclear attack by increasing the capacity of its own unconventional weapons arsenal seemed to be the only instrument to avoid totally destructive consequences of absolute war (Kroenig & Pavel, 2012). However, it is necessary to ask whether the scientific debate during the Cold War did not largely misunderstand the then perception of deterrence as a sufficient condition for averting a catastrophe of a nuclear attack.

Thus, the attachment of scientists and military strategists to deterrence as practically the only answer to the threat of unleashing a narrowly defined absolute war most probably contributed to the narrow reflection on the concept of deterrence. For fifty years, deterrence has become an essential element of the U.S. defence strategy against the threat of attack by the Soviet Union (Freedman, 2000, p. 3; Kroenig & Pavel, 2012, p. 21). However, the concept of

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⁴ By the verb "use" in connection with conventional and unconventional weapons, the author means their dropping or launching in all circumstances other than testing. As the scholar Nina Tannenwald appositely noted: "States have obviously relied on nuclear weapons in other ways, including for deterrence, making threats, and alliance relations." (Tannenwald, 1999, p. 433)

⁵ The scientific debate on the concept of deterrence after the end of the Cold War will be discussed in the following subchapter on the four waves of concept research (Chapter 1.3.). However, it may be noted that among the proponents of deterrence limited ability of adapting to changes in the international environment were e.g. William Huggins (1993), Richard Betts (2002), or Lawrence Freedman (2004).

absolute war was only an abstract ideal and C. von Clausewitz drew attention to its very probable impracticability in the words: " ... war never breaks out wholly unexpectedly, nor can it spread instantaneously." (Von Clausewitz, 1976, p. 78). Nina Tannenwald primarily challenged the narrative of deterrence supremacy in the U.S. strategy and supported the argument about the real impracticability of an absolute war not even during the Cold War. In her seminal article The nuclear taboo: The United States and the normative basis of nuclear non-use (Tannenwald, 1999), she describes in detail three examples of the potential use of strategic nuclear weapons: the Korean War, the Vietnam War, and the 1991 Gulf War, and asks why they were not used. The author deliberately chose these cases because the political and military leadership of the United States could use strategic nuclear weapons in the mentioned conflicts without fear of equal belligerent retaliation or currently had an overwhelming nuclear advantage over the Soviet Union. Research should discuss the argument of nuclear advantage because the question remains how many more warheads with a nuclear weapon a war actor would have to have to be in advantage⁶. The United States could apply nuclear weapons to achieve the desired deterrent effect. However, the cases presented undermine the prevailing Cold War narrative of the privileged position of deterrence and raise the question of its status among other strategies rather as a primus inter pares.

Given such questions, it is then necessary to ask about the sufficiency of the use of deterrence in the Cold War understanding alone. The fact that strategic nuclear weapons have not been used since their application in Hiroshima and Nagasaki in 1945 in any open or impending armed conflict indicates the need to combine deterrence with other strategic practices in order to achieve a sufficient deterrent effect, as Nina Tannenwald noted. Or it opens the way to extend the latent structure of deterrence to a greater number of strategies, as scientists of the fourth wave of concept research claim and further elaborate⁷. All these arguments are reinforced by other deviations in the prevailing Cold War narrative, such as when strategic nuclear weapons failed to avert a conventional attack on nuclear powers, as was the case in the

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⁶ A similar question was addressed by theorist Glenn Snyder in his influential book *Deterrence and Defense: Toward a Theory of National Security* (1961, p. 10); his argumentation will be described in more detail in the following subchapters.

⁷ The main representatives of the fourth wave of deterrence research will be introduced in the particular subchapter (Chapter 1.3.). However, it may be noted that among the proponents of broader models of deterrence structure are e.g. Robert F. Trager, Dessislava P. Zagorcheva (2006), Matthew Kroenig, Barry Pavel (2012), Jeffrey W. Knopf (2012), or Zachary Goldman (2015).

Korean War or the 1982 Falklands War. "The widely cited explanation [of the non-use of strategic nuclear weapons – the author's note] is deterrence, but this account is either wrong or incomplete," N. Tannenwald notes (1999, p. 433) and criticizes rational materialist deterrence in the narrative of Cold War scholars: "It offers a compelling account, based on rational self-interest – fear of nuclear retaliation – of why the superpowers did not use nuclear weapons against each other after the late 1950s or so (when the United States began to become vulnerable to Soviet nuclear retaliation)." (Ibid, p. 438) N. Tannenwald criticizes the explanatory insufficiency of realistic approach to international relations and offers an additional constructivist explanation in the presence of a moral appeal to the non-use of nuclear weapons, which has been gradually formed in the human subconscious after their first use in 1945. This normative element, which the scientist called the 'nuclear taboo', is based mainly on a potential condemnation by domestic and global public opinion and is intended to stigmatize and delegitimize the use of strategic nuclear weapons as unacceptable weapons of mass destruction.

Based on the analysis of non-use of nuclear weapons in the three examples mentioned above, N. Tannenwald concludes that "... any sufficient explanation must synthesize material and normative factors, and a full account entails all three explanations: deterrence, 'nondeterrence' material factors⁸, and the taboo – though not, of course, equally or necessarily in all cases." (1999, p. 439). She points out that norms do not determine outcomes but influence (increase or decrease) the possibility of occurrence of certain courses of action. This constitutive component of norms must be taken into account because it is strongly reflected in the conception of deterrence by scientists of the fourth wave of research. Not only do strategic normative elements help deterrence in its predominant Cold War understanding to achieve the desired deterrent effect but they also reaffirm the argument about the adaptability of the concept. History proves that deterrence does not equal fast victory and offers many examples of unsuccessful attempts to apply a deterrence strategy. Such an example could be an attempt to deter an enemy from attacking by building a border fortification in France or Czechoslovakia during the 1930s (Lorenz, 2017, p. 23; Maddaloni, 2017, p. 2). However, the author assumes

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⁸ By "nondeterrence" material factors, Nina Tannenwald considers factors that are outside the deterrence theory, but which significantly shape the consequence of non-use of strategic nuclear weapons. These include, for instance, certain types of public opinion constraints, fear of long-term consequences, lack of organizational readiness, or shortage of bombs (Tannenwald, 1999, pp. 438–439). According to N. Tannenwald, the presence of these materialist factors can potentially explain the cases in which the enemy does not possess nuclear weapons.

that, among other things, due to fear of a complete loss of credibility in the international environment, mainland China has not yet undertaken a military invasion of Taiwan. The current political-military stalemate situation between China and Taiwan⁹, which has lasted since the late 1940s, thus corresponds to the successful application of deterrence strategies, regardless of the Cold War period. Furthermore, it outlines that the Anglo-Saxon scientific tradition, in which the Western narrative of bilateral ideological conflict prevailed, has a certain share in the mistaken generalizing connection of deterrence only with the reality of the Cold War¹⁰.

From the conclusions presented by N. Tannenwald, her scientific position between the third and fourth wave¹¹ of deterrence research is evident: the scholar undermines the prevailing notion of deterrence as the primary and sufficient defence strategy of intimidating the enemy closely engaged with the Cold War. Simultaneously, nevertheless, she still understands the term only in its strictly narrow definition shaped by the political-military reality of the Cold War. For the further needs of this study, such a narrowly considered concept of deterrence will be referred to as classical. It will thus correspond to the terminology used by Ch. Berglund and E. A. Souleimanov (2020) in the concept structuring of asymmetric conflict. For example, as the author shows in the following chapters, some scholars of the fourth wave of deterrence research already considered the normative element of delegitimization as an inseparable deterrence strategy in its broader structure (see e.g. Goldman, 2015; Knopf, 2012; Maddaloni, 2017). Nonetheless, N. Tannenwald dealt with this strategy as a mere additional necessary factor needed to achieve the desired deterrent effect (expressed in the non-use of nuclear weapons). Her claims about the need to combine material and normative factors for an explanation of the

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⁹ One of the authors writing about the stalemate in relations between Taiwan and mainland China is Ralph Jennings (2018), a journalist of the *Voice of America*. The relationship between China and Taiwan is also considered as a good example of the use of deterrence strategies by prominent theorist Patrick M. Morgan (2003, p. 81).

¹⁰ The difficult question of domination of Anglo-Saxon (and primarily American) scientific influence in the Cold War narratives was reflected in detail, for instance, by Noam Chomsky et al. (1997), Jessica C. E. Gienow-Hecht (2000), Richard Kuisel (2000), Robert Griffith (2001), Tom Englehardt (2007), Michael H. Hunt (2009), Volker R. Berghahn (2010), or Bruno Gonçalves, Lucía Loureiro-Porto, José J. Ramasco, and David Sánchez (2018).

¹¹ As will be clearly explained in the particular subchapter (Chatper 1.3.), the individual waves of deterrence research are not strictly separated from each other by certain time periods but rather their ends and beginnings are intertwined. N. Tannenwald's scientific work then represents such a transition as well as that of Lawrence Freedman (2000; 2004; 2005).

non-use of strategic nuclear weapons to be sufficient are very likely largely valid. The author will return to them in this study because the desired result of the combination of applied strategies of deterrence is the non-use of conventional or unconventional weapons.

In this subchapter, the author aimed to argue satisfactorily in favour of the argument about the adaptability of deterrence and thus introduce the reader to the solution of the broad question of characterization and evaluation of the effectiveness of deterrence. Until recently, many scholars shared the view that the deterrence strategy could not adapt to the changed international environment after the end of the Cold War. The absence of constructivist thinking about the normative element in deterrence strategies most likely prevented many scientists from thinking about the concept in its potentially wider use. In connection with the catastrophic vision of the outbreak of the Clausewitzian absolute war, which was imprinted in the study of deterrence by a spatially limited and generalizing realistic Anglo-Saxon scientific tradition, the concept acquired its very narrow classical definition. For many scientists, any attempt to use post-Cold War deterrence strategies may also have seemed irrelevant simply because deterrence was rediscovered in the early period of the Cold War and a principal portion of studies on concept was created during this period (Morgan, 2003, p. 1). However, current scholars no longer repeat the narrative of the supreme position of classical nuclear deterrence in any national defence strategy. On the contrary, a large number of scientists attempt to emphasize the independence of deterrence over a certain period of time and the ability to adapt to new strategic challenges. Current studies thus consider the concept in a broader latent structure and this change is reflected in the evolution of the deterrence definition over time.

1.2.2. Defining the Concept in the Context of the Cold War

After the introduction, which tried to find an answer to the basic question of whether the concept of deterrence is defined by the reality of a particular period or whether it can be adapted to strategic challenges independent of time and space, it is necessary to evaluate how individual authors have dealt with the task of characterizing deterrence. As already mentioned, the amount of scientific work on deterrence theory and practice is extensive. Moreover, it is very difficult to find an initial argument from which it is appropriate to go through the evolution of the characterization of the concept. It should be noted at the outset that the idea of a deterrence strategy arose from questioning the need to use force against the enemy to achieve the desired result. Nevertheless, from the very beginning, deterrence is considered a coercive strategy, and therefore, according to the representatives of the primal considerations of the concept, there must be an element of threat of use of force (compare George et al., 1994; Jervis, 1979; Morgan,

2003; Sun Tzu & Griffith, 1963; Von Clausewitz, 1976). The threat of potential use of force is thus a basic premise of deterrence strategies.

Thus, the core of literature on deterrence theories have generally assessed the difference between the use of force and threat of force (see e.g. Blechman & Wittes, 1999; Maddaloni, 2017, p. 4; Schelling, 1980, p. 9). This comparison was accurately described by Thomas C. Schelling in his principal work *Arms and Influence: "There is a difference between taking what you want and making someone give it to you, between fending off an assault and making someone assault you, between holding what people are trying to take and making them afraid to take it, between losing what someone can forcibly take and giving it up to avoid risk or damage." (Schelling, 1966, p. 2). Sun Tzu and Carl von Clausewitz highly valued the ability to coerce the enemy to yield without any use of force. However, "[d]eterrence is not simply winning without the use of force, there has to be credible force to back up the threat," as Jon-Paul Maddaloni adds (2017, p. 4). The interest in deterrence as a top military strategy was obvious: an effective application of the threat of force significantly saves the expenditures that would be spent on war and the social capital of the state. Above all, however, it protects the population, infrastructure, necessary state institutions, etc. from direct attack.*

Mentioning T. Schelling, his work on classical nuclear deterrence throughout the Cold War has laid a comprehensive theoretical basis for a meaningful debate on the concept that continues to this day. The example of his approach to deterrence and the understanding of the concept by his later followers clearly shows the difference discussed in the previous subchapter. T. Schelling considered a narrowly structured concept of deterrence. Nevertheless, as early as 1958, he correctly identified and described two necessary conditions for the application of deterrence that were reflected in many general definitions of the concept. The first condition is the occurrence of already mentioned *threat of force*, the second is a necessary element of *communication*. T. Schelling's definition of "[d]*geterrence is concerned with the exploitation of potential force*" and "... *persuading a potential enemy that he should in his own interest avoid certain courses of activity,*" (Schelling, 1980, p. 9)¹². Almost fifty years later, two scientists of the fourth wave of deterrence research, Robert F. Trager and Dessislava P. Zagorcheva, are working on the same assumptions, stating that "[a] deterrence strategy ...

¹² Nobel Prize-winning economist Thomas C. Schelling published in 1980 extended edition of his study *The Strategy of Conflict* of 1958. Although he did not change the basic assumptions for carrying out deterrence, he critically reflected some of his original conclusions when evaluating the evolution of deterrence research over the past twenty years.

consists of the following two elements: (1) a threat or action designed to increase an adversary's perceived costs of engaging in particular behavior, and (2) an implicit or explicit offer of an alternative state of affairs if the adversary refrains from that behavior¹³," (Trager & Zagorcheva, 2006, pp. 89–90). The elements of communication and threat of force are the cornerstones of the structure of deterrence, condicio sine quibus non. The use of deterrence is not possible without them, and as R. Trager and D. Zagorcheva suggested in their claim above, they have their psychological effects on the adversary. However, some other necessary preconditions of a predominantly psychological nature must also be fulfilled for a state of deterrence to occur at all.

Based on the above-mentioned necessary conditions, a number of prominent theorists have developed general definitions of deterrence. For instance, Colin S. Gray formulated a widely used definition: "To deter is to persuade someone not to do something that they might well have done otherwise." (Gray, 2010, p. 278) This is in fact consistent with the characterization of deterrence developed by another prominent theorist, Patrick M. Morgan: "The essence of deterrence is that one party prevents another from doing something the first party does not want by threatening to harm the other party seriously if it does. This is the use of threats to manipulate behavior so that something unwanted does not occur." (Morgan, 2003, p. 1) In both definitions, there is a requirement for the necessary psychological manipulation of adversary. T. Shelling's characterization of deterrence mentioned above confirms it too. Deterrence is the concept based on state of mind, on the supposition of a rational cost-benefit calculus by the challenger (Beidleman, 2009, p. 16; Stein, 2012, p. 46). But first of all, a state of deterrence could not have occurred if the other party had not understood it. "Deterrence is the condition that obtains when someone decides that he is deterred," C. Gray claimed and

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¹³ R. Trager and D. Zagorcheva state that "[t]his second element defines the magnitude of the political objectives sought by the coercing state," (Trager & Zagorcheva, 2006, pp. 89–90). However, in order to avoid misunderstandings, the author considers it necessary to mention here that in the framework of deterrence there should be no using of inducement strategy, i.e. an explicit communication of the direct offer of benefit for refraining from hostile action. This study considers deterrence as an attempt at a mere negative outcome that can at most signal a call for negotiations. The inducement strategy considers certain results of negotiations, i.e. a positive outcome. However, the line between the two strategies is blurring and a considerable number of scientists are confusing the two terms (see e.g. Gray, 2003; Jervis, 1979; Maddaloni, 2017; or Trager & Zagorcheva, 2006). The author deals with this issue in more detail in the particular subchapter (Chapter 1.4.).

added that unless the targeted deterree choose to cooperate and be intimidated, deterrence does not work (Gray, 2010, p. 278).

In connection with the necessary cooperative conditions of threat of force and communication, Thomas Schelling presents two elements 'the power to hurt' and 'the power to bargain' (Schelling, 1966, p. 2–3). The scholar argues that deterrence is like a bargain where both parties weight their alternatives and decide to act based on the leverage of the evidence presented. The threat of force represents this evidence and may include any means available to state and non-state actors. The key to bargain is to ensure that the other party believes the evidence, i.e. the threat of force is credible. However, at the same time, both parties must agree on a state of affairs that offers various alternatives to action. Viewed in this way, deterrence is likened to bargain, and therefore, the strategic concept "is not just about making threats; it is also about making offers¹⁴" (Trager & Zagorcheva, 2006, p. 92). Within deterrence, an appropriate combination of threat and offer should be found to achieve the desired results. T. Schelling describes such communication from the position of strength and balancing individual alternatives as 'diplomacy of violence'; the nature of bargaining of this kind is very rough, merciless, and even highly destructive with an element of power to hurt. The critical point of this subtype of coercive diplomacy¹⁵ is the moment of communication to the enemy the threat

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¹⁴ The theorist Glenn Snyder (1961, p. 10), among others, also dealt scientifically with the question of the need for the offer to occur in a state of deterrence. When scientists attempted to study deterrence while ignoring the offers, they usually ended up in an impasse. However, G. Snyder put the question how large a nuclear capability must be for the threat to be sufficient. The answer will not be more certain unless we consider the need to involve an element of offer. An offer not to attack reduces the risk of potential attack caused by the continuing arms race. If the adversary accepts the offer not to attack, any increase in nuclear capability will reduce the credibility of this offer and the risk of attack will increase. However, an appropriate balance must be found between the two necessary conditions of threats and offers. In this context, a well-known case of the 1962 Cuban Missile Crisis presents a good example of threats and offers communication: "*Open communications or back-door channels, like those used in the Cuban missile crisis, are essential.*" (Maddaloni, 2017, p. 5). For related literature on deterrence and provocation, see, for instance, Lebow (1988); Jervis (1989); or Stein (1991).

¹⁵ Later, the political scientists Alexander L. George strictly separates deterrence strategy and coercive diplomacy. He finds the main difference in the fact that deterrence "employs threats to dissuade an adversary from undertaking a damaging action not yet initiated", whereas " ... coercive diplomacy is a response to an action already undertaken" (George, 1994, p. 7). Although deterrence strategies belong among coercive strategies, A. L. George ranks coercive diplomacy as a subtype of so called

of use of force, its potential, and the limit beyond which the force will be applied (Maddaloni, 2017, p. 5; Schelling, 1966, p. 2–3).

1.2.3. Deterrence by Punishment and Deterrence by Denial

The scholar Glenn Snyder intimated the first major change in perception of the concept of deterrence during the Cold War. According to him, in the context of deterrence strategy, it is essential that the increase in adversary's perceived costs reflects the amount of costs imposed by the deterrer itself. This requirement definitively distinguishes the strategic concept from other forms of diplomacy, such as persuasion, which do not consider any imposition of costs. Simultaneously, this consideration makes it possible to extend the Cold War limited deterrence structure to two strategic elements¹⁶ termed by G. Snyder as 'deterrence by punishment' and 'deterrence by denial' (see Figure 1.; Snyder, 1961, pp. 14–16; Trager & Zagorcheva, 2006, p. 90). Deterrence by punishment is defined by the scholar as damaging something an opponent values in retaliation for his undesired hostile act. Potential triggers of punishment may include a terrorist attack as well as an action considered a precursor to an attack ¹⁷ (Snyder, 1961, p. 15). However, the strategy of deterrence by punishment alone may not be sufficient to intimidate the enemy, it may actually have a counterproductive effect. The theorist Martha Crenshaw warns that the application of the threat of use of force alone can quickly turn into the use of force which "... may radicalize the whole movement or some splinter faction" (Crenshaw cited in Alterman, 1999, p. 3). However, it should be remembered that the ideal aim of deterrence is achieve the desired objectives without the use of offensive means. It is

^{&#}x27;compellence strategy'; he perceived coercive diplomacy rather in "defensive uses of the strategy – that is, efforts to persuade an opponent to stop or reverse an action" (Ibid). Both compellence and deterrence are subcategories of coercive strategies as shown by Jon-Paul Maddaloni's Figure 1. (2017, p. 10). The particular subchapter (Chapter 1.4.) deals in more detail with compellence, its differences from deterrence, and mutual similarities.

¹⁶ At this point, it should be noted that G. Snyder's structural division of deterrence strategies was subsequently widely used in conceptualizations by many scholars of the fourth wave of research (see, e.g., Goldman, 2015; Knopf, 2012; Kroenig, Pavel, 2012; Maddaloni, 2017; or Trager & Zagorcheva, 2006). This study will also work extensively with both strategic elements.

¹⁷ Precursors to an attack may include illegal armament, recruitment of potential perpetrators, or preparation for the attack itself.

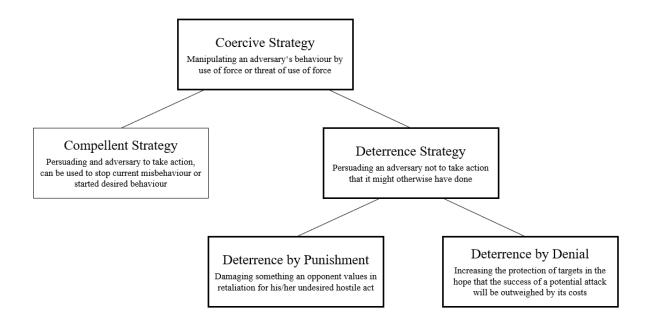


Figure 1. Typology of Glenn Snyder's conceptualization of deterrence strategies (using figure made by Maddaloni, 2017, p. 10; Snyder, 1961, pp. 14–16; adapted by the author)

possible with a right combination of deterrence by punishment and deterrence by denial strategy¹⁸.

Deterrence by denial is characterized by increased protection of targets in the hope that the success of a potential attack will be outweighed by its costs. The application of this strategy intends to convince terrorists of the state's determination not to make concessions in favour of terrorist tactics. Therefore, it is generally true that "where punishment seeks to coerce the enemy through fear, denial depends on causing hopelessness" (Johnson, Mueller, & Taft, 2002, pp. 16–17; Snyder, 1961, pp. 15–16). Deterrence by denial should not be confused with defence strategy because it merely aims at "... reducing. . . costs and risks in the event deterrence fails" (Snyder, 1961, p. 3) rather than on the psychological manipulation with the opponent. Strategies

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¹⁸ R. Trager and D. Zagorcheva (2006) demonstrate on different strategic approaches to two terrorist groups in the Southern Philippines – the Moro Islamic Liberation Front and the Abu Sayyaf Group – that deterrence by punishment can lead to open fighting, further radicalization of terrorists, prolongation of the conflict and increasing the number of victims. While an appropriate combination of strategies of deterrence by punishment and deterrence by denial resulted in success, i.e. the organization's approval to open negotiations, in the case of a conflict with the Moro Islamic Liberation Front, the mere employment of deterrence by punishment against the Abu Sayyaf Group led to a serious escalation of the conflict.

to increase the protection of targets may include, for example, strengthening security controls at airports, in government buildings, or stadiums, tightening immigration controls, or fortifying embassies¹⁹. These strategies aim to reduce the coercive leverage of terrorist tactics and thus to minimize the motivation to attack (Trager & Zagorcheva, 2006, p. 122). The essence of deterrence by denial has one fundamental difference from deterrence by punishment: it is applied more generally and more indirectly. While in order to use the latter, it is necessary to know to some extent the adversary and his attack capabilities so that the threat can be properly balanced, deterrence by denial rather responds to the threat of attack by an unknown enemy. Alternatively, it responds to an already committed attack because the task of the denial strategy is to reduce the perpetrator's success, regardless of whether the attack has already been carried out. However, the study will focus on a closer analysis of the strategy later.

For the combination of deterrence by punishment and deterrence by denial to be effective, three conditions directly related to the deterree's mentality must be met in addition to the need to balance them properly:

- 1. The deterree must understand the (implicit or explicit) threat;
- 2. his decision-making must be sufficiently influenced by cost-benefit calculations²⁰;
- 3. and the adversary must show a strong will to survive and eventually win, despite the other party's ability to cause damage²¹.

¹⁹ According to some analysts, one of the reasons for the 1998 attacks on U.S. embassies in Kenya and Tanzania was reasoning of perpetrators that U.S. assets in Africa were less secure compared to better fortified facilities, for example, in the Middle East (see e.g. Cooke, 2017; Reid, 1998; or Risen & Weiser, 1999).

