

The Research Approaches on Crisis and its Management

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Abstract—The paper structures research approaches to the crisis and its management. It focuses on approaches – psychological, sociological, economic, ethical and technological. Furthermore, it describes the basic features of models chosen according to those approaches. By their comparison it shows how the crisis influences organizations and individuals, and their mutual interaction.

Keywords—approaches, crisis, model.

I. INTRODUCTION

THE growth of problems in the field of crisis management is a challenge for both people in practice and researchers. In the seventies research papers concerned with that field advanced forward further stages. Scientists began to be interested in a concept of crises in various disciplines. They started to develop models that created the main framework for the recognition of crises.

The paper gives an overview of some of important contributions to the study of crises. The procedure makes it possible that the description of the basic features of chosen models or the results of research show to what extent the crisis and its development influences the organization and an individual and how they react to it.

Booth [1] mentions three points of view applied in structuring development tendencies in the field of crises investigation - psychological, sociological, and economic. A psychological perspective concentrates on individuals and their reaction to the crisis. Some scientists abandoned the psychological perspective and applied a sociological background. A political-economic perspective inclines to view crisis development from the standpoint of managerial or political advantage. It includes scientists' contributions in the field of international relations. Economists focused on economic analyses of organizations and developed theories enabling them to predict crises in the private sector. The basis of sociological perspective is research of handling with social responses to environmental crises such as famine, earthquakes or fires. A significant representative of that perspective is Quarantelli who is especially interested in the way of how societies react to crises.

Every perspective has a tendency to use technique or methods of analysis which is traditional in the field of study. Psychological perspective uses to a large extent an interview and psychological techniques. Political perspective uses a

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game and theories of negotiations. Economists have a tendency to apply empiric knowledge. Sociological perspective uses various kinds of sociological methods (surveys, interviews).

Author's approach is based on those three perspectives that she develops and completes. For the systematization of particular models and approaches classification she uses a 4C method designed by Shrivastava [9]. Shrivastava uses this method in his studies of crisis in which he focuses on four key aspects: causes, consequences, caution, and coping. Causes mean failures that triggered the crisis and the previous circumstances that allowed failures to happen. Consequences are immediate but they may also have a long-term impact. Caution includes precautionary measures and minimization of impacts. Coping includes a reaction to the crisis that has set in.

The mentioned models, approaches and frameworks are very complex and often closely interconnected so it is not possible for some of them strictly to confirm the unambiguousness of their classification according to a certain view. Yet, the author emphasizes their most important features and according to them she classifies them. A created set of models, approaches and frameworks is not comprehensive as it represents only a fraction of published papers. Also their classification according to standpoints may be a matter of discussion because most authors admit the equivocal character of crisis and thus more views are often overlapped in their approaches. In the submitted paper the author concentrates on the standpoint of view on crisis and its development: psychological, sociological, economic, ethical and technological.

II. METHODOLOGY

Theoretical processing is based on theoretical research encompassing the analysis and systematization of obtained knowledge. A classification analysis is used for the differentiation among particular definitions and conceptions of crisis and crisis management. At the relation level it is possible to reveal more complex dependencies between elements of crisis and factors influencing it, especially functional dependencies. Synthesis of knowledge is a presumption for the formulation of conclusions. By classification of knowledge into a wider framework the author clarifies mechanisms of determined phenomena functions. This synthesis is not a mere composition of particular phenomena but, at the same time, it is a creation of new wholes and new views.

On the basis of comparison, the author considers the properties of phenomena under searching. The organic unity

of the process of themes creation and their critical evaluation is realized by means of creative thinking methods.

III. DISCUSSION - PSYCHOLOGICAL APPROACHES ON THE CRISIS AND ITS MANAGEMENT

Some authors say that the crisis cannot be evaluated from the view of an individual who is experiencing it. A number of authors incline to the explanation of the role of individual's strength in organization's crisis that has emerged e.g. [15]. There are not many papers that would be concerned with individual's experience in the crisis in the period of its emergence and progress (forming of preconditions for the onset of crisis). This role has been moved into the field of psychological research aimed at trauma where it tries to understand what the impact of organization's crisis on an individual is.

Approaches in those papers are based on three presuppositions. The first presupposition is the fact that the crisis brings problems which are complicated and emotional. The second presupposition is that the ability of people to process information during the crisis is limited. The third presupposition is that the crisis will break out because managers reacted in a wrong way they were not be able to make the right decisions and thus further shortcoming have appeared in understanding the situation and information processing [5].

