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2. DECISION-MAKING IN EMERGENCY RESPONSES TO TERRORIST ATTACKS

2.1. The crisis and the crisis situation

In the social sciences, the concepts of crisis and crisis situations are defined in various ways. Legally, they are defined in the Act of April 26, 2007 on crisis management. It describes a crisis situation as a situation that negatively effects the level of safety of persons, property or the environment.

2.1.1. Crisis recognition

One necessary condition of a crisis is that the authorities are unable to cope with the situation normally, using standard procedures. Other conditions determining an event as a 'crisis' are:

- Surprise;
- Time and information deficits;
- Delayed response to development of the situation;
- Escalation of events;
- Periodic loss of control over the development of events;
- Threat to life, vital interests or priorities;
- Wide media attention;
- Collapse of the normal decision-making process.

Crisis is a word of Greek origin meaning 'solstice', 'breakthrough', 'decisiveness', and 'turning point'. This concept appears in all areas of human life and society. The social sciences speak about political crises, Government crises, crises of the State, economic crises, psychological crises and international crises, amongst others. The literature on the subject most often focuses on the following types of crisis:

- Developmental crisis – moments of transition from one stage to the next;
- Situational crisis – when a person encounters something unusual and is not able to cope with it or control it (violence, job loss, accidents);
- Chronic crisis – coping mechanisms that the human brain deploys to deal with the immediate aftermath of a crisis;

– Existential crisis – internal conflict and fears. Often combined with the belief that we have wasted our lives, that we have made the wrong decisions. Existential crises often occur at certain moments of human life, for example a mid-life crisis (at about 40 years in men, or the so-called balance sheet crisis appearing near the end of life).

The concept of a crisis can also be defined as an unpredictable event that has potentially negative effects, significantly limiting production, services, employment, financial health and reputation.

2.1.2. A comparison of the statutory definition of selected definitions of psychology, management and command

A crisis is a set of external and internal circumstances affecting a system in such a way that they have lasting changes. The result of these changes can be a qualitatively new layout or a new structure and function in an existing status, or growing destabilization, insecurity and social tensions. From this it can be concluded that crises are inevitable, accompanying people throughout their life and not having only a negative aspect, as is commonly believed, because it is apparent from the definition (and above all else, experience and history), that the consequences of a crisis can also be progress, development and new values. From the beginning of its existence, humanity has had to deal with crisis situations. These are considered to be accidents, personal failures and successes. The life of every person is marked by continuous changes in the wake of critical events that erode its homeostasis. Human behaviour cannot be fully controlled and predictable. The forces of nature cannot be fully anticipated. Therefore, each unit – family or community – sooner or later finds itself involuntarily or accidentally in a crisis situation. The situations that cause crises can be limited and their effects minimised. However, they cannot be eliminated completely.

2.1.3. Attributes of a crisis

A crisis is made up of three elements: time pressure, threat, and surprise. Every crisis is different, although most are, to some extent, characterized by the following features:

- Surprise and time pressure;
- Insufficient and uncertain information;
- Loss of or inability to take control of the situation;
- Panic;
- Outdated emergency response systems;
- Policy makers focused on short-term plan of action;
- Interruption of the normal decision-making process.

2.2. Decisions and the decision-making processes

It would be difficult to create a single universal definition of a decision that fully satisfies all those dealing with the issue. Decision-making is a conscious process, with at least two possibilities desirable from the point of view of the public interest. The term order determines all further proceedings, not only of the decision-maker, but also of the entities affected by the decision. A similar definition of the word 'decision' is that a decision is not random, but is supported by analysis of a number of variant solutions possible at the time. Most often a decision is a choice between two modes of action, neither of which are more verifiable than the other.

2.2.1. Attributes of a decision

- Selection of possibilities;
- Choice of action;
- Choice of objectives;
- Choice of activities leading to implementation of the objectives;
- Decision based on preferences and comparisons;
- Troubleshooting the chosen solution;
- Statement of intent;
- Implementation.

The most important attribute of a decision is that it is a freely-made choice.