Admiral Sir Julian Oswald on the belligerent's understanding of the threat and his cost-benefit calculations in the Cold War context, noted: "Our deterrent posture exploited the reasonable fear that aggression entailed risks of retaliation that would exceed any possible gains. Successful deterrence required both sides to understand this language and accept the rules." (Oswald, 1993, p. 29). In his seminal work Deterrence and Defense, G. Snyder postulated four factors that exists in the adversary's mind and that he contemplates during the cost-benefit calculus: "(1) his valuation of his war objectives; (2) the cost which he expects to suffer as a result of various possible responses by the deterrer; (3) the probability of various responses, including 'no response'; and (4) the probability of winning the objectives with each possible response" (Snyder, 1961, p. 12). Both deterrer and deterree must consider almost all alternatives of war action.

²¹ Some terrorists may act fanatically, and therefore, some analysts believe that, in general, none of these conditions can be met (see e.g. Pape, 2005, p. 5). However, most scientists agree that terrorists act

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(Gray, 2010, p. 279; Trager & Zagorcheva, 2006, p. 91)

Necessarily, the deterree has to be able to bear other party's threats; not only for the deterrence strategy to be successful, but for it to be launched at all. Therefore, it is necessary to understand the adversary's political and strategic situation before starting the deterrent bargaining. Otherwise, a strategic error might happen which could lead to failure of deterrence in its very beginning. As C. S. Gray added as an example: "[T]he intended deterree [could be – the author's note] so constrained by his domestic situation that he simply cannot afford to agree to be deterred" (Gray, 2010, p. 280). Counterparts needs to know each other culturally; designing an effective counter-terrorism strategy requires a deep understanding of the adversaries involved in terrorist operations, not only their intentions²² and capabilities but also roles of individuals within the group. The key to successful deterrence is to identify the opponent's discrete vulnerabilities and to own capabilities that could threaten these vulnerabilities (Oswald, 1993, p. 30; Trager & Zagorcheva, 2006, p. 101). Such in-depth knowledge requires the involvement of a broader latent structure of deterrence strategies, including a communication strategy for delegitimization or deterrence by denial. Nevertheless, such a deterrence structure is considered by scholars of the fourth wave of research.

The example of potential deterrence failure mentioned by C. S. Gray outlines the broader question of factors that can lead to the failure of this coercive strategy. Therefore, before moving on to the analysis of a broader structural concept of deterrence, it is necessary to mention the so-called 'three C's of deterrence', which indicate the potential failures of the theory. Thomas C. Schelling elaborated them in detail in his seminal work Arms and Influence (1966); first, the threat must be credible and anyone who resorts to it must be able to turn it into action. Both scientists R. Trager and D. Zagorcheva add that not only the threat of retaliation, but also the deterrer's commitment refrain from action if its conditions are met must be credible.

rationally within their value system, even when conducting suicide missions (see e.g. Betts, 2002; Crenshaw, 2012; or Schachter, 2002) This question, which scientists R. Trager and D. Zagorcheva call the 'problem of irrationality', will be discussed in more detail in the next chapter on the four waves of deterrence research (Chapter 1.3.).

²² Some terrorists may refrain from certain actions not only for fear of their lives and property but also for fear of not fulfilling their intentions. Examples include peace talks in Northern Ireland or Colombia, which were interrupted when one party violated the ceasefire. As there was a risk that the demands of the terrorists would not be taken into consideration in any way if the peace processes were completely interrupted, all parties subsequently called for a ceasefire and a refrain from violence (Acosta & Murphy, 2014; Melichar 2018; WOLA, 2015).

In addition, the deterrer must have an incentive to retaliate and "not be made worse off by carrying out a threat than if it had simply not responded to the provocation" (Trager & Zagorcheva, 2006, p. 91). Second, the threat must be communicated simply so that the adversary fully understands the dilemma he is facing. Thus, the deterrer must be able to say that he is threatening something that his belligerent values highly; the adversary must understand that there is something at risk that he values much more than the success of his intended action. And third, there must be a deterree's commitment that the threatened action will be taken. T. Schelling emphasizes that deterrence is based on a reasonable or rational actor model of the world in which individual actors behave according to their best interests. Nonetheless, he also admits that in a complex and unpredictable world, issues related to the three C's of deterrence and rationality can lead to theory failure and catastrophe²³ (Schelling, 1966; Trager & Zagorcheva, 2006, p. 91). A wide range of tools and practices to reduce the failure of the theoretical framework and increase the success of deterrence were subsequently introduced by scientists and strategic analysts of the fourth wave of concept research. Current scientific research has opened a leeway in the structure of concept for a number of strategies that have been and are compatible with the general definition of deterrence.

1.2.4. Broader Application of Deterrence

All premises and conditions mentioned above were practically fulfilled during the era of so called 'strategic nuclear deterrence'. As an overall Cold War strategy, deterrence proceeded from the unique capacity of nuclear weapons not even to cause serious damage, but the total destruction. Strategic nuclear forces are naturally offensive, they cannot be used as traditional defensive weapons (Huggins, 1993, p. 2). Carl H. Builder from the RAND Corporation describes nuclear weapons in terms of "political instruments of terror, not military instruments of war²⁴" (Builder, 1991, p. 12). The Cold War was based on a contingent promise: "if you

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²³ T. Schelling's conclusions about the three C's of deterrence and rationality have led many scientists and strategists to interpret the theory of deterrence as unpredictable (see e.g. Achen & Snidal 1989; Fearon, 1994; or Signorino & Tarar, 2006). It should be noted that many of these authors also contended with serious methodological difficulties in their studies; their research shows how extremely difficult it is to rely largely on regressive inferences without a thorough knowledge of the causality of individual cases.

²⁴ C. Builder's reasoning agrees with the conclusions of N. Tannenwald (1999) on the nuclear taboo evolved by the stigmatization of strategic nuclear weapons as an immoral political instrument of terror

attack, you will suffer consequences you cannot accept" (Huggins, 1993, p. 2) and strategic thinking was subject to the premises discussed above. However, with the end of the Cold War, seemingly most of the conditions for the successful deployment of the deterrence strategy has passed. "With the collapse of the discipline of the East-West stalemate, this system of deterrence has been undermined," emphasizes Admiral Sir Julian Oswald (1993, p. 29), one of the military strategists of the Cold War. For many scholars and strategic analysts, the end of the bipolar distribution of the spheres of political-military power signified the conclusion of an era of thorough knowledge and predictability of the enemy's thinking.

Anglo-Saxon scholars, who at the time still dominated theoretical derivations in the field of deterrence, suddenly lacked the certainty of a potential unleashing of the Clausewitzian ideal of absolute war; conventional weapons could not replace nuclear force. They had no apocalyptic consequences, and therefore, could not be demonstrated in order to restore credibility to deter according the known deterrence postulates (Connable, 2018, p. 11; Huggins, 1993). The realistic perception of the world as a network of logically interconnected relationships between rational-minded state actors was disrupted by the seemingly irrational behaviour of hitherto relegated state and non-state actors. These actors did not hesitate to use chemical weapons of mass destruction and inflict suffering and destruction on their own people. Moreover, scholars and strategic analysts no longer faced a single threat under the ideological conflict between the 'capitalist and liberal West' and the 'communist and illiberal East' but had to deal with fragmented, decentralized threats, the definitions and classifications of which were just beginning to evolve (Lorenz, 2017, p. 32; Oswald, 1993, p. 29). It is therefore not surprising that a considerable number of scientists soon after the end of the Cold War questioned the position of deterrence as the principal element of national defence strategy and marginalized it as obsolete and no longer applicable in the fight against new threats²⁵.

The change in thinking about the use of deterrence occurred gradually, usually with scientists who put deterrence on the margins of their primary research (see e.g. Alterman, 1999; Prunckun & Mohr, 1997; or Tannenwald 1999). These authors generally conducted research on the border of the third and fourth waves of deterrence research; they rather dealt with the concept in its classical narrow structural definition characterized primarily by T. Schelling and

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⁽in C. Builder's term). Due to their totally destructive immoral nature, nuclear weapons cannot be considered instruments of conventional warfare.

²⁵ This fact has already been outlined in the first of previous subchapters (Chapter 1.2.1.) and will be discussed in more detail in the following section (Chapter 1.3.).

G. Snyder but considered it insufficient to fulfil the desired deterrence effect in the new context of the arrangement of power and influence. In their opinions, for the deterrence strategy to lead to a successful outcome, it should be applied together with other necessary strategies of delegitimization (Tannenwald, 1999), prosecution and negotiation (Crenshaw in Alterman, 1999), or dissuasion (Prunckun & Mohr, 1997, pp. 269–270); Henry W. Prunckun and Phillip B. Mohr even inappropriately synonymize deterrence with the strategy of dissuasion, which should rather be a subtype of deterrence strategies (see e.g. Maddaloni, 2017, pp. 16–17), as will be presented later in the study. But it was not until the September 11 terrorist attacks (also known as 9/11) that this gradual change in thinking about the concept of deterrence has obtained its contemporary form.

The 9/11 symbolizes the beginning of the struggle with a new global adversary, which, however, in many aspects fulfils the attributes listed above and typical of adversaries in the post-Cold War period. In the relationship between decision-makers, military strategists and scientists, the pressure to find new strategies for the effective fight against terrorists and the idea of terrorism has increased significantly. As all potential options were considered, the deterrence strategy was rediscovered, among other things. Efforts of scholars resulted in sizable body of new explorations on deterring terrorism. A new understanding of deterrence became a significant part of a broader fourth wave of concept research (Knopf, 2012, p. 21). This scientific approach is characterized by a liberation from the theoretical inferences into the form of grand theory that has accompanied research in the field of deterrence since the beginning of the Cold War. The strategy should no longer be derived from a single case and terrorism was not the only threat to be faced; research has also focused on the use of deterrence against rogue states armed with weapons of mass destruction, sea/air piracy, or cybercrime (see e.g. Bahar, 2007; Goodman, 2010; or Lebovic, 2007). "Research on deterring terrorism, however, constitutes the largest and most original part of the fourth wave," Jeffrey W. Knopf noted (2012, p. 21). This study is also part of an extensive discussion of the fourth wave of deterrence research.

Within this scientific approach, scholars share a presumption that non-state actors, including terrorist groups, can be deterred. Ironically, the interest of these scientists grew at a time when the scepticism of scholars and strategists of previous generations of research²⁶ about

²⁶ The aforementioned fact that the individual waves of deterrence research mingle with each other rather than follow each other with a sharp separation of individual periods is confirmed by H. W. Prunckun and P. B. Mohr, stating that the counterterrorist policy of Reagan's administration already in February

the effectiveness of deterrence against terrorists increased. "A conventional wisdom quickly emerged that deterrence would prove irrelevant against groups like al Qaeda." (Knopf, 2012, p. 21) Doubts about the effectiveness of deterrence in trying to deter suicide bombers from their actions or in the case of ignorance of the location of wanted terrorists, the so-called 'return address problem', shifted from the 1990s to the period after 9/11 with even greater intensity²⁷ (Ibid). Many scholars considered the strategy of deterrence to be inappropriate in the fight against terrorists, yet the number of scientific publications on the possibility of applying terrorism deterrence increased.

The question is how to explain such a large increase in interest in the terrorism deterrence strategy? The author offers three potential causes; first, international terrorism on 9/11 has hit the territory, infrastructure, and population of the United States so severely that had to trigger a retaliatory response almost automatically. International terrorism has been active for several years and has inflicted several attacks on the United States prior 9/11 (Watson, 2002), but for the first time, there has been such a massive terrorist threat to national security in the USA. Second, this reaction was very expensive over time. One of the tasks of deterrence is to prevent expensive retaliatory reactions that ultimately harm both the deterrer and the aggressor. The vast majority of influential studies on the benefits of deterrence was made after 2006 when the cost of the United States response to 9/11 symbolized by the wars in Afghanistan and Iraq began to materialize²⁸ (see e.g. Belasco, 2005; Bilmes & Stiglitz, 2006; or Orszag, 2007). And third, the increasing interest in terrorism deterrence has responded to a growing number of studies addressing the psychological profile of terrorists and highlighting the

¹⁹⁸⁶ considered more specific deterrence strategies characteristic of the studies of authors of the fourth wave of research (Prunckun & Mohr, 1997, p. 270).

²⁷ The scientific discussion and its initial arguments on the issue of non-functioning of deterrence against terrorist threat are analysed in more detail in the following subchapter (Chapter 1.3.).

²⁸ According to the Costs of War project at the Watson Institute for International and Public Affairs at Brown University, the costs of the wars in Afghanistan, Iraq, and Pakistan (the war in Pakistan refers to the US counter-terrorism operations against al Qaeda) amounted to \$6.4 trillion dollars in Fiscal Year 2020. These expenses involve, for example, "direct Congressional war appropriations; war-related increases to the Pentagon base budget; veterans care and disability; increases in the homeland security budget; interest payments on direct war borrowing; foreign assistance spending; and estimated future obligations for veterans' care" (Watson Institute, 2020). So far, war expenditures have been paid for mostly by borrowing. The scholars from project estimate that interest payments can reach up to over \$8 trillion by the 2050s.

considerable potential of using deterrence strategies in fight with them (see e.g. Alterman, 1999; Davis & Jenkins, 2002; or Prunckun & Mohr, 1997). This list is not intended to be an exhaustive enumeration of factors that have a positive effect on the development of the fourth wave of deterrence research. However, it should put the reader in a historical context in which sizable body of new explorations on deterring terrorism has developed.

The fourth wave of research is characterized by the incorporation of a number of strategies previously considered outside the framework of deterrence into the latent structure of deterrence concept. These strategies extend the considerations and the very practice of applying deterrence to a larger number of cases. Their incorporation into the deterrence structure allows for their appropriate typologization, which can serve as a practical source for a balanced combination of strategic practices and tactical tools tailored to a specific case. The creation of typologies of deterrence strategy tools responds to the need to consider threats not only in their classical form of use of unconventional nuclear weapons but also as conventional threats and threats of a non-military nature. A good example of a theoretical basis reflecting the abovementioned features of the fourth wave of deterrence research is the work of Zachary Goldman (2015). The scholar builds the theory on the findings of Thomas Schelling (1958), Lawrence Freedman (2004), or Alex Wilner (2011) and provides a contemporary understanding of deterrence.

Z. Goldman draws on the still valid theoretical foundations that were previously attributed only to the Cold War period and defines deterrence as "the act of influencing an adversary's cost/benefit calculations to prevent him from doing something that you do not want him to do" (Goldman, 2015, p. 311). The scholar agrees with the crucial role of the aforementioned three C's of deterrence in the success of the use of deterrence but criticizes the ill-conceived potential consequences that can be caused by the deployment of a mere threat by military force. Using the example of international pressure on the regime of Muammar Gaddafi and the subsequent military action in 2011, Z. Goldman demonstrates the hopelessness caused to the Libyan leader by the threat of military force. The scientist argues that the applied strategy was so punished that Muammar Gaddafi had no alternative but to "fight to the end or to capitulate unconditionally to the international coalition" (Ibid, p. 314). Z. Goldman appeals to use such strategies and means that force the adversary to consider costs and benefits and, if necessary, to withdraw from his original objectives. Only in this way, deterrence would not violate T. Schelling's cardinal principle formulated as: "To be coercive, violence has to be anticipated. And it has to be avoidable by accommodation. The power to hurt is bargaining power. To exploit it is diplomacy." (Schelling cited in Goldman, 2015, p. 314) The art of

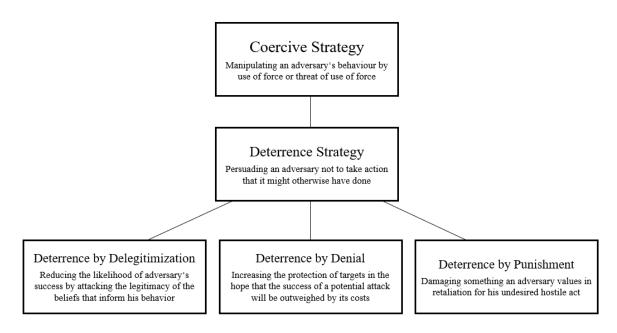


Figure 2. Typology of Zachary Goldman's conceptualization of deterrence strategies (Goldman, 2015, p. 314; using figure made by Maddaloni, 2017, p. 10; Snyder, 1961, pp. 14–16; adapted by the author)

deterrence presupposes the ability to persuade the belligerent to refrain from the intended action without a real deployment of means of force against him. However, it has never been said that deterrence must achieve the desired aim only with the help of (un)conventional weapons.

In this sense, Glenn Snyder took the first step forward by dividing deterrence strategies in two categories: deterrence by punishment and deterrence by denial. The evolution of theory of deterrence has made further progress at a time when its sufficiency has been questioned and when it has been essential to consider the presence of other necessary strategies that will help deterrence succeed. So far, this development is completed by the current scientists of the fourth wave of concept research, who again strengthen the credibility of deterrence by incorporating previously necessary strategies outside deterrence into the latent structure of concept²⁹. This is exactly what Zachary Goldman did when he supplemented G. Snyder's strategic division with the strategy that N. Tannenwald originally considered outside the concept: deterrence by delegitimization (see Figure 2.). In contrast to deterrence by denial when a belligerent "is deterred from a course of action when a defender employs measures that make a successful attack less likely," in deterrence by delegitimization, the likelihood that an adversary will

strategic structure is a sufficient tool in the fight against terrorist acts. Deterrence is still only one of many strategies in the vast field of counter-terrorism (Connable, 2018, p. 13).

²⁹ However, scholars of the fourth wave of research do not claim that deterrence with an expanded

achieve his goals is minimized "by attacking the legitimacy of the beliefs that inform his behavior" (Goldman, 2015, p. 318). Terrorism is delegitimized whenever the activities of its members are publicly condemned as mean, vile, cowardly, or have no effect on the lifestyle of the society against which the actions are conducted. Deterrer seeks to persuade the adversary to change or abandon the intended actions "by degrading the rationales that motivate and guide his behavior" (Wilner, 2011, p. 27). The strategy of delegitimization also involves debates on religious interpretations, manipulation of strategic culture, or influencing public opinion, i.e. methods that are available not only to the defence component of the state but in the age of social networks virtually everyone³⁰.

The following chapters will present in more detail further efforts to integrate relevant strategic practices into the deterrence structure. The study will show broader typologies of deterrence strategies evolved by selected scientists of the fourth wave of concept research. These typologies and their thorough evaluation will then be used as a basis for the construction of the author's typology. Nevertheless, each of these typologies only shows an exhaustive list of strategies that can be used and combined accordingly for specific cases of application of deterrence, they do not represent an overall combination as such. Before that, however, it will be necessary to put changes of the nature of deterrence into the context of evolution of scientific discussion, to define the concept lexically more strictly, and to logically structure it according to the method used by Ch. Berglund and E. A. Souleimanov.

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³⁰ Scientist Janice Gross Stein (2012) describes the strategies that Z. Goldman summarizes under the collective title of deterrence by delegitimization as the most effective in combating the very idea of terrorism. Although the discussion of the issue is much more complex, in general, deterrence by delegitimization can be seen as a non-violent political strategy to combat another political strategy, born of shame, humiliation, anger, isolation, or alienation and "designed to delegitimize governments or leaders by alienating and frightening their populations" (Stein, 2012, p. 62). From the above, the effort of fourth-wave scholars to engage not only strategies aimed at preventing attacks, but also tactics seeking to reduce the thought bases of such hostile actions is evident.

1.3. Four Waves of Deterrence

The appellation of four waves of deterrence in the literature indicates the modern contribution of scholars and analytical strategists to the broad discussion of deterrence begun in the years immediately following World War II. The division into waves does not correspond as far to a simplified positioning of individual authors and influential studies into four indicative time periods, as Samuel Huntington did in his pivotal work in 1991 on the division of waves of democratic transitions. Thus, similarly to the historiography of the evolution of theories of European integration (see e.g. Kratochvíl, 2008; Wiener & Diez, 2009), the waves correspond to the different approaches of individual authors. Each wave differs from the past in some fundamental progress, a different approach to deterrence research, often a greater connection to reality, an emphasis on newly raised questions, and a critique of past approaches. The waves are not strictly separated from each other and it is not unique if one of the authors conducts research within several waves during his professional life and if some work lies on the borderline of the waves with its approach. Thus, the author rather gives a brief introduction to the evolution of scientific debate on the concept of deterrence, which is divided into four waves for greater clarity.

1.3.1. Three Waves of Deterrence: Questions & Challenges

From the beginning of nuclear era, first scholars were trying to theoretically explain actual functioning of deterrent strategy in the real world. Later, Robert Jervis described this first attempts of Bernard Brodie, Jacob Viner, or Arnold Wolfers as 'the first wave of deterrence' (Jervis, 1979, p. 291). Although the work of these pioneers of theoretical inferencing of classical nuclear deterrence application is rather forgotten, and R. Jervis emphasizes little impact of their work, these scholars have shown the amazing speed with which they have seen the implications of nuclear weapons. Their work lacked the broad range and systematization of the second wave. Nevertheless, these first deterrence theorists anticipated the existence of some assumptions and conditions that were later rediscovered by other authors. "[P]art of the reason why they did not have more influence is that the general and long-run considerations being examined were too far removed from the pressing international problems of the day," (Ibid). The scientific community was not yet addressed national security issues immediately after World War II and it was not clear that many of the ways of thought applied to this area could shed light on other issues.

With the coming of 'the second wave' in the late 1950s, new ideas very soon became conventional wisdom, "... even though there was little evidence for the validity of the propositions" (Jervis, 1979, p. 289). In many of their works, scientists such as Bernard Brodie, Thomas C. Schelling, Glenn Snyder, or Robert Wohlstetter primarily sought to establish the basic conditions for the realization of deterrence and characterize it. They usually based their inferences on the case of grand strategy, which defined and symbolized the period in which they conducted research: on the nuclear stalemate between the United States and the Soviet Union, of which political-military leadership briefly possessed nuclear weapons. To understand this new unprecedented situation of rivalry between the two powers, the second-wave authors used already ongoing studies on the rediscovered concept of deterrence. And since it was very popular among international relations scientists and strategists of that time to apply game models to real relationships, many scholars of the second wave of deterrence research included a connection between deterrence theory and zero-sum game models in their work (Lorenz, 2017, pp. 25–26).

The implications of models such as the Game of Chicken, as an analogy to the practical application of deterrence, have enabled scientists to understand many of the bargaining tactics actors embraced. It was supposed to help to understand the situations "... in which the first choice of both sides is to stand firm, but in which both prefer retreating and letting the other side win to a mutually disastrous confrontation. Each side therefore tries to prevail by making the other think it is going to stand firm" (Jervis, 1979, pp. 291–292). Each side decides whether to stand firm by calculating its costs and benefits and estimating the probability that the other will retreat. Thus, the implication of the model helps scientists understand why belligerents stand firm rather than retreat. However, the implication also highlights the paradoxical nature of deterrence, where each actor hopes to be secured not by protecting itself well, but by threatening to cause unacceptable damage to the other side (Ibid, p. 292). From the above, it is clear how crucial role the choice of zero-sum game models as explanatory theories of the effect of deterrence on the narrow definition of concept in its classical meaning played. The use of zero-sum game models can thus be included among factors such as the catastrophic vision of the outbreak of the Clausewitzian absolute war or a spatially limited and generalizing realistic Anglo-Saxon scientific tradition, which also play a key role in the narrowly defined concept of deterrence.

The impact of the second wave on the future evolution of deterrence research is crucial. Nevertheless, some of the second-wave authors' conclusions came under criticism, which was outlined in the previous chapters. However, it is appropriate to give at least selected examples

of criticized issues, as well-meaning and targeted criticism is part of the scientific debate and further deepens knowledge. One of the regularly and still recurring criticisms is the argument that deterrence does not properly answer the question of how to change the hostile motivations of the other actor into a peaceful one (see e.g. Jervis, 1979, pp. 292–294; Morgan, 2003, pp. 10–11). Anatol Rapoport's claim that the only way out of the dilemma is a good choice for the whole system (Rapoport, 1966, pp. 281–282) is insufficient to answer the question. However, the inadequacy of the answer to the question of achieving the adversary's peace intentions lies in the very nature of the realistic tradition: "The origins of wars and courses of crises are much more frequently studied than the defusing of tensions and the diminution of conflict." (Jervis, 1979, p. 292). However, although selected third-wave and fourth-wave authors try to solve this causal question of exposing black box in the opponent's mind (see e.g. Lebow & Stein, 1990; Tannenwald, 1999; or Wilner, 2011, p. 32), the author will not address it further in this study. The answer to this question is not the aim of this work, moreover, many authors are unable to agree on what should be the success of deterrence: whether to avert a hostile action or to start negotiations on an alternative arrangement. The author considers the averting of hostile action to be a minimal success, and therefore does not address in the study the ways in which the enemy's intentions can be turned into peaceful.

