ISSN 2345-0282 (online) http://jssidoi.org/jesi/ 2020 Volume 8 Number 2 (December) http://doi.org/10.9770/jesi.2020.8.2(48)











http://issidoi.org/esc/home



# AFTER COVID-19. REORIENTATION OF CRISIS MANAGEMENT IN CRISIS\*

# **Zbyslaw Dobrowolski**

Jagiellonian University, Institute of Public Affairs, ul. Prof. S. Lojasiewicza 4, 30-348 Krakow, Poland

E-mails: zbyslaw.dobrowolski@uj.edu.pl

Received 15 March 2020; accepted 29 September 2020; published 30 December 2020

Abstract. The occurrence of the COVID-19 Pandemic has revealed all the weaknesses of different organisations, including macrostructures – the States. It turned out that they are unprepared to COVID-19 Pandemic and at the same time pretending that they are controlling unpredictability, which is not valid. I collect information through a review of secondary data and observation of pandemic effects in several countries. In all countries, the effects of a pandemic are noticeable. It creates the slowdown of the economy and the introduction of restrictions on public life on an unprecedented scale. The effects of current economic restrictions will appear in a few months. I identified weaknesses in the crisis response and argue that any organisations also in macro-level should redefine the role of crisis management, which is in crisis. There is a need for a co-evolving this system within the organisation, which means the necessity of reshaping crisis management from crisis management relational model into crisis management three-dimensional flexible model. Crisis management based on risk analysis may be useless in the context of organisational unpredictability.

Keywords: Pandemic; unpredictability; crisis management; forecasting; foresight

Reference to this paper should be made as follows: Dobrowolski, Z. 2020 After COVID-19. Reorientation of Crisis Management in Crisis. Entrepreneurship and Sustainability Issues 8(2), 799-810. http://doi.org/10.9770/jesi.2020.8.2(48)

JEL Classifications: H12, G17

Additional disciplines (besides field of economics reflected in JEL classifications): management

# 1. Introduction

COVID-19 pandemic revealed weakness in organisations and macrostructures in different scale in all of the World. It is sufficient evidence that crisis management has failed. The effects of unpredictable pandemic are significant. They are breaking supply chains, hindering business operations, results in loss of trust and reputation. Most countries have severe problems with ensuring essential health and economic security for their citizens and residents.

<sup>\*</sup> This work was supported by Jagiellonian University, Poland

ISSN 2345-0282 (online) <a href="http://jssidoi.org/jesi/2020">http://jssidoi.org/jesi/2020</a> Volume 8 Number 2 (December) <a href="http://doi.org/10.9770/jesi.2020.8.2(48)">http://doi.org/10.9770/jesi.2020.8.2(48)</a>

There are many studies on crisis management (c.f., Mansfeld, 1999; Okike, 2004; Ghosh, Ostry, & Qureshi, 2015; Besenyő, & Kármán, 2020). However, there is little know why crisis management is flawed, which is proved by systematically recurring crises and the last one initiated by COVID-19. I aim to fill this research gap and formulate the following research problem, whether crisis management relational approach based on risk management is appropriate in conditions of unpredictability?

The paper proceeds as follows: First, I review previous research on crisis management, and formulate methodology. Next, I build a new model of crisis management. After that, I formulate conclusions and identify an area of future research.

# 2. Theoretical Framework

# 2.1. Nature of crisis and crisis response

Literature study showed that the nature of the crisis and its responses are multifaceted. Following Smith view, there is no collective acceptance about the precise meaning of the term "crisis" (Smith, 2005, p. 319). However, Jaques (2010) noticed that a descriptive definition developed by Pearson and Clair (1998) is appropriate: "An organisational crisis is a high impact event that threatens the viability of the organisation and is characterised by ambiguity of cause, effect and means of resolution, as well as by a belief that decisions must be made swiftly" (p. 60). This definition should be changed. An organisational crisis is indeed a high impact event that threatens the viability of the organisation. However, causes of the crisis can be known or should be determined, but they have not been established because the organisation has neglected potential threats. Therefore, an organisational crisis is a high impact event that threatens the viability of the organisation and is caused by neglect observation of potential threats, their effects and means of resolution.

Müller (1985) noticed that in a crisis, it is highly unlikely that problems will be solved at a single stroke or by adhoc action. It leads to the assumption that despite the urgency of the crisis, the situation demands management and solving-problems from a three-dimensional perspective, which includes organisational, managerial and political issues. One may add to this perspective, another one, an axiological dimension. Moral weaknesses in organisations may catalyse a crisis, but also cause such ethical crises (Boling, 1978; Dobrowolski, 2017). Paraskevas (2006) using narrative analysis identified weaknesses in the chain's crisis response. Kouzmin (2008) noticed, that crisis management can be unable to decrease escalating crisis in increasingly risk-dominated economies. His statement needs to be fulfilled.

Crisis management proved to be useless in a pandemic. Johansen, Aggerholm and Frandsen (2012) presented and discussed some of the main findings from a broad survey of internal crisis management and crisis communication conducted in 2011 among the 367 largest Danish private companies and 98 public organisations (municipalities). The study showed that the vast majority of analysed organisations had a crisis or contingency plans. However, the questions: how do they implement these plans, and what are the effects of the crisis management were without answers. Surely, such a response is possible in the crisis, which means ex-post. I argue that it is too late to obtain such a solution. There is a need to verify the accuracy od such plans and effectiveness of problem-solving ex-ante. Therefore, organisations should not only prepare crisis or contingency plan but also measures of verification these plans. Preble (1997) notes the fields of strategic management and crisis management have been evolving separately despite their potential for synergistic integration. This author shows how the combination of crisis management's approach to strategic management's offensive market positioning orientation can strengthen the strategic management of organisations.