Psychodynamics of the organization is the key to psychological elements of industrial crises. At the emergence of mistakes made by operational staff and management, a lack of caution, unwillingness to observe safety principles and the onset of organizational decay there are psychological processes, especially 'enrooted resistance' [3].

The most important pioneering work in this field was probably done by Caplan [1], who developed a crisis model on the basis of empiric and clinical studies of an individual. He identified four phases of crisis development (Tab. I). He recognized that in the second phase, individual's coping or inability to cope with anxiety would begin to appear as well as stress, tears or a feeling of being guilty. It may mean that the individual has warded the problem off he has unblocked it or mentally rejected it. Such response, however, will not solve the problem.

On the other hand, attempts and errors can be useful for testing of how the problem is coped with. If coping with the crisis is a failure and the threat is not lesser, then the pressure will increase. In the third phase a growing tension stimulates an individual to try new solutions and use new techniques of how to solve the problems. He or she builds on the previous experience or recognizes earlier ignored side of the problem. Another strategy is to put parts of the problem off and cope with those that are easier manageable. Also resignation is an option. This poorly adapting response may lead to the fourth phase. If none of new solutions of the third stage does not lead to the reduction of stress or to the problem sorting out, the tension is approaching the point of break in which the individual is becoming mentally disturbed since a usual

coping with the mechanism has failed. This is then a point of crisis.

Caplan emphasizes that the opportunity is in such level of stress at which the stress can help solve the crisis. As long as such opportunity is used, a probability of not coping with the crisis is considerably decreased. Individuals are most emotionally approachable in the period that follows after crisis breaking out. Assistance to the individual who is not able to react adequately just in this period may have a positive impact on the overall coping with the crisis. Lack of suitable intervention can negatively influence an individual for a long time and cause his or her badly adapting reaction to the crisis.

TABLE I
 CAPLAN'S CRISIS MODEL

1 Treat	2 Consequence	3 Appropriate response	4 Disruption
Definition of the event as a threat, reaction: increase in stress	Performance of individuals is disturbed	Attempt to find a new solution	Disturbance, collapse, loss of control over themselves

Revised from: [1]

Lindsay [1] considers Caplan's model not enough accurate but at the same time he admits that the model can be useful. His most serious critic of the model is that it is homoeopathic (treatment of similar by a similar). Instead of it he wants individuals to change themselves, to advance, and to have a development or teach-yourselfes model. Nevertheless, Caplan's model is widely used. Especially the opinion that the intervention will be most successful in the period immediately following the crisis has been favorably accepted [1]. It is the period in which individuals feel disorientated and shocked and are most vulnerable. In this period it is easier to help get an individual acquainted with new realities. If there is no interference in such period and an individual continues in denying the crisis reality, that more difficult the adaptation may be later.

A psychological approach gives an individual the insight into problems as individuals have usually got few or even no experience in coping with a sudden crisis encompassing stress, shock and denial.

Weick [14] argues about the role of mental model and its importance in the period of forming preconditions for the emergence of crisis. He points out that behavior which is to help understanding the crisis often will deepen it. At the same time, recognition abilities, processing and perceiving of information can unfavorably influence understanding the crisis and thus increase its weightiness.

Scientists who agree with the psychological bases of crisis build on a precondition that mental health and ignorance play an important role in the crisis emergence. For example, Schwartz [10] who searched causes of the Challenger space shuttle explosion insists that it was the elements of ignorance that contributed to the catastrophe. Mitroff et al. [3] says that a personality disorder, mental health deficiency or individuals'

defense mechanisms contribute to breaking out the crisis in the organization. It is known that there are cases in which management did not pay attention to warning voices because they were pronounced by unacceptable sides - e.g. by workers, the public, environmentalists and the like.

Growing stress influences individual's ability to cope with it for a long time. This leads to a decrease in ability to assess various conflicting information and to the development of one dominant view of situation. Slatter [11] put those features into the context of crises development and placed them into four stages (Tab. II).

In the first stage the crisis is often ignored. The reason may be the inadequate management system including finance systems, the information system, observing external environment, internal monitoring system and etc. Management need not be aware of the situation in which the organization is finding itself (or they are not able to realize it).

In the second stage the crisis is becoming visible. Management can take notice of something extraordinary but they do not appropriately interpret the signals. In many cases the management believes that they are on the right track and

TABLE II
 FOUR STAGES OF THE CRISIS ACCORDING TO SLATTER

Denial of the crisis	Hidden crisis	Disintegration	Organizational collapse
overlooked signals of the crisis	there is no explanation for the approaching crisis, belief that it will pass away	inadequate reaction (small, wrong, late)	inability to react

Revised from: [11]

that the crisis is of a temporary character; it should not pose a threat to the organization. Consequence of those approaches is that the crisis is hidden for a long time.