In his article (1979), R. Jervis criticizes the authors of the second wave of research for their classical understanding of deterrence concept, while ignoring the contribution of G. Snyder (1961), who he also ranks among second-wave scholars. However, R. Jervis himself cannot disencumber from the concept interpretation as deterrence by punishment; he emphasizes, however, that game theory makes it possible to consider deterrence in a broader 'carrot with stick' concept³¹, and admits the considerations of the involvement of 'deterrence by reward' strategy³², as introduced by Jon-Paul Maddaloni (2017) in his conceptualization. R. Jervis, as a rather third-wave author, opens the considerations of both the third wave and especially the fourth wave of research. In addition, the scientist criticizes the second wave for

³¹ The name of the concept was adopted by R. Jervis from the scholar Alexander George, who had claimed that the bargaining model based on Chicken "ignores the possibility (and, oftentimes, the necessity) of combining a carrot with the stick" (George & Smoke, 1974, p. 29). R. Jervis criticizes this argument of A. George in his article (Jervis, 1979, p. 294).

³² The author will discuss the deterrence by reward strategy in more detail in the next subchapter (Chapter 1.4.). However, he considers it necessary to mention here that this strategy is rather part of a wider group of inducement strategies, which should be separated from deterrence due to its differences.

its ethnocentrism and the problem of rationality (Jervis, 1979, pp. 296–301), issues that are still not sufficiently resolved. R. Jervis sees two types of ethnocentrism: first, the United States is considered better and stronger than other states. "Deterrence theory certainly does not commit this error. The theory is abstract and deals with states A and B, and it does not matter what national names fill these blanks." (Ibid, p. 296) Second, the Anglo-Saxon scientific tradition assesses the world from its point of view and very rarely admits that people from other cultures might analyse relations differently (Ibid, pp. 296–297).

The second criticized question, the problem of rationality, is fundamentally different from the problem of irrationality, which is characteristic of the fourth wave of research and which the author will address in the following subchapter. While the problem of irrationality generally points to the impossibility of applying deterrence against someone who does not calculate costs and benefits, the problem of rationality points to the fact that deterrence theory overestimates the ability of a decisionmaker to think rationally, especially under high stress (compare Holsti, 1972, pp. 7–25; Holsti & George, 1975, pp. 255–319). "The question is twofold: first, does the assumption that men are rational lead to the generation of interesting and valid propositions, and second, how rational do men have to be for deterrence theory to apply," R. Jervis asks and remarks: "Much less than total rationality is needed for the main lines of the theory to be valid." (Jervis, 1979, p. 299). For deterrence, it is essential that the adversary realizes that starting a war is the worst alternative. And concurrently, he must know that the deterrer is of the same opinion; otherwise, the deterree could conclude that the deterrer is less than rational and would not hesitate to start a war. This premise again draws attention to the paradoxical nature of deterrence when "[i]t is (really) bizarre for a state to maintain its security by making its adversaries believe that it is prepared to bring about the end of its civilization" (Jervis, 1979, p. 300). Nevertheless, the inference is completely rational because an attack that suddenly destroys the entire civilization and its firepower is virtually impossible. Thus, the target state has time to retaliate in any way. Selected examples of criticized questions spilled over between the authors of the following waves and further developed their research.

First significant attempts to systematize and extend the theory of deterrence emerged in 1970s. 'The third wave of deterrence' came with need to verify previous ideas and adapt the theory on the reality of 1970s. Within its framework, scientists have largely abandoned the deductive approach, with which had grouped together and explored well-known bargaining tactics, and have preferred induction, trying to test theoretical knowledge on specific real examples. "There is much to be gained by doing so: greater precision, new insights, and testing the theory. By thinking through the theory's implications, we are led to understand the theory

better – to see which elements are essential, which contradict each other, and which are in need of modification," R. Jervis commented on the third wave of deterrence research (1979, p. 301). This research wave is very extensive, in many ways it already blends with the fourth wave and rather deals with lexical details, which various authors have tried to clarify and define more clearly (see e.g. George, 1994, pp. 7–11; Gray, 2003; or Morgan, 2003). However, not sporadically, more and more ambiguities arose due to different authorial approaches and an increasing number of terms and definitions. The research also deals with exceptions that defy established theoretical assumptions, and endeavours to explain other deviations with the help of other approaches, for example, the field of behavioural psychology, and to adapt deterrence to them (compare Jervis, 1972; Langlois, 1991; or Snyder, 1971).

The third wave of research, like the second wave, is accompanied by fundamental questions that were explicitly defined by Robert Jervis (1979, pp. 302–303): "First, under what conditions do threats and the use of force lead the other side to retreat and when do they lead it to reply with threats and force of its own? Second, when does a retreat or a concession lead other to expect, and the state to make, other retreats?" However, since the latter question most likely requires the involvement of knowledge from the field of psychology, and this study has no scope to address it satisfactorily, most of the works of the fourth wave of deterrence research build on the answers to the former question. Scholars who have conducted research on the third and fourth waves, such as Nina Tannenwald, Henry W. Prunckun, Phillip B. Mohr, and even Robert Jervis, have inferenced the basis for answering it by identifying the types of strategies that determine the objectives of deterrence. Currently, fourth-wave scientists, as well as the author of this study, are trying to find a suitable modification of the strategic framework of deterrence, which would consider a sufficient number of measures and practices to achieve the object contained in the question defined by R. Jervis³³. And it was the need to modify the

³³ This study will present the existing models of strategic structure of terrorism deterrence, and its author will develop his own model, yet the initial question of the third wave of research ("Under what conditions do threats and the use of force lead the other side to retreat and when do they lead it to reply with threats and force of its own?") remains unsatisfactory answered. A much more satisfactory answer could be provided by research grounded in the method of fuzzy-set qualitative comparative analysis (also fsQCA), which makes it possible to appropriately combine quantitative regression analysis with the analysis of qualitative data (see Vis 2012). Using this method, a research could analyse the conditions of various results of deterrence applied and stipulate which conditions most often lead to the achievement of desired objectives of deterrence. The author is not aware that such research has been realized in the field of deterrence as a national security strategy.

concept of deterrence that was one of the key findings that third-wave scientists have sought to address. The classical understanding of the concept was no longer sufficient to explain the various deviant cases mentioned, for example, by Nina Tannewald (1999).

Gradually, various solutions to the question of deterrence modification have appeared, of which two already mentioned and very influential have prevailed among scientists: either to keep the deterrence in its classical form and to consider the involvement of other necessary strategies to ensure its effectiveness (for the use of this method see e.g. Crenshaw in Alterman, 1999; Jervis, 1979; Prunckun & Mohr, 1997, pp. 269–270; or Tannenwald, 1999), or to extend the strategic structure of deterrence with strategies and tactics that do not conflict with the general definition and nature of concept, so that deterrence can be directly applied to a large number of different cases. The latter option, of which theoretical and typological basis were laid by Glenn Snyder (1961), characterizes the current approach of scientists of the fourth wave of deterrence research. Incidentally, in contrast to the second and third waves of research, the beginning of the fourth as well as the first wave can be relatively well find out in time: while the beginning of the first wave intersects with the beginning of the Cold War, the rise of the fourth wave can be observed after 9/11.

1.3.2. The Fourth Wave of Deterrence: Reflections & Doubts

The three waves of deterrence research addressed main attributes of realist approach in international relations: state-on-state relationships, sustainable status quo theoretically inferenced from the Game of Chicken or Clausewitzian absolute war, and nuclear (or rarely high-intensity conventional) exchanges (Connable, 2018, p. 11). However, the realist approach failed to respond appropriately to the challenges that accompanied the end of the Cold War. The collapse of the Soviet Union and the dissolution of the Warsaw Pact meant the disintegration of the zone of influence of one of the two powers. Bipolar paradigm was no longer relevant, and the primary interest was not to preserve a geopolitical stalemate between the two world powers. Variety of state and primarily non-state actors took important positions in international relationships and many of them posed a significant risk to the new world order. These fundamental changes have completely changed the threat perception of the United States and its European allies. Irregular conflicts, the proliferation of weapons of mass destruction and missile technologies, failed states, or terrorism represented significant new challenges that the liberal world order had to face (Lorenz, 2017, p. 32; OECD, 2012, p. 18). The previous discussion on the concept of classical nuclear deterrence covered many topics, however, it was

unable to consider the post-Cold War challenges. Many scholars studying deterrence seemed to be disconcerted in the new world order.

Governments have faced the challenge of applying deterrence to intimidate multiple groups at once. While this task posed a strategic challenge, it also represented significant costs and difficulties. Military units, intelligence, the diplomatic service, or the administration would have to investigate and target more groups in different parts of the world that use various languages and operational procedures³⁴. This would not yet be as difficult as the need for separate negotiations with local authorities to allow acting against non-state actors. "These factors limit the ability of the deterrer to threaten focused retaliation against terrorist groups." (Trager & Zagorcheva, 2006, p. 106–107) However, a much more serious problem laid in the very nature of deterrence, which most scientists understood in T. Schelling's classical meaning or the broader conceptualization of G. Snyder. As described in one of the previous chapters (Chapter 1.2.4.), the strategy of deterrence in its limited nature could not be applied against a yet undefined new type of adversary; the post-Cold War belligerent appeared to be irrational, unpredictable, fragmented and capable of any hostile action (Oswald, 1993, p. 29). Therefore, many prominent scientists and analytical strategists have begun to question the significance of deterrence strategies in countering new threats.

In connection with the U.S. military strategy, the scholar Lawrence Freedman spoke about marginalisation of deterrent practices and William Huggins proposed to focus on the approach of compellence (Freedman, 2004, p. 1; Huggins, 1993). As C. S. Colin said: "[D]eterrence has been marginalized because some of the more implacable of our contemporary adversaries appear to be undeterrable," (cited by Connable, 2018, p. 12). As early as the 1990s, efforts to apply deterrence as one of the counter-terrorism strategies began to emerge (see e.g. Allan, 1990; Le Vine & Salert, 1996; or Prunckun & Mohr, 1997). These scientific publications represented the initial rather diffident endeavours to look for traces of coercive tactics and deterrence by denial, as defined by G. Snyder, in counter-terrorism strategies. However, prior to 2000s, scepticism about the use of deterrence in the fight against terrorism prevailed in the scientific debate. For instance, the scholar Richard Betts claimed that deterrence has "... limited efficacy . . . for modern counterterrorism" (2002, p. 46). Paul K. Davis and Brian M. Jenkins asserted: "The concept of deterrence is both too limiting and too naïve to be applicable to the war on terrorism." (2002, p. xviii). And in its National Security

³⁴ The question of deterring multiple adversaries is addressed in much more detail by Daniel S. Treisman (2004, pp. 345–373).

Strategy, President George W. Bush's administration has agreed with the generally accepted view of scientists claiming: "*Traditional concepts of deterrence will not work against a terrorist enemy*." (Bush, 2002, p. 15). Scientific studies highlighting the benefits of deterrence engagement in counter-terrorist campaigns have been on the fringes of interest.

According to Robert F. Trager and Dessislava P. Zagorcheva (2006, pp. 87-88), the assertion about the ineffectiveness of deterrence strategies in the fight against terrorism is very likely to be based on three pillars. These pillars also form the basis of criticism of the fourth wave of deterrence research. First, terrorists are rather considered irrational, and therefore unresponsive to the cost-benefit calculation, which is a necessary condition for the implementation of deterrence. This assertion can be found more often in the popular press; but since it is generally accepted (even by the scientific) public, it should be emphasized in every discussion of the use of deterrence in counter-terrorist strategies. The second pillar of criticism is intertwined with the first one: according to theorist Robert A. Pape, some terrorists are considered so highly motivated that they are "... willing to die, and so not deterred by fear of punishment or of anything else" (Pape, 2005, p. 45). As can be seen, R. Pape proceed from the premises of classical deterrence concept even in 2005. Third, even if terrorists feared punishment, deterrence strategies cannot be applied against them, because they "... lack a return address against which retaliation can be visited" (Betts, 2002, p. 45). However, the fourth-wave authors responded to the criticism with thorough research based on the findings, for example, of psychology.

The claim that terrorists are irrational is contradicted by a large body of literature which points to the fact that terrorist groups usually have a set of hierarchically ordered objectives and choose strategies and tactics through which they best achieve them (see e.g. Betts, 2005; Crenshaw, 2012; Kydd & Walter, 2002, pp. 279–289; Pape, 2003; or Schachter, 2002, p. 96). These findings do not necessarily apply to every individual involved in terrorist activities³⁵; in

³⁵ In this case, the issue of deterrence of so-called lone wolves is widely discussed (see e.g. Bates, 2012; Michael, 2012; or Phillips, 2011). The problem lies in their fanatical behaviour, which leaves almost no room for cost-benefit calculation. However, again, scepticism about the impossibility to deter lone wolves stems from the classical concept of deterrence. The fact that they cannot be deterred by coercion to reassess their priorities does not mean that deterrence strategies cannot be applied to them at all. For example, Associate Professor Peter Phillips analysed a large number of lone wolf attack cases, concluding that measures to increase the security of targets mostly discourage individuals from attacking (Phillips, 2011; Phillips and Pohl, 2011). Deterrence by denial strategy is based on increasing the

addition, terrorist groups may "put interest ahead of a strictly interpreted ideology" (Trager & Zagorcheva, 2006, p. 94). Nevertheless, terrorist groups with a higher degree of consolidation tend to pursue their interests. Terrorists want to be in control and send a message in order to gain support for their cause, regardless of the specific motives that lead them to do so. "Rationality is a base term that does not cover specific nuances of every motivation (value system) a terrorist considers to make a decision. However, most terrorism scholars agree that decisions are made for a reason, and not pure insanity." (Maddaloni, 2017, p. 6) As Pape shows in his article (2005, pp. 44–45), suicide tactics in particular were adopted within coercive campaigns due to its remarkably successful ability to exert pressure on liberal democracies.

Even seemingly fanatically suicidal terrorists, who are intensely motivated by religious beliefs and the ideology of terror, are not irrational in the sense that it is impossible to deter them (see Comment 35.). It is also very likely that many individuals and organizations acting as support units for terrorist groups, and therefore members of the wider structure of these groups, are less motivated and therefore vulnerable to the classical concept of deterrence. Weaker motivation and a certain degree of hesitation increasing vulnerability to deterrence is in particular evident in the initial decision-making phases of preparation process of hostile actions (Trager & Zagorcheva, 2006, p. 88; Wilner, 2014, pp. 446-448). Influential fourthwave scholars R. F. Trager and D. P. Zagorcheva (2006, pp. 88-89) are already working with an expanded strategic deterrence structure, stressing that even the most motivated members of terrorist groups can be deterred by threatening their political goals rather than freedom, physical and mental health, or life. "From a policy perspective, the ability to hold political ends at risk is a crucial point, because doing so stands by far the best chance of fracturing the global terrorist network, one of the most important objectives of counterterrorism policy." (Ibid, p. 89) Both scientists again argue that one of the effective strategies that should be applied in counterterrorist campaigns is deterrence by delegitimization, which has already been discussed in this study (see Chapter 1.2.4.).

However, it is necessary to select strategies of deterrence according to the type of threat and, above all, to combine them well so that the so-called 'problem of terrorist motivation' is

protection of potential targets of attack. In various countries, the practical application of deterrence by denial in the form of, for example, the positioning of anti-terror concrete barriers preventing the passage of a motor vehicles in places with a higher concentration of people or the installation of security detector door frames can be noted (see e.g. MVČR, 2016; Robertson, 2017). By the way, the combination of the first and second pillars of criticism is clearly visible on this issue.

reduced or completely eliminated (Trager & Zagorcheva, 2006, pp. 92–93). It may consist in the extreme supremacy of a political goal over others, such as life, property, or liberty. In such a case, the efforts of deterrer to hold at risk something that the terrorist values to a similar extent as political objectives in order to affect his behaviour would seem almost impossible. The strategy of deterrence by denial alone is not enough to deter a strongly motivated perpetrator from hostile action. Finally, even the combination of the threat of punishment with the threat of reducing the success of hostile activity may not deter the deterree from acting. As Zachary Goldman showed in the case of international pressure on the regime of Muammar Gaddafi, the combination of deterrence by punishment and deterrence by denial even has the potential to escalate conflict into open violent struggle (Goldman, 2015, p. 314). In connection with the problem of terrorist motivation, it can be said that "... if the terrorists' motivation is high enough, then even a small probability of a successful operation and a high probability of punishment will not deter them" (Trager & Zagorcheva, 2006, p. 92). However, each motivation has a specific reason, and no terrorist group can be based on a completely irrational ideological basis. Moreover, again, it is possible to quote R. Jervis: "Much less than total rationality is needed for the main lines of the theory to be valid." (1979, p. 299). Although terrorist decisionmaking processes consist of rational and irrational considerations, this is not extraordinary and does not preclude the possibility of applying deterrence.

There is no need to address the third pillar of criticism in detail, because it has almost nothing to do with the very effectiveness of deterrence strategies. The so-called 'return address problem', as R. F. Trager and D. P. Zagorcheva (2006, pp. 93, 108-111) call the third basis of the critical position, refers to the incapability to impose an appropriate combination of deterrent strategies on terrorists when participants in terrorist acts cannot be located. Currently, it is rather an outdated issue, which largely addresses the development of technologies that significantly reduce the possibility of making it difficult to locate any individual on Earth. Although the localization of some activities, for example, in the darknet space, increases the cost of intelligence and the extended strategy requires the involvement of more military forces, diplomacy or administration, the current situation cannot be compared with the situation at the turn of the millennium, when locating the enemy was a demanding challenge. The current application of deterrence certainly requires increased costs because the adversary is not as unambiguous as the Soviet Union in the original Anglo-Saxon scientific tradition. However, as already mentioned, deterrence is more expensive but not impossible. In addition, the increased costs of applying deterrence still difficult may outweigh the expenses of open violent conflict, destroyed infrastructure, and lost lives.

Thus, in the advanced fourth-wave thinking, the only potential adversaries against which deterrence is irrelevant are ardent nihilists and the clinically insane; "... all others must undertake some form of cost-benefit analysis," Ben Connable adds (2018, p. 12). Scholars Paul Davis and Brian Jenkins in connection with terrorism deterrence identify clear rational costbenefit calculus within terrorist groups like al-Qaeda or ISIS emphasizing that "... mission success is very important and leaders are in some ways risk-averse" (Davis, Jenkins, 2002, p. xii). This argument has been extensively accepted and further developed by other empirical research and expert analyses, especially after the 9/11 terrorist attack. As mentioned in one of the previous subchapters (Chapter 1.2.4.), international terrorism on 9/11 severely hit the territory, infrastructure, and population of the United States and launched a very costly military response. With the opening of a discussion on the choice of appropriate less expensive response strategies for terrorism deterrence and a detailed revision of the critique of deterrence, some of the former opponents of use of deterrence strategies in the fight against terrorism have changed their minds. For instance, the scholar Lawrence Freedman has begun advocating the use of deterrence in the post-9/11 world claiming that "... in all cases [deterrence – the author's note] is about setting boundaries for actions and establishing the risks associated with the crossing of those boundaries" (Freedman, 2004, p. 116). L. Freedman notes that deterrence is a natural result of a combination of a desire to change the behaviour of the adversary and the means designed to do so.

Scientists and strategic analysts have largely accepted a consensus that deterrence can be applied to a wide range of threats, from nuclear war to terrorism. Nonetheless, the nature of deterrence has undergone significant change over the years, which was concisely summarized by both scholars Matthew Kroenig and Barry Pavel (2012, pp. 23–24). They presented key differences in deterrence understanding between the Cold War era and post-September 11 period as: (1) there exist many more enemies to be deterred now, (2) the concept is partial unlike its originally absolute character, and (3) deterrence is not a key pillar of national security strategy anymore but only one part of a broader strategy. Deterrence constitutes a significant and necessary component of an overall counter-terrorism strategy (Ibid, p. 33), despite its limited role and changed character. Deterrence no longer has its exceptional position among defensive strategies and, given the fragmentation of threats, it can no longer be considered in the form of grand theory. The authors of the fourth wave of research consider deterrence in an expanded strategic structure, which includes a greater number of different procedures and tactics when it is necessary to adapt the response to a particular threat. The current concept of deterrence, which enables its strategies to be involved in the set of practices, techniques, tactics,

and strategies of counter-terrorism, is widely recognized not only by its long-standing advocates, but also by former opponents³⁶.

The discussion on terrorism deterrence is not finished and is still growing. However, the presented overview did not aim to provide an exhaustive list of authors, solved questions, and possible answers. It was to add the context of the development of scientific discussion to the previous highly theoretical subchapter on the definition of deterrence. In the previous lines, the author reached the research of terrorism deterrence, which forms a significant specifically focused branch of deterrence. This study addresses terrorism deterrence in the second section; there, the author introduces the scientists of TD, its theoretical bases, and proposed structural conceptualizations of deterrence strategies. In the remaining two subchapters dealing generally with the concept of deterrence, the author focuses on the lexical clarification of some terms and analyses the logic of deterrence concept structure.

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³⁶ For example, the scholar Lawrence Freedman has accepted the argument about involving deterrence by the delegitimization within counter-terrorist campaign asserting that through "*stigmatizing* ... [terrorist's – the author's note] *ideas amongst communities*" and setting global standards, terrorist actions will have little chance of success in achieving their political objectives (Freedman, 2004, p. 123).

1.4. To Deter or to Compel? Lexical Similarities and Mistakes

Although the author mentions the broad issue of lexical ambiguities associated with the concept of deterrence rather marginally, he considers it necessary to address it in more detail in selected essential dimensions. This chapter therefore serves to clarify some terms that individual scholars confuse with others or misinterpret. The author does not have the ambition to examine individual definitions in detail, to contradict their parts, and to create other characteristics that would bring even more ambiguity to the already extensive discussion about the clarity of concepts division. He is aware of the vast scope of research on deterrence, the blurring of its defining boundaries, and the subtle differences that distinguish deterrence from other strategies in international relations. The author knows that it is not in the ability of any author to cover individual lexical details in an ever-evolving concept that responds to the variability of an ambiguous world. He will therefore focus on the fundamental ambiguities that permeate the scientific work of several authors and make it difficult to model more appropriate structural conceptualizations of deterrence strategies. He will try to specify some terms to avoid inaccuracies in his final conceptualization, which is the main objective of this study.

First, the author chooses a way to clarify the position of deterrence among other strategies of international relations because this problem is the main reason for confusion and misinterpretation. For example, as already mentioned, Henry W. Prunckun and Phillip B. Mohr (1997, pp. 269–270) inappropriately synonymized deterrence with the strategy of dissuasion. However, scholars more often confuse deterrence with a strategy of compellence or inducement by including elements of inducement or compellence in the structural conceptualization of deterrence (compare Gray, 2003; Jervis, 1979; Maddaloni, 2017; or Trager & Zagorcheva, 2006). In his monograph *Maintaining Effective Deterrence*, Colin S. Gray (2003) presented his own definitional distinction of several terms, which are often confused:

- Deterrence has the negative object of persuading an adversary not to take action that it might otherwise have done.
- Compellence has the positive object of persuading an adversary at a minimum to cease and desist from current misbehaviour, and more likely to retreat from positions seized and to surrender assets illicitly seized by force.
- Dissuasion is similar to deterrence but persuades the general masses like a message to "those whom they may concern" against future military competition.
- Inducement is a way of influencing with persuasion-by-reward for good behaviour.

Pre-emption and prevention – are alternatives to deterrence, and mean to attack first in
the last resort, which is to say in the face of truly compelling evidence of imminent
threat. The difference between the two is timing and a preventative attack is initiated
before an identified menace becomes an imminent threat and may be based on suspicion
rather than compelling evidence.

(Gray cited by Maddaloni, 2017, pp. 6–7)

Although this distinction does not clarify some details, it will help in many ways to understand the distinctive elements. Above all, it shows the negative nature of deterrence compared to positively focused strategies of compellence and inducement.

