



Research Article

© 2019 Igor Vladislavovitch Ponkin.
This is an open access article licensed under the Creative Commons
Attribution-NonCommercial-NoDerivs License
(<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

"Black Swan" Event as Manifestation of Uncertainties in Public Administration

Igor Vladislavovitch Ponkin

*Doctor of Science (Law), Professor,
Department of the State and Municipal Administration,
Institute of Public Administration and Civil Service,
Russian Presidential Academy of National Economy and
Public Administration, Moscow, Russian*

Doi: 10.2478/mjss-2019-0018

Abstract

Public administration, today, in practice is projected, programmed and realized today, as a rule, as though it occurred in the conditions of high degree of definiteness. This article is devoted to research of uncertainties in public administration, in particular, the so-called "black swan" phenomenon in public administration has been investigated. Aim: the purpose of the article included: to define a concept of uncertainty of public administration, consequences of such uncertainties, to consider the concept and features of the "black swan" event in public administration and to consider the existing scientific interpretations of this concept. Methods: to achieve aims mentioned above, such methods as the method of analysis, synthesis, classification method, and others were used. Results: the article presents the author's concept of uncertainty, defined place of certainty in the process of public administration and the classification of types of "black swan" events.

Keywords: *public administration, uncertainty in public administration, deviantology of public administration, the "black swan" concept*

1. Introduction

Administration, as V.A. Trapeznikov (1983, p. 6) wrote, is a fight against disorder.

Public administration, today, in practice is projected, programmed and realized today, as a rule, as though it occurred in the conditions of high degree of definiteness (in the conditions of the lack of indeterminacy factors). It is presumed that the conditions in which such administration is realized, are rather favorable and quite (or at least just acceptably) certain, the relations in the course of public administration are quite certain, subject to normal and linear dependences, subject to an accurate schematization. But, practically always, it is not so (sets and weight characteristics, however, can differ). Such greenhouse conditions in reality simply do not exist. Actually, state authorities deal with ontology, development, nonlinear behavior, and interrelation of complex, open, dynamic systems, they deal with stochastic processes, with very complicated types of disorganization and dysfunctionalization developing nonlinearly and hard to be predicted, often with indistinct (or diffuse) sets of the objects of administration possessing invariance and ambiguous (hysteresis) and dynamic characteristics including semistructured and underformalized objects.

According to our definition, **uncertainty** is subjectively reflected and/or objectively existing state (conditions) of the environment, features of the process, conditions of the operating system and/or subject and object field of administration determining critically low and/or aspiring to zero opportunity of adequate, timely, and pragmatically relevant to estimability and predictability features

of behavior of objects, the course of the current and future processes, possibilities (probabilities) of the advent of events (including casual) and developing of situations (including excessive), results of influences (applied efforts) and the expenses connected with them, degree of controllability of the objects of administration and their susceptibility / rigidity to administrative influence and impact, possible and most probable changes of conditions and scenarios of realization and results (consequences) of the project (process), and also determining reducibility (up to zero) possibilities of management of those states, conditions, scenarios, results, and consequences.

Uncertainties are integral part of decision-making process within and in the course of public administration, have considerable impact on the processes and results of adoption of administrative decisions, are a real and inevitable factor at developing, programming, acceptance, and implementation of such decisions in many situations at implementation of public administration.

Predictability of the future is one of the main conditions of prevention of crises in public administration and ensuring necessary resistance and resiliency of public administration to negative factors. But it is unpredictability that at times breaks all the schemes, turns the whole sets of measures of public administration into the failure.

Predictability in public administration is significantly decreased by the factor of existence of uncertainty, both in subject and object field of public administration, and in the course of such administration. But to even bigger extent, predictability decreases in the conditions of complicated destructive impact of the actor state upon the victim state.

In this sense, the "black swan" concept developed by US economist, trader, and mathematician, Nassim Nicholas Taleb, is of essential interest. The concept received the name in connection with the historical situation of the occurring delusion that swans are only white, which existed till Australia was discovered.

2. Features of the "Black Swan" Event and the Essence of the "Black Swan" Concept

This concept gained considerable popularity as it can be applied and is applied in absolutely different spheres, including public administration. The concept is based on the thesis of essential reevaluation (exaggeration) of real opportunities of statistical science and underestimation of influence of inexplicable accidents.