Richardson (1995) examines the nature of crisis-prone organisational beliefs and behaviours and focuses mainly on disaster - proneness. Richardson shows that narrow views of reality and the organisational systems and

ISSN 2345-0282 (online) <a href="http://jssidoi.org/jesi/2020">http://doi.org/10.9770/jesi.2020.8.2(48)</a>)

behaviours promoted by such views lead to crisis events. He concludes that many of us work in organisations which are "crises waiting to happen". Such observations lead to a generalisation that the management and employees of the organisation catalyse crises with their inertia.

The practical conclusion that comes from these studies, although not presented by Richardson, is that mechanisms should be developed for warning against the limited perception of the environment and threats by members of the organisation. It leads to the generalisation that crisis management based on risk analysis may be useless in the context of organisational unpredictability.

The importance of risk assessment presents many researchers (Simunic & Stein, 1990; Friedlob & Schleifer, 1999; Reamer, 2000; Chang et al., 2008; Phillips, 2011; Wang & Li, 2011; Christensen, Glover, & Wood, 2013; Amir, Kallunki & Nilsson, 2014; Gramling & Schneider, 2018). Uncertainty differs from risk (Dobrowolski, 2020). One may measure and quantify the risk, and the potential outcomes are known—uncertainty links with unpredictable future events. One may mitigate the risk. Uncertainty is beyond the control of the individual, group or organisation (Cook, 1988; Alaszewski & Coxon, 2008; Samson, Reneke & Wiecek, 2009; Renn, Klinke & van Asselt, 2011; Dobrowolski, 2020).

The most crucial challenge for organisations operating in conditions of uncertainty is the ability to respond to unpredictable situations actively (Dobrowolski, 2020). Organisations which want to exist in an unpredictable environment need solid roots based on social capital, where trust plays a key role (c.f. Coleman, 1990; Prusak & Cohen, 2001; Adler & Seok-Woo, 2002; Hansen, 2002; Dobrowolski, 2020). Such organisations have to use foresight, which may help tame many unknowns of uncertainty through the selection of one of the different future options and creation conclusion for the present, and decision for one of the options (c.f., Ansoff, 1980; Martin, 1995; Barker & Smith, 1995; Miles, 2008; Cuhls, 2008; Liebl & Schwarz, 2010; Cuhls, 2003; Georghiou et al., 2008; Greenblott, O'Farrell, & Olson, 2018; Cuhls, 2019; Dobrowolski, 2020; Gordon & Helmer, 1964; Bright & Schoeman, 1973; Martino, 1983; Andriopoulos & Gotsi, 2006; Popper, 2008, 2008a).

Foresight includes identification of weak signals and wild cards. Weak signals are early, often inaccurate, signs of impending events. These events, after the occurrence, affect individuals, groups and organisations and their environment in the very indefinite future (Botterhuis et al., 2010; Dobrowolski, 2020). Weak signals are precursor events, or they are early warnings, namely slight changes in the current state of affairs or existing trends that—if observed and correctly interpreted—may hint at a growing likelihood of occurrence of a specific Wild Card. These signals may be unclear at the beginning, but they may become more precise in time (if monitored) or more reliable, perhaps in combination with other signals (Botterhuis et al., 2010; Brynielsson, 2013; Dobrowolski, 2020). Wild Cards are potential future events with a low likelihood of occurrence but with high impact in the future, if they occur (Mendonca et al., 2004; Smith & Dubois, 2010; Hauptman, Hoppe & Raban, 2015; Qi & Tapio, 2018; Dobrowolski, 2020). Researchers (c.f., Mendonca et al., 2004) advocate the implementation of a weak signal methodology and identification of wild cards by scanning the decision environment. They suggest the nurture of improvisation capabilities, which help exist in an unpredictable environment. This approach may lead to organisational agility (Ilmola & Kuusi, 2006; Dobrowolski, 2020).

The appearance of past cases of transmission of animal diseases to humans and the fact of functioning in the conditions of globalisation should be a sufficient signal to take remedial actions to prepare for a new pandemic properly. It was, therefore, necessary to introduce mechanisms for the selection of potentially sick patients at all border crossing points, in particular airports. It was necessary to determine the capacity of hospitals and their equipment with life-saving measures. There is a need to redefine economic policy. Current policy is flawed due to based on greed manifested in need to achieve ever-higher profits and satisfaction of shareholders and leading to the relocation of production to countries with lower production costs. This short-sighted policy led to the emergence of monopolistic practices and total dependence on supplies in one or two countries. The effects of

ISSN 2345-0282 (online) <a href="http://jssidoi.org/jesi/2020">http://jssidoi.org/jesi/2020</a> Volume 8 Number 2 (December) <a href="http://doi.org/10.9770/jesi.2020.8.2(48)">http://doi.org/10.9770/jesi.2020.8.2(48)</a>

breaking the supply chain were noticeable. It was a crucial weak signal of upcoming economic disaster, and it is unbelievable that such visible signals have been ignored. It is, therefore, necessary to end this policy and rebuild "strategic" production in individual countries. One must move away from the naive assumption that business is transnational. Business is and will be national because it is too dependent on politicians.

# 2. Methodology

The observation of the scale of COVID-19 problems in the following countries: the USA, Spain, Italy, the United Kingdom and France leads to the following generalisation. Crisis management in those countries is in crisis. Next, I started to literature review to establish whether crisis management relational approach based on risk management is appropriate in conditions of unpredictability? I aware that literature study as the primary research method can be perceived as the limitations of this research. However, I argue that literature research is valuable, though secondary, source of evidence. In management sciences, theories are build based on practice. The lack of any reference in the literature about foresight in crisis management may confirm that such a solution was not taken into account. Consistent with an abductive approach (Lukka, 2014; Lukka & Modell, 2010), the insights in this paper have emerged iteratively through consideration of both theory and the empirical cases.

## 3. Results

# 3.1. Approach of crisis management

Jaques (2007) showed that linear life-cycle models of crisis management are flawed and did not fail to capture the full dynamics of changes. Therefore, there is a need to use a non-linear, relational construct which considers issue and crisis management in the context of interdependent activities, which must be managed at different stages. He aptly notes that such an approach includes the role of issue-solving management in both the pre-crisis and post-crisis phases.

The traditional approach, called "event approach" regards a crisis as an adverse event. It focuses on incident response – what an organisation has to do when a crisis occurs and how to prepare for it in case it happens (Jaques, 2010). However, this concept is based on the assumption that "a crisis is a sudden and unexpected event that threatens to disrupt an organisation's operations and poses both a financial and reputations threat" (Coombs, 2007, p. 164) or "a crisis is an unplanned (but not necessarily unexpected) event that calls for real-time high-level strategic decisions in circumstances where making the wrong decisions, or not responding quickly or proactively enough, could seriously harm the organisation" (Davies, 2005, p. 69). Meanwhile, the crisis occurs because the organisation is flawed, which means that there were no preventive measures to predict crisis occurrence.

Recently a distinct tendency for crisis management evolves beyond the operationalised response. It flows from the argument of a growing awareness that organisations should focus on identifying any signs of crisis to avoid it. It has led to increasing acceptance of crisis management as part of a process continuum. What does it mean? It means that organisations need to take into account that: a) most crises are not sudden events; b) that leaders and managers have to be familiar with red flags of crisis and ensure that such red flags are consistently developed. Familiarity with red flags may prevent potential crises, or to mitigate those which do occur. Pauchant and Mitroff aptly note that "Crisis management is not the same as crash management — what to do when everything falls apart" (Pauchant & Mitroff, 1992, p. 11). It means that they pointed out the proactive approach to the crisis. Shrivastava (1995) noticed that crises are not events but processes (Jaques, 2010).

Crises are not discrete events, but mostly high-intensity nodes in ongoing streams of social interaction ('t Hart, Heyse & Boin, 2000, p. 185). It means that crisis is an ongoing process, which after disclosure and application of remedies mutates and occurs in a different form. It, therefore, requires constant tracking of early signals, named weak signals, or symptoms or "red flags" of crises. Such approach is complementarity between the event approach

ISSN 2345-0282 (online) <a href="http://jssidoi.org/jesi/2020Volume 8 Number 2 (December)">http://doi.org/10.9770/jesi.2020.8.2(48)</a>

and the process approach to crisis management, and I do not compare these the approaches in detail knowing that it was analysed in the past (c.f., Forgues & Roux-Dufort, 1998; Jaques 2009; Roux-Dufort, 2007, Jaques, 2010). Following Jaques study I also identify the challenge in the present study is how to represent the new crisis process approach in a way which translates into structural design, utilising the continuum of established management terminology and activity. I also agree with Roux-Dufort (2007) and Jaques (2010) that in the situation of different organisational needs, there is no best practice model for how to resolve the crisis. Many organisations may reflect a combination of both the event and the process approach to crisis management.

Jaques proposes to take into account the process continuum approach instead of the event approach, which means the implementation of more fully integrated, a non-linear model which establishes crisis management as a cyclical construct (Jaques, 2007). In his model one may recognise four cores: crisis preparedness; crisis prevention; crisis even management and post-crisis management, which includes the last and simultaneously first stage: evaluation and modification of activities.

Crisis preparedness includes planning processes, systems manuals, training and simulations. Crisis prevention includes early warning scanning, issue and risk management and emergency response. Crisis event management includes crisis recognition, system activation/response and crisis management. Post-crisis management includes recovery, business resumption, post-crisis issue impact, evaluation and modification (Jaques, 2007, 2010).

Analysis of this model leads to the identification of some organisational problems. There is unclear why Jaques distinguishes crisis preparedness as a separate core and does not link this core with crisis prevention. According to (the very well-recognised in management sciences) Adamiecki and Chatelier the cycle of organised activity, the analysis should precede planning. It means that planning processes should be effects of weak signals, but simultaneously weak signals scanning should proceed as planned. There is, therefore, a need for link early weak signals with planning instead of distinguishing between two cores, including separately planning and scanning signals.

Jaques (2010) aptly notes that non-linear construct includes related and integrated activities which may overlap or coincide. Nevertheless, the proposed model can lead to misunderstanding and different perceptions of the model's assumption. Even if the cyclical model is not linear assumes a particular sequence of events, because of consists of cycles of the circle. Based on Jaques model, I propose modified (figure 1) new crisis management relational model named three-dimensional crisis management model.



**Figure 1.** Three-dimension crisis management model *Source*: Own elaboration based on Jaques 2007, 2010.

Jaques (2010) correctly postulates the organisational need to crisis preparedness includes many of the primary activities, such as planning processes, including traditional exercises and simulations. However, it may be

ISSN 2345-0282 (online) <a href="http://jssidoi.org/jesi/2020">http://jssidoi.org/jesi/2020</a> Volume 8 Number 2 (December) <a href="http://doi.org/10.9770/jesi.2020.8.2(48)">http://doi.org/10.9770/jesi.2020.8.2(48)</a>

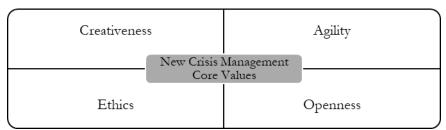
unnecessary to plan simulation based on experience from the past. It has to be supplemented by weak signals scanning. It seems that proposed orderly and logical nonlinear construct, which is, however, a phased structure, should be replaced by a three-dimensional structure, named "glue structure", where preventive activities, including among others, early warning systems and risk/issue management, are realised simultaneously with post-crisis management. Such an approach will enable limitation of adverse organisational, managerial, social, economical and political effects of crises. The cited author noticed it is a very natural human tendency to focus on moving on from the crisis as quickly as possible and returning to former conditions. There is an extensive literature on change management, where authors pointed out the organisational desire to back to the old track (Wilson, 1992; Kotter, 1996; Senior, 2002; Todnem, 2005). The barriers to management learning and organisational improvement in the aftermath of a crisis are also recognised (c.f. Elliott, Smith & McGuinness, 2000; Jaques, 2008). Jaques (2010) correctly notes that resistance by any organisation to a frank assessment of its shortcomings is understandable, but the post-crisis phase is necessary to improve the organisational activities.

Again, I conclude correctness of Jaques (2010) arguments that the effective way of counteracting crises is to institutionalise a crisis prevention mindset instead of just focusing on crisis response. This multifaceted approach includes but is not limited to a deep understanding of systemic causes of previous crises. Systemic failures are a known cause of significant crises. There is a lot of evidence from the past that limitations of faults were deliberately suppressed (Esser & Lindoerfer, 1989; Starbuck & Milliken, 2007, Jaques, 2010). Such a situation is usually fuelled by ethical gaps in organisations and a lack of trust in organisations. Therefore, the effective preparedness to the crisis requires a change of thinking and behaviour.

Believing that crisis is inevitable and upcoming should replace naive believe that organisation may omit crisis. In the situation of the organisation's functioning in the conditions of globalisation, the crisis will occur. Creating a culture of trust and openness is necessary to eliminate examples of hiding problems. I agree with Jaques (2010) and Brown (2002) that crisis is catalysed by lack of imagination and inadequate analysis; rather than due to lack of information. Therefore, I suggest the need to build "weak signals" thinking and change approach from forecasting to foresight.

# 3.2. Core values of Crisis Management

Review of literature showed that successful crisis management needs a culture based on openness to experience and change, creativeness, ethical behaviour. Taking into account these requirements, I modify the Norton and Kaplan balanced scorecard, and I formulate four core values of crisis management (Figure 2 and 3). I assume that a mechanism for building relationships and other intangibles between individuals and organisations are just as important as the ability to financing crisis management.



**Figure 2.** Balanced Core Values of New Crisis Management *Source*: Own elaboration based on Kaplan Norton Balanced Scorecard.

ISSN 2345-0282 (online) <a href="http://jssidoi.org/jesi/2020">http://jssidoi.org/jesi/2020</a> Volume 8 Number 2 (December) <a href="http://doi.org/10.9770/jesi.2020.8.2(48)">http://doi.org/10.9770/jesi.2020.8.2(48)</a>

| To succeed in unpredictable   | Creativeness |          |         |             |
|---|--------------|----------|---------|-------------|
| environment, how will we sustain and develop our  | Objectives   | Measures | Targets | Initiatives |
| ability to change and make improvements?  |              |          |         |             |
| To achieve our goals, how will we sustain and develop our ability to act agility to effectively exist in unpredictable environment? | Agility      |          |         |             |
|   | Objectives   | Measures | Targets | Initiatives |
| To satisfy our clients which business processes must we excel at?   | Ethics       |          |         |             |
|   | Objectives   | Measures | Targets | Initiatives |
| To achieve our vision how should we communicate to our clients?   | Openness     |          |         |             |
|   | Objectives   | Measures | Targets | Initiatives |

**Figure 3.** Elements of Balanced Scorecard of Crisis Management *Source*: Own elaboration based on Kaplan Norton Balanced Scorecard

Effective crisis management requires the appropriate formulation of objectives, design and management of each of the three levels: organisation, process and workplace. I specify nine variables that create crisis management matrix (figure 4). Three variables affect the organisation's performance in each of its areas. They show ways in which the organisation's goals are achieved, the way of designing the activities and the way of managing the organisation may influence three levels of effectiveness: the level of organisation, the level of the process and the level of the workplace. This approach is similar to the one proposed by Rummler and Brache in achieving organisational effectiveness (Dobrowolski & Szejner, 2019; Rummler & Brache, 1995). I modify this approach adding the need to identify weak signals in nine variables of organisations.



**Figure 4.** Nine Variables of Crisis Management *Source*: Own elaboration based on (Dobrowolski & Szejner, 2019; Rummler & Brache, 1995).

## **Conclusions**

The aim of this research was achieved. The public organisations, entrepreneurs and consumers live in more uncertainly environment caused by the pandemic. In such circumstances, the risk-based approach is not sufficient. This research confirmed arguments of Jaques (2010) the need to establishing effective mechanisms to recognise and respond to weak signals. However, the non-linear model based on circle crisis management model needs to be

ISSN 2345-0282 (online) <a href="http://jssidoi.org/jesi/2020">http://jssidoi.org/jesi/2020</a> Volume 8 Number 2 (December) <a href="http://doi.org/10.9770/jesi.2020.8.2(48)">http://doi.org/10.9770/jesi.2020.8.2(48)</a>

replaced by the three-dimensional model, where the flexibility of crisis management exists. I also confirm Jaques' (2010) postulate the organisational need to crisis preparedness includes many of the primary activities, such as planning processes, including traditional exercises and simulations. However, I argue that it may be useless to plan and carry out simulation-based on experience from the past. It hasto be supplemented by weak signals scanning. Concluding correctness of Jaques (2010) arguments that the effective way of counteracting crises is to institutionalise a crisis prevention mindset instead of just focusing on crisis response I argue that naive believing that organisation may omit crisis should be replaced by an approach that crisis is inevitable and upcoming. I agree with Brown (2002) that crisis is catalysed by lack of imagination and inadequate analysis. Therefore, I suggest the need to build "weak signals thinking" and change the approach from forecasting to foresight.

There were a lot of weak signals of the imminent crisis in the past, and it is unbelievable that no one identified the immediate threat. Further research and practice should enable determining why weak signals are ignored. Regardless of the future scope of research, based on literature study where the importance of social capital for the organisation functioning in an unstable environment is underlined, I propose to use the modified the Norton and Kaplan balanced scorecard, and I formulate four core values of crisis management. Besides, I noticed that effective crisis management requires the appropriate formulation of objectives, design and management of each of the three levels: organisation, process and workplace. I specify nine variables that create crisis management matrix, and I argue the need to identify weak signals related to each of this variable.

This article can be useful for practitioners. The important lesson here is not just identifying to a wide range of weak signals but also their analysis. Crisis costs too much because someone is to turn a blind eye to improper management practices.

### References

Alaszewski, A. & Coxon, K. (2008). The everyday experience of living with risk and uncertainty, *Journal Health, Risk & Society*, 10(5): 413-420. <a href="https://doi.org/10.1080/13698570802383952">https://doi.org/10.1080/13698570802383952</a>

Adler, P.S., & Seok-Woo, K. (2002). Social capital: prospects for a new concept, *Academy of Management Review*, 27(1): 17-40. https://doi.org/10.5465/AMR.2002.5922314

't Hart, P., Heyse, L., & Boin, A. (2001). New trends in crisis management and crisis management research: Setting the agenda, *Journal of Contingencies and Crisis Management*, 9(4): 181-188. <a href="https://doi.org/10.1111/1468-5973.00168">https://doi.org/10.1111/1468-5973.00168</a>

Amir, E., Kallunki, J. & Nilsson, H. (2014). The association between individual audit partners' risk preferences and the composition of their client portfolios, *Review of Accounting Studies*, 19: 103–133. https://doi.org/10.1007/s11142-013-9245-8

Andriopoulos, C. & Gotsi, M. (2006). Probing the future: Mobilising foresight in multiple-product innovation firms, *Futures*, 38(1): 50-66. <a href="https://doi.org/10.1016/j.futures.2005.04.003">https://doi.org/10.1016/j.futures.2005.04.003</a>

Ansoff, H.I. (1980). Strategic Issue Management, Strategic Management Journal, 1(2): 131-148. https://www.jstor.org/stable/2486096

Barker, D. & Smith, D.J.H. (1995). Technology foresight using roadmaps, *Long Range Planning*, 28(2): 21-28. https://doi.org/10.1016/0024-6301(95)98586-H

Besenyő, J., & Kármán, M. (2020). Effects of COVID-19 pandemy on African health, political and economic strategy. *Insights into Regional Development*, 2(3): 630-644. https://doi.org/10.9770/IRD.2020.2.3(2)

Boling, T.E. (1978). The Management Ethics "Crisis": An Organizational Perspective, *Academy of Management Review*, 3(2): 360-365. https://doi.org/10.5465/amr.1978.4295577

ISSN 2345-0282 (online) <a href="http://jssidoi.org/jesi/2020">http://doi.org/10.9770/jesi.2020.8.2(48)</a>)

Botterhuis, L., van der Duin, P., de Ruijter, P. & van Wijck, P. (2010). Monitoring the future. Building an early warning system for the Dutch Ministry of Justice, *Futures*, 42(5): 454-465. <a href="https://doi.org/10.1016/j.futures.2009.11.030">https://doi.org/10.1016/j.futures.2009.11.030</a>

Bright, J.R. & Schoeman, M.E.F. (1973). A Guide to Practical Technological Forecasting. Englewood Cliffs, NJ: Prentice Hall

Brown, A. (2002). Avoiding unwelcome surprises. *The Futurist*, 36(5): 21-23.

Retrieved from https://search.proquest.com/openview/15987d5d1a870a0c1bd96c85375e8ee3/1?pq-origsite=gscholar&cbl=47758

Brynielsson, J., Horndahl, A., Johansson, J., Kaati, L., Mårtenson, Ch. & Svenson, P. (2013). Harvesting and analysis of weak signals for detecting lone wolf terrorists, *Security Informatics*, 2(11): 1-15. https://doi.org/10.1186/2190-8532-2-11

Chang, S.I, Tsai, Ch. F., Shih, D.H. & Hwang, Ch. L. (2008). The development of audit detection risk assessment system: Using the fuzzy theory and audit risk model, *Expert Systems with Applications*, 35(3): 1053-1067. https://doi.org/10.1016/j.eswa.2007.08.057

Christensen, B. E., Glover, S. M., & Wood, D. A. (2012). Extreme estimation uncertainty in fair value estimates: Implications for audit assurance, *Auditing*. A *Journal of Practice & Theory*, 31(1): 127–46. https://doi.org/10.2308/ajpt-10191

Coleman, J.S. (1990). Foundation of Social Theory. Cambridge, Ma: Harvard University Press.