A significant difference is particularly evident between deterrence and inducement; as already mentioned, the author, like Colin S. Gray or Lawrence Freedman (2004, p. 116), understands deterrence as a strategy for achieving primarily negative or passive goals such as preventing hostile acts or demobilization. In this approach, deterrence has at most the opportunity to communicate the incentives to start negotiations. On the other hand, the objective of inducement strategy is an active positive outcome of concession for reward. However, a positive "measure for measure" offer usually requires explicit communication of the direct offer of benefit for refraining from the hostile action. Such communication is a negotiation of a kind (Adnan, Hassan, Aziz, & Paputungan, 2016, p. 622). The author agrees with the opinion of a large number of scientists that negotiating with terrorist groups legitimizes their existence, their objectives, and their methods (see e.g. Alexander, 2002; Narveson, 1991; Neumann, 2007; Weinberg & Davis, 1989; or Wilkinson, 2006). He does not claim that one should not negotiate with terrorists³⁷ but that such manners applying the strategy of persuasion by reward should not be part of deterrence. If negotiation legitimizes the other party, then it would completely deny the sense of deterrence by delegitimization; and deterrence by delegitimization by its negative nature coincides with the logic of deterrence. In the scientific works of most fourth-wave authors, it has become an integral part of the strategic structure of deterrence (see e.g. Knopf, 2012; Kroenig & Pavel, 2012; Maddaloni 2017; or Wilner, 2011)

Strategies of deterrence by reward and deterrence by delegitimization are internally in contradiction. However, because the boundaries between them are blurring and in some cases,

³⁷ For instance, the case of the Colombian peace process has shown that significant peace-building results can be achieved through negotiations with terrorist group representatives (see e.g. Beittel, 2016). Effective negotiations with members of terrorist groups are dealt with, for example, by the influential scholar Ira William Zartman (1990), Harmonie Toros (2008), or Audrey Kurth Cronin (2010).

it is not easy to distinguish the degree of explicit expression of the offer³⁸, it is not uncommon for some authors to include deterrence by reward strategy in deterrence strategic conceptualizations³⁹ (see e.g. Jervis, 1979; Maddaloni, 2017; Wilner, 2011, p. 7). However, the author will respect the focus of deterrence on the negative or passive result and implies in his proposal of strategic conceptualization only strategies with the same internal nature of focus. Internal negative/passive orientation is also one of the characteristics that distinguishes deterrence from compellence. By focusing on the positive goal of change, even the inducement strategy is closer to compellence. Nevertheless, the distinction from deterrence or inducement is not clear enough from C. S. Gray's definition of compellence. Unlike both strategies, compellence is not only positive or active, but "... requires that the punishment [is] administered until the other acts rather than if he acts [as in deterrence - the author's note]" (Schelling, 1966, pp. 70–71). In contrast to deterrence, the strategy of compellence shifts the initiative of the first action to the coercer, not to the adversary. However, instead of offering a reward, it actively uses force against the adversary, thereby, "inducing his withdrawal, or his acquiescence, or his collaboration by an action that threatens to hurt" (Ibid, p. 80). Therefore, despite the use of the word "inducing", it is not compellence strategy that is built on the application of a persuasion by reward strategy.

³⁸ Scholars R. F. Trager and D. P. Zagorcheva emphasized an example of the practice of deterrence, which could also be perceived as inducement: In 2003, U.S. ambassador to the Philippines, Francis Ricciardone, warned members of the Moro Islamic Liberation Front that they could lose \$30 million earmarked by the U.S. Congress into areas controlled by them, as long as they do not sever contact with the terrorist group Jemaah Islamiah (Trager & Zagorcheva, 2006, p. 116). The question remains whether such information may appear to be a positive solution in the form of a change in the status quo, or a negative one, because the reward is not directly targeted at the terrorist group and there is no explicit negotiation.

³⁹ Scientists are divided on the question of inclusion of strategy based on offering reward in the strategic structure of deterrence, and the author's logical reasoning has its critics. For example, Paul Huth and Bruce Russet claimed that while "... the inclusion of positive inducements as a means to deter is not standard practice in academic writings," its exclusion "... cannot be justified on grounds of strict logic" (Huth & Russett, 1990, p. 471). Both authors assume that offer of reward can induce an adversary to change his behaviour, which is the desired goal of deterrence. However, they do not consider the negative nature of deterrence, which separates it from the strategy of inducement. Moreover, it depends on whether the success of deterrence is considered to avert a hostile action or to start negotiations on an alternative arrangement.

This effort to differentiate individual strategies, based on the analysis of conclusions of authors who have dealt with this issue for a long time, serves primarily to prevent ambiguities and misinterpretations in inferencing conclusions about individual strategies; in the real world, it is often very difficult to distinguish if a strategy of deterrence or compellence is being applied. As the scholar Patrick M. Morgan claims: "The distinction between the two is quite abstract; in confrontations they are often present together and virtually indistinguishable." (Morgan, 2003, p. 2) After all, the author tries to define the dividing lines more sharply, although he realizes that in many cases this is very difficult or even impossible. Such an example is the dissuasion strategy that Henry W. Prunckun and Phillip B. Mohr (1997, pp. 269–270) even inappropriately synonymize with deterrence as already mentioned. They cannot be blamed for their misjudgement, especially considering the origin year of their study. If the dissuasion strategy is considered today, it is used as a deterrence by dissuasion and is ranked under to the overall deterrence strategy. For example, Jon-Paul Maddaloni puts deterrence by dissuasion on par with deterrence by denial or deterrence by delegitimization (see Figure 3.). By its characteristics, the dissuasion strategy covers only part of the deterrence; its task is to send a message about the nonsense of armed conflict with the help of "... conventional force forward basing and presence for rapid response, long range precision guided capability, and drone capability for targeted killings" (Maddaloni, 2017, p. 16)⁴⁰. Dissuasion is a strategy based on the principle of potentially devastating retaliation, which could escalate into a highly destructive conflict without the application of other deterrence strategies.

Colin S. Gray defines prevention/pre-emption as the last term. Although some deterrence strategies such as deterrence by denial or deterrence by dissuasion have a preventive function, prevention/pre-emption works with an initiating attack by the coercer. Prevention/pre-emption is thus closer to compellence strategy, but the author does not intend to elaborate on their mutual relationship. For instance, Jon-Paul Maddaloni presents a completely different relationship of prevention/pre-emption and compellence, where he put pre-emptive strategies) above compellence; compellence, however, together with deterrence is ranked under coercive strategies (see Figure 3.). J.-P. Maddaloni puts pre-emptive, coercive, and defensive strategies

⁴⁰ Jon-Paul Maddaloni's description of the dissuasion strategy is overwhelmingly based on a description of the role that the administration of President George W. Bush assigned to dissuasion in the post-9/11 security environment (see Lutes, 2004).

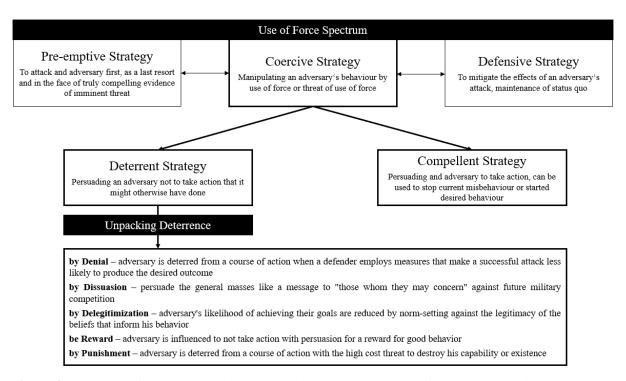


Figure 3. Typology of Jon-Paul Maddaloni's basic conceptualization of deterrent strategies (Maddaloni, 2017, p. 10; adapted by the author

on the same level in his figure. He thus correctly separated deterrence from preventive/preemptive and defensive strategies. Nevertheless, while the difference between prevention/preemption and deterrence is relatively obvious, conversely, deterrence by denial could seemingly evoke a defensive strategy; and it should be noted that J.-P. Maddaloni's definition of defensive actions: "[t]o mitigate the effects of an adversary's attack, maintenance of the status quo" (cited from J.-P. Maddaloni's Figure 1., 2017, p. 10) could seemingly correspond to the objectives with which deterrence by denial is applied. However, as already mentioned in the subchapter 1.2.3., deterrence by denial should not be confused with the defence strategy because it merely aims at "... reducing. .. costs and risks in the event deterrence fails" (Snyder, 1961, p. 3) rather than on the psychological manipulation with the opponent. Although there is a very narrow line between deterrence and defence and some deterrence strategies contain a defensive component⁴¹, a defensive strategy lacks an element of psychological manipulation, which, like the preventive/pre-emptive strategy, fundamentally distinguishes it from deterrence.

⁴¹ The vast majority of Cold War scholars considered deterrence to be the supreme strategy of national defence. However, these scientists cannot be blamed for not strictly distinguishing between deterrence and defence; during the first three waves of research, there was no tendency to do it (moreover, as can be seen, there are still uncertainties in this issue). Glenn Snyder was de facto the only scientist who

Psychological manipulation of the opponent's judgment, like the negative/passive nature of concept, is another fundamental condition that distinguishes deterrence and its individual strategies from other strategies designed to fight the adversary. Nevertheless, manipulation of the adversary's mind can still be found in compellence and inducement, and therefore, J.-P. Maddaloni ranks deterrence and compellence among coercive strategies defined as "[m] anipulating an adversary's behavior by use of force or threat of use of force" (cited from J.-P. Maddaloni's Figure 1., 2017, p. 10; see Figure 3.) Nonetheless, with this schematic illustration of the order of individual strategies, J.-P. Maddaloni disrupted the other term division developed by C. S. Gray in his short article Gaining Compliance: The Theory of Deterrence and its Modern Application:

- To deter is to dissuade by menaces alone someone not to do that which we anticipate they are motivated to do.
- To coerce is actually to inflict pain for the purpose of dissuasion by the credible threat to inflict yet more pain, in the absence of timely compliance.
- To defeat means to employ brute force and discard the need for the enemy to choose to cooperate, and simply to attempt to disable his power of resistance.

 (Gray, 2010, p. 282)

According to the above, deterrent actions should not be a subset of coercive strategies but on the same level as a different strategy. The characteristic of "to coerce" presented by C. S. Gray rather corresponds to the definition of compellence. However, generations of scientists consider deterrence as a subtype of coercive strategy (compare George et al., 1994; Jervis, 1979; Morgan, 2003; or Von Clausewitz, 1976), and therefore the division of C. S. Gray is not entirely appropriate. In addition, J.-P. Maddaloni's definition of coercive strategy corresponds to both deterrence and compellence strategies and is thus a suitable umbrella term for them.

While useful conclusions can be drawn from the former division of the five strategies defined by C. S. Gray in an attempt to distinguish between individual terms, his latter division does not correspond to the established axioms with which the vast majority of scientists work. J.-P. Maddaloni distributes strategies more conscientiously and appropriately, however, he makes some mistakes that the author of this study will try to eliminate in his conceptualization; for example, among the strategies of deterrence, J.-P. Maddaloni includes the strategy of

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distinguished the two terms at the time (see Snyder, 1961). In addition, during the Cold War, there were very few options how to categorize deterrence. Therefore, due to its internal logic, deterrence was usually synonymized with defence.

deterrence by reward, which, however, rather corresponds to inducement. Nevertheless, his well-developed conceptualization of deterrence strategies will be the subject of a more detailed analysis in the second part of this study (see Chapter 2.3.3.). In this chapter, the author mainly elaborated in more detail the problem of ambiguity between individual terms. Concurrently, he tried to emphasize the dividing lines between the individual strategies, so that the reader (1) could better orientate himself between them and (2) better understand the author's approach to conceptualizing the strategic structure of deterrence. The author found that the two fundamental latent attributes that separate deterrence strategies from other strategies are its intrinsic negative/passive nature and the objective of manipulating the opponent's mind/behaviour. Based on these conclusions, he will be able to determine which strategies to include in the final conceptualization design and which not.

1.5. The Logic of Deterrence Concept Structure

In this last part of the first section of the study, the author analyses the probable latent strategic structure of deterrence. Based on the logic of concept structure theory presented by Gary Goertz (2006, pp. 1–50) and with knowledge of its practical application made by Ch. Berglund and E. A. Souleimanov (2019), he tries to compile a table of various forms of deterrence deployment. The resulting table should help the reader to orientate in the differences among the classic concept of deterrence defined by Thomas C. Schelling, a broader understanding of the deterrence of Glenn Snyder, Jeffrey W. Knopf, or Zachary Goldman, and the extended logic used by the author in this study. This chapter is intended to introduce the reader to the issue of exclusivity/inclusivity of deterrence concept, as presented in their theory by David Collier and James E. Mahon, Jr. (1993). In the following lines, the author will try to outline one of the ways how to categorize the degree of exclusivity/inclusivity of deterrence. Concurrently, he proposes the extended logic of concept structure in which he understands deterrence.

One of the appropriate ways how to structure the concept is to focus on the individual strategies that are included in it. Deterrence is a strategy to fight the adversary. Scientists and strategic analysts work with it primarily as a strategic concept, so it is logical to think about the structure of deterrence in a broad structure of other strategies. There are several methods to rank strategies; for example, as the author will introduce later, scholars Robert F. Trager and Dessislava P. Zagorcheva (2006) deal with the motivations of the adversary and conceptualize the use of deterrence strategies on level of motivation expression (see Figure 7. in Chapter 2.3.1.). However, this method would be completely improper for concept structuring, as it only represents different combinations of selected deterrence strategies used against various motivations, without being capable to summarize the full range of diverse strategies. Another method of structuring deterrence has been worked out by scholars James Smith and Brent Talbot (2008). Nevertheless, their three level-targeted deterrent structure applying the tactical level, the operational level, and the strategic level is based only on using of deterrence by denial measures and it faces the same problem as the approach of R. F. Trager and D. P. Zagorcheva. Individual levels can hardly meet the necessary normative criterion of category exclusivity; the same deterrent measures can be included in both the tactical and strategic levels, only with a different degree of generality or length of employment.

On the contrary, Glenn Snyder chose the method of structuring the concept within the general strategic framework according to a uniform definition criterion covering the effect to be achieved and a generally described method of achieving the effect. And this approach was

followed, among others, by Jeffrey Knopf, Matthew Kroenig, Barry Pavel, or Jon-Paul Maddaloni. As has been said many times, Glenn Snyder changed generally accepted view of deterrence by liberating it from synonymous associations with deterrence by punishment and dividing the concept into two strategies: deterrence by punishment and deterrence by denial. Other, especially fourth-wave scientists further expanded the strategic structure of deterrence by including other strategies, the appropriate combination of which, respecting the diversity of cases, should lead to the expected objectives of deterrence. However, some of them have often not set the proper boundaries for deterrence, and by including some particular strategies, they exceeded the scope of deterrence to other strategies, as analysed in the previous chapter. The author concluded in the previous chapters that the deterrent strategies should meet some of the necessary conditions, including the following four:

- 1. the presence of a threat of force,
- 2. communication offer alternatives,
- 3. psychological manipulation of the opponent's mind/behaviour,
- 4. focus on passive/negative result.

These conditions are met by several strategies already mentioned in previous chapters, such as deterrence by punishment, deterrence by denial, deterrence by delegitimization, or dissuasion (hereinafter referred to as deterrence by dissuasion).

The table of concept structure could focus on each strategy, or more precisely its presence or absence in the concept of deterrence, separately. It is not yet certain which strategies will be included in the final conceptualization. However, the above-mentioned strategies can be divided into two strategic groups according to their basic characteristics, as Glenn Snyder formerly did. Unlike G. Snyder, however, the author shares J.-P. Maddaloni's belief that deterrence by denial should not be on the same level in structure as deterrence by punishment. Deterrence by denial shares some similarities with deterrence by dissuasion, in particular the objective of causing a feeling of frustration from reducing the success or failure of a hostile action taken. Also, deterrence by delegitimization aims to increase the feeling of frustration from the inability to ideologically influence potential adherents and radicalize promising adepts to membership in terrorist groups. The author believes that frustration as an indirect means of coercion appropriately separates selected known deterrent strategies from deterrence by punishment strategies. He therefore names the group of these strategies as deterrence by frustration and equates this comprehensive strategy with deterrence by punishment (see Figure 4.). In contrast to deterrence by frustration, the deterrence by punishment strategies threaten by direct retaliatory actions, which in some form of punishment impact on specific perpetrators.

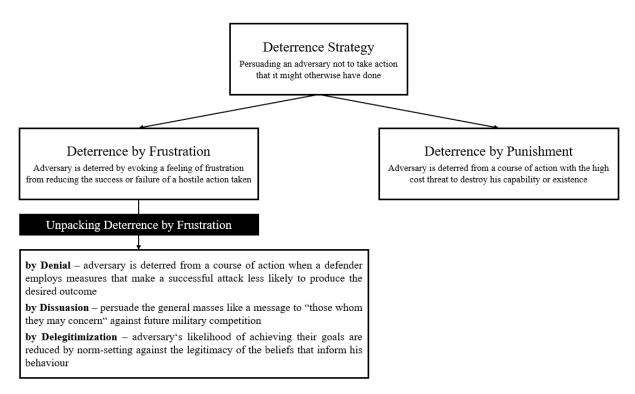


Figure 4. Typologization of the basic division of deterrence into deterrence by frustration and deterrence by punishment strategies (using the definitions of J.-P. Maddaloni, 2017, p. 10)

These two groups of deterrent strategies, deterrence by punishment and deterrence by frustration, will be sufficient for the needs of the study and to outline the degree of exclusivity/inclusivity of deterrence concept in reflections of deterrent scholars⁴². They both term the expected consequences of the deterrer's reaction to the deterree's action, the achievement of which is the goal of mentioned and widely accepted deterrent strategies. The degree of exclusivity/inclusivity of concept will therefore depend, inter alia, on the inclusion of one or both strategic groups in scholars' considerations. As is well known, T. Schelling considered only deterrence by punishment in the classical concept meaning, G. Snyder then deterrence by punishment together with deterrence by denial. Nonetheless, the table will not contain only two columns; there is one more thing that needs to be considered that can change the strategy in many ways.

⁴² The author of this study is not the only one who tried to propose a new division of deterrent strategies into two groups: for example, Zachary Goldman (2015) divided strategies into military and non-military while preserving the original names of the strategies. However, such a division is not entirely appropriate, because, for example, deterrence by punishment may include military as well as criminal (non-military) strategies. The strategy would thus have to be included in both groups.

Deterrence can be exclusive/inclusive in another dimension. It should be borne in mind that strategies, their combinations, and employment may differ significantly depending on whether the deterrer is at risk directly or indirectly. It is not clear from the already mentioned widely accepted definitions by T. Schelling⁴³ or C. S. Gray⁴⁴ whether the deterrer is to be endangered directly or indirectly, and as far as the author is aware, this issue has not yet been addressed in detail by any scholar. Rather, theories automatically consider only a situation where the adversary directly threatens the deterrer, who, by choosing an appropriate combination of deterrent strategies, seeks to maintain the status quo and achieve a change in the opponent's behaviour. Nonetheless, definitions and theories allow for another kind of deterrer-deterree relationship: the opponent primarily threatens another target, but secondarily endangers the interests of the deterrer, who responds to the indirect threat by applying deterrent strategies. The condition for the existence of such a state must be the overlap of the interests shared by both parties to the indirect deterrence⁴⁵. Such an example of an indirect threat to deterrer is very likely the case of China-Taiwan-United States deterrence, where mainland China primarily threatens the potential military invasion of Taiwan and secondarily indirectly the interests of the United States in the Pacific region. The United States is thus employing some deterrent strategies, such as an increased military presence in the Pacific region (deterrence by dissuasion, Stewart & Lee, 2021) or strengthening Taiwan's defence (deterrence by denial, Blanchard & Lun Tian, 2020).

The choice of practices and measures in response to indirect threats tends to be usually more moderate than where the deterrer is also the primary target; as it is in the strategic conceptualization of M. Kroenig and B. Pavel (2012, pp. 25–33), who deal in it with direct and indirect responses to possible hostile actions. While the direct response, according to their

⁴³ T. Schelling's definition of "[d]geterrence is concerned with the exploitation of potential force" and "... persuading a potential enemy that he should in his own interest avoid certain courses of activity," (Schelling, 1980, p. 9).

⁴⁴ C. S. Gray formulated a definition: "To deter is to persuade someone not to do something that they might well have done otherwise." (Gray, 2010, p. 278).

⁴⁵ The importance of overlapping interests of both sides of deterrence in selected cases is mentioned in more detail by scholars Robert F. Trager and Dessislava P. Zagorcheva (2006, pp. 98–105). Both authors emphasize the need for at least minimal overlap between the interests and preferences of state applying deterrence strategies and terrorists: "When the preference orderings of terrorists and states are precisely opposed, deterrence is impossible." (Trager & Zagorcheva, 2006, p. 99) However, they do not address the case of in-/direct threat of deterrer in their article.

conceptualization, is directed against 'violent extremists', the perpetrators themselves, the indirect response is intended to affect 'assets valued by violent extremists', including, for example, their families and communities. In their inferencing, both scientists closely approach the idea of in-/directly threatening the deterrer by individual actors of the terrorist network, nonetheless, these author's considerations are not included in their article⁴⁶. Moreover, M. Kroenig and B. Pavel consider the forms of direct and indirect response only in the context of deterrence by punishment strategy. However, as is obvious from the aforementioned example of U.S. support for Taiwan, other deterrent strategies may take a different form of response to the indirect threat.

Therefore, the author considers that, given the significant influence of the issue of in/direct threat on the choice of strategies, practices, and measures of deterrence, it is necessary
to address this issue in the third column of the table. The table thus reflects changes in the
degree of exclusivity/inclusivity of latent structure of deterrence concept, as presented by
individual scholars in their studies. The determination of exclusivity/inclusivity degree of
authors' inferencing over time is aided not only by the involvement of relevant strategies into
the latent structure of deterrence, but also by the presence of consideration of whether the
strategy also has a suitable alternative response to an indirect threat. The table does not contain
a column reflecting the presence of a direct threat, as it should always be considered.

	Deterrence by punishment	Deterrence by frustration	Indirect threat	Degree of exclusivity/inclusivity*
Classical meaning	Yes	No	No	Highly exclusive
Unexplored meaning	No	Yes	No	
	Yes	No	Yes	Moderately exclusive
	No	Yes	Yes	
Regular meaning	Yes	Yes	No	Moderately inclusive
Peripheral meaning	Yes	Yes	Yes	Highly inclusive

Table 2. Types of meaning and the degree of exclusivity/inclusivity of deterrence theories considered by individual scholars.

* The author determines the degree of exclusivity/inclusivity according to the number of types of strategies considered in the deterrence framework and the inclusion of strategic modifications to respond to an indirect threat. Classical meaning is thus *highly exclusive* because it considers deterrence just

⁴⁶ The author deals with the proposal of strategic conceptualization of terrorism deterrence developed by M. Kroenig and B. Pavel in more detail in the particular subchapter (Chapter 2.3.2.).

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within one strategic group as a response to a direct threat only. *Moderately exclusive* concept of deterrence is also considered only within one strategic group, but also in the proper modification in response to an indirect threat. Most fourth-wave scholars consider deterrence in its *moderately inclusive* nature involving a broader strategic structure; however, they do not modify strategies in response to an indirect threat. The *highly inclusive* deterrence concept considers a broad strategic structure responding to both direct and indirect threats.

It is possible to further modify the table; it can be even more detailed and focus on each strategy separately⁴⁷. However, for the purposes of this work, the division in the table is quite sufficient. With its aid, the author tries to outline the possibility of defining the meaning of deterrence concept of individual authors; for instance, the reader is able to imagine the structural form of the classical theory of deterrence of T. Schelling, its strategic content and direct targeting⁴⁸. Glenn Snyder, with his moderately inclusive theory, can be ranked among the predecessors of scholars of the fourth wave of deterrence research, who mostly consider the concept in its regular meaning. On the other hand, fourth-wave scholars M. Kroenig and B. Paul, in their reflection on in-/direct responds, marginally address deterrence in its peripheral meaning. Therefore, the division in the table should not automatically merge with the research waves of deterrence; in the table, the author just divided the individual approaches to deterrence according to its logic of concept structure, including deterrent strategies and their modifications based on the fact whether the threat is direct or indirect.

In addition, the table fulfils three other important purposes. First, its conclusions will significantly help the author in creating the final strategic conceptualization of deterrence. The

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⁴⁷ The table is still open for further extensions. The author considered extending the table to include other intervening nominal variables, such as state/non-state actor or nuclear bomb ownership. He admits that strategies may differ even when these variables are included, however, the differences would no longer be significant and would be at the level of choice of practices or measures. The author thus leaves the door open for further research and, due to the limited space of the study, does not consider other intervening variables.

⁴⁸ The results in the table should be taken with some caution. For example, the mentioned classical theory of deterrence of T. Schelling covers not only deterrence by punishment, but also deterrence by dissuasion, i.e. the strategy based on deterring the adversary by increasing one's own attack potential. To cover the established deterrence theories even better, all possible deterrent strategies would need to be included. However, summarizing all deterrent strategies requires more comprehensive research, for which there is no room in this study.

author considers deterrence and specifically terrorism deterrence in its peripheral highly inclusive meaning. Conceptualization will be based on a strategic structure dividing the strategy into two groups: deterrence by punishment and deterrence by frustration. In addition, the conceptualization will emphasize that strategies also have an alternative for responding to an indirect threat. Second, the table can also serve as a theoretical framework for further research, which can focus on a specific form of practiced deterrence. For example, within the aforementioned case of China-Taiwan-United States deterrence the research could examined whether the deterrence applied by the United States is moderately exclusive or highly inclusive. The table can also help scientists in the assessment of appropriateness of applied deterrence theories. Third, the table conclusions leave the door open to further research in the field of deterrence meaning, which the author called 'unexplored'. These are cases where, for example, deterrence is considered only as deterrence by frustration as a response to a direct or indirect threat. Although most authors agree that deterrence without a deterrence by punishment strategy is not effective, the author believes that it would be appropriate to conduct thorough research into the effectiveness of using only deterrence by frustration strategies against the indirect threat.