In the subsequent development the management admits there is a need of reaction. As long as the reaction is inadequate the organization reaches the fourth stage of the crisis. This stage marks the situation in which the trust in the organization and its objectives has been lost. The management is paralyzed by the fear of a wrong action it is difficult to obtain sources for the resolution of the crisis.

Slatter claims that the described development is not inevitable. As long as the organization identifies the crisis and its character well in advance and implements appropriate interventions then there is a possibility that the identified signals would not develop into a crisis.

Individual's personal attitude is associated with a morally managed attitude towards crisis occurrence. Snyder et al. [12] are engaged in the interconnection of ethic rationality concept with the management of crisis occurrence. Due to its uncertainty and often to its sudden character the crisis situation requires that the organization decide flexibly but knowledgeably with the aim to survive. Snyder et al. [12] emphasize that these actions have to have the ethic character

and have to take into consideration the needs of stakeholders and commitments to them.

In case of organization's crisis not much attention is paid to the victims of trauma. The victims are most often employees whom the crisis has caused physical and psychical damage that might lead to a psychical collapse. Therapeutic, social, emotional or other forms of support may be a useful help for employees in order to renew their individual abilities and to strengthen their personal feeling of safety in the period of threat.

The author emphasizes the fact that organization's crisis can cause employees' disillusion and encourage a need of psychical reorganization. As a result, it can happen that the victims are not sure about themselves and they are also doubtful about cultural preconditions, structural relations and positions outside the organization.

Summary of psychological approaches on the crisis

A psychological view on the crisis suggests that individuals play an important role in organization's crisis. Behavior, inappropriately set objectives or other limitations of people's perceiving (e.g. in a wrong way understood information) in concurrence with other elements of the organization can be the reasons of crisis. As a consequence of crisis, employees who are physically or psychically harmed by that crisis can be sacrificed. Recognition of the basic vulnerability of the organization and its individuals and consequences of sacrificing can help organizations precede the crisis or minimize damage already done.

IV. DISCUSSION - SOCIOLOGICAL APPROACHES ON THE CRISIS AND ITS MANAGEMENT

A number of papers describe and analyze the impact of crisis on the organized group [6]. A sociological view is focused on the way in which communities and groups react to crises. It understands the crisis as a failure of shared significance and the institutionalization of socially built up relationships. One important discovery is a possibility of analysis of social responsibility for external crisis at four various levels: group, social, organizational and individual. Most research work concentrated on the individual level but contemporary authors more and more often focus on the social and organizational level.

Turner [13] claims that the crisis will emerge when a shared importance that earlier served the community well will break away from the reality. Habermas [4] offers an alternative view of the crisis. He says that the crisis of 'rationality' occurs in case managers are not already able successfully to manage the economic growth. Extending of 'a rational crisis' triggers 'a just crisis' in which supporters will deny a support to the key persons and they will replace it by doubts about the current social structure and the organization as such. This situation can slide into 'a motivation crisis' in which the atomization of individuals occurs and the responsibility towards standard values or team's opinions is completely missing. Habermas's standpoint represents the crisis as a failure of trust in

organization's leadership and organizations as such. Habermas's view represents the crisis as a failure of trust in organization's management, in social order, traditional values and standpoints [4].

Arnold [7] developed a model of crisis decision-making representing both sociological and social-psychological standpoint. It is focused on an individual in relation to the group (Tab. III). It is especially aimed at the reaction of individuals to crises. According to his opinion, the first stage of reaction is shock. It can show itself in many ways - senses of panic, anxiety, helplessness, confusion, indignation, hostility, distrust and pain. Such emotional reactions are considered quite usual.

An effort to deny the crisis, to distance from it is typical for the second stage. It is an attempt to return to a routine, time-tested and stable situation before the crisis broke out. This appears very often because an unexpected and unacceptable character of the crisis leads to the feelings which an individual cannot cope with. Reaction - an attempt to avoid reality and to suppress the crisis can be found not only at the individual's level but also at the level of groups. The third stage is a point of turn at which an individual realizes that he has to cope with the reality. An individual has to accept a reality of change and adapt to it or to refuse it. Finally, the fourth stage is adaptation, adjusting. An individual starts to adapt, he or she starts to learn by experience from the crisis and develop a new way of its sorting out.

An important contribution is Caplan's statement that over the period of crisis individuals suffer from growing stress. He showed how the increased stress and tension rapidly worsened individual's ability to make decisions. Moreover, he pointed out to a possibility of early identification of crises and the way of their warding off. There are other authors who agree with Caplan e.g. Lindsay [1]. They refer to the need of evaluating individuals' role in the situation of crisis and of the stress they are exposed to as it can have a critical impact on the type of crisis and its course and outcomes. That is why individuals'

TABLE III
 ARNOLD'S MODEL OF CRISIS

1	2	3	4
shock	defensive retreat, denial	admitting, accepting the crisis	adjusting, adaptation

Revised from: [7]

reaction to the crisis has to be taken into account in any model of crisis.

Not all organizational theorists, however, agreed on the approach to crisis development but Slatter's simple model is very convincing. He says that in evaluating causes of crises external environment, management and organizational factors have to be taken into consideration [11]. Many problems can be overlooked due to the imperfect system of checking. Managers have a tendency to ignore or deny the crisis. This

corresponds with Caplan's claim about the denial of crisis by individuals. Slatter was sure that accepted measures were coming too late and to a small extent. Holst's standpoint about lack of flexibility, stiffness and manager's limited rate of attention in the period of crisis supports Slatter's standpoint [2].

Brecher's paper [2] supports the idea that managers in the time of crisis rely on traditional standards. He says that for the period of crisis the intensity of communication is raising but at the same time the limitation of possibilities of how to solve the crisis is also raising. He found out that performances were lower due to the running crisis and alternatives were not much looked for, which is undesired because in the time of growing threat the usefulness of formal approaches is decreasing. Brecher's model of behavior sees the crisis as an element which arouses phenomena leading to responsibility. An independent variable is the perception of crisis by managers which is created by the sense of threat, time press and a probability of fight against the crisis. A dependent variable in the crisis behavior is a carried out option. It depends on top managers' critical perception.

Brecher's model is aimed at the conceptual approach. He says that scientists making the analysis of crisis have to examine seven elements: 1) a source of crisis (triggering mechanism, external or internal), 2) the weightiness of crisis (values that are considered as endangered, 3) complexity of crisis (a number of endangered key areas, uncertainty, 4) the intensity of crisis, 5) time span of crisis, 6) communication formulas and their adequacy, 7) probable outcomes of crisis. The author says that Brecher's attitude represents the aspect that should be analyzed in any crisis.

Since the time of that finding drafts of processing concept of crisis development have appeared. Arnold's work does not consider the models of crisis breaking out only but it also considers the models of crisis outcomes. According to Quarantelli [6], in making an analysis of crisis it is important to differ among various levels of analyses. The theme of analysis was developed by Booth [1] into a model suggesting a multilevel approach to the analysis of crisis. The model has five levels of analysis: An individual, group, organization, inter-organizational environment and surroundings. Every level will be influenced by the crisis differently. The model suggests how those five levels overlap each other by various kinds of analysis focus.

For example, organization's management can identify the crisis as 'an error of the individual' and/or 'operator's negligence' that has been created at the individual level. An analyst may look for influences whose removal need not be considered a crisis solution by other levels. In most cases, crises have causes and consequences at more than one level. A multilevel analysis tries to grasp causes and consequences over the time. The purpose is to identify usual reactions of individuals and organizations to crises, and to reduce faults in coping with them.

Summary of sociological approaches on the crisis:

A sociological view contributes to understanding organization's crisis in many respects. It suggests that crises have a common base, which is a failure of social construction. Organization experiences a crisis of management and cultural standards which follows the event that will trigger the crisis. Organization's leadership will most probably appear under supervision and a change might also happen. Members of the organization may doubt corporate culture they may sense the need for its change. Crisis management cannot be successful without a reform of management and corporate culture.

A sociologic view regards failure of collective thinking and structure as the cause of the crisis. Consequence is a disintegration of the social arrangement and traditionally recognized values and opinions that can turn into extreme individualism and violence [5]. Shrivastava et al. [8] points out that the organizational crisis often will turn into a social-economic dispute. It indicates that a collapse is expectable.

V. DISCUSSION - ECONOMIC APPROACHES ON THE CRISIS AND ITS MANAGEMENT

According to Slatter [11] who takes the economic approach to the crisis, scientists should be aware of the role of human stress in the crisis. He accepts factors of inclination to the crisis that he describes as external and internal factors of organization's susceptibility to the crisis (Fig. 1).

Slatter suggests three important variables:

Competitive and environmental variables: Sudden changes in the environment within the market or suppliers cause problems to the organization, it is more vulnerable to the crisis.

Administrative variables: Managers' personal qualities and abilities and their style of leadership have a significant influence on the quality of decision-making and for that reason on the abilities of organization to cope with the crisis.

Organizational variables: The size of organization, its position on the market, financial stability, structure, planning, checking and the like influence management and their opinion on the preparation and coping with crisis situations.

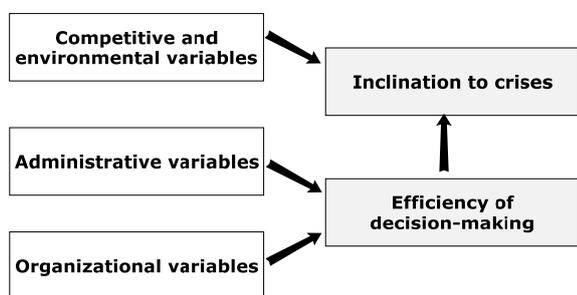


Fig. 1 The factors of inclination to the crisis

Zuzák [32] lays emphasis on the procedural character of crisis development and crisis management generally. He differentiates several phases of crisis process (Fig. 2).

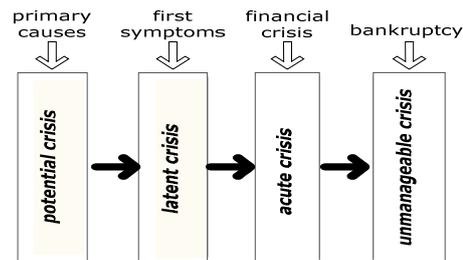


Fig. 2 Phases of crisis process
 Revised from: [32, p. 70]

A period of the potential crisis, which is the period of imbalance between the organization and its environment. If the imbalance in question is not a consequence of fluctuations, e.g. seasonal ones or if it is not a manifestation of the cycle then the imbalance signalizes a probability of potential crisis emergence.

If growing of the imbalance continues and it even spreads to other organization's areas of activities then the period of latent crisis is coming. A crisis chain of partial imbalances may emerge that apparently become evident separately. Some crisis symptoms can be already identified (e.g. rise in the ratio of waste, fluctuations, decline in work discipline, claims). Often they do not reflect in the field of finance yet, and so not much attention is usually paid to them.

In the following phase, which is the acute phase the imbalance already penetrates into the financial area. Expenditures are going up. Insolvency appears, there is lack of funds as they are often tied down to stocks. Organization becomes illiquid and the culmination of this phase is often the last phase - the beginning of unmanageable crisis. As long as it is not possible to manage the crisis in the last but one phase then it is not usually possible to remedy destructive effects of the crisis in this last phase.

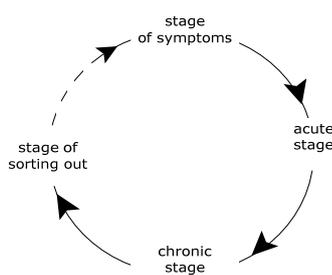


Fig. 3 Straightforward fast progress of the crisis
 Revised from: [30, p. 21]

Also Umlaufová and Pfeifer [30] are of a similar opinion. To indicate individual phases they use a different terminology: the stage of symptoms, acute stage, chronic stage and the stage of crisis sorting out. Crisis and its management may have a tendency to the straightforward fast progress at the end of which there is succumbing (Fig. 3) or a tendency to the complex progress along with overlapping and recycling of

stages with their recurrences, the increase in intensity of difficulties and often finishing also by succumbing to the crisis (Fig. 4).

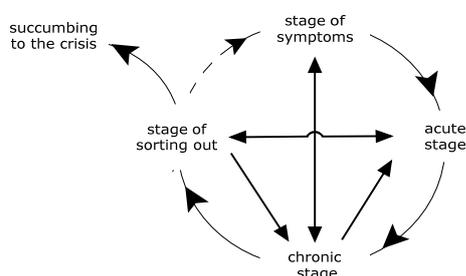


Fig. 4 Complicated progress of the crisis
 Revised from: [30, p. 22]

Successful crisis management can be described by the chain of completely managed crisis: stage of symptoms --- acute stage --- chronic stage --- crisis resolution --- decreasing of another crisis probability. Ideally, the management will record the symptoms of the crisis in time and take the right measures: stage of symptoms --- clearing away the causes of symptoms -- sorting out the crisis --- decreasing of probability of another crisis breaking out.

The length of particular phases is individual and it depends on a number of internal and external factors. Breakpoints in the development is the limit of coordination where contradictions between the interests of organization and the interests of its environs are acceptable for a limited time period only, if it is exceeded, contradictions will end in confrontation.

