

THE INTERDISCIPLINARY NATURE OF CRISIS MANAGEMENT

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Abstract: *The cyclic constantly reproducible nature of socio-economic crises, the increase in modern conditions of general uncertainty and instability, as well as the aggravation of the technogenic and environmental situation, together actualize the problem of crisis management in its qualitatively new - complex systemic content. To solve it, it is necessary to form a comprehension of the interdisciplinary nature of crisis management. Based on the generalization of theoretical and methodological studies, the phases of the crisis are singled out in the article, and its difference from the crisis situation is shown. An analysis is given of the regulatory support of crisis management in Poland and an example of the empirical practice of regulating relevant aspects at the local level is given. On this ground, an attempt was made to identify and rank the blocks of sciences, to identify the components of the branches of knowledge within each of these blocks (with a schematic illustration of the developed model), which is aimed at substantiating an interdisciplinary understanding of the nature and functional purpose of crisis management.*

Key words: *crisis management, interdisciplinary approach, block of economic sciences, institutional sciences*

1. INTRODUCTION

The issue of forming the need for interdisciplinary in crisis management has been actively discussed in recent years. The sphere of crisis management concerns every aspect of society's functioning. Public awareness of the issues addressed in the study is also of great importance in terms of each country's citizens' safety. Threats that have arisen in recent years have a negative impact on people, the environment, infrastructure, and the state as a whole. Prevention, proper and quick response, as well as effective elimination of threats, are the most important goals of the state and public institutions. Therefore, it is necessary to constantly

improve the system of crisis management, which poses a complicated and complex problem of determining its interdisciplinary content.

The purpose of the research is to show and reveal the interdisciplinary nature of crisis management. To achieve the goal, a systematic theoretical analysis was conducted, which is based on extensive empirical studies.

2. RESEARCH METHODOLOGY AND PROBLEMATICS

To study processes and interrelations in the social circumstances and natural environment, it is necessary to use qualitative methods of cognition. For this reason, the case study method was used to comprehend the interdisciplinary nature of crisis management. Several problematic questions were formulated, the most important of which are: which subjects participate in the so-called "security network"? What are the tasks of these organizations?

What fields and disciplines of knowledge are required for crisis management? To understand the interdisciplinary nature of crisis management, it is necessary to know the definition and essence of this concept, as well as to identify its interdisciplinary content. This is the subject of a complex scientific and practical analysis since an effective response to the crisis requires coordinated actions of specialists from a wide range of industries and spheres. Accordingly, it is necessary to employ methods of knowledge of various sciences.

3. CRISIS AND CRISIS SITUATION - THEORETICAL ANALYSIS

The etymology of the term "crisis" is of Greek origin (from the Greek "krisis"), and in general, it can be defined as a struggle, choice, or functioning under the pressure of time (Dworecki, 2012, p. 30). The essence of a crisis is a turning point and a change in the functioning of a specific subject (and/or object), that is, a moment when the functioning of a specific subject (and/or object) improves or worsens.

The cause of the crisis can be a large-scale social emergency that causes negative consequences for society and the economy of the country/countries (for example, an epidemic, war, climate disaster, etc.). The crisis may be related to the difficulties of a specific entity of economic (social) activity, or – its responsible executives. That is, the causes of the crisis can be both external (foreign) and internal (domestic). Accordingly, there are external and internal theories of crisis in science.

Crisis and crisis situation can be defined in different ways. It usually depends on the field and discipline of science, the nature, and the purpose of the subject. Sometimes these two terms are used synonymously, despite their diversity. A crisis is an element of a crisis situation, but not every crisis situation has to be a crisis (Wojciechowska-Filipek, S., Mazurek-Kucharska, B. 2014, p. 15-16). A crisis is a breaking point in a crisis situation when control over the crisis situation is lost (Zieliński, 2017, p. 49). This turning point can help control the threat or deepen and develop it.

The topicality of researching the problems of crisis and crisis management is, in many ways, determined by the cyclical, i.e., reproducing nature of the crisis. This important methodological provision was put forward for the first time in the history of science at the end of the 19th century by the famous Ukrainian scientist M. I. Tugan-Baranovsky (1894). Then this concept was developed by his disciple and follower N. Kondratieff (1984).