2. Concept of Terrorism Deterrence

This second section of the study deals with the concept of terrorism deterrence (hereinafter also referred to as TD) which is a significant separate field of application of specific deterrent strategies; its conceptualization is based on the same conditions for the employment of deterrence as well as the attributes that must be met by individual strategies. The author does not address this important part of the broad counter-terrorist campaign just to contribute a little to research that "... constitutes the largest and most original part of the fourth wave" as Jeffrey W. Knopf asserted (2012, p. 21). His study responds to the rise of national and international terrorism that can be observed since the early 2000s. In the literature, this rise is usually illustrated by the significantly growing number of suicide terrorist attacks: whereas in the 1980s 41 cases could be recorded, in the 1990s the number was around 100, in the first five years of the new millennium climbing to 400 cases of suicide terrorist attacks per year. Although there was a subsequent decline in the number of attacks, the quantity of cases did not fall to the values of the 1990s. In addition, after 2011, there has again been a sharp increase in the number of cases to approximately 400 suicide terrorist attacks per year⁴⁹ (Horowitz, 2015, pp. 72–73; Pape, 2005, pp. 253–264).

Similar trends give cause for concern that terrorist groups may not rely solely on suicide missions, but may possess and possibly use weapons of mass destruction (hereinafter also referred to as WMD), one of the greatest threats to developed countries and the world order as such (see Allison, 2004; Knopf, 2012; Powers, 2001; or Stern, 1999). Therefore, as already described, with the rise of international terrorism and the pressure to reduce and eliminate it, the demand for research into effective ways of conducting counter-terrorist campaigns has also grown. The author joins the demand with this study addressing current research in the field and outlining the conceptualization of strategies appropriate for use within TD. Nonetheless, first, it is necessary to give the reader insight in what form the author considers terrorism and

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⁴⁹ The compiled data used by R. A. Pape (2005, pp. 253–264) and M. C. Horowitz (2015, pp. 72–73) in their studies constitute ample evidence of the sharp increase in the number of suicide terrorist attacks in recent years. However, they do not reflect recent significant changes in the field of terrorism, such as the defeat of the Islamic State or the peace negotiations between the Taliban and the administration of President Donald Trump, which may have resulted in a significant change in the number of suicide terrorist attacks. The author therefore strongly recommends considering repeating and upgrading the research of both mentioned scholars reflecting recent significant changes. Nonetheless, for the purposes of this study, the conclusions of R. A. Pape and M. C. Horowitz are sufficient.

especially the concept of terrorist act; it is the prevention of a terrorist act or the mitigation of its success that are the main goals of TD. A very detailed definition of a terrorist act was approved unanimously in October 2004 by the UN Security Council in Resolution 1566, which defined terrorism and declared that under no circumstances should a terrorist attack be tolerated or excused for ideological or political reasons:

Criminal acts, including [those – the author's note] against civilians, committed with the intent to cause death or serious bodily injury, or taking of hostages, with the purpose to provoke a state of terror in the general public or in a group of persons or particular persons, intimidate a population or compel a government or an international organisation to do or to abstain from doing any act, which constitute offences within the scope of and as defined in the international conventions and protocols relating to terrorism, are under no circumstances justifiable by considerations of a political, philosophical, ideological, racial, ethnic, religious or other similar nature.

(unscS/RES/1566[2004])

This widely accepted definition is sufficiently inclusive that its wording can be attributed by the author to actions of which retention or reduction of success is the task of TD. Nevertheless, the author admits that for the reader it can be slightly tangled and confusing; after all, as a characteristic of terrorism as such. The structured definition of terrorism, which provides the necessary context for the concept of terrorist action, is very helpful in this case. One such, appropriate for the purposes of this work, was summarized by the prominent terrorism expert Paul Wilkinson, who was aware of the confusion that "... has been created as a result of the mass media, politicians and others using the term terrorism as a synonym for political violence in general" (Wilkinson, 2011, p. 4). The scholar empirically and conceptually distinguished terrorism from other forms of violence and conflict using the following characteristics:

- It is premeditated and designed to create a climate of extreme fear;
- it is directed at a wider target than the immediate victims;
- it inherently involves attacks on random or symbolic targets, including civilians;
- it is considered by the society in which it occurs as 'extra-normal', that is in the literal sense that it violates the norms regulating disputes, protest and dissent; and

 it is used primarily, though not exclusively, to influence the political behaviour of governments, communities or specific social groups.
 (Ibid.)

Paul Wilkinson's structured definition is based on the empirical observation of identical features of activities of a large number of terrorist groups or individuals. Thus, according to the principle of logic of concept structure, if the activity of a group or individual meets all the above-described attributes or only part of them, TD can be applied.

It is important to realize that the definition of terrorism, like the author of this study, does not consider who commits terrorism; for example, it does not address whether the acts are committed by a group or by an individual. Thus, the attacks of 9/11, the 2011 Norway attacks committed by Anders Breivik, and the 2021 storming of the U.S. Capitol can be considered as examples of terrorism. A number of different typologies can be found to cover the profiles of individuals and groups involved in terrorism (see e.g. Ganor, 2008; Horgan, Shortland, & Abbasciano, 2018; or Wilkinson, 2011, pp. 6–8). However, the involvement of some particular typology is not relevant for this study. Deterrence aims at anyone who is in any way involved in the preparation and execution of a terrorist acts, because the task of deterrence is to prevent the implementation of the action, respectively to reduce its success. It is important to know the profile of individuals involved in terrorism only when choosing specific combination of deterrent strategies, tactics, practices, and measures⁵⁰.

The last two facts need to be mentioned. First, the author makes no difference between WMD terrorism and terrorism using conventional weapons. The study deals with the conceptualization of strategies that consider the employment of deterrence against any threat (which is one of the reasons why the author devoted sufficient space to the explanation of nuclear deterrence, findings of which he does not ignore). The difference in approach to both types of terrorism then depends on the choice of the appropriate combination of outlined strategies, tactics, practices, and measures. And second, the author is aware of the problem with the word terrorism (see Wilkinson, 2011, p. 4): there are attempts to replace it with the terms 'holy warriors', 'freedom fighters', or 'revolutionaries', depending on objectives they are fighting for. Some post-modern philosophers then view the concept of terrorism as subjective,

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⁵⁰ In one of the following subchapters (Chapter 2.2.), there will be references to the roles of individuals in terrorist network, which is emphasized in particular by the scholar Alex Wilner. Nevertheless, even these roles are not relevant for this study, as their division also belongs to the area of profiling individuals involved in terrorism.

with unclear or no independently verifiable criteria, which must be properly understood in the context of the post-modern era of the world; the concept is not explicitly rejected by post-modernists but at least deeply questioned (see e.g. Khalidi, 2008). Paul Wilkinson responded to similar efforts: "The public would be justifiably puzzled if lawyers and criminologists ceased to use terms such as 'murder', 'serial murder', and 'war crime' and 'genocide' simply because those who perpetrate such crimes regard these terms as pejorative." (Wilkinson, 2011, p. 4) The author agrees with this view. Therefore, he will use only one term – terrorism – for the activities defined above and the form of deterrence, which prevents the implementation of these activities, or limits its success, in this study.

2.1. Classification of Descriptive Arguments

When strategic analyst Jon-Paul Maddaloni attempted in 2017 to comprehensively classify the deterrence strategies applied by the United States and its allies in the fight against the Islamic State (hereinafter also referred to as ISIS) leadership in various national-security documents, he found only unstructured applied practices and measures of military and non-military nature. Moreover, the inclusion of some practices in the strategic framework of deterrence, such as 'remove leadership' or 'liberate captured territory', may be questioned. Most of the tactics such as degrading support structures, disrupting planning and operations of ISIS, or stopping ISIS's financing and funding could be integrated into relevant deterrent strategies. However, the practices are not elaborated in any detail so that their individual components can be clearly categorized according to the relevant deterrent strategies (Maddaloni, 2017, pp. 29–33). It is the appropriate classification of deterrent practices that could show whether a proper combination of strategies is chosen that make sufficient efficiency at the lowest possible cost⁵¹.

J.-P. Maddaloni may not have had access to all important strategic documents that may address the classification of individual deterrent practices in more detail. However, his conclusions show symptoms of much deeper problems noted in a number of national-security documents. Whether they discuss deterrence more extensively and in more detail or rather in general, they almost always do so in a disordered manner, often synonymously with other strategies terming deterrence as deny or defence (compare Dempsey, 2015; Gates, 2008; or Shalikashvili, 1997). The application of deterrence is in most cases blended with nuclear and conventional forces; in the texts it is possible to find indirect references to deterrence by punishment, deterrence by dissuasion, or deterrence by denial, but there is definitely no mention of deterrence by delegitimization. The considerable emphasis on force technology also evokes the absence of other types of strategies aimed primarily at indirect threats such as disruption of financial flows or a temporary ban on entry into the territory of deterrence.

⁵¹ It is worth considering that the economy of force theory developed by John F. C. Fuller (1998) can be applied to the use of deterrence as well as to the deployment of any defence means. The theory stipulates that the desired ideal end of conflict – the ideal win – "... will be achieved with the smallest expenditure of force" (Ibid, p. 202). The deterrence strategy is appreciated by scientists not only for saving the costs of open conflict, but also for allowing the winning strategy to be configured at the lowest possible cost. Successfully implemented deterrence can thus represent the application of the economy of force theory in practice.

Aware of the facts analysed in the previous chapters, one can be convinced that the deterrent practices described in national-security documents can be better chosen, more sophisticated and, above all, that they could more consistently respect the economy of force theory of John F. C. Fuller (see Comment 51.). As already mentioned, for this purpose, however, it is necessary to include deterrent practices in the appropriate classification, which would show the shortcomings in the overall strategy. Proper description of empirically observable, measurable characteristics or normative concepts is needed. However, without attempting to classify descriptive inferences, the method of description by its opponents is "... often identified with idiographic storytelling or with messy, observational data that is insufficient to reach causal inference" (Gerring, 2012, p. 721) One of the answers to the supposed disorder of description is the method of descriptive analysis which involves two objectives of conceptualization and measurement. There are also other methodological tasks associated with each type of descriptive arguments (see Figure 5.), however, both variable measurement and conceptualization are common and fundamental to all; this is the basic level of approach to the subject (Ibid, p. 735).

In this study, the author focuses mainly on the evaluation of appropriateness of existing typologies of TD strategies, followed by a proposal of his own conceptualization. He does not address the issue of measuring variables, because in the case of latent concepts it is based on assumptions about the concept that are not liable to empirical testing⁵². Individual models of conceptualization intersect with description and normative appeal; they are not a mere response to empirical observations but seek to point out phenomena that can potentially occur. It should not be forgotten that in the case of conceptualization, it is still primarily a thought experiment which to some extent reflects the reality. From the point of view of phenomenology: conceptual models serve to understand the situation in which consciousness currently lives but they are

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John Gerring demonstrates the validity of his claim by considering several commonly proposed strategies. For instance, the *face validity* issue refers to a rather intuitive and unsystematic approach with deficient results in selected tough cases. *Convergent* and *discriminant* strategies try to validate measures by comparing them with other measures that are considered to be valid measures of the same concept (convergent validity) or different concepts (discriminant validity). The effectiveness of both strategies then depends on the assumption that the comparator concepts are measured correctly but this assumption cannot be tested. Finally, *causal* strategies attempt to validate the measure by observing a causal relationship to an input or output; but the causal relationship is only inferred, not tested (Gerring, 2012, p. 727–728).

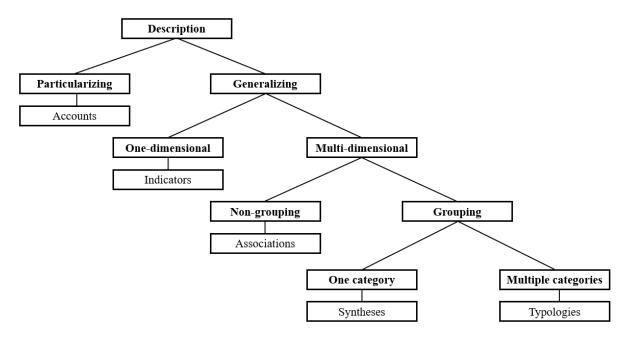


Figure 5. Taxonomy of descriptive arguments (Gerring, 2012, p. 725; adapted by the author)

also an expression of the world in which consciousness desires to live. Therefore, the formulation of models is not only a theoretical performance, but always also an opinion that changes the current world (Gerring, 2012, p. 727; Matějčková, 2019). Conceptualizations of deterrent strategies are based on the ideal of achieving effective deterrence, which will result in discouraging the enemy from hostile action and changing his approach toward the deterrer. For that purpose, however, it is necessary to determine and properly classify a sufficient number of deterrent strategies, the appropriate combination of which will result in effective deterrence.

In the previous chapters, the author showed that an effective way to achieve the goal in determining a sufficient number of deterrent strategies is the method of structuring the concept within the general strategic framework according to a uniform definition criterion covering the effect to be achieved and a generally described method of achieving the effect. This method has already been used by scholars Thomas C. Schelling, Glenn Snyder, Zachary Goldman, or Alex S. Wilner. However, before the author proposes his strategic conceptualization of deterrence, it is necessary to decide what form this conceptualization should take, i.e. how to correctly typologize deterrent strategies. This study has already outlined several forms of different configurations (see Chapter 1.5.) but they will be elaborated in more detail just in this second section. First, the forms of configurations depend on the shape of the descriptive relationships that create descriptive arguments. J. Gerring (2012, pp. 724–729) argues that descriptive arguments assume five archetypal forms: *accounts*, *indicators*, *associations*, *syntheses*, and *typologies*. The scholar presents them to the reader in a clear taxonomy (Ibid, p. 725, see Figure

- 5.). Each argument responds to different methodological criteria; their correct application makes it possible to structure the empirically observable, measurable characteristics or normative concepts appropriately.
- J. Gerring's taxonomy does not only demonstrate the possibilities of configuring descriptive arguments; "[t]hese are the patterns that we look for when attempting to describe events in the social world. This is what description means at the level of argumentation." (Gerring, 2012, p. 725) The scholar emphasizes that his figure is only illustrative, i.e. that it generalizes majority tendencies and features distinguishing individual arguments, which separates from any causal significance they may have. Strategic structures of deterrence do the same, and therefore can be included in the generalizing description in the first place. As such, they explicitly refer to a class of events (that may or may not be larger than the studied sample). Generalization is very useful for classifying categories and inferencing theories or formulas that make it easier to understand reality. Nonetheless, it is accompanied by the many times mentioned problem of simplification and selection of reality, which has also acted and still acts as a negative factor in inferencing theoretical conclusions about deterrence. Generalization is primarily a question of extent, for which, however, there are no universal propositions or particular facts⁵³ (Berk, 2004, p. 207; Gerring, 2012, pp. 725–726; Jacoby, 1999); the degree of generality largely depends on the judgment of each scientist.

Nevertheless, it is useful to distinguish between particularizing and generalizing statements about the world. It is also important to realize that, despite the above-mentioned problems, accepting the main objective of generalization does not imply neglecting specific cases and events. A scientifically legitimate goal can also be to analyse and describe a larger class of cases, i.e. a population (Gerring, 2016). It can be stated that the deterrence strategy is a generalization of the population of deterrent strategies, which are based on a certain planning and use of deterrence practices and tools. Focusing on the taxonomy of descriptive arguments, it is obvious that in the case of more complex configurations of strategic structures of deterrence

⁵³ In this case, the author considers the facts without any reference to the real context or other known facts (Gerring, 2012, p. 725).

the author does not consider indicators⁵⁴ or multi-dimensional associations⁵⁵. Configurations group deterrent strategies, however, they cannot be classified as single-categorical. That is, the type of descriptive argument in a strategic deterrence structure cannot be called synthetic. Syntheses refers to the unification of disparate attributes by a central theme; a pivotal topic lends coherence to an otherwise disordered set of phenomena and allows conclusions about itself to be drawn of a more general nature (Gerring, 2012, pp. 726–727). To respect the topic of the study, a synthesizing form of argumentation can be found, for example, in scientific disputes concerning national strategic cultures. American strategic culture is best characterized as strictly liberally unilateral (Kagan, 2003) or rather multilateral (Brands, Feaver, 2018), or a mixture of both, along with various ascriptive identities (Bloomfield, 2012). Each of the scholars presents a synthetic generalization of a broad group of diverse subject attributes.

The author dealt with synthetic analytical description in previous chapters, attempting to identify common attributes of deterrent strategies and characteristics that very likely distinguish them from other strategies. It is not excluded that the synthetic analytical description will be used in this second part of study, however, the evaluation of forms of strategic configurations of deterrence deal mainly with grouped multiple categories (see Figure 5.). The individual authors of the fourth wave of deterrence research usually describe strategic configurations as taxonomies or typologies (compare Kroenig & Pavel, 2012; Maddaloni, 2017; Trager & Zagorcheva, 2006) and as the theorist J. Gerring asserts: "Where multiple categories are defined, the result is a typology." (2012, p. 727) The research goal of typologies is to classify phenomena into an exhaustive number of mutually exclusive categories according to a uniform categorization principle or principles. It should be noted that within the logic of synthetic arguments, such a principle may be unidimensional, however, categorization must exhibit a grouping function in order to achieve typologization. Potatoes and peppers are rightfully

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⁵⁴ The task of the indicator is to describe one feature/dimension of population, which is based on empirically observable, measurable characteristics of a phenomenon; it is a simple univariate description that underlay all other general propositions, causal or descriptive. In political science, examples of indicators include those intended to measure the quality of governance, for instance, in indices of *Freedom House* or *PolityProject* (Gerring, 2012, p. 726).

⁵⁵ Associational descriptive arguments refer to attributes of diverse units, i.e. the multidimensional components of a phenomenon (Gerring, 2012, p. 726). An example of an association could be research into the relationship between political engagement and particular social class as conducted by Robert D. Putnam (2001) or Elmer E. Schattschneider (1975).

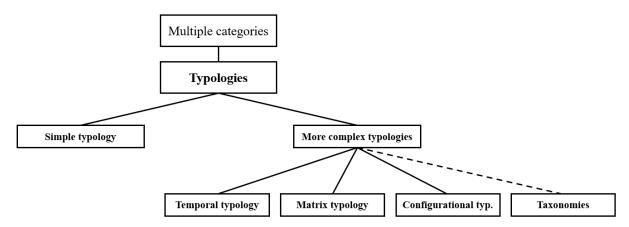


Figure 6. Examples of typologies (the dashed line between '*more complex typologies*' and '*taxonomies*' indicates a complex relationship between the terms which is described in more detail below).

divided into different categories of vegetable as they varied from each other along multiple attributes such as colour, taste, origin, etc. Nonetheless, the determination of categorization principles for the objective separation of phenomena into conceptually distinct categories is a central problem of typologies (Gerring, 2012, pp. 727; Smith, 2002, p. 379). Therefore, the author in the study does not stipulate the conclusions with unquestionable validity.

Typologies take different forms (see Figure 6.), which need to be discussed in more detail. Typology can generally be divided into simple or more complex form (Gerring, 2012, pp. 727–728). A simple typology has no other characteristics beyond those defining the typology. Thus, an example might be Guillermo O'Donnell's division of authoritarian regime into traditional, populist, and bureaucratic (O'Donnell, 1973). On the other hand, more complex typologies include additional attributes that can be used to divide these classifications into separate types. For example, "[a] temporal typology, or periodization, constructs categories according to discrete time-periods" (Gerring, 2012, p. 727). The already mentioned example of Samuel Huntington's division of waves of democratic transitions into indicative time periods (Huntington, 1991) can be mentioned for periodization. The author of this study rather gave up the attempt at periodization in the analytical description of the four waves of deterrence research due to the intersection of the individual waves. A matrix (or multidimensional) typology that derives categories from the intersection of several attributes might seem appropriate to the reader for the classification of deterrence research waves. However, this typology is also not eligible for classifying research waves because it requires all categories to share variations of the same factors. For example, Robert A. Dahl thus identified four types of regimes based on the intersection of two key factors, participation and contestation (Dahl, 1971, p. 7).

In this way, it would be possible to analyse and elaborate in detail even more types of more complex typologies. However, speaking about the configuration of deterrent strategies, it is necessary to mention the existence of configurational typologies and the related issue of taxonomy. The position of taxonomy in the classification of descriptive arguments provokes disputes among scientists. For instance, John Gerring considers taxonomy to be "... a specific kind of typology⁵⁶" (Gerring, 2012, p. 727) In his conception, "[a] taxonomy arranges neighbouring categories within a genus et differentium hierarchy in which each subtype possesses all of the attributes of the type, plus one" (Ibid, p. 728). This concept is illustrated in the classification of descriptive arguments in Figure 5. According to J. Gerring, configurational typologies, like taxonomies, create subtypes of one superordinate category. But unlike taxonomies, subcategories are formed by subtracting, and not adding, attributes. Such a configuration generates diminished subtypes compared to augmented taxonomy categories. An example might be the division of democracy concept into a set of relatively distinct models – liberal democracy, deliberative democracy, electoral democracy, majoritarian democracy, participatory democracy, and egalitarian (or social) democracy – each identifying a different attribute of the core term for better understanding of the concept (Coppedge et al., 2011).

Notwithstanding, the scholar Kevin B. Smith (2002, p. 381) understands the relationship of typology-taxonomy differently and rather draws attention to their dual approach to the classification of categories based on the distinction of nature of attributes. In his considerations, typologies separate concepts rather than empirically observable and measurable characteristics. "The dimensions are based on the notion of an ideal type, a mental construct that deliberately accentuates certain characteristics and not necessarily something that is found in empirical reality." (Ibid.) As such, typologies can serve by heuristic inference and provide a theoretical framework for comparison. However, the scholar attributes them a shortcoming in failing to provide an exhaustive list of mutually exclusive categories; no one is able to contain all possible attributes with the help of thought experiments and the ambiguous reality makes it impossible to find a strict division between them. On the other hand, taxonomies classify categories representing empirical cases. They should be connected mainly with natural sciences, however,

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John Gerring draws attention to the frequent semi-synonymous usage of the words typology, classification, and taxonomy. In particular, the choice of the typology-taxonomy relationship depends on the judgment and defence of the individual scholars. For scientific work on these inter-related terms, see Vittorio Capecchi (1968), Alberto Marradi (1990), Colin Elman (2005), or David Collier, Jody LaPorte, and Jason Seawright (2012).

according to K. Smith, their use can be found "... in numerous disciplines that face the need for classification schemes" (Ibid.). As the example of Figure 5. shows, the classification of categories into taxonomies can also be found in the social sciences. And scientists who would ignore J. Gerring's conclusions may consider the classification of deterrent strategies to be a taxonomy; deterrent strategies are derived from practically used strategies and their categorization is thus based on empirically observable, measurable characteristics.

It is obvious that the different attributes of typologies and taxonomies together share a very narrow, almost blurring boundary. Therefore, no scientist can be blamed if he prefers one term denoting the classification of deterrent strategies over another; it is only a matter of interpretation which is the subject of a long-standing dispute. Some authors have identified configurations as taxonomies because the attributes of the categories were empirical in nature, and K. Smith acknowledged that taxonomy is possible to use outside the natural sciences. However, it is precisely because of these characteristics that the author of the study does not understand both types of classification separately as K. Smith. Rather, he considers taxonomy as one of the types of typology, because K. Smith's division is not ultimately excluded from J. Gerring's classification; moreover, John Gerring is more consistent in describing the genuine differentiating elements of configurational typologies and taxonomies. Considering J. Gerring's classification of description arguments, it is more appropriate to denote some strategic conceptualization of deterrence as configurational typologies, rather than taxonomies. Either way, the author will deal with the field of more complex typologies in the following lines. The list of existing typologies of structures of deterrent strategies should indicate the path of appropriate conceptualization of terrorism deterrence, the new proposal of which concludes the research part of this study.