Zelinka [31] observes crisis management in three phases. At the first level a small decline in income appears, causes of that decline are not looking for sufficiently as the organization will recover soon. But after a certain time, new insolvency will appear; part of income is allotted to the repayment of debts all the time. During further development the point is exceeded at which the debt cannot be repaid continually and the bankruptcy will happen sooner than it is possible to find and put into effect an efficient solution.

According to that thesis the emergence of bankruptcy can be divided into three thirds. In the first two thirds it is possible efficiently to intervene but the last third brings the end as what was possible to make up for has been missed because a real reason of their emergence was not recognized.

Frybert [20] exclusively focuses on economic crises and he described a procedure of crisis solution. He differentiates several phases: the phases of prevention, identification, resuscitation, diagnostics, consolidation and stabilization, and the phase of strategic solutions.

Into the solution of crisis Frybert [20] includes also the phase of prevention, the period of preparation for crisis. In the subsequent phase, it concerns the identification of the state of emergency and the immediate acceptance of major inevitable

short-term measures to ensure the operation (supply of electricity, raw materials and the like). After that introductory phase rough diagnostics of the basic causes of crisis emergence follow on the basis of which the management has to decide what further procedure in an intermediate medium horizon will be implemented. In this phase already the first breakpoint appears - decision-making on the direction of organization's further development. Decisions are made to stop the operation or to implement further steps for stimulation. This is the first level of strategic decision-making on organization's further development. A negative alternative of further development means to make decision on winding up the organization or starting an insolvency procedure. Such alternative is usually chosen in case a rough analysis shows that the subject is not able further to survive and it is not either possible or necessary to prolong its agony. A positive alternative means that in the subsequent phase makeshift revitalization measures will be taken that will put remedial measures into effect and at the same time they will form a space for subsequent decision-making on the basis of detailed analysis as a whole as well as its parts. On the basis of detailed analysis, variants of revitalization concept will be worked out, which means the second level of strategic decision-making on further development of the organization.

Hálek [21] sees crisis phenomena and their solution only in three phases: a phase of prevention (crisis potential, precautionary measures), a phase of repression (the scope of crisis, repressive measures), a phase of remedy (the extent of subsequent damages, means of damages liquidation).

Summary of economic approaches on the crisis:

Economic approaches more than others emphasize three factors. The first is localization. The crisis arise in one or more locations. It is possible for the crises to be widespread and escalated. The crisis are often linked to a specific condition of an organization. The second factor is time. Researchers discuss the importance of time in spreading the crisis across the organization. Crisis time tests the nature of manager and his abilities. Manager can be a hero, villain or victim. The next factor is degree of emergency, which related to the complexity and the readiness of organizations to the crisis. The initial trigger can escalate an incident into a serious accident because the organization does not have an effective plan to cope with the crisis.

VI. DISCUSSION - ETHICAL APPROACHES ON THE CRISIS AND ITS MANAGEMENT

Original, solely economic responsibility when the organization was responsible only for economic results of its activity has been extended for the social area encompassing ethical interests. The grade of organization's social responsibility can be judged according to what extent it is willing to meet legal requirements put on them on a higher rate than it is essentially necessary (protection and safety of employees, the issue of environment-friendly production and the like). Managers' decision-making cannot be motivated by

economic indicators only but it has to reflect also wider impacts - on employees, region and on the environment. A number of big institutions are ranked among big supporters of education and providers of subsidies for underprivileged people. It is meritorious but without ethical behavior of upholders themselves it does not work as CSR (Corporate Social Responsibility) programs themselves will not save organizations. The most difficult appears to be organizations' ability to balance among pressures on short-term decisions and a long-term perspective. Complexity of considering a long-term economic, ecological or social sustainability often disappears under the pressure of everyday tasks.

Organizations tend to divide the increase in their profits from 'doing good' as two each other eliminating alternatives. But there are proofs that responsible organizations can be successful also according to the traditional criteria. For example, a survey of the organization called Business in the Community showed that organizations that were consistently operating in accordance with the principles of social responsibility reported for the years of 2003 up to 2007 on 3.3 % to 7.7 % higher annual return on investments for shareholders than was FTSE 350 index (Roger Trapp, The Independent, available at www.independent.co.uk - quat. 21. 7. 2009). Even at present the indices of efficiency such as FTSE index and Dow Jones index observe also those indices on capital markets that are defined by various criteria of responsible entrepreneurship.

To elevate the issue of social responsibility to the level of regular part of entrepreneurship is a task for many organizations that understand responsibility as charity, which requires a lot of money and which they do only because this is right and proper. A good signal and a promise for the future can also be the fact that previous trend of reaching maximum profit is regarded as a cause of most current problems by a number of academicians.

Summary of ethical approaches on the crisis:

Why not abandon the ethical attitude even in the time of crisis?

Because:

- Reputation and transparency are key factors - even more in the period of crisis. Employees have to understand the reason if e.g. the organization is forced to dismiss them.
- Customers express their fears - they do know whom to believe. Assurance about safety, reliability and proper providing of services are part of CSR activities.
- Opportunity to win trust - is in effect mainly at the moment when others cut down their activities. Assurance of stakeholders that organization's behavior to them is good also in worse time will produce a potential of trustworthiness that the organization might need.
- Costs do not have to be high - CSR that do not modify a model of activities need not demand high financial means.
- Prognosis forwards - the crisis or recession will end. Publishing of news in media that CSR activities have

not been interrupted can be used for further activity of the organization.

VII. DISCUSSION - TECHNOLOGICAL-STRUCTURAL APPROACHES ON THE CRISIS AND ITS MANAGEMENT

From a crisis management standpoint, techniques representing production equipment and other tangible means, technologies, procedures and tactics of management, its experience and usual practice are included into those views. A great emphasis is put on structural and human causes, and presages of failure in operation [25]. According to prevailing opinions, performance without almost any accidents is not possible and erroneous operations should be regarded as normal with a certain probability of occurrence [25], [27].

Smart a Vertinsky [29] searched the importance of managerial style in determining organization's vulnerability towards the crisis. They identified five various kinds of business environment - constant, falling, expanding, periodical and being interrupted (the expanse with declines). They claim that the autocratic style is the only efficient one in the constant environs in which the ongoing crisis is least probable. In all other environments where the occurrence of crisis is more probable they consider a democratic managerial style as more appropriate.

Research done by Holsti [1] focused among others on searching the influence of crisis outcomes on managers. Also in his research work important impacts induced by the stress were identified:

Decrease in the span of attention:

With ongoing crisis a pressure on management work is increasing. They have to make decisions more and more quickly in spite of continual changes. This widens the volume of information in the communication system and increases demands on their right evaluation and processing. Unfortunately, the time pressure often leads to overlooking of essential information or also to ignoring information that does not support any former or present system. Managers have an option to return to decision-making based on previous experience. In this way their decision-making loses a strategic dimension.

Increase in administrative inflexibility:

Growing stress influences individuals. Their ability of long-term coping with the stress is decreasing. This leads to the decline in their ability to evaluate various information sometimes even opposing and to the tendency to take one dominant view of the situation.

The author [23] in her article also pays attention to a personality of manager who comes even more to the fore in the period of crisis. A manager is exposed to the concerted pressure he or she is forced to make decisions while having lack of information he or she has to cope with critical conflicts. The period of crisis is one of the most important tests which managers and their organization are exposed to. It is the opportunity for "getting in the sun" as well as to writing a professional epitaph

Mitroff and Pauchant [24] observed in their empiric study the way of how organizations prepare for the crisis. They identified four factors that specified whether the organization was prone to the crisis or ready to face it. Those critical factors were as follows: organizational strategy, organizational structure, organizational culture, and characters of individuals working in the organization.

Shrivastava et al. [8] move crises outside the organization as such and consider them as inter-organizational phenomena that cannot be judged separately. On the basis of studies they specified several characteristics of crises. Characteristics of crises are illustrated by means of data relating to three different events: poisoning after taking Tylenol medicine, the escape of poisonous gas in Bhopal, and the explosion of Challenger space shuttle. Those events harmed organizations of both state and private sector, influenced world opinion, and concerned a broad number of product and manufacturing technologies.

Charles Perrow [25] did not focus on managers, their instruments and techniques applicable to warding off a crisis but on the support of activities having higher tendency to crisis than others independently to manager's individual qualities. He searched natures and properties of organizations and their relations to environment. He identified two important axes that he thought to have a considerable impact on the nature of crisis. The first axis represents a stage of interconnection. Loosely connected systems may work even under condition if one or two connections are missing. Closely connected are those where even a small error may mean a collapse of the whole system. The second axis represents the stage of mutual influencing. As long as the relation is linear the errors can be easier identified and solved. As long as it is a complex system of relations it can very difficult to find the errors and follow their consequence in the system. Perrow claimed that a combination of tightly connected complex bonds may lead to the situations in which even a small change in mutual acting or interconnection of bonds may lead to a catastrophe. Perrow work resulted in emphasizing the need of organization to avoid activities that are closely interconnected and complex as they may lead to a critical collapse.

