SCENARIO APPLICATION IN PUBLIC ADMINISTRATION

Abstract. Application of scenarios in public administration (PA) can ensure the sustainable development of the social system (system) and contribute to the necessary changes in a complex and dynamic environment. Under influence of any, including undesirable scenario, thinking of civil society can be controlled by manipulating its conscious and unconscious. In these conditions, PA can be complicated and reduce efficiency. Moreover, the archetype-based scenario becomes attractive and engages the scenario participants in a game offered by the scenario manager to achieve a certain goal.

PA should manage thinking properly according to a state of the system and the environment to maintain equilibrium between them and achieve a desired goal. Application of scenarios in PA can provide conditions to manage thinking. A scenario creates an environment in which archetypes start working. Scenario events can generate a certain combination of conscious and unconscious in thinking to make right decisions,

A virtual or actual scenario can be used to accelerate a required change and also to influence competitors. Under influence of a virtual scenario PA can become complicated because the system can start working wrong due to difficulty to recognize reality.

To conduct PA effectively under scenario influence requires managing thinking through building a learning organization. It provides both negative and positive feedbacks that facilitate making necessary changes in the system and direct to achieve desired goals. It is based on proper leadership with delegation of authority, shared vision and responsibility, building favorable organizational culture and climate. The task of PA is to create conditions in which the system will be “smart”
to demonstrate situational awareness, collective emotional intelligence, analyze the situation and make right decisions.

**Keywords:** scenario, archetype, public administration, conscious, unconscious, thinking.

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**ЗАСТОСУВАННЯ СЦЕНАРІЙІВ У ПУБЛІЧНОМУ УПРАВЛІННІ**

**Анотація.** Застосування сценарійів в публічному управлінні (ПУ) може забезпечити сталий розвиток соціальної системи (системи) та сприяти необхідним змінам в умовах складного та динамічного середовища. Під впливом будь-якого, в тому числі небажаного сценарію, мисленням громадянського суспільства можна керувати, маніпулюючи його свідомим і несвідомим. В цих умовах ПУ може ускладнюватись та знижувати ефективність. Більш того, сценарій, побудований на основі архетипів, стає привабливим та затягує учасників сценарію в гру, яка пропонується менеджером сценарію для досягнення певної мети.

ПУ повинно правильно керувати мисленням відповідно до стану системи та середовища, щоб підтримувати рівновагу між ними та досягати бажаної мети. Застосування сценарійів у ПУ може створити умови для управління мисленням. Сценарій створює середовище, в якому починають працювати архетипи. Події сценарію можуть генерувати певну комбінацію свідомого та несвідомого в мисленні для прийняття правильних рішень.

Віртуальний або реальний сценарій можна використовувати для прискорення необхідних змін, а також для впливу на конкурентів. Під впливом віртуального сценарію ПУ може ускладнитися, оскільки система може почати працювати неправильно через важкість розпізнання реальності.

Для ефективного ПУ в умовах впливу сценарію, потрібно керувати мисленням шляхом побудови організації, яка навчається. Вона забезпечує як негативний так і позитивний зворотні зв’язки, що сприяє здійсненню необхідних змін у системі та спрямовує на досягнення бажаних цілей. Це засновано на відповідному лідерстві з делегуванням повноважень, спільному баченні та відповідальності, створенню сприятливої організаційної культури та клімату. Завданням ПУ стає створення умов, в яких система буде "розумною", щоб демонструвати ситуаційну обізнаність, колективний емоційний інтелект, аналізувати ситуацію та приймати правильні рішення.
**Target setting.** A social system (system) can become vulnerable under influence of scenarios that are used by exterior and interior players to achieve own goals. To develop the system in the complex and dynamic environment and protect it from undesired scenario impacts may require understanding archetypal aspects of scenario application in public administration (PA). To study an archetypal nature of a scenario and thinking under scenario influence can facilitate providing effective PA.

**Analysis of recent researches and publications.** Scenario development and planning are discussed in works of P. Schwartz, P. van Notten, O. Sparrow, P.J.H. Schoemaker and others. C. Jung, S. Freud and D. Uznadze described archetypal foundations and thinking. G. Durand proposed the concept of “imaginer” that joins the subject, the object and the process of thinking.