2.2.2. Decision-making processes

The decision-making process is a unique thought process each time. A decision made in another, identical situation, even by the same person, could be the product of an entirely different thought processes. The steps in such a process include:

- Identification of the situation;
- Identification and design of variant decisions;
- Assessment of these variants and choice of one particular one;
- Creation of the conditions for execution of the chosen decision;
- Monitoring of the effects of the decision.

Each of these steps needs to meet specific information needs, and the continuous flow of relevant information can only be accessed by a smoothly functioning information system.

2.2.3. Leadership decisions and the decision-making processes

A command decision is an act of will, formalised and passed on for implementation. The decision-making process at the command level is the result of a series of actions, events and information enabling command-level personnel to make decisions in a crisis situation.

2.3. The formal/classical model of decision-making

Formal models of decision-making are used to determine the an optimal solution to a problem. The aim of rational thinking is to arrive at the optimal decision, i.e. the one that has the greatest benefit, or minimises losses as far as possible.

2.3.1. Presentation of the basic elements of the classic model

Formal models of decision-making follow a specific sequence of thought, which can be illustrated as follows:

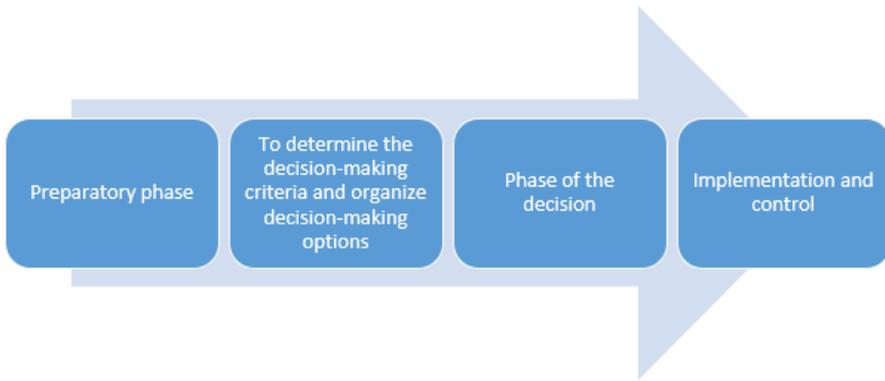


Figure 1. Phases in the formal model of the decision-making process

Preparatory – Determination of the causes of the problem. The problem might be identified by asking the following questions:

- Has the problem happened before?;
- What are the time and location concerns?;
- Is it a recurring problem, or a one-off event?;
- Who is responsible?

Determining decision-making criteria – This phase has three steps:

- Formulation of different variants of a solution;
- Definition of the solution assessment criteria;
- Evaluating the chosen solution.

Decision – Comparison of possible solutions to the problem and choosing the one that best meets the previously adopted criteria.

Implementation and control – Putting the chosen solution into practise and monitoring its progress and results.

2.3.2. The rules of the decision-maker operating in a rational model

Regardless of the adopted solution, the decision-maker must adhere to certain rules of rational thought:

- They must have access to the full range of information uniquely identifying the situation requiring a decision and be able to process them calmly and intelligently;
- They must be able to arrive at a full set of possible variant solutions;
- They must know and understand the consequences of each variant solution;
- They must be able to identify and prioritise all objectives;
- They must always choose the option most advantageous from the point of view of the problem assessment criteria;
- They must have a consistent value system that would allow them to make the same decision again, under the same conditions.

2.4. Models of decision-making under conditions of bounded rationality

The bounded rationality model of decision-making assumes that the decision-maker has incomplete information. This does not always mean a shortage of information, but can also mean their inability to separate the relevant information from the irrelevant. If they do not have the appropriate information, they cannot not create all possible solution variants. This limitation most often arises from the limitations of human knowledge and reasoning.

In terms of having only limited or incomplete information, the decision-making process is as follows:

- Formulation of the problem-identification problems visible, reflecting the interests and prior experiences of decision-makers;
- Identification of assessment criteria;
- Assignment of weights to each criterion;
- Determination of variant solutions;
- Analysis of variant solutions;
- Implementation of the chosen solution;
- Implementation and monitoring of the chosen solution and its effects.