Cook, R. M. (1988). Uncertainty in risk assessment: A probabilist's manifesto, *Reliability Engineering & System Safety*, 23(4): 277-283. <a href="https://doi.org/10.1016/0951-8320(88)90039-7">https://doi.org/10.1016/0951-8320(88)90039-7</a>

Coombs, W. T. (2007). Protecting organization reputations during a crisis: The development and application of situational crisis communication theory, *Corporate Reputation Review*, 10(3): 163-176. https://doi.org/10.1057/palgrave.crr.1550049

Cuhls, K.E. (2003). From forecasting to foresight processes—new participative foresight activities in Germany, *Journal of Forecasting*, 22(2-3): 93-111. <a href="https://doi.org/10.1002/for.848">https://doi.org/10.1002/for.848</a>

Cuhls, K.E. (2008). Methoden der Technikvorausschau – eine internationale Übersicht (Methods of Technology Foresight – an international overview). Stuttgart, Germany: IRB Verlag. Retrieved from <a href="http://www.isi.fraunhofer.de/isimedia/docs/v/de/Methodenvorausschau.pdf">http://www.isi.fraunhofer.de/isimedia/docs/v/de/Methodenvorausschau.pdf</a>

Cuhls, K.E. (2019). Horizon Scanning in Foresight – Why Horizon Scanning is only a part of the game, *Futures & Foresight Science*, 2(1): 1-21. https://doi.org/10.1002/ffo2.23

Davies, D. (2005). Crisis management: Combating the denial syndrome, *Computer Law and Security Report*, 21(1): 68-73. https://doi.org/10.1016/j.clsr.2005.01.016

Dobrowolski, Z. & Szejner, T. (2019). Public Ethnocentrism. An Obstacle of Worldwide Economic Development: Concept and a Preliminary Research, *Journal of Intercultural Management*, 11(1): 125-147. https://doi.org/10.2478/joim-2019-0006

Dobrowolski, Z. (2017). Combating Corruption and Other Organisational Pathologies. Frankfurt Am Main: Peter Lang GmbH, Internationaler Verlag der Wissenschaften.

Dobrowolski, Z. (2020). The supreme audit institutions readiness to uncertainty. *Entrepreunership and Sustainability Issues*, 8(1): 513-525. http://doi.org/10.9770/jesi.2020.8.1(36)

Elliott, D., Smith, D., & McGuinness, M. (2000). Exploring the failure to learn: Crises and barriers to learning, *Review of Business*, 21(3): 17-24. <a href="https://doi.org/10.1177/1350507607083205">https://doi.org/10.1177/1350507607083205</a>

Esser, J. K., & Lindoerfer, J. S. (1989). Groupthink and the space shuttle Challenger accident: Toward a quantitative case analysis, *Journal of Behavioral Decision Making*, 2(3): 167-177. https://doi.org/10.1002/bdm.3960020304

https://scholar.google.pl/scholar?hl=pl&as\_sdt=0%2C5&q=Crises%3A+Events+or+Processes%3F+Paper+presented+at+Hazards+and+Sustainability&btnG=

Friedlob, G. & Schleifer, L. (1999). Fuzzy logic: application for audit risk and uncertainty, *Managerial Auditing Journal*, 14(3): 127-137. https://doi.org/10.1108/02686909910259103

ISSN 2345-0282 (online) <a href="http://jssidoi.org/jesi/2020">http://jssidoi.org/jesi/2020</a> Volume 8 Number 2 (December) <a href="http://doi.org/10.9770/jesi.2020.8.2(48)">http://doi.org/10.9770/jesi.2020.8.2(48)</a>

Georghiou, L., Harper, J. C., Miles, I., Keenan, M., & Popper, R. (2008). *The handbook of technology foresight, concepts and practice, PRIME series on research and innovation policy*. Cheltenham, UK & Northampton, MA: Edward Elgar.

Ghosh, A., Ostry, J. & Qureshi, M. (2015). Exchange Rate Management and Crisis Susceptibility: A Reassessment, *IMF Economic Review*, 63: 238–276. https://doi.org/10.1057/imfer.2014.29

Gordon, T.J. & Helmer, O. (1964). Report on a Long-Range Forecasting Study. Santa Monica, California: Rand Corporation.

Gramling, A. & Schneider, A. (2018), Effects of reporting relationship and type of internal control deficiency on internal auditors' internal control evaluations, *Managerial Auditing Journal*, 33(3): 318-335. <a href="https://doi.org/10.1108/MAJ-07-2017-1606">https://doi.org/10.1108/MAJ-07-2017-1606</a>

Greenblott, J.M., O'Farrell, T. & Olson, R. (2018). Strategic Foresight in the Federal Government: A Survey of Methods, Resources, and Institutional Arrangements, *World Futures Review*, 11(3): 245-266. <a href="https://doi.org/10.1177/1946756718814908">https://doi.org/10.1177/1946756718814908</a>

Hansen, M.T. (2002), Knowledge Networks: Explaining Effective Knowledge Sharing in Multiunit Companies, *Organization Science*, 13(3): 223-353. <a href="https://doi.org/10.1287/orsc.13.3.232.2771">https://doi.org/10.1287/orsc.13.3.232.2771</a>

Hauptman, A., Hoppe, M. & Raban, Y. (2015). Wild cards in transport, European Journal of Futures Research, 3(1): 1-24. https://doi.org/10.1007/s40309-015-0066-9

Ilmola, L. & Kuusi, O. (2006). Filters of weak signals hinder foresight: Monitoring weak signals efficiently in corporate decision-making, *Futures*, 38(8): 908-924. https://doi.org/10.1016/j.futures.2005.12.019

Jaques, T. (2007). Issue management and crisis management: An integrated, non-linear, relational construct, *Public Relations Review*, 33(2): 147-157. https://doi.org/10.1016/j.pubrev.2007.02.001

Jaques, T. (2008). A case study approach to issue and crisis management: Schadenfreude or an opportunity to improve? *Journal of Communication Management*, 12(3): 192-203. https://doi.org/10.1108/13632540810899399

Jaques, T. (2009). Issue and crisis management: Quicksand in the definitional landscape, *Public Relations Review*, 35(3): 280-286. <a href="https://doi.org/10.1016/j.pubrev.2009.03.003">https://doi.org/10.1016/j.pubrev.2009.03.003</a>

Jaques, T. (2010). Reshaping crisis management: the challenge for organizational design, *Organizational Development Journal*, 28(1): 9-17.Retrieved from <a href="http://www.issueoutcomes.com.au/Websites/issueoutcomes/Images/Reshaping%20crisis%20management%20ODJ.pdf">http://www.issueoutcomes.com.au/Websites/issueoutcomes/Images/Reshaping%20crisis%20management%20ODJ.pdf</a>

Johansen, W., Aggerholm, H. K. & Frandsen, F. (2012). Entering new territory: A study of internal crisis management and crisis communication in organizations, *Public Relations Review*, 38(2): 270-279. <a href="https://doi.org/10.1016/j.pubrev.2011.11.008">https://doi.org/10.1016/j.pubrev.2011.11.008</a>

 $Kaplan, R.S.~(2010).~Conceptual~Foundations~of~the~Balanced~Scorecard.~Working~Paper~10-074.~Harvard~Business~School.~Retrieved~from~\\ \underline{https://www.hbs.edu/faculty/publication\%20files/10-074~0bf3c151-f82b-4592-b885-cdde7f5d97a6.pdf}$ 

Kotter, J. P. (1996). Leading Change, Boston, MA: Harvard Business School Press.

Kouzmin, A. (2008). Crisis Management in Crisis? *Journal of Administrative Theory & Praxis*, 30(2): 155-183. https://doi.org/10.1080/10841806.2008.11029631

Liebl, F. & Schwarz. J. O. (2010). Normality of the future: Trend diagnosis for strategic foresight, *Futures*, 42(4): 313-327. <a href="https://doi.org/10.1016/j.futures.2009.11.017">https://doi.org/10.1016/j.futures.2009.11.017</a>

Lukka, K. (2014). Exploring the possibilities for causal explanation in interpretive research, *Accounting, Organizations and Society*, 39(7): 559–566. <a href="https://doi.org/10.1016/j.aos.2014.06.002">https://doi.org/10.1016/j.aos.2014.06.002</a>

Lukka, K., & Modell, S. (2010). Validation in interpretive management accounting research, *Accounting, Organizations and Society*, 35(4): 462–477. <a href="https://doi.org/10.1016/j.aos.2009.10.004">https://doi.org/10.1016/j.aos.2009.10.004</a>

Mansfeld, Y. (1999). Cycles of War, Terror, and Peace: Determinants and Management of Crisis and Recovery of the Israeli Tourism Industry, *Journal of Travel Research*, 38(1): 30-36. <a href="https://doi.org/10.1177/004728759903800107">https://doi.org/10.1177/004728759903800107</a>

ISSN 2345-0282 (online) <a href="http://jssidoi.org/jesi/2020">http://jssidoi.org/jesi/2020</a> Volume 8 Number 2 (December) <a href="http://doi.org/10.9770/jesi.2020.8.2(48)">http://doi.org/10.9770/jesi.2020.8.2(48)</a>

Martin, B.R. (1995), Foresight in science and technology, *Technology Analysis & Strategic Management*, 7(2): 139-168. https://doi.org/10.1080/09537329508524202

Martino, J.P. (1983). Technological Forecasting for Decision Making, 2nd edition. New York, Amsterdam, Oxford: North-Holland.

Mendonca, S., Pina e Cunha, M., Kaivo-oja J. & Ruff F. (2004). Wild cards, weak signals and organizational improvisation, *Futures*, 36(2): 201-218. https://doi.org/10.1016/S0016-3287(03)00148-4

Miles, I. (2008). From futures to foresight. In L. Georghiou (Ed.) The handbook of technology foresight, concepts and practice, PRIME series on research and innovation policy (pp. 24–43). Cheltenham, UK and Northampton, MA: Edward Elgar.

Müller, R. (1985). Corporate crisis management, Long Range Planning, 18(5): 38-48. https://doi.org/10.1016/0024-6301(85)90199-2

Okike, E. (2004). Management of crisis: The response of the auditing profession in Nigeria to the challenge to its legitimacy, *Accounting*, *Auditing & Accountability Journal*, 17(5): 705-730. https://doi.org/10.1108/09513570410567782

Paraskevas, A. (2006), Crisis management or crisis response system? A complexity science approach to organizational crises, *Management Decision*, 44(7): 892-907. https://doi.org/10.1108/00251740610680587

Pauchant, T. C., & Mitroff, I. I. (1992). Transforming the crisis prone organization. San Francisco, CA: Jossey-Bass.

Pearson, C. M., & Clair, J. A. (1998). Reframing crisis management, *The Academy of Management Review*, 23(1): 59-76. https://doi.org/10.5465/amr.1998.192960

Phillips, J. (2011). Target, Audit and Risk Assessment Cultures in the Probation Service, *European Journal of Probation*, 3(3): 108-122. https://doi.org/10.1177/206622031100300308

Popper, R. (2008). Foresight methodology. In L. Georghiou, J. Cassingena, M., Keenan, I. Miles, & R. Popper (Eds.), The Handbook of Technology Foresight (pp. 44–88). Cheltenham: Edward Elgar.