According to N. N. Taleb, almost all important discoveries and technical inventions were not the result of strategic planning – they were just Black swans, "attributes of the uncertainty we face in real life have little connection to the sterilized ones we encounter in exams and games" (Taleb, 2007).

The "black swan" concept is complex and interdisciplinary, it comes from mathematics, economics, psychology, and evolutionary biology (Taleb, 2007).

We will address to the interpretations of the features and the nature of the "black swan" event represented in scientific literature.

N. N. Taleb formulated the following features of the "black swan" event:

1. the event is abnormal because nothing in the past foretold it;
2. the event has huge influential force;
3. in the subsequent, experts find this event as such which by all means had to occur; the human nature forces to make up explanations for the incident after it happened, making the event, at first apprehended as an absolute surprise, quite explainable and predictable (Taleb, 2007).

Some foreign researchers continued research of this concept, including – in relation to various spheres, which led to its development and supplementation.

Terje Aven notes that the following main interpretations of the considered concept within which the "black swan" event is considered as:

- incident, surprisingly unexpected, extraordinary in relation to the expected speed of its occurrence (the extreme in this case is shown in the fact that the consequences of such event are serious or large-scale);
- extraordinary incident with very small probability of occurrence;
- unexpected extraordinary incident taking place in the situation in which there is a lot of

uncertainty;

- unknown uncertainty (Aven, 2013, p. 45).
- Thus, according to Terje Aven, the following two approaches to interpretation of the "black swan" concept are the most suitable:
 - the "black swan" event as a rare incident with extraordinary consequences;
 - the "black swan" event as an extraordinary incident, unexpected from the point of view of today's condition of knowledge (Aven, 2013, p. 47).

Francis G. Castles sees as the "black swan" events "sudden and unexpected national and international emergencies – the 'black swans' of war, economic depression, hyperinflation and, more prospectively and topically, mass epidemics, terrorist incidents and environmental catastrophes", influencing the nature of the actions of the welfare state and its development (Castles, 2010).

The arising events belonging the "black swan" concept, and also the consequences which they can involve, can be both negative and positive by the nature. Sirkka Heinonen notes that the word "black" in this case does not have negative connotation, but only illustrates unexpectedness of the event. The "black swan" calls into question the issue of the condition of the existing knowledge, and also can instantly and unexpectedly transform them. Such events can arise in any sphere: in the nature, economy, policy, and culture, they can represent unforeseen consequences of other people's actions, and can be that that actively and intentionally other people do (Heinonen, 2013, p. 22–23).

The "black swan" events are retrospectively predictable, and it seems to researchers that they had an opportunity to predict their advent. And, such predictability is closely connected with one more component of the "black swan" concept which has as the basis the fact that such events arise also because of human illusion of understanding of a particular situation. Besides, such events, as a rule, are rather extreme in the consequences (Krupa and Jones, 2013, p. 287).

Thus, it is important to know that the "black swan" events within the considered concept do not absolutely correspond to concept of probability, they, more likely, can only be foreseen as increase of factors of uncertainty, and also increase in quantity of future opportunities in advance. "Black swans" also represent potential for emergence of rather inconsistent events as they do not get accumulated from the combinations of uncertainties available at the particular present moment (Heinonen, 2013, p. 25).

The "black swan" events which are described as having quite low probability of their advent, but thus considerable influence which ignores the key moment of the current situation, namely that black swans break already developed situation, are called such not only for the reason that they have the dramatic consequences for all the society, but also because they are shocking for not fitting into the available understanding of the situation (Heinonen, 2013, p. 26).

Robert Jervis in the research of the "black swan" concept in relation to policy addresses to McGeorge Bundy's statement, the National Security Advisor to the U.S. President, concerning the fact that some events during the war in Vietnam "were "trams"". Under this comparison as Robert Jervis notes, McGeorge Bundy meant the event which if purposefully expected for a long time, will occur sooner or later (Jervis, 2009, p. 482).

Thus, as Robert Jervis notes, the main question here which is very difficult to answer, is the question of which obvious turning points are "trams" and which – "black swans" as even the changes caused by an unforeseen "tram" can affect the existing principles and structures, and the history can be movable by the forces of which the subjects have no idea, at least, partially (Jervis, 2009, p. 482).