Ukrainian scientists such as E. Afonin, O. Donchenko, O. Balakireva and O. Sushi have researched the issue of public management from an archetypal position. However, archetypal aspects of scenario application in PA and protection of the system from influence of undesired scenarios have not been widely studied.

**The purpose of the article** is to study application of scenarios in PA from the archetypal perspective to maintain system effective in the complex and dynamic environment.

**The statement of basic material.** A scenario can be considered as a PA tool to develop, manage and protect the system from undesirable influences. In the modern conditions of open global communication, technological development, increased completion between nations and corporations scenarios are used to influence the system to achieve desired goals. A study of archetypes, self-organization and scenarios can help to conduct PA effectively.

According to C. Jung, archetypes are “forms or images of a collective nature which occur practically all over the Earth as constituents of myths and – at the same time – as individual products of unconscious…The [forms and images] are imprinted and hardwired into out psyches” [1, p. 50]. He described 1) archetypal events: birth, death, separation from parents, initiation, marriage, the union of opposites; 2) archetypal figures: great mother, father, child, devil, god, wise old man, wise old woman, the trickster, the hero; and 3) archetypal motifs: the apocalypse, the deluge, the creation [2, p. 76, 84, 85].

Archetypes can present beliefs, values, national and organizational cultures, myths, mental models, stories, images and other. The number of archetypes can be limitless [3] and they could work together as entire whole. For instance, besides of Jungian archetypes there are system and scenario archetypes. D. Kim [4] P. Urze and A. Abreu [5] represent following system archetypes: 1) Limits to Growth; 2) Shifting the Burden; 3) Eroding Goals; 4) Escalation; 5) Success to the Successful; 6) Tragedy.
of the Commons; 7) Fixes that Fail; 8) Growth and Underinvestment; 9) Accidental Enemies; and 10) The Attractiveness Principle.

Archetypes can explain system behavior, problem patterns, thinking, leadership aspects, facilitate analysis and decision making (DM) and serve as a forecasting instrument. They can help to analyze own and opposing sides and their thinking. Archetypes could be fundamental in writing philosophies as constant statements. In the context of PA it is about principles and rules of management, social relationships and system development. Also, archetypes such as Limits to Success, Shifting the Burden/Addiction, Tragedy of the Commons [6] and others can describe a nature of human biases and traps in thinking.

S. Freud and C. Jung introduced the individual conscious and collective and unconscious. C. Jung and D. Uznadze understood the conscious and the unconscious as two aspects of one system. C. Jung considered them in connection as “soul integrity.” The collective unconscious coexists with the individual and collective conscious, contradict with each other, but generate a new for development of the system.

C. Jung defined consciousness as “an ephemeral phenomenon that makes all the urgent adaptations and orientations, which is why its work can most likely be compared to orientation in space” [7, p. 38]. According to him, the collective unconscious is the source of the forces of the soul, and the archetype combines forms and categories that set the soul in motion [8]. The spiritual component is fundamental in leadership and can have energy. According to the law of conservation of energy, it cannot simply disappear. In the context of PA archetypes can be those carriers of energy that provide spirituality, build beliefs, values, national and organizational cultures in the given environment.

The environment can define leadership, thinking and decision making (DM) that can depend on a set of archetypes to make a decision for system survival. Change of the environment may require changing a set of archetypes to review beliefs, values, national and organizational culture to improve DM [9, p. 180]. It reflects in a certain combination of conscious and unconscious in thinking, for instance, dominance of creativity to implement change.

Satisfaction of human needs can drive thinking and motivate doing something relatively new. People invent based on existing archetypes to make life better from their own prospective. Change of the environment forces adapting the system as a combination of innovations with traditions. For instance, innovations such as “robot” remind a human being and an airplane – a bird. Innovations in conjunction with traditions can form an inseparable unity in which a tradition appears as a kind of “starting point” for an innovation.

A scenario generates an environment in which scenario participants can think, conduct DM and act. The scenario context may direct people to think in a desired for a scenario manager way. It facilitates visualization of objects (yourself, others), subjects (environmental elements) and events in their connection through
imagination (process of thinking). It can remind “imaginator” of G. Dunrand that includes the object, the subject and the process of thinking [10].