Popper, R. (2008a). How are foresight methods selected? Foresight - The journal of future studies, strategic thinking and policy, 10(6): 62-89. doi: <a href="https://doi.org/10.1108/14636680810918586">https://doi.org/10.1108/14636680810918586</a>

Preble, J.F. (1997). Integrating the Crisis Management Perspective into the Strategic Management Process, *Journal of Management Studies*, 34(5): 769-791. <a href="https://doi.org/10.1111/1467-6486.00071">https://doi.org/10.1111/1467-6486.00071</a>

Prusak, L. & Cohen, D. (2001). How to invest in social capital, *Harvard Business Review*, 79(6): 86-93. https://doi.org/10.1093/0195165128.003.0001

Qi, J. & Tapio, P. (2018). Weak Signals and Wild Cards Leading to Transformative Disruption: A Consumer Delphi Study on the Future of e-Commerce in China, *World Futures Review*, 10(1): 44-82. <a href="https://doi.org/10.1177/1946756717752921">https://doi.org/10.1177/1946756717752921</a>

Reamer, F. G. (2000). The Social Work Ethics Audit: A Risk-Management Strategy, *Social Work*, 45(4): 355–366. https://doi.org/10.1093/sw/45.4.355

Renn, O., Klinke, A. & van Asselt, M. (2011). Coping with Complexity, Uncertainty and Ambiguity in Risk Governance: A Synthesis, *AMBIO*, 40: 231–246. <a href="https://doi.org/10.1007/s13280-010-0134-0">https://doi.org/10.1007/s13280-010-0134-0</a>

Richardson, B. (1995). Paradox management for crisis avoidance, *Management Decision*, 33(1): 5-18. https://doi.org/10.1108/EUM000000003896

Roux-Dufort, C. (2007). A Passion for imperfections: Revisiting crisis management. In C. M. Pearson, C. Roux-Dufort & J. A. Claire (Eds.), International Handbook of Organizational Crisis Management, (pp. 221-252). Thousand Oaks, CA: Sage.

Rummler, G.A.& Brache, A.P. (1995). Improving Performance: How to Manage the White Space in the Organization Chart. San Francisco: Jossey-Bass Inc.

Samson, S., Reneke, J.A., Wiecek, M.M. (2009). A review of different perspectives on uncertainty and risk and an alternative modeling paradigm, *Reliability Engineering & System Safety*, 94(2): 558-567. https://doi.org/10.1016/j.ress.2008.06.004

ISSN 2345-0282 (online) <a href="http://jssidoi.org/jesi/2020">http://jssidoi.org/jesi/2020</a> Volume 8 Number 2 (December) <a href="http://doi.org/10.9770/jesi.2020.8.2(48)">http://doi.org/10.9770/jesi.2020.8.2(48)</a>

Senior, B. (2002). Organisational Change, 2nd edition. London: Prentice Hall.

Shrivastava, P. (1995). Ecocentric management for a globally changing crisis society. Paper presented at National Conference, Academy of Management, Vancouver, BC, Canada

Simunic, D.A. & Stein, M. T. (1990). Audit risk in a client portfolio context, *Contemporary Accounting Research*, 6(2): 329-343. https://doi.org/10.1111/j.1911-3846.1990.tb00762.x

Smith, Ch. J. & Dubois, A. (2010). The 'Wild Cards' of European futures: Planning for discontinuities? *Futures*, 42(8): 846-855. https://doi.org/10.1016/j.futures.2010.04.016

Smith, D. (2005). Business (not) as usual: Crisis management, service recovery and the vulnerability of organizations, *Journal of Services Marketing*, 19(5): 309-320. <a href="https://doi.org/10.1108/08876040510609925">https://doi.org/10.1108/08876040510609925</a>

Starbuck, W. H., & Milliken, F. J. (2007). Challenger: Fine-tuning the odds until something breaks, *Journal of Management Studies*, 25(4): 319-340. https://doi.org/10.1111/j.1467-6486.1988.tb00040.x

Todnem, R. (2005). Organisational change management: A critical review, *Journal of Change Management*, 5(4): 369-380. https://doi.org/10.1080/14697010500359250

Wang, Y. & Li, M. (2011). The Role of Internal Audit in Engineering Project Risk Management, *Procedia Engineering*, 24: 689-694. https://doi.org/10.1016/j.proeng.2011.11.2719

Wilson, D. C. (1992). A Strategy of Change, London: Routledge.

# Acknowledgements

This work was supported by Jagiellonian University, Poland

**Zbyslaw DOBROWOLSKI** is the Professor of Jagiellonian University, Poland and member of the Scientific Council at the Financial Ombudsman, Minister of Finance. He was the editor of the International Journal on Governmental Financial Management, USA. He is coauthor of worldwide INTOSAI auditing standards and guidelines. INTOSAI expert involved in numerous international programs of public business excellence. Author of numerous scientific papers, including twenty monographs. Research interests: business excellence, risk management, sustainability, public management.

**ORCID ID**: orcid.org/0000-0003-1438-3324

Make your research more visible, join the Twitter account of ENTREPRENEURSHIP AND SUSTAINABILITY ISSUES: @Entrepr69728810

Copyright © 2020 by author(s) and VsI Entrepreneurship and Sustainability Center This work is licensed under the Creative Commons Attribution International License (CC BY). <a href="http://creativecommons.org/licenses/by/4.0/">http://creativecommons.org/licenses/by/4.0/</a>