The characteristics of a crisis are the loss of control over the situation, suddenness and unexpectedness, negative character, and the resulting pressure of certain circumstances and lack of sufficient and/or accessible resources.

The following approach dominates in modern science. During a crisis situation, its four phases are distinguished (Fig. 1). In the first phase (peace). The main goal of crisis management at this stage is information gathering and constant monitoring of the situation. The purpose of the second stage is the preparation and planning of the appropriate response. In the de-escalation phase, control over the crisis situation is gradually taken and an attempt to stabilize it is made. The last phase, called the new stabilization, is not equivalent to the restoration of the pre-crisis situation (initial state), but it restores social peace.

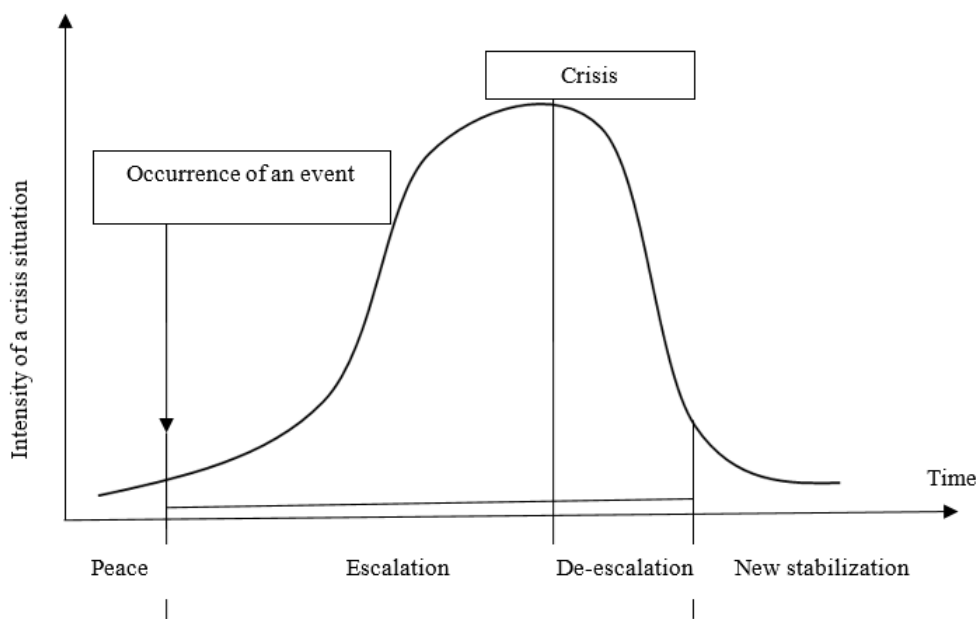


Figure 1. Crisis situation — phases
Source: (Grocki, 2012.)

In summary, a crisis situation begins with the first visible symptoms, and a crisis is the culmination of a crisis situation deepening. To "relate" crisis management to the field of science, it is necessary to compare some aspects from the point of view of security sciences and management sciences. Table 1 shows a comparison of the concept of crisis in two aspects - in the context of security sciences and the context of management sciences.

Table 1 shows the fundamental difference in defining the concept of crisis, depending on the field of science. The term "crisis" is often associated with risk. It appeared in the context of crisis management at the turn of the 1940s and 1950s. At first, it only covered insurance and financial risks. The risk now affects all aspects of society, organizations, and countries. This also became the reason for the need to create an interdisciplinary approach to the crisis management process.

Table 1. Definitions of the crisis (Source: Skomra, 2018)

	Duration	Manageability
Security Sciences	A breakthrough, a turning point, a moment	Loss of capability to manage the situation
Management Sciences	State, phase, period, situation	Requires management under time pressure

Nevertheless, for this, it is necessary to synthesize the approaches of security sciences and management sciences of social direction.

4. CRISIS MANAGEMENT AS A SYSTEM - CONCEPT, AND ESSENCE

The essence of crisis management is to respond appropriately and prepare actions (planning, coordination, support, organization, control) to prevent or mitigate the consequences of threats. For crisis management to be effective, it is necessary to use human resources, legal acts, technologies, and information sources the right way. This means that it is necessary to possess knowledge in various fields (management, law, IT, security, psychology, sociology).

The crisis management system should become part of the actively developing security sphere, subject to changes and improvements at every stage of its functioning. This is a certain organizational structure (model), which should consist of several levels and encompass the resources of the country and society. Under the legislation of the Republic of Poland, such a structure is presented in Table 2.

Table 2. The structure of the crisis management (*Source: National Security System*)

CRISIS MANAGEMENT SYSTEM			
Administrative level	Crisis Management Authority	Opinion-making and advisory body	Crisis Management Center
National	The Council of Ministers, the Prime Minister	Government crisis management team	Government Security Center
Departmental	Minister managing a department of government administration, Head of the central authority	Crisis Management Team (ministry, central office)	Crisis Management Center (ministries, central office)
Provincial	Provincial governor	Provincial crisis management team	Provincial Crisis Management Center
County	County Executive	County Crisis Management Team	County Crisis Management Center
Commune	Head of the commune, Mayor, President of the city	Communal Crisis Management Team	Communal Crisis Management Centers may be set up

The crisis authority carries out support and coordination activities, as well as monitoring of rescue operations throughout the country. The governing body is the Council of Ministers which deals with crisis situations in the territory of the Republic of Poland. The Government Security Center is a body subordinate to the Council of Ministers.

The provincial level (accountable to the Council of Ministers) supports rescue operations. Activities on the territory of the county are performed at the respective level.

Summing up, the essence of the crisis management system is related to the cooperation of many subjects and institutions aimed at maintaining public safety and responding appropriately to threats. The issue of crisis management is a broad and new direction of research, which is of interest to many scientific disciplines.

One of the tools that empirically demonstrates the interdisciplinary nature of crisis management is the security network. This concept (according to the Law of Poland "On Crisis Management") means a list of potential threats with an indication of the leading entity for their elimination and cooperating entities.

To confirm the proposed thesis Table 3 shows an example of the security network of one of the municipalities in the Świętokrzyskie Province (Voivodeship).

Table 3. Security network of the Samborzec commune (Source: Crisis response plan of the Samborzec commune)

System Entities	Incident												
	Flooding	Hurricane	Fire	Drought	Snowstorm / blizzard	Heavy raining	High air temperatures	Low air temperatures	Construction catastrophes	Epidemics	Epizootic	Highway catastrophes	Water supply disruptions
Head of commune													
OSP/PSP													
Police													
PPIS													
PLW													
WIOS													
PINB													
SZMiUW													
ARMIR													
IMGW													
RZGW													
Road administrator													
RZE													
ABW													
ZGK													

 the leading subject (entity)

 the subordinate subject (entity)

Legend:

OSP – Commune Volunteer Fire Department / State Firefighting Service

PPIS – County State Sanitary Inspector

PLW – County Veterinary Doctor

WIOS – Provincial Inspector for Environmental Protection

PINB – County Building Supervision Inspector

SZMiUW – Świętokrzyski Board of Melioration and Water Facilities

ARMIR – Agency for Restructuring and Modernization of Agriculture

IMGW – Institute of Meteorology and Water Management

RZGW – Regional Water Management Board

RZE – County Power Company

ABW – Internal Security Agency

ZGK – Department of Communal Management

The leading subject of crisis management, in this case, is the Head of Samborzhets commune, while the supporting/auxiliary subjects differ depending on the nature of the threat. Auxiliary organizations, in particular, include voluntary fire brigade and state firefighting service, police, state district sanitary inspector, etc.

5. FORMATION OF SYSTEMIC COMPREHENSION OF THE INTERDISCIPLINARY NATURE OF CRISIS MANAGEMENT

The implementation of the method of cognition "from the abstract to the concrete" in the context of the objectives of the presented study allows for making some generalizations.

Crisis management as a complex interdisciplinary phenomenon is objectively formed under the influence of several blocks of sciences. Respectively, - its systemic content should include aspects of several sciences (Fig.2).