A scenario, as a PA tool, can provide:
1) Planning, forecasting and responding in different spheres of PA such as leadership, social interactions, relationships between the state authority and the civil society, technical, administrative and political concepts;
2) Thinking and analyzing to make decisions;
3) Managing the system in a desired way.

Scenario planning can be based on an archetypal nature of system development that connects past, present and future that define “time.” “Force” and “space” are connected with the object and the subject. The process of thinking is directed to develop situational awareness (SA), situational understanding (SU), analyze and make decisions through visualization of “imaginator” in the framework of “time, force and space.”

A scenario requires 1) development, 2) support and 3) management. They are connected and present a cycle of scenario existing. A scenario can exist up to a moment of achievement of a desired goal.

Scenario development can be based on archetypes and include following steps: 1) identify driving forces as trends or drivers that may impact achievement of a desired goal in the framework of political, economic, social, technological, legal, and environmental domains; 2) identify critical uncertainties; 3) develop plausible scenarios; and 4) discuss implications and paths [11].

To develop a scenario and deal with it may require understanding a scenario purpose and its owner or customer. A subject, who gets maximum scenario benefits, can be its owner. Knowledge of a scenario structure, triggers, driving forces and its end state can define proper planning and acting to achieve own goals in this scenario.

A level of scenario influence on system development could be strong, moderate or weak that can define the significance of the scenario as a PA tool. A use of the archetypal basis to develop a scenario can make it attractive and, hence, strong. System archetypes, in particular, can help to develop an active scenario in which its participants can play a desired for a scenario manager game.

Scenario support is based on maintaining its stability to achieve a desired goal. It means scenario events and activities should be flexible and adaptable on the way to achieve this goal. Archetypes can work like attractors that may define a line of scenario stability that can stabilize and direct thinking in a certain way.

Scenario management requires continuous SA, evaluation of the system, the environment, activities of scenario players and assessment of achievement a desired scenario goal under control of a scenario manager.

An archetypal nature of the scenario and thinking can allow managing scenario participants. Moreover, they can become addicted to the scenario under control of a scenario manager. Archetypes can define thinking for a scenario manager and scenario players, including an opposing side, as well. The difference is a scenario
manager directs players in a certain direction when they think and act in a desired for him/her way. Additionally, reaction of an opposing side could be based on archetypal behavior. It can help to develop and analyze course of actions of an opposing side in wargaming of the operational planning process.

Archetypes define a convergent process in thinking rather than divergent one. However, to deal with complex and dynamic environment may require divergent process to overcome challenges through change. On one hand, complexity and chaos requires system self-organization to facilitate system elements making independently a new structure. On the other hand, self-organization can use archetypes as attractors in thinking to save system functionality.

System ability for change can define its adaptability and survivability. Links of the system build its structure, which includes “organizational, mental, communicative and informational parts that are connected and developed jointly through public administration [12, p. 10].” Links of the system may determine its functionality. To develop a new system structure requires changing links.

Quality and depth of a network of links are crucial to change the system. It also can have an archetypal character. Archetypes, presenting unconscious or convergent in thinking, may tend to save old links and resists to appearance of new ones. Networks can remind a spider web that is powerful because it can influence even big systems through soft power. When the system is inside of a spider web, it is getting difficult to manage it freely because of highly dependency from this web.

Social order and structural change can be explained from the viewpoint of self-organization under non-equilibrium conditions. “Non-equilibrium is the source of order. Non-equilibrium brings order out of chaos” [13, p. 287]. “In non-equilibrium situations, fluctuations play an essential role. Bifurcations appear and we have to go from a deterministic to a probabilistic description” [14, p. 210]. Change is connected with fluctuations that should break old links to create new ones. It is a process of competition between conscious and unconscious in thinking as reflection of reality and archetypal resistance to change.