2.4.1. The practical model of decision-making – characteristics and critical analysis of its use in emergency situations

The practical model defines a simplified decision-making process. This simplification is imposed by a conscious adjustment by the decision-maker to the realities of the situation in hand, such as time constraints and limitations on

information gathering. As a result of this approach, the decision-making process is itself simplified.

2.4.2. The Janis & Mann rational model – characteristics and critical analysis of its possible use in emergency situations

Rational decision-making models come down to application of the appropriate course of action. The free effort of the decision-maker is replaced by use of an algorithm designed to achieve optimal results – from the identification of the problem through the collection of data to the creation of variant solutions and selection of the most advantageous variant. In following the rational model, the decision-maker should:

- Have access to the full range of information about the problem;
- Have access to the full set of possible solution variants;
- Know and understand the consequences of each variant solution;
- Be able to identify all objectives;
- Always choose the option most advantageous from the point of view of the problem assessment criteria;
- Have a consistent value system that would allow them to make the same decision again, under the same conditions.

2.4.3. The advantages of the rational model

- Allows for repetitive decisions;
- Is measurable;
- Newcomers can determine what it is they do not know;
- Is systematic, prevents omission of any items;
- Is of a general nature and can be used in a wide range of situations.

2.5. Decision-making based on recognition

This model assumes the use of a variety of methods of making a decision, depending on the conditions under which the decision-maker is operating. An important part of this process is that the decision-maker must determine whether the problem is a 'decision problem'. Decision problems have the following characteristics:

- The number of possible solutions is large or unknown;
- The final solution variants may differ from the initial variants;
- Not all the possible solutions are equally desirable or feasible;
- The choice of variant of the best solution is a difficult, complex one, that requires the collection of additional information, as well as many more calculations and measurements.

2.5.1. Pre-requisites for optimizing a decision

- The problem is understandable;
- There are clearly defined criterion for the optimal solution;
- The number of options from which to select is small and they are understandable;
- No cost limits and ample time to make a decision.

2.5.2. The importance of expert competence in decision-making

- Experts have much greater knowledge and utility;
- They can use pattern recognition in their decision-making;
- They openly seek feedback;
- They can make improved assessment and identification of problems;
- They possess specialised memory;
- They automatically proceed in small steps;
- They are able to naturally monitor the decision-making process.

2.5.3. Decision-making by experienced individuals

- Experienced individuals can easily evaluate situations on the basis of experience and practise, rather than through formal analysis or comparison;
 - Their first-considered possibility is usually acceptable, but not necessary to future solutions;
 - They generate and evaluate options one by one, without comparing their advantages and disadvantages;
 - In considering the possibilities, they test each one in their imagination, so that the decision-maker can then detect weak points in it and find a workaround;
 - Their main emphasis is on action, not on assessing all possible solutions.

2.5.4. Expert perception of crises – characteristics

- They check for regularity;
- They look for anomalies – events for which there is no explanation, or some other non-compliant factor. Beginners do not know what should happen, so when something does happen, they can't recognize it as important. In comparison, experts can identify it immediately. Anomalous events can be called 'negative guidance'. Experience plays a very important role in the formulation of predictions and making use of them. Experience plays a very important role in the formulation of predictions and their use – only by being able to anticipate things are we able to see when something has happened;

- They have a better overall picture ('tall orientation') – experts have a general sense of what is happening in a given situation, which allows them to assess their typicality;
- Mechanisms – experts have behind-the-scenes knowledge of how to perform specific tasks, and so can better coordinate the work of the team;
- Opportunities and occasions to improvise – experts have the ability to develop explanations and predictions that conflict with available data;
- Events that have already taken place or have only occurred once – experts consider every situation not only from the current perspective, but see it as part of a pattern from past to present to the future;
- Experts can see details that are too small for newcomers to notice;
- Experts are sensitive to the limitations of their own knowledge and memory, which helps them take specific steps to avoid problems. Experts are able to look critically at themselves, which makes it easier for them to see that in a given situation they might make a mistake. They then often submit their decisions and plans for critical assessment.

2.6. Limitations of decision-making models under operating conditions

2.6.1. Characteristics of the RPD (Recognition Primed Decision) model

This is a decision-making model based on the concept of naturalistic decision-making, (Naturalistic Decision-making), in which the decision-making process often takes place under conditions creating the maximum number of factors affecting the decision-maker and the decision-making process. These factors include:

- Time pressure, high-stakes games;
- The experience of the decision-makers;
- A lack of information;
- Inadequately defined objectives;
- Dynamically changing conditions.

The RPD model is based on two processes:

1. Assessment of the situation and development of the best solution by the decision-maker.
2. Evaluation of the efficacy of individual actions by imagining their symptoms.

2.6.2. Terms of the RPD model

The simplest situation in which a decision must be made occurs when a person recognizes a situation as being typical, known to them, and so takes appropriate action. They are able to clearly define the objectives, to recognize the essential factors

and predict developments. From this, they can formulate a solution. The combination of these four elements (objective, guidance, prediction of developments, definition of a typical course of action), allows for a decision to be made. In the RPD model, the decision will be a simple match with previous experience. Information obtained by the decision-maker may not match the information in a typical case, or might indicate more than one possibility. In this case, the decision-maker is forced to extend the decision-making process, and must collect more information that hopefully matches the characteristics of known cases, or clarifies the discrepancies.

Another obstacle that can meet decision-makers is a lack of elements in a situation that are common to known cases.

An important feature of decision-making by means of diagnosing a situation is assessment of a selected solution without comparative analysis. The RPD model specifies that the decision-maker does not propose parallel, alternative solutions to resolve a situation, but that they imagine implementation of the decision and its consequences in their mind. If it appears to be a good solution but one that may have faults, they modify it accordingly. If it appears to be not a very good solution, they will develop another one, which will be subject to the same mental assessment and analysis.

Can you learn to make decisions in a crisis?

The RPD model does not rely on knowledge of the model itself, but on acquisition of experience of decision-making situations, as well as actively searching for opportunities to acquire practical experience. Each opportunity must have a specific purpose and criteria for evaluation. Accumulation of experience in this way is considered the richest resource of knowledge and experience. Obtaining feedback is also highly valuable, enriching one's own knowledge by analysing past experience – experts learn from mistakes made, and formulate new proposals using that knowledge.

2.7. Psychological aspects of decision-making

2.7.1. The psychological conditions of decision-making – general characteristics

When making a decision, a decision-maker must consider three important factors:

- Legal certainty – the precise, quantifiable and reliable information on the legal effects of each of the solutions under consideration that are known to the decision-maker;

- Risk – the probability of obtaining the desired result from different solutions;
- Uncertainty – unpredictable external circumstances or lack of information necessary to determine the likelihood of specific effects of a solution.

Decision-making situations should be assessed on a scale of certainty (using the full capabilities of prediction), by risk, and also uncertainty (based on the minimum possibility of predicting events and their consequences).

2.7.2. Factors distorting the decision-making process

- Information;
- Resources;
- Social;
- Bureaucratic;
- Organizational;
- Conformity;
- Group thinking syndrome;
- Emotions;
- Personality.

2.7.3. Personality features influencing the decision-making processes

- Locus of control;
- The need for achievement;
- Authoritarianism;
- Machiavellianism;
- Willingness to take risks;
- Type of motivation;
- Stress resistance.

2.7.4. Features of a professional commander – general characteristics

- Professionalism and respect for subordinates;
- Unconventionality;
- The need for achievement, the pursuit of a healthy rivalry;
- The ability to resist superiors when they are wrong;
- The ability to provide adequate assessment of subordinates;
- An aversion to unnecessary use of subordinates;
- An interest in the lives and problems of their subordinates;
- Openness;
- An appreciation of the enemy;
- The ability to adapt to new situations and make decisions in changing conditions;

- Empathy;
- An adequate rating in terms of their setbacks and successes;
- Activity, vitality;
- Serene temperament.