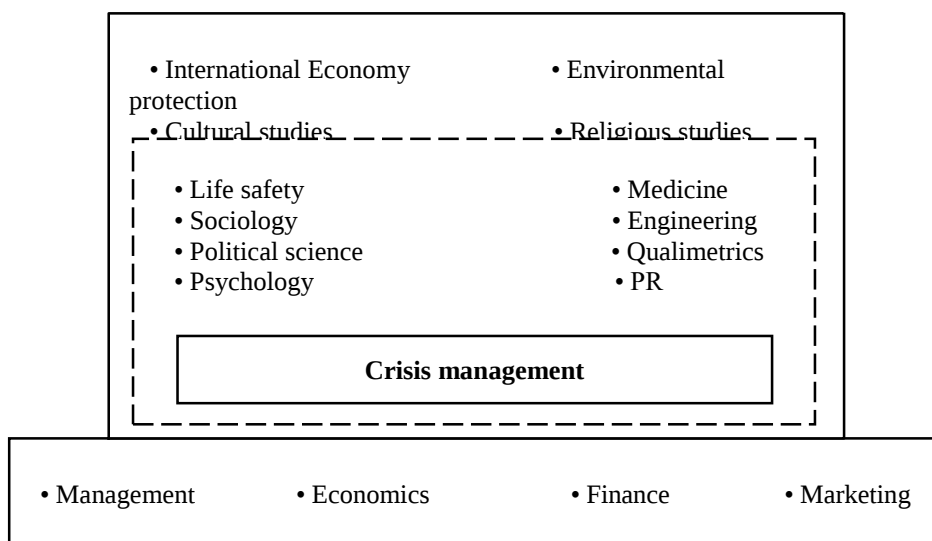


Figure 2. The interdisciplinary nature of crisis management.

Source: (own author's elaboration)

The basis of crisis management is, as shown in Fig. 2, the block of fundamental economic sciences - management itself, economics, finance, and marketing. Moreover, in this case, crisis management should synthesize these fundamental economic sciences and, in a new qualitative pattern, should be embodied in the management profile (Glinkowska and Chebotarov, 2019).

In this understanding, crisis management in its functional mission is the basis of a block of sciences, which also includes life safety, political science, sociology, psychology, medicine, engineering (a set of technical and technological aspects of the crisis of a particular subject or object), qualimetry and PR (public relations).

Insufficient attention to these aspects, and their ignorance, affected the justification and implementation of measures to counter the COVID-2019 pandemic (Kolosov et al., 2022).

This block, in its turn, was made up of a broader block of sciences, including both institutional sciences and natural sciences: international economics, environmental protection, cultural studies, and religious studies. In this context, a particularly important role in crisis monitoring and substantiating the system of measures to overcome its consequences is played by taking into account the varying degree of response of managers in certain countries to uncertainty and

instability. In economic comparative studies, this is defined by such a dimension (parameter) of national business cultures as "uncertainty avoidance" (Glinkowska-Krauże et al., 2022).

Subjects (and/or objects) of different complexity levels that have found themselves in a crisis (or crisis situation), to overcome it - to enter the phase of "new stabilization", respectively, "require" the use of crisis management of different complexity levels. Thus, for small and medium-sized businesses, it may be sufficient to use crisis management using only the tools of the fundamental economic sciences block. For big business subjects and regional level social systems, it requires (along with the first block) also the block of sciences such as life safety, political science, sociology, psychology, medicine, engineering, quality control, and PR. Overcoming the crisis by subjects (and/or objects) of the national level necessitates the use of approaches and tools of the sciences like international economics, environmental protection, cultural studies, and religious studies as additional components.

5. CONCLUSIONS

Cyclical - reproducible nature of socio-economic crises, as well as increased instability of the modern economy and aggravation of the technogenic situation, significantly update the problems of crisis management. The multifaceted nature of contemporary crises objectively necessitates the use of a systematic approach to their foresight, monitoring, management, and overcoming the consequences (loss minimization). As a consequence, there is a need to use the conceptual approaches and practices of the system of modern sciences and branches of knowledge. Underestimating, and even ignoring the interdisciplinary nature of crisis management, is not only scientifically invalid. This results in human, financial, and material losses.

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