Shrivastava [9] and Smith [28] describe models of crisis's causes that are more advanced than Perrow analysis and they include errors outside those technological systems. Their models content errors in the methods of organization, in judgment of staff operation and leadership, general directives, safety infrastructure, and readiness of environs. In case of crisis emergence as a consequence of breakdown or catastrophe Zuzák [32] mentions three phases - a phase of primary reaction, a stabilization phase and the phase of action (Fig. 5).

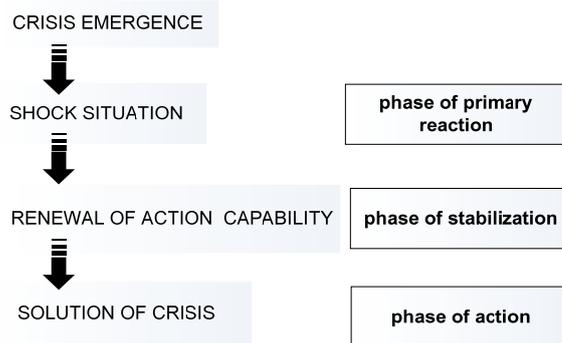


Fig. 5 Phases of crisis as a consequence of breakdown
 Revised from: [32, p. 55]

Perrow's issue of interconnection and influencing is associated with a further direction of research work that was taken over from HRO (High Reliability Organizations) project. It means examining phenomena connected with the operation system with the extraordinary level of safety, and with production capacity under very demanding conditions [25].

According to Sagan [27], the theory of high reliability (HRT) suggests that it is possible to learn from operational errors, to strengthen safety from the lowest levels in order to reach such state in which the whole risks system will become quite safety. Sagan compares this procedure with NAT (Normal Accident Theory). This theory is based on a presumption that it does not matter how much the organization tries to be sound. For most risks systems a mutual complexity is characteristic that allows the emergence of unavoidable errors reacting in unexpected directions and thus foiling the system of safety, and tight bonds in which small errors will become big. Catastrophic accidents are normal (meant extraordinary) as they are connected with those risks systems.

On the example of HRO theory it is possible to see the development of teaching itself organization [27], [15]. Roberts [26] at his study of HRO characteristics mentions the opportunity of improving procedures in crisis sorting out; it includes factors that contribute to the development of crisis. These factors focus on the nature and role of human errors, on the danger revealing vulnerability which is connected with the safety of critical system.

Even though the nature and validity of HRO theory (called HRT by Sagan) was contested [25], [27] and was the subject of thorough discussion at present it provides some important and interesting impulses for the theory of management as well as practice.

Initially, HRO research concentrated on organizations with a high 'potential of failure' as e.g. controlling of flight operations, military systems (control system of aircraft carrier) or management of nuclear power station. A possibility of shifting concepts developed in those branches to other highly risk activities, for example health care is significant and it can contribute to better understanding of processes thanks to which a crisis potential is 'hatching out' in organizations [29]. HRO studies created systems and processes that would ensure

that knowledge was explicitly informative and affected all persons within the organization [26]. They also developed culture of training of continual improvement that allows employees to remain motivated and willing to learn. It also provides them with skills and self-confidence needed to the solution of complex demands in the system in which they work, e. g. [8]. Another area in which research in HRO offers interesting opportunities for further considerations are relationships between managers and other members of the organization. Of a high priority in HRO activity are processes aimed at issues of growing communication and a possibility of its violation [15]. A key factor in HRO is human capital and its abilities [26].

Summary of technological-structural approaches on the crisis:

From a technological-structural point of view, causes of crisis are interactive, closely interconnected and based on technologies, technical background and managerial factors both inside and outside the organization. Technologies cannot be avoided that is why managers should be cautious in relying on high-risk technologies. The stage of cautiousness is connected with to what extent the organization is prepared for the crisis. Consequence of catastrophes resulting from the application of those technologies can be an extensive destruction that may cause heavy losses of property as well as casualties.

VIII. CONCLUSION

A system approach to crises and its outcomes allow progress in research of crises. At the same time it means help also to practical preparation for crises and coping with them. All aspects of crises deserve much more attention from researchers than it has been paid so far. Economy, management, organizing or the existence as such will never be the same after the crisis as it used to be before it. Organizations need a better description of all kinds of crises. They need an analysis of their causes and consequences. They need instructions for the defense against them and to their management.

The author lays an emphasis on frequently occurring factors in models and constructions of crisis management. These factors (on the one hand top management themselves and their approach to the crisis and its managing, on the other hand the organization with its culture, structure and strategy) can be traced almost in all organizations in their relation to the crisis.

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