Change of the system is generated through the decision making process as fluctuation of convergent (conscious) and divergent (unconscious) thinking that support each other and cannot exit separately in the system. Convergent thinking may serves as a stability mechanism when divergent one deviate from an area of familiarity. Eventually a decision should be made to establish a new equilibrium between the system and the environment. DM mistakes can decrease system effectiveness and eventually destroy it. Reflection, as conscious, can present negative feedback when unconscious demonstrate positive feedback that can generate new diverse ideas. It creates a paradox – the need of change and resistance to this change.

“Interaction of the collective conscious and unconscious may nonlinearly depend on the state of the system and environmental conditions, namely the level of equilibrium between the system and the environment” [15, p. 158] that is determined by the coefficient of dynamic equilibrium between the system and the environment.
which illustrates openness of the system, its adaptability and efficiency.

Presenting unconscious, archetypes can start working more actively when the situation is complex and unknown and the system achieves a certain Keq (Keq \text{min} - Keq \text{crt}). In these conditions the PA task is to keep thinking process from possible active use archetypes in DM and add reflection of the reality as conscious to analyze a situation by application of combination of different types of thinking (critical, creative, system, design and strategic). For example, it may mean avoiding archetypal human biases and traps in the DM by using critical thinking.

Therefore, application of a set of different types of thinking can have a purpose to propose to apply convergent thinking when divergent one dominates naturally and vise verse. It is a so-called process of management of thinking that can be based on SA, SU, and collective emotional intelligence (CEI) [17, p. 133]. There is a certain combination of convergent and divergent that can facilitate making a right decision in a given situation.

The task of PA is to conduct scenario planning and managing on a certain edge between archetypal, as unconscious, and reflection of reality as conscious. First, it is about establishment of conditions that have to provide proper proportion of conscious and unconscious in thinking to manage own system in the environment. Second, it is about an ability to recognize other scenarios and organize protection from their possible negative impacts in the framework of “diplomacy, information, military and economic” domains (DIME).

A scenario structure, similar to a system structure, can have organizational, mental, communicative and informational parts. Activities of each scenario part define quality and a level of influence on the system in the context of DIME. For instance, activities of informational and communicative parts can look like informational operations and strategic communication. To deal with three parts of scenario may require applying a set of different types of thinking that belong to conscious or unconscious.

A scenario can influence the system in positive and negative ways as well. The task is to recognize states of the environment and the system in order to anticipate the necessary changes. Influence of the competitor scenario can lead to change of the set of values. However, proposition of another set of values does not guarantee system effectiveness in a new environment due to misunderstanding of the system itself by those, who built the scenario or intentional destruction of the system to promote own interests.

Every action triggers a reaction or feedback that is critical for system development. There are reinforcing and balancing feedbacks. A system can have circles of causality – including actions, feedbacks and delays [18]. Change can develop the system through fight with archetypes. It reflects in delay in DM as system reaction because of archetypal nature of human thinking. A decision with a big delay may become irrelevant. Application of different types of thinking can help to decrease delay in DM.
A scenario can create certain conditions that regulate a proportion of conscious and unconscious. For instance, chaos can activate unconscious as irrational thinking in DM, that triggers, for instance, system archetypes. Proposing a relatively clear picture of the situation can trigger reflection as conscious to apply analytical thinking in DM. The sequence of events and their idea can launch archetypes working in a desired for a scenario manager way. Thus, managing scenario events can regulate thinking of scenario participants.

A scenario can create a complex picture of virtual or actual reality that is analyzed by conscious or analytical thinking through feedback. Reality can trigger unconscious (archetypes) in thinking and DM of any scenario players in a certain way. A virtual reality can be a way to launch archetypes to work. Creating reality, as reflection of conscious, can inform unconscious about launching certain archetypal activities. It means there is a possibility to influence group unconscious to manage the system. It can be used by in positive and negative ways as well. For instance, in PA it can generate required changes in order to adapt the system to a new environment in case of fear and possible resistance of the civil society.

As a PA tool, a scenario should be attractive for the system. Archetypal foundations of the scenario such as myths, beliefs, values, stories and culture can make it attractive because there is minimum risk from your own prospective. However, an attractive or archetypal scenario may not mean always useful. A fully archetypal constructed scenario can anchor the system and eliminate innovations and changes that can be critical in conditions of the complex and dynamic environment.