2.2. Terrorism Deterrence in Context

It would be possible to address the existing conceptualizations of strategies of terrorism deterrence on these lines; after all, the internal nature and latent structural logic of deterrence, its attributes and conditions of realization were largely analysed and described in the first section of this study, and TD within these research subjects does not bring anything fundamentally new. It is "only" a derivative of the umbrella concept of deterrence focused on a particular type of adversary and his specific activities. TD can be applied under the same conditions as deterrence and this application has attributes that can be assigned to selected deterrence characteristics according to the logic of concept structure. However, it is necessary to outline the context in which the conceptualizations of deterrence strategies are developed, and thus summarize the main reasons why they take certain forms, different from, for example, cyber deterrence (see e.g. Chen, 2017). Furthermore, it is necessary to give some reasons why it is essential to focus on conceptualizing TD strategies.

The answer that current (fourth-wave) conceptualizations of deterrent strategies respond to the demand for more effective achievement of deterrence objectives through as many relevant strategies as possible that meet the attributes of deterrence is already insufficient in this second section (such a general answer was possible in considering the strategy of deterrence as such). Primarily, two factors comprise the form of conceptualization of TD strategies – the profile of specific individuals involved in the terrorist network and the ongoing phase of preparation/execution of a terrorist act – specific characteristics and combination of which must be answered with an appropriate combination of deterrent strategies. For this purpose, it is necessary to display as many relevant deterrent strategies as possible in the conceptualization, which can then be selected, combined, and applied as needed. Such a well-classified conceptualization can serve not only as a set of potentially applicable strategies, but also a theoretical framework for subsuming specific practices among deterrent strategies, or among specific counter-terrorist campaign strategies. After all, the table of types of meaning and the degree of exclusivity/inclusivity of deterrence theories would be an insufficient theoretical basis for such research.

Terrorism deterrence is only one of several classes of counter-terrorist campaign strategies, which further includes, for example, seizing the initiative activities such as compellent strategies or stabilizing activities such as economic aid. As is evident, counter-terrorist strategies usually attempt to address root causes as in the case of economic aid (Connable, 2018, p. 13; Trager & Zagorcheva, 2006, pp. 88–89); in the case of TD, for example,

deterrence by delegitimization strategy addresses root causes when aims to challenge the narratives of terrorism. Therefore, counter-terrorist strategies are generally considered to be long-term (see e.g. Dempsey, 2015). They must respond appropriately to the challenges that arise during the various phases of the conflict⁵⁷, and in the meantime address and attempt to eliminate individual root causes and subsequently de-escalate and transform the conflict into a peaceful settlement. The task of deterrent strategies is to prevent terrorist activities or reduce the success of attacks already carried out during the various phases of the conflict. For this purpose, it is necessary to properly profile the individuals involved in terrorism against whom TD strategies are to be applied accordingly.

The scholar Alex Wilner deals with these factors, the form of which is responded to by the conceptualization of deterrent strategies. Building upon the already mentioned condition of the need to understand the adversary culturally, politically, and strategically, outlined by, for example, C. S. Gray (2010), he attempts to operationalize the TD's objective and classify the period in which terrorist activities are prepared, or executed. For this purpose, he presents his multi-approached concept of so-called '*unpacking terrorism*' (Wilner, 2014, p. 447). A. Wilner is one of the scientists actively researching the individual targets that require the selective tailoring of TD to classified groups or subgroups of individuals within the existing terrorist structure. Terrorist acts usually require the involvement of a system of actors performing specific functional roles; conceptualization of TD strategies thus consider terrorism as an '*organizational phenomenon*'58 grouping, for instance, militant leaders, planners, religious

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⁵⁷ In this meaning, conflict is understood as a general conflict of interests of individual parties. Deterrence is one of the strategies designed to prevent open conflict, the notion of which the word "conflict" in international relations may rather evoke. For more details on the forms of conflicts and their de-/escalations see, for example, Roland Eckert and Helmut Willems (2003), Juan A. Lacomba, Francisco Lagos, Ernesto Reuben, and Frans van Winden (2014), or Richard Bösch (2017).

This assertion cannot be postulated as absolute. In particular, cases of attacks by some lone wolves in the past raise doubts about terrorism as a purely organizational phenomenon. There can be mentioned Anders Breivik or Brenton Tarrant, who were probably not radicalized by anyone else and who prepared their deadly attacks without the help of any supporter (see e.g. Ravndal, 2013; Williamson, 2020). These two cases also represent exception from Paul Davis and Brian Jenkins' postulate claiming that "[t]o produce a large-scale attack, terrorists must constitute a system of actors fulfilling specific functional roles" (David & Jenkins, 2002, p. xi.) Even though both lone wolves have committed large-scale terrorist attacks, they still constitute mere exceptions to the generally accepted assumption of the organizational nature of terrorist activities.

ideologues, recruiters, bomb-makers, suicide and non-suicide operatives, financiers, or state, societal, and community supporters (Ibid.). A. Wilner's definition of the roles of individuals involved in terrorism is not very different from the system of actors first identified by scholars Paul Davis and Brian Jenkins (2002). However, A. Wilner develops and complements this system by the need to take phasing into account.

Each of the terrorist network actors mentioned poses a strategic challenge; as mentioned in the subchapter on fourth wave of deterrence research (Chapter 1.3.2), some less fanatically motivated individuals, such as financiers, are much easier targets for TD than, for example, suicide and non-suicide operatives (see e.g. Trager & Zagorcheva, 2006, pp. 96–97). Various combinations of individual deterrent strategies may be applied to different terrorism actors as well as in the case of diverse phases of preparation and implementation of a terrorist action. As the scholar Michael J. Powers (2001, p. 5) has argued in his book on WMD terrorism, strategists should think of terrorist activities as a process or as a series of activities escalating into violence, rather than a single event or act. Each operation has its beginning, middle, and end, and analysts can periodize these phases according to certain attributes⁵⁹. The division of operations into phases will facilitate the understanding of the whole planned action, and thus the choice of appropriate strategies, tactics, practices, and measures. Phasing can streamline the combination of TD strategies, and thus prevent the attack, while providing a clearer empirical basis for formulating effective TD strategies.

In order for terrorism deterrence to successfully achieve its goal, it is necessary to apply an appropriate combination of TD strategies at each stage of the preparation and implementation of a terrorist action. In his study, Jon-Paul Maddaloni presented a simplified sequence of phases replicating the usual progress of a terrorist operation: "radicalization, recruitment, financing, bomb-making, infiltration, execution, and publicity" (Maddaloni, 2017, pp. 9–10). Each of these phases presents a challenge for detection by law enforcement and intelligence network, and for a military and non-military response. If, in any particular stage, the risk of tracing and punishment outweighs the benefits of a successful attack (multiplied by the possibility of success), members of the terrorist network are deterred (Trager & Zagorcheva, 2006, pp. 98). As the terrorist operation escalates during the progress of individual stages

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⁵⁹ Determining attributes for periodization is purely subjective and depends on each scholar which phasing factor he chooses. For example, analysing the 9/11 attacks, the scientist Robert Anthony has identified nine '*sequential decision steps*' that al-Qaeda and subsequently the hijackers themselves needed to make for the whole operation to succeed (Anthony, 2003, p. 8).

approaching the attack, so does the determination and willingness of individuals involved in the terrorist network to achieve the intended goal. Therefore, A. Wilner emphasized the need to incorporate efforts to eliminate the willingness to act into the overall TD plan. Like Glenn Snyder, Nina Tannenwald, or Zachary Goldman before him, he argues that efforts to remove the ability of terrorists to act are insufficient and calls for the involvement of measures and practices influencing the adversary's cognitive and moral spheres. A. Wilner refers to this as "... the distinction between diminishing capability and manipulating motivation" (Wilner, 2014, p. 456). Like several scientists, he thus confirms the conclusion that in order to achieve a comprehensive deterrent strategy in a counter-terrorist campaign, it is necessary to apply not only deterrence by punishment or deterrence by dissuasion based on weapon capabilities, but also deterrence by denial and especially deterrence by delegitimization.

Conceptualization of TD strategies must be robust enough so that its selected strategies can be combined sufficiently to successfully deter individuals involved in the terrorist network. At the same time, analytical strategists must appropriately typologize them so that scholars can combine individual deterrent strategies within the clear structure of conceptualization in response to the relevant threat from diversely defined actors in the terrorist network, or at different stages in the course of terrorist activities. In addition, the TD strategies typology needs to indicate the applicability of strategies within direct or indirect deterrence appropriately. Finally, according to D. Collier and J. E. Mahon's logic of concept structure, individual deterrent strategies of TD should meet some of the four criteria that characterize deterrence strategy as a whole, which are:

- 1. the presence of a threat of force,
- 2. communication offer alternatives,
- 3. psychological manipulation of the opponent's mind/behaviour,
- 4. focus on passive/negative result.

In the following chapters, the author will present and evaluate some selected conceptualizations of TD strategies but will deal in detail only three; in particular, he will examine whether they meet the attributes described above together with the characteristics of the category classification. It is essential that conceptualization of deterrent strategies takes the form of an exhaustive and exclusive typology distinguishing categories according to a uniform criterion. To answer one of the research questions, the author will be interested in which form of typology should be chosen for conceptualization (for individual forms of typologies, see Chapter 2.1.). Subsequently, he proposes his own conceptualization of strategic structure of TD, in which he attempts to incorporate all the attributes based on the author's previous analysis.

In the following chapters, it will also be obvious that the fourth-wave conceptualization of deterrent strategies is still in its infancy and that there is only a minimum of attempts at a comprehensive typologization of strategies. Nevertheless, strategic conceptualization of TD has several significant functions that facilitate not only the appropriate application of deterrent practices and measures against the adversary, but also the research of TD and deterrence as a whole. First, the conceptualization of TD strategies should primarily serve to outline as many combinations of strategies as possible that can be applied at different stages of the preparation or execution of a terrorist act against various members of the terrorist network. As J.-P. Maddaloni remarked, "... deterrence strategies are not cookie-cutter and need to be specifically tailored to the intended adversary with a complete understanding of deterrence prerequisites and key attributes" (Maddaloni, 2017, p. 13). Second, as already mentioned, the strategic conceptualization can be used as a theoretical basis for further research. For example, if I observe some strategy applied, can I classify it among TD's strategies to find out if it is a practical use of terrorism deterrence? Third, appropriately designed conceptualization can help to observe shortcomings in applied comprehensive TD and to attempt to streamline its employment. Fourth, the conceptualization model can be employed to outline a change in the nature of deterrence concept and its expanded form. Finally, the conceptualization of TD strategies helps to understand the separation of deterrent strategies from other non-deterrent strategies and to determine their separating attributes. The last two functions are widely used by the author in this study, while they significantly facilitate the orientation of him and the reader in the complex topic of analytical description of terrorism deterrence.

2.3. Established Strategic Conceptualizations of Terrorism Deterrence

Alex Wilner's study Contemporary Deterrence Theory and Counterterrorism: A Bridge Too Far (2014) is an example of the descriptively seminal but not conceptually grounded research on terrorism deterrence. Although the scholar properly described the evolution of deterrence nature from a narrowly focused strategy in extended deterrence, he subsequently disorderly defended the use of individual deterrent strategies (by punishment, by denial, or by delegitimization) and combined his conclusions with individual specific cases. This approach, which Zachary Goldman also applies in his article Navigating Deterrence: Law, Strategy, and Security in the Twenty-First Century (2015), is somewhat disorganized and confusing for the reader. The studies are very seminal from a descriptive point of view, but inappropriate for any further analysis due to their non-conceptual nature. One of the ways how to organize their conclusions is to appropriately classify their selected findings using descriptive analysis. And as the author outlined in previous chapters (especially in the Chapter 1.5.), one of the most appropriate methods is to conceptualize the strategies of deterrence, or according to the logic of the fourth wave of research, the strategies of specifically focused deterrence.

Another fourth-wave author, Jeffrey Knopf (2012), conceived his research conceptually much more clearly. He divided the study according to the applied means of deterrence into 'deterring conventional terrorism' and 'deterring WMD terrorism'. Especially, in the section on deterring conventional terrorism he elaborated in more detail three comprehensive strategies inspired by the research of Glenn Snyder and Alexander George: deterrence by punishment, deterrence by denial, and indirect deterrence. Nonetheless, despite the increased clarity, J. Knopf's research is largely unfinished. The scholar completely ignored other strategies already known in 2012, such as deterrence by delegitimization or deterrence by dissuasion, and included some of their elements among the three strategies he mentioned. Research is neither exhaustive nor exclusive, on the contrary, it is very vague; for example, J. Knopf separately dealt with a strategy of indirect deterrence, which he considered similarly to the scholars M. Kroenig and B. Pavel (2012, pp. 25–33; see also Chapter 1.5.), i.e. different from other strategies in targeting 'third parties', not directly the assailant. However, already in the same year, M. Kroenig and B. Pavel showed in their article How to Deter Terrorism (Ibid.) that deterrence by punishment (the another strategy according to J. Knopf) can be targeted directly

as well as indirectly, i.e. that this difference can be achieved simply by choosing within main deterrent strategies that diverse in the result they are to achieve through their employment⁶⁰.

J. Knopf did not address the possibility of classifying the analysed strategies. As already mentioned, James Smith and Brent Talbot (2008; see also Chapter 1.5.) were among the first TD theorists who dealt with modelling the structural conceptualization in their work. However, their attempt to properly classify TD was neither exclusive nor exhaustive. The efforts of both scientists to divide deterrent strategies according to one criterion of the degree of targeting led only to the division of one of the strategies – deterrence by denial – between the tactical level, the operational level, and the strategic level. This procedure can be repeated for each deterrent strategy if they are known. Although such conceptual framework may be useful in planning operations, especially if it is supplemented at each stage by specific measures and practices, it is completely inappropriate for the purposes of this study: according to it, neither the change of nature of deterrence concept can be outlined nor an exhaustive and exclusive list of categories of deterrent strategies can be determined.

J. Smith and B. Talbot's conceptual framework is one of the first attempts to appropriately classify the deterrent strategies that appear in the scientific works of T. C. Schelling, G. Snyder, R. Jervis, C. S. Gray, A. Wilner, or Z. Goldman. The year of its publication suggests that the development of a fourth-wave strategic classification of specifically targeted deterrence is still in its infancy, looking for an appropriate form of typology and unifying criteria according to which categories within deterrence can be effectively classified. This research and testing are evident in the three representative conceptualizations of TD strategies, which the author will present in the following subchapters. They evince a deeper level of sophistication and need to be addressed in more detail. For each of them, the author evaluates the extent to which they meet the attributes of classification of TD

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⁶⁰ The author of this study also considers the strategic division into direct/indirect deterrence rather as a subcategory to all major deterrent strategies. Therefore, the mentioned division can be indicated in the strategic conceptualization as a mere list of practices and tools applied within major strategies. This consideration will be elaborated in Chapter 2.4. In addition, the concept of indirect deterrence can be understood in a broader dimension than just that presented by J. Knopf (2012, pp. 23–25), M. Kroenig and B. Pavel (2012, pp. 25–33), or A. George (2003, p. 465). It can be understood as deterrence applied against the aggressor who does not act primarily against the deterrer; however, by his hostile act, the aggressor also threatens deterrer's interests (for more details see Chapter 1.5.).

strategies, i.e. whether their concept is appropriate for use as a model basis for the design of the author's own conceptualization.

2.3.1. Strategic Conceptualization of Robert F. Trager and Dessislava P. Zagorcheva

Both proponents of the use of deterrent strategies in the counter-terrorist campaign, the scholars Robert F. Trager and Dessislava P. Zagorcheva (2006), based their conceptualization on differences in the responses of selected TD strategies to the motivation of diverse individuals involved in terrorism. By conceptualizing the ability to target different individuals within a terrorist network, they fulfilled the fourth-wave conclusions of A. Wilner, P. Davis, and B. Jenkins about tailored deterrence. In their framework (see Figure 7.), both scientists specified various combinations of deterrent strategies that should effectively respond to the different intensity of terrorist actors' motivation. They defined motivation as "... the extent to which terrorists value their political goals over non-political ends," while "... [e]xamples of the latter may include life, liberty, property, and social standing (when not derived directly from terrorist activity)" (Trager & Zagorcheva, 2006, p. 95). For this purpose, the framework is divided into four quadrants and the form of conceptualization thus belongs to the category of matrix, or multidimensional, typology (for its characterization see Chapter 2.1.). The vertical axis shows the intensity of motivation, the extent to which terrorists have certain political goals to be achieved is on the horizontal axis.

Both authors of the scheme pointed out that although they created four categories, each of the axes should be considered as a continuum; for example, the more motivated an individual is, the more likely he or she will be less vulnerable to deterrent strategies, as listed in quadrants 1 and 2. On the other hand, if terrorism actors attach more importance to what cannot be achieved by terror than vice versa, the more susceptible they are to threat of the former and the more the application of TD should be successful. With this horizontal division, R. F. Trager and D. P. Zagorcheva (2006, pp. 94–108) reflected the phasing of the terrorist operation, as described, for example, by J.-P. Maddaloni (2017, pp. 9–10) or before him A. Wilner (2014, pp. 447–448) and R. Anthony (2003). Nonetheless, despite all this, the figure of both scholars contains mere apparent combinations of deterrence by denial and deterrence by punishment, or temporary deterrence by punishment. Temporary deterrence by punishment is a combination of deterrence by punishment and deterrence by dissuasion strategies (see definition included in Figure 7.), whereas, according to the authors, deterrence by denial also contains the attributes of deterrence by dissuasion, when it demonstrates a resolve not to make concessions in addition to increasing the protection of the targets.

Goals that can be accommodated?^a

		Yes	No
	Low (terrorist value life over goals)	deterrence by punishment: political and nonpolitical ends held at risk; deterrence by denial	deterrence by punishment: political ends held at risk; deterrence by denial
Intensity of motivation	High (terrorist value goals over life)	deterrence by punishment: political ends held at risk; temporary deterrence by punishment ^b ; deterrence by denial	temporary deterrence by punishment; deterrence by denial

Figure 7. Conceptualization of TD strategies of Robert F. Trager and Dessislava P. Zagorcheva: *Potential deterrence strategies based on the intensity of terrorist motivation and the similarity of preferences over outcomes* (Trager & Zagorcheva, 2006, p. 95)

^a Some terrorist groups have objectives that could be at least partially accommodated either by the deterring state or by actors over whom the deterring state has leverage. In this sense, the relationship is not zero sum.

^b "Temporary deterrence" implies that groups can be influenced to refrain from taking action while they build capability for larger strikes. This is sometimes to the advantage of the deterrer because it provides a greater window of opportunity for the use of offensive strategies against the group.

Thus, conceptualization in this form *de facto* only outlines that deterrence by punishment and deterrence by denial (ignoring their more thorough distinction) can be used in any case, no matter how high the intensity of motivation and the goals accommodated. It fulfils the condition of the ability to adapt the combination of deterrent strategies in response to the activity of "... *target classes of individuals who are essential for the functioning of a terrorist group as a whole*" (Trager & Zagorcheva, 2006, p. 93) during different stages of terrorist operations. However, conceptualization based explicitly on this condition is hardly able to fulfil other essential attributes, such as outlining an exhaustive and exclusive list of deterrent strategies in a single model, so that the model can well reflect a change in the nature of deterrence. In this established form, it could also be used to choose a combination of selected deterrent strategies at any time prior 9/11. Moreover, the matrix typology, however suitable for combining a limited number of strategies, is not an appropriately chosen form of classification to outline an exhaustive and exclusive list of deterrent strategies. Because the author considers

it more important to determine as many strategies as possible, which can then be freely combined, he will not use the matrix typology for his conceptualization design.

R. F. Trager and D. P. Zagorcheva point out the need for a further combination of TD strategies contained in the individual quadrants, as some strategies do not have the same effect on some groups as on others: "In some cases, terrorists are so motivated that deterrence by punishment strategies that target the nonpolitical ends of terrorists are insufficient." (Trager & Zagorcheva, 2006, pp. 98)⁶¹ Creating a typology that reacts to the degree of application of certain strategies is extremely difficult, if not impossible, because this degree varies between actors. However, it is possible to create an appropriate typology of individual strategies, which can then be combined individually. Scholars, whose research work will be evaluated in the following chapters, were based on this consideration. R. F. Trager and D. P. Zagorcheva's conceptualization is remarkable, and the authors cannot be denied the effort to respond appropriately to the subjects of terrorism and the development of the terrorist operation. But without the possibility of identifying more types of deterrent strategies, it shows only vague results. Nevertheless, this conceptualization is not intended to identify more strategies. Only in the form of a secondary framework reflecting various terrorism actors, or the phasing of a terrorist operation respectively, it could appropriately complement the structural conceptualization, the creation of which the author strives primarily.

2.3.2. Strategic Conceptualization of Matthew Kroenig and Barry Pavel

Both scientists Matthew Kroenig and Barry Pavel worked out one of the highly developed conceptual frameworks in their article *How to Deter Terrorism* (2012). In their conceptualization, they also distinguish between two primary TD strategies, namely deterrence by punishment and deterrence by denial, as R. F. Trager and D. P. Zagorcheva (2006, pp. 94–108). However, both scientists attempted to structure them according to their intended effect, and not according to their response to the motivations of particular actors. Thus, M. Kroenig and B. Pavel found a way how to multiply the number of deterrent strategies that can be

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⁶¹ In addition, both scholars point out the need for at least minimal overlap between the interests and preferences of the state and terrorists in order for deterrence to realize at all (Trager & Zagorcheva, 2006, pp. 98–105). "When the preference orderings of terrorists and states are precisely opposed, deterrence is impossible – no bargaining space exists." (Ibid, p. 99) Their argumentation complements the author's assertion that it is necessary to overlap some or all of the interests between deterrer and deterree during the application of indirect deterrence strategies.

combined and applied against the adversary. Nevertheless, the method of approaching the distinction of intended effects limited them in scientific work. As R. F. Trager and D. P. Zagorcheva before them, both scholars primarily focused on classes of individuals operating within a terrorist network against whom specific practices and measures can be applied. They reflected this distinction between strategies in two ways: (1) by dividing deterrence by denial into tactical and strategic levels, building on the conceptualization of James Smith and Brent Talbot (2008), and (2) by focusing deterrence by punishment on direct and indirect target. The latter is based on the scientific works of Alexander George (2003, p. 465) or Jeffrey Knopf (2012, pp. 23–25) and both authors thus reflected for the first time in some conceptualization of TD strategies the important strategic difference in the application of direct and indirect deterrence. Nonetheless, individual strategies are distinguished in the conceptualization mainly and only by the used practices and tools of deterrence (see Figure 8.)

M. Kroenig and B. Pavel termed deterrence by punishment as deterrence by retaliation, with this strategy primarily referring to the Cold War-era nuclear strategy defined by *Mutually* Assured Destruction doctrine (Kroenig & Pavel, 2012, pp. 22–23). Here the author perceives the need to shed the light on a different stance on the retaliatory approach and to tell the reader his own opinion. Because, as Jeffrey Knopf noted, "[t]he area of greatest debate concerns traditional notions of deterrence by punishment, in particular the efficacy of threatening retaliation against the communities that terrorists claim to represent." (Knopf, 2012, p. 22) Application of classical punishment approaches are broadly preferred by Israeli analysts (compare Bar, 2008; Merari, 2002; Steinberg, 2001) and M. Kroenig and B. Pavel themselves present the case of "... Israel's past policy of demolishing the homes of suicide bombers' families as an example of successful deterrence" (Kroenig & Pavel, 2012, p. 27). However, in opposition to this approach stands Mark D. Kielsgard and Tam Hey Juan Julian (2018) or Jeffrey Knopf (2012) who point out the immorality of similar acts and the need for human rights protection in order to prevent further production of violent acts. The author stands by the latter; he agrees with the need to involve deterrence by punishment in a comprehensive counterterrorist campaign but while maintaining respect for human rights. It means, for instance, the imprisonment or travel restrictions for terrorists and their supporters.

The incorporation of Israeli controversial practices into deterrence by punishment is one of the most widely criticized issues, especially by scholars of the Anglo-Saxon tradition. In contrast, deterrence by denial is a widely accepted TD strategy, because its idea of increasing the protection of attack targets does not provoke controversy. However, even M. Kroenig and B. Pavel in their conceptualization merged deterrence by denial with deterrence by dissuasion,

Impose Costs		Deny Benefits
	Direct response:	Denial – tactical level:
	Threaten to respond against violent	Threaten to deny tactical success.
	extremists.	
Direct	e.g., threaten to imprison radical	e.g., visibly strengthen homeland
approach	clerics who incite violence	security
	Indirect response:	Denial – strategic level:
	Threaten to respond against assets	Threaten to deny strategic success.
	valued by violent extremists.	, E
Indirect	e.g., threaten to impose costs (travel	e.g., communicate that demands for
approach	restrictions, taxes, etc.) on terrorists'	withdrawal of U.S. troops from the
	families	Middle East will not be met, even in
		the face of terrorist attacks.