By the definition, "black swans" are quite rare, however considering more and more complex and interconnected world, they are not only becoming more widespread, but, also, their consequences are extending more and more widely (Wildman, 2015, p. 3).

The "black swans" described by Nassim Taleb are beyond the normal standard expectations because within their limits nothing indicates reality of advent of such events (Bourgon, 2008, p. 13).

As Terje Aven notes, the "black swan" event should be considered as surprising unexpected extraordinary incident the specified characteristics of which are those in relation to the current state of knowledge and modern belief. Respectively, in application of this concept the current state of

knowledge, and also the time interval is important (Aven, 2013, p. 49).

Peter Ho and Adrian Kuah (2015, p. 11) note that unexpected advent of "black swans" can be caused by that components of complex systems interacting with each other in the ways to which determined linear analysis can not be applied.

In recent years, attention to so-called "black swans" in relation to risk management and decision-making in the conditions of uncertainty has significantly increased. This metaphor is intuitively attractive and it became very popular for the description of idea of advent of unexpected events and results (Aven, 2013, p. 44).

As Richard Carson (p. 14) notes, the concept of the "black swan" put forward by N.N. Taleb is one of the most uncommon concepts in the sphere of public management as, in particular, it assumes change or deviation from already standard or traditional theories of public administration developed earlier. The theory of the "black swan" allows to look at the results of public administration through another prism, to better estimate and understand shortcomings of theories of public administration.

According to Robert Jervis, "black swans" can be generated as well by human beliefs, as the behavior of people is caused by their interpretations and understanding of what others will do, and generalizations concerning application of the "black swan" concept have to be based on how people think and judge others. According to this researcher, whether the event representing the "black swan" occurs or not, depends on how people react to the signs of the event which can occur (Jervis, 2009, p. 483).

3. Classification of the "Black Swan" Events Types

Taking into account the approaches presented in scientific literature, it is reasonable to allocate the following sudden and unexpected national and international emergency situations as the "black swans" having essential impact upon realization of public administration:

- 1) natural disasters of significant force (flood, earthquake, tsunami, eruption of volcanoes);
- 2) exhaustion of national or world reserves of minerals and other resources (oil, gas, etc.);
- 3) unforeseen (unplanned and unpredictable) "black swans" which "fly up" as a result of human actions:
 - a flutter and "an ideal storm" in public administration;
 - a dysfunctionalization of public administration, transformation of the state into insolvent because of toxic leaders and performers in the system of public administration for other reasons;
- 4) "black swans" intentionally "released" by a person, a group of persons, organization, the state, or a group of the states:
 - military conflicts (with some exceptions);
 - acts of terrorism;
 - organized crime;
 - destruction of the target state by the actor state (including destruction by means of hybrid wars, use of the tools of "the soft force", "the clever force", by means of organization of "color revolutions");
 - coup d'état;
 - civil war;
 - large interreligious and international conflicts;
 - man-made pandemic (epidemic of an infectious disease extending in the territory of all the country or several countries of the world, several regions of the world);
- 5) events resulting from a complex combination of the reasons of different nature:
 - death of a historical civilization;
 - technotronic catastrophes of a significant force (accident at atomic power station and hydroelectric power station; serious accidents at production, operation, and transportation of arms);
 - economic crises (hyperinflation, etc.) with extremely negative consequences;
 - environmental disasters;

- pandemics.

The key aspect of the "black swan", according to David Wildman, is the emergence of the tendency, as a result of such events, of geopolitical reactions, which lead to deterioration of a situation after the very first incident, even after a significant amount of time (Wildman, 2015, p. 3).

4. Operating by Risks of the "Black Swan" Events in Public Administration

Today, the problem of development in public administration of the tools, allowing to operate with uncertainty and to predict the "black swan" events as well, was extremely actualized.

There is a number of ways of "black swans" risk management, for example, studying of the factors which preceded advent of such events, and also finding of explanations for them, for example, in clusters of weak signals. Thus, it is possible to learn to distinguish situations which can lead to the "black swan" advent (Heinonen, 2013, p. 24).

Another approach is implementation of forecasting of the unforeseen, that is identification and predicting of "black swans" which can prepare for the moment when, in subsequent, they "come up". Such approach, in particular, is used also by public authorities, for example – in Finland (Heinonen, 2013, p. 25).

To decrease the risks of the "black swan" event advent, it is not enough to use traditional methods of risk management and risk decrease. So, the approaches to mitigation of risks are, as a rule, focused upon the events which can arise suddenly, however they do not have a comprehensive outlook to trace or expect all the following one after another consequences of the "black swan" or, for example, to expect reactions and counter-measures of a wide range of subjects which together make so-called "Butterfly Effect" (Wildman, 2015, p. 3).

According to David Wildman, ideal for consideration of "black swans" possibility is the so-called scenario analysis used in combination with more formal methodologies and also approaches in management of geopolitical risks and combinations of risks (Wildman, 2015, p. 5).

As Peter Ho and Adrian Kuah (2015, p. 20) note, the future promises more and more difficulties and bears in itself an increasing number of "black swans" and uncertainties, and the state has to learn to function properly and even to prosper in such conditions, and also surely to cope with shocks even then when they occur.

Peter Ho and Adrian Kuah (2015, p. 20) allocate the following steps which the state, when it seeks to cope with unpredictable shocks, needs to realize:

- first, recognition of complexity of the environment in which the state is to function;
- second, realization of new nonlinear instruments of management of difficulties and strategic risks.

Jocelyne Bourgon specifies that in the unpredictable world where the "black swan" events take place, the state faces a hard choice. So, the state itself can see the role mainly in providing observance of the legislation and in providing high-quality state services and public benefits. Or, the state can take an active position concerning not predictabilities and failures of public administration in the context of ensuring productivity and achievement of results in certain spheres. And if it is about communal interests and public benefit, the state will never avoid a duty to be "the insurer of last resort" at the most serious failures. Regardless of what the state does, which measures it takes, crises for it and for all the society are inevitable, however it has an opportunity to limit the consequences of crises and to increase ability of the society to cope with them. Respectively, according to Jocelyne Bourgon, the active role of the state in the face of unpredictability has to extend to:

- capacity-building to foresee, experiment, and carry out intervention in advance when expenses because of inaction are more serious, than risks of unsuccessful intervention;
- decrease in the conflicts, evasion from risks, avoidance of preventable failures, and also realization of preventive measures for mitigation of the consequences of probable, but unpredictable crises, epidemics, etc.;
- assistance in ensuring equitable distribution of benefits from the main innovations and breaks;
- ensuring equitable distribution of risks so that citizens (in particular – the most vulnerable)

did not bear disproportionate high share of consequences of unpredictable failures (Bourgon, 2008, p. 14).

Pursuing the goal to cope with risks, in particular, with risks of the "black swans", the state should rely on imperfect knowledge and realize creative approaches, and also tolerantly treat uncertainties, misfortunes, and even failures. Besides, the state should even sacrifice some degree of public administration efficiency that represents considerable derogation from traditional views of the state's role (Bourgon, 2008, p. 14).

Use of new tools does not liquidate a shock, however it will increase ability to expect such shocks that the state, respectively, had an opportunity actually to reduce the frequency and consequences of such shocks that eventually will lead to increase of stability of the state (Ho and Kuah, 2015, p. 20).

One of the main drawbacks of the "black swan" concept of public administration is that exclusively statistical proofs confirming its existence do not confirm its predictability (Carson, p. 14).

According to Paul Kielstra, such definition strictly limits a circle of events which can fall under the "black swan" concept, and, respectively, eventually reduces practical usefulness of this concept (Kielstra, 2014, p. 4).

According to Richard Carson, the "black swan" concept is, in fact, a private concept as, first, it provides knowledge of how exactly it is possible to explain the drawbacks of the traditional theory of public administration. Second, in its framework, the guidelines on the basis of which it is possible to estimate possible success or, on the contrary, failure of traditional theories of public administration from the point of view of predictability of its results are offered. And, at last, within this theory schemes and mechanisms of the use of such situations are offered, however such situations can not be predicted with their help, anyway (Carson, p. 14).

Richard Carson called the "black swan" concept "both metaphor and cautionary tale about the over reliance on statistical evidence" (Carson, p. 14).

5. Conclusion

Both, political practitioners and science, are already significantly tamped with ideology of political correctness, stamps, and labels, false in the contents, aggressively imposed by rhetoric covering real processes and real interests of the main actors.

The bright statement of the Czech analyst in the field of safety, Jan Schneider, is known: "So, what is economic crisis? It is a new shock therapy (pay attention, we again have returned to unnaturally accelerated events), which distracts attention while assets pass from hand to hand, promptly as well. That is, the economic crisis occurs only from the point of view of the robbed part of the mankind. For its second part, imperceptible, but much richer, on the contrary, there is a financial orgasm" (Schneider, 2016).

As, reasonably, Thilo Sarrazin (2010) noted, "it is a very effective method – to shut a mouth to the person who thinks differently, cursing his/her habit to call things by their proper names with political incorrectness damnation". But the fact remains: any aggressive action or campaign is provided with the corresponding rhetorical and media shielding today.

"There are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we don't know. But there are also unknown unknowns - to the ones we don't know we don't know" – Donald Rumsfeld, the Secretary of US Defense said on February 12, 2002 (The Federal News Service, 2002).

Today, not only Russia, but also the USA, and many other states of the world entered the area of the most favored treatment of the "black swan" events advent ...

References

- Aven, T. (2013). On the meaning of a black swan in a risk context. *Safety Science*, 57, 44–51.
- Bourgon, J. (2008). New Directions in Public Administration: Serving Beyond the Predictable. Retrieved from http://s3.amazonaws.com/connected_republic/attachments/6/Microsoft_Word_-_Bourgon_on_new_public_admin_Canada_.pdf

- Carson, R. The Black Swan – A Case Study. Retrieved from http://www.richcarson.org/PoIS_540__Case_Study_Paper_.doc
- Castles, F. G. (2010) Black swans and elephants on the move: the impact of emergencies on the welfare state. *Journal of European Social Policy*, 20(2), 91–101.
- Heinonen, S. (2013). The dance of the black swans. *Publications of the Finnish Parliament's Committee for the Future*, 5, 20–40. Retrieved from https://www.eduskunta.fi/FI/tietoaeduskunnasta/julkaisut/Documents/tuvj_5+2013.pdf
- Ho, P., Kuah, A.W.J. (2015) Governing for the Future What Governments Can Do. *PRISM*, 5(1), 9–21.
- Jervis, R. (2009). Black swans in politics. *Critical Review*, 21(4), 475–489.
- Kielstra, P. (2014). Black Swans and Global Capital Markets: Preparing for the unknowable. Retrieved from <http://www.economistinsights.com/sites/default/files/Blackswans.pdf>
- Krupa, J., Jones, C. (2013). Black Swan Theory: Applications to energy market histories and technologies. *Energy Strategy Reviews*, 1, 286–290.
- Sarrazin, T. (2010). *Deutschland schafft sich ab Wie wir unser Land aufs Spiel setzen*. München, Deutschland: Deutsche Verlags-anstalt.
- Schneider, J. (2016, February 25). Až Ukrajinci zjistí, co všechno jim doma už nepatří, zapomenou na Krym. Úchylnost médií je jako za předchozího režimu. Každý pšouk Velkého bratra... Retrieved from <http://www.parlamentnilisty.cz/arena/rozhovory/Jan-Schneider-Az-Ukrajinci-zjisti-co-vsechno-jim-doma-uz-nepatri-zapomenou-na-Krym-Uchylnost-medii-je-jako-za-predchoziho-rezimu-Kazdy-psouk-Velkeho-bratra-423313>
- Taleb, N.N. (2007). *The Black Swan. The Impact of the highly improbable*. New York (USA): Random House.
- The Federal News Service. (2002, February 12). DoD News Briefing - Secretary Rumsfeld and Gen. Myers. Retrieved from <http://archive.defense.gov/Transcripts/Transcript.aspx?TranscriptID=2636>
- Trapeznikov, V.A. (1983). *Management and Progress in the Scientific and Technical Field*. Moscow (Russian Federation): IMP RAS.
- Wildman, D. (2015). Geopolitical Risk: The Butterfly Effect and Black Swans. *FTI Journal*, 2–5. Retrieved from <http://www.fticonsulting.com/~media/Files/us-files/insights/journal-articles/geopolitical-risk.pdf>