2.7.5. The role of the commander in minimizing stress

Decision-making is a process that does not end at the time the decision is issued, but continues until effects of the decision are made completely clear. The decision-maker gains experience from the current course of events that can be used in planning for future events. Decision-making in a crisis is often accompanied by severe stress, not only for the commanding officers, but also their subordinates. But the commanding officer can have an impact on minimising the stress on their subordinates at every stage of the action. This begins before the decision-making process even begins, at the start of the crisis, through the individual phases of the decision-making, planning, preparation and implementation. COs can relieve pressure on their subordinates by:

- Issuing clear and unambiguous orders;
- Giving a clear and unambiguous briefing on the terrain, objectives, and entities involved;
- Allocating tasks according to experience and competence, taking into account social relations;
- Considering the needs of subordinates;
- Carefully planning to use appropriate means and forces to achieve the objectives.

Commanding officers must be aware of their position's power and responsibility, and how it can affect their subordinates. Their authority can be built up over time in a variety of ways, including by being firm but consistent, allowing for their subordinates to clearly understand what to expect of their CO in any given situation. COs are responsible for the safety and well-being of their people, should back them up in difficult situations, and offer them advice and support when needed.

After an event, when the authorities have stood down and returned to normal duties, the Commander should properly debrief their subordinates, assessing together the course of their responses, and collecting opinions and information from them. This particularly applies to any mistakes and perceived inefficiencies, in order to eliminate them in the future, as well as highlighting good decisions and well-implemented actions. A good Commander knows their subordinates and can easily see changes in their thinking and actions, and respond appropriately. For example, by providing comfort and necessary counselling, especially after tough, demanding events.

2.8. Group decisions

2.8.1. The concept of synergy

In a synergistic team, the outcome of a decision or action is always greater than the sum of the results obtained by the individual team members. Synergistic actions made in close cooperation and synchronization with each other have bigger, better effects. Another benefit of a truly well-coordinated team is that each person can offer extra support to other people, with other tasks. A good example of synergy is two people working together to move a heavy wardrobe – individually, they could move it no more than a few metres.

2.8.2. The advantages and disadvantages of making group decisions

Make important and risky decision as a team has its advantages. First of all, a group can analyse the situation from multiple different points of view. This can yield multiple good solutions and open up the pool of information available, which helps reduce uncertainty. Decision-making in a group confers a shared responsibility for implementation of the chosen solution, which increases the focus and feeling of responsibility of the decision-making team.

On the other hand, there are disadvantages too. A team making a group decision can be prone to committing various errors. In analyses of various group decisions the most common errors are the so-called groupthink effect, which is the increased likelihood of bad decisions made simply to ensure harmony and mutual consent. The other problem is polarization of opinions, which is divisive and unhelpful. Other problems with group decision-making are when preference is given to just one kind of decision-making model, and when a team becomes over-confident and develops a resistance to criticism. Various other pitfalls include:

- Groups working in isolation;
- Having an over-strong leader;
- Severe stress, most commonly from time pressure or high risk;
- Lack of a decision-making strategy – the group members do not apply any techniques for decision-making making under pressure.

It is difficult to talk about universal advantages and disadvantages of group decision-making. There are many variables that can have an impact on the decision-makers and their choice of solution. These include the type of situation, the personality, qualifications and experience of the decision-makers, and time pressure. The advantages and disadvantages can be summarised like so:

Advantages	Disadvantages
<ul style="list-style-type: none"> – Access to more information and knowledge; – Higher degree of acceptance of the chosen solution; – More variants can be produced; – Can lead to improved team communication; – In general, better decisions can be made. 	<ul style="list-style-type: none"> – The process takes longer, and is more costly; – Compromised solutions resulting from lack of mutual agreement; – Group can be dominated by one person; – Susceptible to Groupthink and polarisation.

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