Figure 8. Conceptualization of TD strategies of Matthew Kroenig and Barry Pavel: *A Deterrence Toolkit* (Kroenig & Pavel, 2012, p. 25; adapted by the author)

when they integrated the communication of the dissuasive presence of military units in the Middle East into the strategic level of deterrence by denial (see Figure 8). Either way, both scientists have divided deterrence by punishment/retaliation and deterrence by denial into four strategies that are composed of cost imposition practices (direct and indirect response) as well as benefits denial techniques divided into tactical level and strategic level. They called the resulting conceptualization a 'toolkit' because one of its goals is to offer an outline of practices and tools that can be applied within a TD.

Practices of cost imposition strategy aim to deter terrorist activities through the threat of costly punishment. The strategy is based on the assumption that although some individuals resolved to go to death are very likely greatly difficult to deter, many terrorist leaders, radical clerics, financiers, and "... other members of terrorist networks value their lives and possessions" (Kroenig & Pavel, 2012, pp. 25–26). The direct approach of this strategy therefore employs simple threats such as imprisonment or causing physical harm in possible fight. However, in order to protect human rights, decision-makers must make not only "... a firm commitment to those who refrain from terrorist activity that they will not be punished" (Kroenig

& Pavel, 2012, p. 27), but that, for instance, conditions of imprisonment also respect human rights⁶². One of the main conditions of efficacy of these practices is tightening the laws on terrorist activities. The direct cost imposition strategy is also effective against state sponsors of terrorism⁶³ applying a range of diplomatic techniques from imposition of financial sanctions to international isolation (Ibid., pp. 26–27).

On the other hand, the indirect cost imposition strategy does not aim at terrorists themselves but something else that terrorists value a lot such as their families, communities, and assets. M. Kroenig and B. Pavel ranked among the indirect techniques travel restrictions or taxes, as well as Israeli controversial practice of demolishing the homes of suicide bombers' families (2012, pp. 27–28), unacceptable for many analysts including the author. Both scholars also listed in their study the existence of deterrence by delegitimization strategy as an alternative to the named examples of indirect approach practices. Nevertheless, the scientists only mentioned this strategy aiming "... to shape terrorists' perceptions about how terrorist activity could negatively affect their families and communities" (Kroenig & Pavel, 2012, p. 28) in connection with nuclear terrorism, refusing to address it in more detail. The fact that scholars completely ignore this strategy and its more thoughtful inclusion in the structure points to the limits of their conceptualization, which is not adapted to a greater number of strategies than those set by the authors.

According to M. Kroenig and B. Pavel's notion, deterrence by denial address practices seeking to deter individuals involved in terrorism by threatening failure (Kroenig & Pavel, 2012, p. 25). More specifically, the tactical level of denial "... deter[s] terrorism by threatening

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The infamous case of enormous abuse of power by prison staff for the purpose of human rights violation of prisoners at the Abu Ghraib Detention Center was described by the American psychologist Philip Zimbardo in his seminal work *Lucifer Effect: Understanding How Good People Turn Evil* (2007). Human rights violations at the Abu Ghraib Prison or the Guantanamo Bay detention camp were most likely one of the main sources of radicalization of future terrorists outside these prisons, as well as those imprisoned in these detention centres; for example, among the former prisoners of Abu Ghraib can be found ISIS top commander Abu Abdulrahman al-Bilawi or the leader of the Islamic State Ibrahim Awad Ibrahim al-Badry known as Abu Bakr al-Baghdadi (Awan, 2007; Eaton, 2016).

⁶³ State sponsors of terrorism represent another element of the terrorist network which is generally considered by scientists to be less motivated and easier to trace, and therefore more vulnerable to TD. Currently Cuba, North Korea, Iran, and Syria are on the U.S. list of states sponsoring the terrorism. Previously, the letter also contained, for example, Sudan or Libya (Trager & Zagorcheva, 2006, p. 97; U.S. Department of State, 2021).

to deny terrorists the ability to successfully conduct an attack" (Ibid., p. 28). In this case, the authors reproduced the classical definitional framework of deterrence by denial, described by G. Snyder (1961), with its intended effect and traditional practices such as 'visibly strengthen homeland security': hardened key targets or improved domestic intelligence (Kroenig & Pavel, 2012, pp. 28–30). Nevertheless, among the practices of strategic level of denial, scientists included communication convincing terrorists of the failure of attacks, which, however, can be an attribute of deterrence by dissuasion or eventually deterrence by delegitimization⁶⁴. M. Kroenig and B. Pavel suggested not only, for example, to publicly communicate resolution not to negotiate with terrorist movements and not to withdraw military capacities from areas controlled by terrorist groups, but also "... to limit media coverage of terror attacks to reduce the publicity sought by terrorist organizations" (Kroenig & Pavel, 2012, p. 31). Despite the outline of specific practices and tools, an uncertain distinction and confusion remain between the various deterrent strategies.

The chosen classification form does not allow to determine a larger number of deterrent strategies according to one selected criterion, so that it does not lose its table format. In this case, it is not a matrix typology, although the shape could guide the determination of this classificational form. The matrix typology must fulfil the attribute of multidimensionality, in which a limited number of factors fluctuate; in the previous case of R. F. Trager and D. P. Zagorcheva's conceptualization, the degree of employment of TD strategies varied according to the change in intensity of motivation or the extent of accommodated political goals. However, the conceptualization of M. Kroenig and B. Pavel belongs to the configurational typologies (for its characterization see Chapter 2.1.), because both scholars attempt to consider completely different strategies in distinct quadrants, distinguished according to different attributes. However, the chosen form of table is very limiting in the ability to set a much larger number of

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Castex to terrorists on 18 October 2020 in response to the assassination of teacher Samuel Paty: "You do not scare us. We are not afraid. You will not divide us. We are France," (BBC, 2020) as well as the answer of former fighter pilot Maj. Gen. Tal Kalman on Israel's capabilities militarily thwart Iran's nuclear plan: "The answer is yes. When we build these capabilities, we build them to be operational. It's not that there aren't many strategic dilemmas, since the day after Iran can go back to the plan, but the ability exists. Definitely." (Limor, 2021) It is extremely difficult to distinguish which deterrent strategy is covered by former or the latter communication. However, both aim to provoke the adversary's frustration at the feeling of not being able to achieve the desired effect of terrorist action.

other strategies. Moreover, it is not well-chosen to distinguish strategies and their effects solely according to different practices and tools of deterrence, because they do not have to meet the condition of exclusivity, as is evident in the case of communication convincing terrorists of the failure of attacks.

The strategic configuration should also maintain a uniform level of hierarchy, rather than combining the distribution between the strategic and tactical levels of deterrence by denial with the direct and indirect approach of deterrence by punishment. J.-P. Maddaloni, the last scholar whose work will be reflected in this chapter, maintains a unified hierarchy based on the structure of coercive strategies, which are divided by ramification into other substrategies. In his study, the author chooses this approach when designing his own conceptualization of TD strategies. Either way, M. Kroenig and B. Pavel's strategic conceptualization is another significant and bold attempt to appropriately classify TD strategies while incorporating evolutionary changes in the nature of deterrence. Their work is extremely beneficial in calculating various specific tools that can be used within the TD against the adversary. Nevertheless, it contains a considerable number of shortcomings that considerably disqualify conceptualization from its further improvement and deeper elaboration.

2.3.3. Strategic Conceptualization of Jon-Paul Maddaloni

In his study *Add Deterrence to the Strategy Against ISIS*, Jon-Paul Maddaloni (2017, pp. 14–18) created one of the most complex, elaborated, and sophisticated strategic conceptualizations of TD in terms of the attributes that a proper typology should fulfil. First, he chose for classification a form of configurational typology that illustrates the hierarchy between individual strategies by ramification into subcategories. The scholar applied this method within the structure of using force strategies. Second, all strategies are strictly divided according to one criterion: a precise definition covering the effect to be achieved and a generally described method of achieving the effect. This appropriately chosen classification method makes it possible to clearly illustrate the largest possible number of mutually exclusive strategies that meet the attributes of deterrence strategy without disturbing the configurational structure. J.-P. Maddaloni's conceptualization of TD strategies can thus be used without major problems for all five functional areas mentioned by the author in the chapter on terrorism deterrence in context (see Chapter 2.2.); thus, the conceptualization can:

• serve to outline as many combinations of strategies as possible that can be applied at different stages of the preparation or execution of a terrorist act against various members of the terrorist network:

- be used as a theoretical basis for further research;
- help to observe shortcomings in applied comprehensive TD and to attempt to streamline its employment;
- be employed to outline a change in the nature of deterrence concept and its expanded form;
- help to understand the separation of deterrent strategies from other non-deterrent strategies and to determine their separating attributes.

Individual deterrent strategies can then be combined as needed in response to diverse actors of terrorism at different stages of the development of a terrorist operation. As already mentioned, the strategic conceptualization developed by R. F. Trager and D. P. Zagorcheva (see Chapter 2.3.1.) can be used as an auxiliary theoretical framework for such a subsequent combination. Finally, the chosen form of classification makes it possible to illustrate the ramification of the strategy in different responses to direct and indirect threat.

However, a configurational typology that satisfies the aforementioned attributes was used by J.-P. Maddaloni mere as the initial structural model for constructing the final conceptualization; the author presented this elaborated basic conceptualization in this study's chapter *To Deter or to Compel? Lexical Similarities and Mistakes* (see Figure 3. in Chapter 1.4.). Nonetheless, J.-P. Maddaloni modified this basic conceptualization according to three spheres – *physical*, *mental* (*cognitive*), and *moral* – where "... *influence can be applied*" (Maddaloni, 2017, p. 14), as developed by John F. C. Fuller (1998, pp. 93–174). The scholar characterized the spheres as follows:

The physical sphere's main feature is structure and freedom of movement, composed of military units and equipment, armies, logistics, safe havens, communications, industrial areas, and geography. The cognitive sphere's main feature is control of the organization, composed of intelligence, ideas, ideology, plans, and doctrine. The moral sphere's main feature is maintenance of the movement, composed of will, courage, fear, loyalty, determination, patriotism, and tradition.

(Maddaloni, 2017, p. 14)

J.-P. Maddaloni classified such operationalized spheres in a table. Based on it, he created a conceptual framework of three approaches to TD, where he connected the relevant deterrent

J. F. C. Fuller's Conditions on the Use of Force Framework

Physical	Cognitive	Moral				
Structure	Central Characteristic of Each Sphere: Control	Maintenance				
Planes, Tanks, Ships	Reason, Imagination, Will	Fear, Courage, Morale				
Application to Islamic State and VEOs*						
Safe havens, freedom of movement, and state sponsorship Wealth and material assets Leadership	Social acceptance Religious and political sympathy and recruitment Group cohesiveness	Publicity Personal glory Tactical success or failure Will to continue				

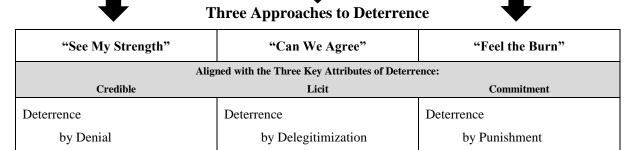


Figure 9. Conceptualization of TD strategies of Jon-Paul Maddaloni: *Deterrence aligned with conditions on the use of force* (Maddaloni, 2017, p. 15; adapted by the author)

by Reward

by Dissuasion

strategies to the individual spheres that are affected by the strategies. The scholar assigned a short title to each of these approaches, which should concisely characterize the method of influencing the given strategies on the spheres: *See My Strength*, *Can We Agree*, and *Feel the Burn* (see Figure 9.). Afterwards, he described and explained his final conceptualization of TD strategies in detail in his study (Maddaloni, 2017, pp. 14–18).

By modifying the initial configurational typology according to J. F. C. Fuller's theory of distinguishing spheres of influence, the final conceptualization has lost several essential attributes that it should fulfil (and which the initial typology fulfils). First, by dividing and incorporating deterrent strategies between spheres, J.-P. Maddaloni resigned from the commenced attempt to appropriately hierarchize strategies using further ramification within categories. Second, the scholar violated the originally appropriately chosen classification principle by adding another criterion of division according to spheres, which fundamentally

^{*} VEO is an abbreviation for violent extremist organization.

disturbs the exclusivity of deterrent strategies. As J.-P. Maddaloni pointed out: "In Fuller's model, the spheres are not independent of each other, and the use of force will commonly affect two or all simultaneously." (Maddaloni, 2017, p. 14) Such a solution is certainly justified by the ambiguity of the world and the impossibility to strictly distinguish the deterrent strategies, which should be applied together in combination anyway. Nevertheless, the scholar sought to create a conceptual framework; and conceptual framework loses its classification purpose and normative function at the moment when typologization does not meet the basic criteria, i.e. that the categories are "...mutually exclusive, exhaustive, and defined by uniform principles" (Gerring, 2011, p. 142). Thus, individual deterrent strategies in conceptualization may, despite their incorporation, influence other spheres, leading to the ambiguity and vagueness of the proposed conceptual framework.

Due to conceptual vagueness and ambiguity, the author will not discuss in detail the reasons for the placement of individual deterrent strategies in conceptualization (see the division of strategies in Figure 9.). However, the greatest contribution of J.-P. Maddaloni's conceptual framework consists of including as many relevant deterrent strategies as possible, characterized over the years by prominent scholars such as T. C. Schelling, G. Snyder, R. Jervis, C. S. Gray, A. Wilner, or Z. Goldman. Thus, J.-P. Maddaloni classified in addition to deterrence by punishment and deterrence by denial also deterrence by dissuasion, deterrence by delegitimization and deterrence by reward. All these strategies share the basic attributes of the deterrence strategy, yet they are separated from each other both by the expected outcome of their application and by the method by which they achieve the desired effect. The author of this study will use these deterrent strategies in the final conceptualization of TD strategies, except deterrence by reward. As the author explained in detail in the chapter *To Deter or to Compel? Lexical Similarities and Mistakes*, he does not incorporate deterrence by reward in his conceptualization design because this strategy does not meet the internal negative/passive nature of deterrence focus (see Chapter 1.4.).

Other deterrent strategies are defined to a large extent satisfactorily and the author used many of the findings summarized by J.-P. Maddaloni in the characterization of strategies in the previous chapters. Nevertheless, the author dares to be critical of the issue of methods of applied deterrence by punishment. In his study, the scholar argued that the practices of punishing strategy include, for example, "... destroying a critical resource or killing a key leader essential to the violent extremist organization" (Maddaloni, 2017, p. 18). However, in this case, he again incorrectly combined deterrence and compellence, which shifts the initiative of the first action to the deterrer. It was T. C. Schelling (1980, p. 9) who defined that one of the cornerstones of

deterrence is the threat of force, not the use of force, which was also emphasized in his study by J.-P. Maddaloni (2017, p. 4). His explanation of the practical application of deterrence by punishment thus again shows how extremely difficult it is to separate individual coercive strategies and avoid combining them. However, the fact that it is difficult does not mean that it is completely impossible to create conceptualizations based on strictly separate (coercive as well as deterrent) strategies, the categories of which will be exhaustive, mutually exclusive and classified by uniform criteria. J.-P. Maddaloni created such a conceptualization of TD strategies (see Figure 3. in Chapter 1.4.), but during an attempt to further modify it, he failed to maintain the conditions of proper typology.

All three analysed conceptualizations of TD strategies attempt to classify deterrent strategies according to different criteria. R. F. Trager and D. P. Zagorcheva related deterrent strategies to the motivations of terrorism actors and the degree of accommodation of political goals, M. Kroenig and B. Pavel divided strategies according to used practices and tools into different hierarchies of direct/indirect deterrence and tactical/strategic level of deterrence, and J.-P. Maddaloni distinguished between strategies based on a uniform definition criterion covering the effect to be achieved and a generally described method of achieving the effect. Each conceptual framework has its pros and cons, but none of their authors can be denied the effort to find a method how to properly classify deterrence strategies to meet the largest possible number of attributes required by proper typology and which the author gradually introduced and sought in the examples of presented conceptualizations. The author already has enough knowledge to try to contribute with his own design of conceptualization of TD strategies, which should fulfil as many classification attributes of configurational typology and simultaneously correspond to the definitional framework of deterrence, or terrorism deterrence.

2.4. Designing Conceptual Framework of TD Strategies

The nature of deterrence has changed significantly over time. Through their studies, fourthwave scientists no longer respond to just one type of threat as their predecessors did during the Cold War. They respond to the demand for cost-effective employment of combat assets, without the need to use them, in order to change the behaviour of the adversary in the post-Cold War environment characterized by fragmentation of threats and augmented unpredictability of the actions of actors. Through their research, these scholars respond to the fact that the concept of deterrence has lost the Cold War form of a grand strategy, which was attributed to it mainly by the Anglo-Saxon scientific tradition. They react to the situation when the strategy had to face the situation defined by Matthew Kroenig and Barry Pavel (2012, pp. 23–24) in three conclusions: (1) there exist many more enemies to be deterred now, (2) the concept is partial unlike its originally absolute character, and (3) deterrence is not a key pillar of national security strategy anymore but only one part of a broader strategy. There was a need to adjust deterrence in response to individual threats that became relevant and urgent after the collapse of the Soviet Union and the end of bipolar paradigm in international relations. National and international terrorism has become one of the most serious threats.

Along with these changes, a scientific approach to the concept of deterrence, and especially to its strategic framework, has evolved. Already during the Cold War, it was not possible to consider deterrence only in its classical form defined by T. C. Schelling (1966; 1980) and summarized by G. Snyder (1961) in terms of deterrence by punishment and deterrence by denial. Thus, other deterrent strategies began to appear in scholars' texts to explain better the effect of deterrence application and to incorporate the tactics, practices, and tools used into an appropriate strategic framework. Thus, prior to the end of the Cold War, R. Jervis (1979) supported the involvement of deterrence by reward in the strategic framework of deterrence, then in the 1990s there were proposals to explain some deterrent methods by deterrence by dissuasion (Prunckun & Mohr, 1997), deterrence by prosecution or negotiation (Crenshaw in Alterman, 1999), deterrence by delegitimization (Tannenwald, 1999), or deterrence by reputation (Zapfe & Vanaga, 2019). Over time, further research has confirmed the viability of some defined strategies, while other strategies have been ruled out for duplication of practices of generally accepted deterrent strategies or for incompatibility with the intrinsic nature of deterrence. The first three waves of deterrence research thus served, among other things, as a notional incubator for deterrent strategies. Fourth-wave researchers then attempt to classify these strategies appropriately.

The fourth wave of research deals with the response of deterrence to various threats such as rogue states armed with weapons of mass destruction, sea/air piracy, or cybercrime. Deterrent response applies different types of strategies against threats, depending on the profile of the adversary and the methods and measures of aggression he uses. Even deterrence applied within the counter-terrorist campaign also has its specific set of relevant strategies, the identification and definition of which have been addressed, for example, by C. S. Gray (2003; 2010), A. Wilner (2011; 2014), or Z. Goldman (2015). However, as the author showed in the chapter *To Deter or to Compel? Lexical Similarities and Mistakes* (see Chapter 1.4.), the mere synthesis and derivation of various knowledge without an attempt to properly conceptualize coercive and deterrent strategies cause disorder in the definitions of strategies, their intertwining, and misalignment of terms in scientific texts.

Thus, for better orientation between coercive and deterrent strategies, some scientists such as R. F. Trager and D. P. Zagorcheva (2006), M. Kroenig and B. Pavel (2012), or J.-P. Maddaloni (2017) began to create conceptual frameworks based on strategy classification. However, the advantages of their functional utilization do not only lie in increasing clarity between strategies. Scientists have been and are aware that appropriate conceptualization of TD strategies can as well (1) serve to outline as many combinations of strategies as possible that can be applied at different stages of the preparation or execution of a terrorist act against various members of the terrorist network, (2) be used as a theoretical basis for further research, (3) help to observe shortcomings in applied comprehensive TD and to attempt to streamline its employment, or (4) be employed to outline a change in the nature of deterrence concept and its expanded form.

Previous chapters have shown that the conceptualizations of TD strategies are still in their infancy. They rank among the descriptive arguments of grouped multiple categories, i.e. among typologies. Nevertheless, most of the presented established conceptualizations do not even fulfil the basic criteria of typology: with the help of classification it is not possible to determine an exhaustive number of mutually exclusive categories. Scholars rather ignore the need to classify strategies according to uniform principles. These facts lead to ambiguous conclusions and non-fulfilment of classification purpose and normative function of conceptualizations. According to K. B. Smith (2002, p. 381), it is not possible to find a completely exhaustive list of mutually exclusive deterrent strategies with the help of a typology. However, it is possible to present an appropriate method of typologization in an attempt to classify as many known relevant strategies as possible. For this reason, the author considers a form of configurational typology based on hierarchical ramification to be the best way to

conceptualize deterrent strategies. J.-P. Maddaloni typologized in this form his initial structural model of using force strategies (see Figure 3. in Chapter 1.4.). However, he subsequently modified this model so that the new conceptualization lost the basic attributes of typology.

Nonetheless, the author of this study decided to follow J.-P. Maddaloni's initial structural model and on its classificational basis compile its own proposal of conceptualization of TD strategies. J.-P. Maddaloni outlined above all the division of coercive strategies of deterrence and compellence, defining individual deterrent strategies; nevertheless, they are only listed in the structure prepared for further classification (see Figure 3. in Chapter 1.4.). The author focuses on their possible classification and applies the division, which he proposed when creating a table of types of meaning and the degree of exclusivity/inclusivity of deterrence theories, i.e. division of deterrence by punishment strategy and deterrence by frustration strategies (see Chapter 1.5.). He maintains a uniform criterion of typologization of categories, which J.-P. Maddaloni chose for the division of strategies. In the author's conceptualization, deterrent strategies will be divided according to a uniform definition criterion covering the effect to be achieved and a generally described method of achieving the effect. This is the main reason why the author in this study carefully paid attention to the most accurate differentiation of individual coercive and deterrent strategies.

In order for strategies to be considered part of the strategic structure of deterrence, they need to fulfil some of the latent attributes that deterrence contains. Thus, deterrent strategies include:

- 1. the presence of a threat of force,
- 2. communication offer alternatives,
- 3. psychological manipulation of the opponent's mind/behaviour,
- 4. focus on passive/negative result.

According to the logic of the concept structure, each of the deterrent strategies does not have to fulfil all latent attributes. However, at least two factors separate deterrent strategies from other coercive strategies: its intrinsic negative/passive nature and the objective of manipulating the opponent's mind/behaviour. From the deterrent strategies indicated by J.-P. Maddaloni, deterrence by reward does not fulfil the attribute of focus on passive/negative result. In addition, it is in contradiction to deterrence by delegitimization. Application of deterrence by reward usually follows the start of negotiations with the other party and a large number of scientists agrees that negotiating with terrorist groups legitimizes their existence, their objectives, and their methods (see e.g. Alexander, 2002; Narveson, 1991; Neumann, 2007; Weinberg & Davis, 1989; or Wilkinson, 2006). If negotiation legitimizes the other party, then it would deny the

sense of deterrence by delegitimization which, on the other hand, meets both necessary latent attributes of deterrence. Therefore, deterrence by reward is not part of the author's conceptualization design.

The author incorporates into his conceptualization design all other deterrent strategies that J.-P. Maddaloni indicated in his initial structural model (see Figure 3. in Chapter 1.4.). When studying the available literature on deterrence and terrorism deterrence, the author did not discover another relevant deterrent strategy which could be included among those contained in J.-P. Maddaloni's conceptual framework. The author therefore proposes a fourth-wave extended strategic conceptualization composed of these TD strategies: deterrence by punishment, deterrence by denial, deterrence by dissuasion, and deterrence by delegitimization. Their number will be sufficient to outline an appropriate form of typology. In the conceptualization structure, deterrent strategies will be initially divided between deterrence by punishment and deterrence by frustration (see Figure 10.). Deterrence by punishment uses concrete punitive tools and focuses on achieving a specific effect of punishing the adversary. In contrast, deterrence by denial, by dissuasion, and by delegitimization use various means to achieve a more abstract result of evoking in the adversary a feeling of frustration at the inability to complete a terrorist operation or to use the success of a terrorist attack to his advantage.

According to the vast majority of scholars, deterrence by punishment is an absolutely necessary component of the strategic framework of deterrence. Nevertheless, it must always be applied in combination with other deterrent strategies, because not only would it be insufficient to achieve the success of deterrence⁶⁵, but on the contrary it could lead to a dangerous escalation into open conflict. G. Snyder (1961, p. 15) defined deterrence by punishment as damaging something an opponent values in retaliation for his undesired hostile act. "Key to this approach is affecting the adversary's ability to maintain [his – the author's note] momentum and challenging [his – the author's note] morale and will to fight." (Maddaloni, 2017, p. 18) In his conceptualization, the author also outlines examples of the use of punishment strategy against direct and indirect threats, being inspired by the deterrence toolkit of M. Kroenig and B. Pavel (see Figure 8. In Chapter 2.3.2.). The direct approach may include, for example, the threat of imprisonment or physical injury in open combat. Methods of indirect deterrence may be, for example, the imposition of travel restrictions on terrorists' families or diplomatic coercion

⁶⁵ The author reminds that he considers the success of deterrence application to be a change in the behaviour/thinking of the deterred aggressor and averting the threat of an attack.

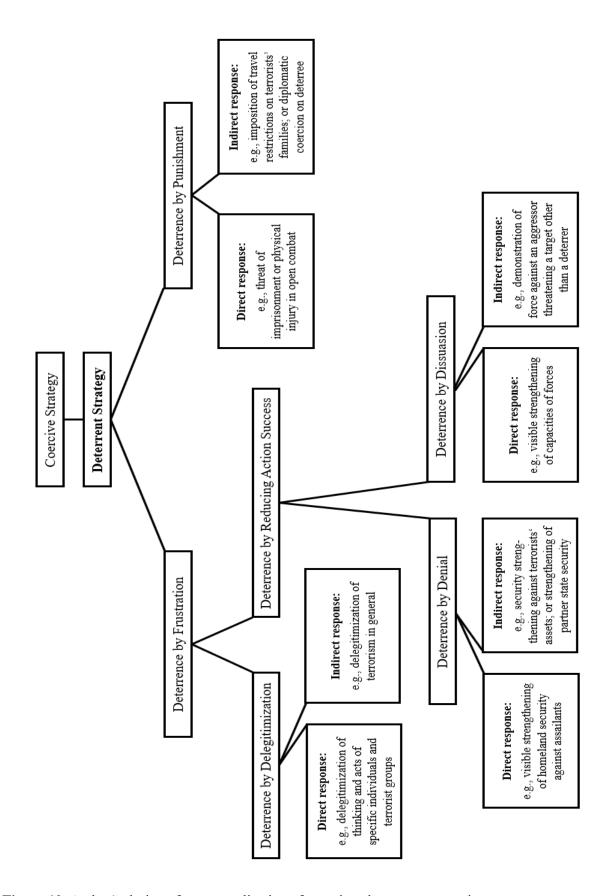


Figure 10. Author's design of conceptualization of terrorism deterrence strategies.

directly on deterree, given the author's consideration of indirect deterrence against the aggressor (see Chapter 1.5). However, deterrence by punishment practices should in any case respect human rights.

Within deterrence by frustration, the author distinguishes deterrence by delegitimization from the strategies of deterrence by denial and deterrence by dissuasion. In contrast to the two strategies mentioned, deterrence by delegitimization is more focused on deterrent success in the long run; the strategy addresses the root causes of conflict such as the ideology of terrorism which it seeks to question and suppress. Deterrence by delegitimization is difficult to grasp because its practices are in many cases as abstract as the goal it seeks to achieve. Deterrer seeks to persuade the adversary to change or abandon the intended actions "by degrading the rationales that motivate and guide his behavior" (Wilner, 2011, p. 27). Thus, the strategy of delegitimization involves, for instance, debates on religious interpretations, manipulation of strategic culture, or influencing public opinion, i.e. methods that are available not only to the defence component of the state but in the age of social networks virtually everyone. The division of direct and indirect responses depends in the issue of delegitimization to the degree of generality: while the direct approach targets specific individuals and terrorist groups, their thinking and acts, the indirect approach questions the ideology of terrorism as such.

Deterrence by denial and deterrence by dissuasion focus primarily on the short-term goal of reducing the success of a planned operation or an already executed attack. Therefore, the author summarizes them under the common designation 'deterrence by reducing action success'. Some fourth-wave authors still mistakenly combine or confuse the two strategies (see e.g. Kroenig & Pavel, 2012; or Trager & Zagorcheva, 2006), but as has been said many times, the two strategies need to be distinguished. Deterrence by denial is characterized by increased protection of targets in the hope that the success of a potential attack will be outweighed by its costs. The application of this strategy is intended to convince terrorists of the state's determination not to make concessions in favour of terrorist tactics (Snyder, 1961, pp. 15–16). Direct response covers the already mentioned practices of strengthening security controls at airports, in government buildings, or stadiums, tightening immigration controls, or fortifying embassies. Indirect response may follow the logic of indirect deterrence target postulated by, for example, A. George (2003, p. 465) or J. Knopf (2012, pp. 23-25) or the author's logic of indirect deterrence. Within the former, for instance, it is possible to increase the control of financial transactions in order to deter terrorism supporters. The latter can be reflected, for example, in interstate technical assistance, where one state secures the critical infrastructure of another partner state facing terrorism.

In contrast, deterrence by dissuasion focuses more on the force issue of deterrence and rather approaches the classical strategic thinking about the deterrence concept presented by studies of scientists and strategic analysts of the Cold War period. Its task is to send a message about the nonsense of armed conflict with the help of "... conventional force forward basing and presence for rapid response, long range precision guided capability, and drone capability for targeted killings" (Maddaloni, 2017, p. 16). In addition, the deterrence by dissuasion strategy is intended to add credibility to the deterrer's determination in order to strengthen the opponent's belief in resolution to counter his aggressive actions. Unlike the punishment strategy, deterrence by dissuasion must be clearly visible and its practices overt⁶⁶. Rather, the division into direct and indirect response practices copies the author's contemplated logic of direct and indirect deterrence against the aggressor as a whole because force measures are usually used regardless of the profile of individuals involved in terrorism. Thus, direct response may include all the tools listed by J.-P. Maddaloni and part of indirect response may be, for example, the already mentioned increased U.S. military presence in the Pacific region in response to the threat to Taiwan from mainland China.

Figure 10. represents the author's proposal of the conceptualization of TD strategies, which should fulfil the attributes of proper configurational typology, meet the latent logic of deterrence concept structure, and satisfy the functional requirements for strategic conceptualization of terrorism deterrence. The author does not claim that a successful result of the deterrence employment can be achieved with an appropriate combination of only these strategies; many predictable and unpredictable intervening variables enter into the deterrent operation, which can ultimately reverse the success of a well-prepared TD strategy. However, if all possible combinations of strategies, tactics, tools, and practices are considered within the direct and indirect responses of all mentioned deterrent strategies, a very robust and highly effective TD strategy can be formed, which can be a credible part of any counter-terrorist campaign. Thus, this author's contribution, among other things, responds to the demand for

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⁶⁶ In this context, it is interesting to mention the example of Israel as a country generally accepted as a nuclear-armed state, whose government has never confirmed or denied possession of nuclear weapons (see e.g. Kristensen & Norris, 2014). Every scientist must weigh whether such a procedure could be considered deterrence by dissuasion when deterrence tools are not clearly visible and known. Either way, presumed Israeli possession of nuclear weapons can be incorporated under deterrence by punishment, which does not necessarily require transparency of punishment but only awareness of the possible employment of punitive practices.

development of more effective counter-terrorist strategies, which was raised after the terrorist attacks of 11 September 2001 and with the global growth of terrorist attacks.

Conclusion

The concept of deterrence can no longer be closely linked only to the Cold War and the threat of an enormously destructive nuclear war. In his study, the author presented a significant number of scientific and empirical findings proving that deterrence has been a widely demanded strategy for effective combat against the adversary for several years now. Above all, the ability of psychological manipulation of opponent with the help of such a combination of deterrent strategies that is sufficiently effective at minimal costs is emphasized. However, such an optimal combination can be achieved especially if as many deterrent strategies as possible are known, and possibly practices and tools within them, which can be suitably combined. As part of the fourth wave of deterrence research, scholars such as James Smith, Brent Talbot, Robert F. Trager, Dessislava P. Zagorcheva, Matthew Kroenig, Barry Pavel, or Jon-Paul Maddaloni have attempted to develop appropriate conceptual frameworks of deterrent strategies, one of the functions of which would be to determine such a proper combination. Nevertheless, their configurations of deterrent strategies have a lot of classificational and definitional shortcomings that prevent the conceptualization of the most robust framework of relevant strategies.

In his study, the author focused on minimizing the descriptive and structural ambiguities by introducing and comprehensively comparing the original understanding of the concept of deterrence with the current approach following the end of the Cold War. Aware of the shortcomings of deterrence research, and reflecting the logical sequence of the study, the author asked these research questions in the introduction: *How and why has the nature of the concept of deterrence changed over time? How can the concept of deterrence, and specifically terrorism deterrence, be satisfactorily defined to meet contemporary challenges? Which category configurations should consider terrorism deterrence strategies? Can the strategies of the concept of terrorism deterrence be satisfactorily typologized? And what form of typology should be chosen? The author focused on terrorism deterrence as the largest and most original part of the fourth wave of deterrence research responding to the global threat of terrorism. The research on terrorism deterrence made it possible to clearly demonstrate the form of the fundamental changes that thinking about deterrence underwent after the end of the Cold War, as well as recent scientific contributions to the conceptualization of TD strategies.*

However, deterrence evolved gradually into the form of terrorism deterrence, with the change in thinking about the concept being considerably criticized by some scientists. The first part of the study focused on this evolutionary development. Although the concept of deterrence was already described in the theoretical work of the ancient military theorist Sun Tzu or

Prussian war strategist Carl von Clausewitz, most Cold War scientists considered it a concept of defensive strategy suitable for application only in the period of United States bipolar rivalry with the Soviet Union. There are many explanations for why scientists like William Huggins or Lawrence Freedman considered deterrence as incapable of adapting to other settlement of power relations. For example, Nina Tannenwald postulated the absence of constructivist thinking about the normative element in deterrence strategies that most likely prevented many scientists from thinking about the concept in its potentially wider use. Concurrently, she described several conflicts questioning the conclusions of the then widely accepted Anglo-Saxon spatially limited and generalizing realistic narrative narrowing deterrence to a defensive strategy that can only be effectively applied with the employment of strategic nuclear weapons. For many scientists, the Cold War power conflict evoked the theoretical concept of totally destructive absolute war introduced by Carl von Clausewitz. Deterrence was rediscovered in the early Cold War just as the only possible response to the threat of occurring of Clausewitzian concept using weapons of mass destruction.

The classical concept of nuclear deterrence thus became established, gradually appositely defined in their scientific works by Thomas C. Schelling or Glenn Snyder. According to them, deterrence is a strategy in which it is possible by psychological manipulation to force the aggressor to refrain from an action that he would execute otherwise. In particular, T. C. Schelling attributed to deterrence the still valid basic attributes, which are the threat of force and communication manifested in the form of bargaining with deterree, or diplomacy of violence; within the concept of bargaining, conditions are postulated without which deterrence cannot be carried out. First, the threat must be credible and anyone who resorts to it must be able to turn it into action. Second, the threat must be communicated simply so that the adversary fully understands the dilemma he is facing. And third, there must be a deterree's commitment that the threatened action will be taken. Deterrent diplomacy of violence presupposes the involvement of rational actors calculating cost and benefit and considering various alternatives. The assumption of actor rationality later became the main object of numerous criticisms aimed at involving some irrational fanatical terrorists in deterrence bargaining. However, there is an absolute minimum of such actors, and most individuals involved in a terrorist network have a hierarchy of values that can be appropriately threatened. The attributes and conditions of deterrence postulated by T. C. Schelling or G. Snyder are thus still valid even when applying deterrence against current actors of international relations.

G. Snyder summarized the Cold War practices and measures of deterrence into two strategic frameworks – deterrence by punishment and deterrence by denial – which should

describe and clarify the adequacy of the employment and effectiveness of deterrence. Nevertheless, with the end of the Cold War, the concept seemed to many scientists as incapable of adapting to a new international environment. Deterrence discussed in detail during the Cold War three waves of research was seemingly inapplicable in an arrangement that did not evoke the theoretical models of the Game of Chicken or Clausewitzian absolute war from which the strategy was inferred. The realist approach based on state-on-state relationships, sustainable status quo, and nuclear exchanges failed to respond appropriately to the challenges that accompanied the end of the Cold War. Collapse of the Soviet Union and the end of bipolar paradigm in international relations opened up the former spheres of influence to a large number of new state and non-state actors. They took important positions in international relationships and many of them posed a significant risk to the new world order; irregular conflicts, the proliferation of weapons of mass destruction and missile technologies, failed states, or terrorism represented significant new challenges that the liberal world order had to face. The classical concept of nuclear deterrence was not considered in response to a large number of new security threats characterized by difficult detectability and, above all, the augmented unpredictability and apparent irrationality of its actors.

Contemporary authors such as J. F. Knopf or B. Connable focus on the onset of fourth wave of deterrence research in their studies. However, they do not deal in any detail with how and why there was a complete reversal in the thinking about deterrence, which was forced to respond to the situation defined by Matthew Kroenig and Barry Pavel in three conclusions: (1) there exist many more enemies to be deterred now, (2) the concept is partial unlike its originally absolute character, and (3) deterrence is not a key pillar of national security strategy anymore but only one part of a broader strategy. The author of this study found probable answers to research questions in the work of selected scientists, who are not usually included in the narrative of four waves of deterrence research, and in the consequences of the terrorist attacks of 11 September 2001. The change in thinking about the use of deterrence occurred gradually, usually with scientists who put deterrence on the margins of their primary research such as N. Tannenwald, H. W. Prunckun, P. B. Mohr, or M. Crenshaw.

In the 1990s, the aforementioned scientists pointed to the inadequacy of explaining the success of deterrence employment through deterrence by punishment and deterrence by denial strategies. Along with that, they proposed the incorporation of other deterrent strategies such as deterrence by delegitimization or deterrence by dissuasion into the strategic structure of deterrence, i.e. strategies, the combination of which with the two original strategies would explain cases of deterrence success without the involvement of strategic nuclear weapons or

failure of deterrence if one of the parties was a nuclear power. Other studies by these and other authors have emphasized the rationality of newly observed international actors, especially those involved in terrorism, in an attempt to alleviate criticism of the impossibility of deter fanatical assailants. The mentioned conclusions of studies supporting the application of deterrence against post-Cold War threats represent a scientific transition between the third and fourth wave of research, the expansion of which can be seen after 9/11.

The fourth wave of deterrence research is characterized by thinking about the deterrence concept in an extended strategic framework. This framework contains responses in the form of strategies, tactics, practices, and measures that reflect specific threats and their actors; its individual strategies can thus be combined to make the appropriate application of deterrence tailored to specific individuals in a particular situation. Scholars of the fourth wave of research are thus responding to the increased demand for strategies of effective fight with individuals involved in a terrorist network and the idea of terrorism, which would significantly save resources spent on open combat. The author identified three very likely and interconnected causes of this increased demand: first, international terrorism on 9/11 has hit the territory, infrastructure, and population of the United States so severely that had to trigger a retaliatory response almost automatically. Second, this reaction was very expensive over time and one of the tasks of deterrence is to prevent expensive retaliatory reactions that ultimately harm both the deterrer and the aggressor. And third, as was already mentioned, the increasing interest in terrorism deterrence has responded to a growing number of studies addressing the psychological profile of terrorists and highlighting the considerable potential of using deterrence strategies in fight with them.

The fourth wave of research is characterized by the incorporation of a number of strategies previously considered outside the framework of deterrence into the latent structure of deterrence concept. These strategies extend the considerations and the very practice of applying deterrence to a larger number of cases. Their incorporation into the deterrence structure allows for their appropriate typologization. Scholars generally accept that deterrent strategies are the most appropriate categories for classification. Such typologies have several appreciable functional utilizations in further research of deterrence; for example, they can (1) serve to outline as many combinations of strategies as possible that can be applied at different stages of the preparation or execution of a terrorist act against various members of the terrorist network, (2) be used as a theoretical basis for further research, (3) help to observe shortcomings in applied comprehensive TD and to attempt to streamline its employment, (4) be employed to outline a change in the nature of deterrence concept and its expanded form, or (5) help to understand the

separation of deterrent strategies from other non-deterrent strategies and to determine their separating attributes. Scientists such as J. Smith, B. Talbot, R. F. Trager, D. P. Zagorcheva, M. Kroenig, B. Pavel, or J.-P. Maddaloni attempted to contribute to the scientific discussion with their proposals of conceptualizations of TD strategies. However, their typologies include a considerable number of shortcomings, which often disqualify them from fulfilling most of the above-mentioned advantages of functional utilization. The author dealt with the proper classification of TD strategies, its type and elaboration in the second part of his study.

One of the most significant weaknesses of the conceptualization proposals of TD strategies is the insufficient separation of individual coercive and deterrent strategies. Disorder in the definitions of strategies can cause their intertwining and misalignment of terms in scientific works. The author identified four attributes of the latent deterrence structure that should be fulfilled by all deterrent strategies. They are (1) the presence of a threat of force, (2) communication offer alternatives, (3) psychological manipulation of the opponent's mind/behaviour, and (4) focus on passive/negative result. According to the logic of the concept structure presented in the theory by David Collier and James E. Mahon, Jr., each of the deterrent strategies does not have to fulfil all latent attributes. However, at least two factors separate deterrent strategies from other coercive strategies: their intrinsic negative/passive nature and the objective of manipulating the adversary's mind/behaviour. Thus, the author first distinguished deterrence strategy from other coercive strategies and then derived four deterrent strategies that fulfil the two necessary latent attributes of deterrence strategy: deterrence by punishment, deterrence by denial, deterrence by dissuasion, and deterrence by delegitimization.

The author also demonstrated that with the help of these deterrent strategies it is possible to determine the types of meaning and the degree of exclusivity/inclusivity of deterrence theories. In his study, he works with the highly inclusive meaning of deterrence when examining the possibility of involving all of the above relevant deterrent strategies and their distribution in response to direct and indirect threats. The issue of direct and indirect threat is part of the general concept of deterrence and is transferable to various types of opponents. The conceptualization of TD strategies should include both a direct and indirect approach, which distinguishes the response according to the profile of individuals involved in terrorism, as well as response to aggression that is indirectly targeted at the deterrer. The author described cases where the aggressor primarily threatens another target and only secondarily the interests of the deterrer. Deterrer must therefore choose the appropriate combination of methods and means to avert a possible attack on the primary target and protect his own interests. Apart from M.

Kroenig and B. Pavel, scientists rather tended not to take these facts into account in their strategic conceptualizations.

Another significant problem of existing conceptualizations of TD strategies is inappropriately chosen classification criteria. Associated with this is the very question of the appropriate form of configuration of categories. Descriptive analysis ranks the classification of deterrent strategies among descriptive arguments forming grouped multiple categories, i.e. typologies. A proper typology should contain an exhaustive number of mutually exclusive categories classified according to uniform principles. In the case of classification of deterrent strategies, the most appropriate form is very likely a configurational typology based on hierarchical ramification of individual categories. The author found a suitable unifying classificational criterion for this type of structuring in the strategic conceptualization presented by J.-P. Maddaloni: deterrent strategies are divided according to a uniform definition criterion covering the effect to be achieved and a generally described method of achieving the effect.

Finally, scholars also have a problem to consider in their strategic conceptualizations the objects of research on terrorism deterrence. Strategic practices and tools should respond appropriately to the threat posed by various actors involved in terrorist network at different stages in the development of a terrorist operation. At the very least, conceptualization should indicate the possibility of appropriate combinations of deterrent strategies in response to a degree of commitment to carry out an attack that varies both between actors and the progress of the terrorist action. The conceptual framework of scientists R. F. Trager, D. P. Zagorcheva, which has the form of matrix, or multidimensional, typology, is relatively well designed to determine such combinations. However, the author did not find a method in his study how to appropriately combine configurational typology with R. F. Trager and D. P. Zagorcheva's conceptual framework, except that multidimensional typology would be used as an additional classification following the primary one. Further research could thus focus on increasing the compatibility of matrix typology addressing the employment of appropriate combinations of deterrent strategies with a configurational framework, which is a suitable tool for identifying as many relevant strategies as possible. Because R. F. Trager and D. P. Zagorcheva's conceptualization does not allow the identification of as many deterrent strategies as possible, the author preferred to compile his proposal of strategic conceptualization in the form of configurational typology, in line with research objectives.

In the last chapter, the author presents his proposal of the conceptualization of TD strategies, which should fulfil the attributes of proper configurational typology, meet the latent logic of deterrence concept structure, and satisfy the functional requirements for strategic

conceptualization of terrorism deterrence. The author does not claim that a successful result of the deterrence employment can be achieved with an appropriate combination of only these strategies; many predictable and unpredictable intervening variables enter into the deterrent operation, which can ultimately reverse the success of a well-prepared TD strategy. However, if all possible combinations of strategies, tactics, tools, and practices are considered within the direct and indirect responses of all mentioned deterrent strategies, a very robust and highly effective TD strategy can be formed, which can be a credible part of any counter-terrorist campaign. Thus, this author's contribution, among other things, responds to the demand for the development of the most effective counter-terrorist strategies, which was raised after the terrorist attacks of 11 September 2001 and with the global growth of terrorist attacks.

The author hopes that his study will contribute, at least in a small part, to the improvement of orientation in thinking about the deterrence concept, whose research faces the problems of ambiguity, insufficient conceptuality, and incorrect grasping. The author was aware of these problems and attempted to identify, solve, and prevent them in his work. He would like some of his ideas to inspire other authors to further research both within the concept of deterrence and in the field of terrorism deterrence research. He mentioned some of his suggestions for further research, which he could no longer address in this study, in the previous chapters. For example, scholars could focus on determining the character and sufficient number of conditions that ultimately led to a successful deterrent operation. The research plan may also lead to a more precise identification of tools and practices that can be used in the context of deterrence, or TD. After all, scholars can use some of the five functions of the author's design of conceptualization of TD strategies and build their further research on them. Finally, the author's model of strategic conceptualization itself is open to further testing of its validity, or its further modification, addition, and refinement. The fourth wave research of deterrence, or terrorism deterrence, is still in its infancy and thus offers a wide range of possibilities for further research.

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Abstrakt

Od atomových bomb k roztříštěným hrozbám: Jak se změnila povaha konceptu deterrence?

Diplomová práce je příspěvkem do odborné diskuse o povaze konceptu deterrence (odrazení či zastrašení) a efektivní konceptualizaci strategií v jeho rámci. O koncept projevovali značný zájem především autoři anglosaské vědecké tradice v průběhu studené války. Deterrence ve formě hlavní obranné strategie vysvětlovalo mocenské vztahy postavené na vlastnictví strategických jaderných zbraní. Nicméně s koncem studené války se koncept jevil jako neschopný adaptace na nově nastupující hrozby jako například terorismus. V posledních letech ale zaznamenává renesanci, když je opět poptáván pro svou schopnost donutit protivníka ustoupit od provedení útoku při pouhé hrozbě odplaty či snížení úspěchu případného útoku. Ke znovuobjevení konceptu přispěla zejména změna uvažování o konceptu, když vědci vzali v potaz vyšší počet různých deterrenčních strategií. Jejich snahy o konceptualizaci těchto strategií nicméně vykazují mnoho nedostatků. Práce si klade za cíl tyto nedostatky redukovat a navrhnout takový strategický rámec deterrence, který by jednoznačně oddělil a hierarchizoval jednotlivé strategie a naplnil atributy řádné typologizace. Za tím účelem je v práci aplikována metoda deskriptivní analýzy spolu s teorií logiky struktury konceptu na rozdělení strategií deterrence v odpovědí na současnou vážnou hrozbu terorismu. Snahou práce je zevrubně popsat a vysvětlit změnu povahy konceptu deterrence a demonstrovat ji na užití proti hrozbě terorismu.

Abstract

From nuclear bombs to decentralized threats: How has the nature of the concept of deterrence changed?

The diploma thesis is a contribution to the scientific discussion about the nature of the deterrence concept and the effective conceptualization of strategies within it. Primarily, authors of the Anglo-Saxon scientific tradition showed considerable interest in the concept during the Cold War. Deterrence, in the form of a grand defensive strategy, explained power relations based on the possession of strategic nuclear weapons. However, with the end of the Cold War, the concept appeared incapable of adapting to newly emerged threats such as terrorism. In recent years, nevertheless, it has experienced a renaissance when it is once again demanded for its ability to force the adversary to refrain from carrying out an attack at the mere threat of revenge or reducing the success of a possible attack. The rediscovery of the concept was mainly due to a change in thinking about the concept, when scientists consider a larger number of different deterrent strategies. However, their efforts to conceptualize these strategies have many shortcomings. The thesis aims to reduce these shortcomings and to design a strategic framework of deterrence that would clearly separate and hierarchize the individual strategies and fulfil the attributes of proper typology. For this purpose, the method of descriptive analysis is applied, together with the theory of logic of concept structure, in order to separate deterrence strategies in response to the current serious threat of terrorism. The thesis aim is to describe and explain in detail the change in the nature of deterrence concept and to demonstrate its use against the threat of terrorism.