Attractors may have an archetypal origin that defines thinking. They can shift depending on states of the system and the environment (Keq). Under changeable conditions attractiveness can lose its priority. For instance, a structure, a job, a narrative or an image can become not attractive in new conditions.

To manage scenario influence is important. On one hand, to decrease scenario influence may require adding conscious, as a reflection, in thinking to “open eyes” on the reality to get a negative feedback. On the other hand, understanding system archetypes and use their positive feedback, as creativity and irrationality, can help to go out of the scenario and come into own desirable scenario. Positive feedback may create a disorder in order to build a new order to adapt the system to a new environment though visualization of the future.

The system can be placed into a real or virtual scenario. A virtual scenario can influence and manage thinking of own and opposing sides by changing a proportion of conscious and unconscious through regulation of Keq. Moreover, “A person, plunging into virtuality, adopts many of the characteristics laid down there, thereby obtaining information about behavior in new situations, and transforming himself” [19, p. 5].

“Virtuality is any promotion of a picture of the world into the cognitive space of individual or mass consciousness that is modeled according to the tasks” [19, p. 2 - 3]. Virtuality, as a visualized picture of reality might remind Durand’s “imaginer” that
can manage thinking in a certain way. D. Ariely suggests that “we look at our decisions in a relative way and compare them locally to the available alternative” [20, p. 20]. He uses terms “imprint,” “anchor,” and “arbitrary coherence,” that can have archetypal nature, to define influence the early price listening on readiness to pay. For example, a proposition to buy two cups of coffee with discount can be an example of influence on unconscious through conscious.

A game can have archetypal nature and be a part of PA process. If a proposed scenario coincides with a desired one for a person, he/she can start playing the game according to the scenario and make decisions in a direction desired for a scenario manager. It can be essential to conduct wargaming, improve courses of action in the planning process and manage an opposing side during the operation.

It is possible to suppose that virtual or real scenarios are created based on archetypes that force a scenario to work and be self-managed. To think to do it and respond to it may require understating a nature of archetypes in system development.

A virtual reality should be attractive for people to follow a proposed scenario. Human needs can be connected with attractors and archetypes in the context of “imaginer.” A person can think and act to satisfy own needs and feel her/himself as a part of the society.

A virtual scenario can create conditions in which PA can start working with mistakes in situational awareness and understanding, analysis and eventually in COA development. To maintain the system functional may require applying conscious in thinking to get real feedback. However, in conditions of virtual reality, feedback might be also virtual and wrong because elements of the system can work according to established rules. Application of different types of thinking can help to recognize fakes and deal with a virtual reality.

It is possible to consider PA effective when scenario application creates following conditions:

1) The system is balanced, therefore, functional and effective;
2) There is equilibrium between the system and the environment (no conflict and resistance to change);
3) Desired goals are achievable.

In the context of PA effectiveness if one of the conditions above is not satisfied under scenario influence it may mean: 1) a scenario is not real (virtual) and used by a scenario owner to get benefits; 2) PA is not organized properly to protect the system from negative scenario influence; 3) there are no SA, feedback (reflection) and, hence, SU; and 4) different types of thinking are not applied properly.

Effective PA considers:
1) defining a right proportion between conscious and unconscious in thinking to develop new system links by scenario application in PA;
2) developing or choosing a scenario that will establish conditions for proper thinking;
3) making a system “smart” like “a learning organization” [18, p. 3-4] that can recognize a level of equilibrium between the system and the environment (Keq).
which defines when and in which proportion to apply a combination of different types of thinking such as strategic, critical, creative, system, design thinking to change the system.

**Conclusions.** The study of archetypal nature of scenario helps to make PA effective in conditions of the complex and dynamic environment. Scenario application in PA can facilitate establishing a proper proportion of conscious and unconscious in thinking to make decisions that keeps the social system functional and competitive. Archetypal scenarios are attractive because they are developed based on archetypes, but not always useful to adapt the system to a new environment.

To use scenarios in PA and avoid influence of undesirable scenarios is critical to create conditions that make the social system “smart” like a learning organization that provides real feedback, situational awareness and implements changes in time through proper leadership, decentralization, shared responsibility, delegation of authority, risk taking in DM and creativity.

**References:**


Література:


