

HOW TO GOVERN THE CITY IN A COMPLEX REALITY?

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Abstract

In an article the authors try to find an answer on the question: how to efficiently govern a city in nowadays complex and multidimensional reality of social sciences. The solution is to create an “adaptive public administration”. It should have the ability to recognize the public needs and socioeconomic conditions, and to flexibly adjust the public policy to the complex situation, learning continuously from this process at the same time. It is time to finish with vertical logic of public administration. The priorities while dealing with public policy’s issues should focus on simplifying the public problem, and immediately after that the decision makers ought to re-composite in a new mode using a patchwork style of policy and management.

Keywords: adaptive public administration, deep complexity

Initial assumptions and thesis

Nowadays the words „creative” and „innovative” are used in many contexts and situations. The problem we diagnose states, that there are vast amount of research articles and thesis about creative and smart cities, but hardly anyone can say that idea itself has been successfully implemented. We can rather find some hallmarks that, if we analyze them together, show desired social construct – a creative and smart city. Those significant signs for all proponents of mentioned idea are inter alia Gay Index, Bohemian Index, representatives of creative class or revenues from creative industries. In our opinion all those indicators don’t describe a creative reality but more likely show rather a complexity of social, economic and political systems that we are dealing with in today world. The question that has to be asked by all interested in the studies on the cities is “how the city should be governed in a complex socio-economic reality” and “how the policy making should look like in order to find effective results among huge number of variables and alternative solutions”.

Our observations based on practical experiences from the NGO environment have brought one basic conclusion. All theories *a priori* and without deeper consideration assume, that each of the municipal actors – the authorities, public administration, the entrepreneurs, the citizens – are capable to adapt quickly to the constantly changing outside reality. Moreover, those actors in many analysis and research are not considered separately from each other because of the logic of operation contiguous to their activities. While politicians, entrepreneurs and citizens in order to function, they should demonstrate the creativity of goals and strategies. In the case of public administration it is impossible. Thus we put the thesis saying that, in order to implement the ideas of creative cities, an “adaptive public administration” should be created.

The theoretical considerations are very inviting and bring an intellectual satisfaction. Nevertheless we have to remember that every scientific theory should be empirically verified. Bearing in mind a very practical dimension of the municipal studies in our opinion every theoretical proposal should at least bring in the conceptions that are capable to be implemented by the local and regional authorities. We believe that theoreticians and practitioners operating in the public sphere are interested only in those concepts, which can

be used in practice, that can change a city environment in real manner. Thus in the forthcoming sections of the article we will analyze through the assumptions of three main theories of public administration in order to show that they don't respond to the complex reality of social, economic and political system management. In third section of the article we will present the organic conception that helps to embrace the complexity of all municipal organism. This will allow us to answer the question – why the theories on creative and intelligent cities are 'apactical'? In fourth section we will present our idea of "adaptive public administration" which should be a solution for all governing the cities interested in public policy making. The last section focuses on the presentation of the idea of *Creative Multilevel Hub* which is a practical explication of public administration activities that aim at quick and effective adaptation to constantly changing social environment around it.

The logic of public administration

The world is changing in a remarkable speed. So do the environment for public services and public administration. Since the end of the 19. century we have witnessed three revolutions (Szczerki, 2004: 282-317). A hundred years ago we could have seen a dawn of the traditional **Weberian public administration** (WPA), where the government was responsible for delivering all public services and where citizens were treated as supplicants. This paradigm has been reigning till the shift of the 70/80's, when a few Anglo-Saxon countries implemented the idea of **New Public Management** (NPM), where public administration is to some extent (vertically) marketized and people are considered to be customers (Grosse, 2011: 82-99; Gruening, 2001: 1-25). This new paradigm spread all over the world especially after the fall of Communism in the early 90's. However, in the last 20 years we have observed many market inconsistencies and failures so that now we can say: "Pure market doesn't work well" - the idea of almighty competition is not matchable with the idea of democracy. Because the democratic world believes in equity, the **Public Governance** (PG) has been introduced. Its main characteristic is based on cooperation between the authorities and citizens (Papaj, Czyż-Gwiazda & Lisiecka, 2011; Lee, 2003, May). One might advocates that it is simply return to the beginning of the Greek politics and Aristotelian republican virtues.

But it is not. We all live in the era of **deep complexity**. Before we explicate this term it is necessary to understand what is a complexity of system itself. Referring to the explanation of David Colander who adopts the definition of "complexity" proposed by economical behaviorist Herbert Simon: "Roughly by a complex system I mean one made up of a large number of parts that interact in a non-simple way. In such systems, the whole is more than the sum of the parts, not in an ultimate metaphysical sense, but in the important pragmatic sense that, given the properties of the parts and the laws of their interaction, it is not a trivial matter to infer the properties of the whole" (as cited in Colander et al., 2011: 359).

Beside the general definition of complexity David Colander distinguish also two other kinds of complexity: dynamic and computational. The latter one defines the system which is so complicated, by the presence of different actors and interconnections between them, that cannot be counted. Such system is unable to become formal. The idea of dynamic complexity, which according by David Colander is commonly used in economics, refers to the system that "(...) endogenously does not tend asymptotically to a fixed point, a limit cycle, or an explosion" (as cited in Colander et al., 2011: 360). According to Rosser and Horgan, cited by David Colander, dynamic complexity involves four approaches based on nonlinear dynamics, i.e. cybernetics, catastrophe theory, chaos theory, and 'small tent' (as cited in Colander et al., 2011: 361). The latter theory implies that in the society and economy we can find many small groups (the tents) which consists of relatively

homogenous actors. This ought to be a respond to the problem caused by the coordination of small tents acting inside a system characterized by the ‘big tent’.

Summing up, we can describe the term ‘complexity’ after David Colander as a combination of six characteristics (Colander et al., 2011: 361):

- (1) dispersed interaction among heterogeneous agents;
- (2) no global controller in the economy;
- (3) cross-cutting hierarchies with tangled interactions;
- (4) continual adaptation and learning by evolving agents;
- (5) perpetual novelty;
- (6) out-of-equilibrium dynamics with no presumption of optimality.

Although in the traditional approach policy makers found really complex issues, they were reducible due to the low level of interactions between stakeholders and interconnections between them and the challenges. Currently the number of interconnections between different elements of one single policy, i.e. stakeholders, challenges, environment, etc., is getting higher and higher. As a result, policy problems can no longer be reduced to elementary issues – we are facing growing irreducibility, both in the cognitive as well as in the practical dimension. In other words, the problem is so complex that it cannot be solved in the satisfyingly way (practical complexity) and cannot be structured cognitively (cognitive complexity).

Prof. Robert Delorme proposed eight elementary dimensions of complexity. Considering different objects, less or more complex, Delorme tried to present the path from the object to the situation where it plays some role.

1 Object	2 Purpose	3 Operator	4 Field	5 Level of aspiration	6 Cognitive/ substantial reducibility	7 Practical/ procedural reducibility	8 Character of situation
Brain of a sheep	Description	Butcher	Butchery	Given by 4	+	+	NCX (non-complex)
	Description	Neurophysiologist	Neurophysiology	Given by 4 but variable according to level of difficulty addressed	+ (if 5 low) - (if 5 high)	+ + -	NCX NCX CX (complex)
High-risk technology and high safety systems	Production and safety	Management Front-line operators	Industry Transport	No major accident	-	+ -	NCX CX
Precautionary principle	Production and safety	Public authorities	Environment Public health Public policy	No major accident	-	+ -	NCX CX
Public expenditure and the role of the state in the economy (RISE*)	Description Understanding Explanation Representation	Economist	Political economy Economics	Meeting scientific standards given by 4:	+	+	NCX
				1) Through doing away with RISE 2) Through not doing away with RISE			

* Regime of interaction between the state and the economy. Source: (Delorme, 2010: 150)

The Delorme's table presents only few examples but enables us to grasp the process of defining the complexity of the situation. However, it does not recognize however the problem of actors' rationality. The problem which the modern social sciences have to face is the fact that there are numerous actors which behavior can no longer be described as rational. In fact, we are facing **bounded rationality** that is dependent on many **psychological, sociological, political, historical and economic** factors. Moreover, we are observing the growing number of interactions between single agents as well as temporary and non-temporary groups of agents. As a result the interactions between single agents and transient group of players are unpredictable which leads to the appearance of the **emergent effects**. Moreover, the reality is affected by **contingency**.

All major systems and subsystems responsible for organizing a political life and governing a public sphere come to the point, where on the one side they are encourage to cope with the deep complexity and on the other side they are forced to stabilize themselves. This place is called "the edge of chaos" (Cleveland, 2005, November: 3-4; Waldrop, 1992). The system standing at "the edge of chaos" should be arranged in such way that all their components are robustly placed and are not overcome by contingency, unpredictability and differentiated activities of other actors and their decisions. Evolution of the systems to "the edge of chaos" should provide them a state of dynamic stability, which allows to be more adaptive, spontaneous and highly responsive to the turmoil within and outside the system. If the systems are not able to achieve such form, the result is a static equilibrium which eventually leads to the disturbance of homeostasis and the entropy.

Interesting remarks for decision makers, which refer to the arrangement of the systems in such way, that helps to avoid their disintegration, are brought by the complexity theory. It presents the concept of complex adaptive systems, which "(...) involve a great numbers of parts undergoing kaleidoscopic array of simultaneous interactions" (Holland, 1992, Winter: 19). This means that system embrace a vast number of autonomous and heterogeneous actors that freely make any number of choices. Despite individual decisions actors of the complex adaptive system share common rules of decision-making which help to connect the structure without any centralized control authorities (Cleveland, 1994, March: 1-2).

What makes such systems adaptive refers to the three specific features i.e. evolution, aggregate behavior and anticipation. First characteristic bases on the general Darwinian idea that individuals adapt to the changing environment by development of those features that allow to successfully survive other of their kind. Second characteristic – aggregate behavior - is not a simple sum of actions but an ability that emerges from individual actions which help to distinguish one system from another. An anticipation finally is contribute to the process of adaptation to the changing circumstances (Holland, 1992, Winter: 19-20).

Above description of the complex adaptive systems suggests that most of the systems nowadays are complex ones. This means that a public administration can't escape from the challenges brought by them. Place where the "fourth revolution" of the public administration should occur is a city and its local government.

The complexity of the city

Many times the city or the metropolis can be described as one of the knots in the network consisted of other urban areas. The city as well can be explained also in the terms of "creative" or "smart", which should highlights one of the features that influences other municipal spheres. Finally the city can be seen in technical terms, which is typical for town-planners observing the cities through their functions. In this perspective we are

talking about internally differentiated metropolitan area consisted of the core and suburban zone.

Above theories evolve from one common point, assuming that surrounding environment consists of constantly changing conditions and relations. Thus, the system and its subjects have to present a high level of adaptability. On the basis of mentioned theories we can state, that a city is a complex, multidimensional and differentiated organism. A crucial challenge in this case is to conduct integrated public policies in everyday management and development of a city. Remaining by the metaphor of the organism every actor and element building a city have to possess a specific role, which define a need of their existence (or many authors referring to the city as organism see Samaniego & Moses, 2008, Summer: 23-23). Institutions and social groups are the organs, that run the life of a city. The citizens and their activities create a bloodstream. Thanks to the people the capital and ideas are transfer from the one point to another. Like the red blood cells, which transport the oxygen and nutrients. They are causing the institutions work and gather the social groups around problem in the city space. The municipal authority is a brain that determines the action of other parts of an organism. So what is a public administration in this story? It is a nervous system. Thanks to it the municipal authority can transfer commands to other actors in a city. Its efficient work maintains coordinated activity of the other organs inside the municipal body. Like it is in the case of human body the paralysis of the nervous system many organs work involuntarily and the body itself can move, the same situation we can observe in the case of the city. When the public administration functions improperly and has low degree of adaptability then we are witnesses of the entropy of the city organism.

How to create an „adaptive public administration”?

Therefore, the key issue for public administration in this time is not the choice of the most efficient way to provide public services, but **the ability to recognize** the public needs and socioeconomic conditions, and to **flexibly adjust** the public policy to the complex situation. The public administration has to **learn continuously** and **should be no more vertically divided**, because naturally it wants to simplify the reality within its vertical departments - education, health, transportation, public security, culture, etc. Due to the existence of deep complexity, what we can and should do while dealing with public policy's issues is to simplify the problem in the first step, but in the second one try to combine it in a new mode. In other words, the decision makers ought to defragment the public problem, but only for its immediate re-composition. The public administration should work in such a **patchwork style** in order to avoid giving easy, but incorrect answers. For example, if there are a lot of homeless people in our part of the city, the easy answer is to build there a reception centre. In the new approach, the city authorities before they undertake actions, they will ask: Why there is a lot of homeless people? Why do they live in this part of the city? Why do they resign from living in other parts? What problems do they generate in this area? What are other problems of this area? How these people can be “used” (in the positive sense) in the development of this area? etc. By answering these questions the public administration together with the local community is able not only to solve this particular problem, but to create the coherent development plan for this area.

Accordingly to the above-mentioned evolution, we have to **re-conceptualize the structure of public administration** and public policy programs, not only at the national, but also international level. This is especially viable for European Union which operates somewhere between those two levels. There are institutions, such as Council of European Union, that act within the classic intergovernmental logic. But at the same moment there are European Parliament and European Commission that cannot be named as intergovernmental institutions - they are truly international and work in the logic of the

national state. From this perspective, there is probably no more complex structure than EU and therefore the common European public policy might be a leader of change.

As a matter of fact, EU support initiatives already follow it - let remind us the Framework Programme for Research and Innovation that crosses the vertical borderline between the academic and business sector. This programme works as an umbrella for dozens of multidimensional projects that undertake various actions. So should the public administration - it should **create a pace for horizontal cooperation** aimed to solve complex problems. We do not need administrative clerks that decide whether to deliver public services through the public sector (as in the Weberian style) or private sector (as in the NPM). Moreover, we do not need administrative clerks that go under the water of social consultations (as in the PG). Who we need are responsible and politically legitimate project managers that will be able to prepare a deep, advanced diagnosis of the problems and to make flexible adjustments of undertaken actions, coming from all three paradigms.

Nevertheless, due to the existing vertical division, the public administration of most EU member state (and other countries as well) is not working in such a project style and therefore will not be capable to adopt this new model of support on the one hand, and on the other to respond to the emerging issues, unless we restructure it into **a hybrid model, working concurrently vertically and horizontally**. The simple vertical model of public-private partnership is no longer sufficient.

Above demands are simple to understand when we speak theoretically. In order to put theory into a practice there has to occur a change in thinking of main players that create the public administrations in a given country. Thus a thought experiment is a good method to introduce new terms and categories to the social consciousness.

According to the previous assumptions the public administration works usually in a sectorial (one dimension) and vertical logic of intervention. In practice we can observe the implementation of different public policies which are separately programmed and realized by singular ministry, agency or department in the city council. Hardly ever those policies can be characterized as synergic, sequential and reciprocal. Unusual dynamic and transformation of our social reality and institutions²⁰ demand more innovative approach to the public policies and development. The latter one won't occur if the public intervention is not going to be adaptive and integrated referring to the instruments used by authorities.

In order to activate mentioned potential of public policies, it is necessary to think about them in the categories of nodes. What does it mean to the city, which can be the subject of the public policies' intervention? The idea of nodes allows us to find more than conventional ways to develop every aspect of cities' life. In order to depict this paradigm we can't avoid to understand what is a node itself. The node is a place, where from different directions coincide "the bands" of social and economical problems together with "the bands" of public policies' intervention. Depending on how those "bands" will be bounded, a particular node will have different shape and different utility. A good metaphor of a nodes in public administration and policies is a main bus and train station. This place in every big city integrate in the supra-local and supra-regional scale, most of the public transportation.

In consequence, the idea of nodes, as well as more prosaic relations occurring in the cities between the public policies, authorities and residents should be transfer into adequate and effective management methods.

²⁰ In this article we understand the institutions according to the new institutionalism paradigm. The institutions are not only the formal and legal administrative entities but also procedures, habits and relations, both formal and informal, that are rooted in a culture and traditions of a given society.

Creative Multilevel Hub as an explication of Public-private-social partnership

The new structure of public administration that could on the one hand represents the citizens, and on the other flexibly adjusts to complex problems through **hubs** that connect horizontally different vertical sectors/departments and already existing networks. What should be the framework conditions for starting a hub? In order to achieve public-private-social partnership the emphasis have to be put on providing possibly the most unbounded working environment. Limitless refers either to formal rules of running the company or NGO or to the spatial dimension i.e. inspiring open spaces combining different functions like cafeteria and newspaper kiosk or restaurant/pub with library. Beside open and common spaces there should be also separate part which provides a possibility for working in peace and quiet. Access to this part should be given for every interested company and both formal and informal social initiatives. The hub should be a combination of today co-working centers and technological or entrepreneurship incubators.

The aim of many hubs rooted in different parts of the city should be multi-dimensionally focused on the growth of the city. The hubs are the keystones binding in one place the streams of people, institutions and ideas that come from different levels of the city reality. Thanks to their potential the hubs can be used by the public administration as training zone for diagnosing the broader reasons of the problem (like in the case of homeless people in one part of the city). The hubs can be used also for searching simple and cheap solutions for solving the problem or implementing a given public policy. An advantage of this mechanism is that it is not a top-down order of and public administration but commonly developed solution in public-private-social partnership.

Conclusions

We have tried, through above considerations, answer one very important question: how the city should be governed in a complex socio-economic reality? The answer for this was closed in a thesis saying that and “adaptive public administration” should be created. Nowadays a classical theoretical approaches to the mechanisms of the public administration are not sufficient. The assumptions of Weberian public administration, New Public Management and Public Governance stopped to become matchable to the challenges of the constantly evolving society. That is why we proposed that, firstly, we have to understand the social reality itself. In our opinion it can be described in a good manner by the idea of deep complexity. But it still requires to find a solution to the new problems it brings. What if the actors of modern social reality behave in such a way that they are no longer rational? What to do in a situation when, psychological, sociological, political, historical and economic factors impact the bounded rationality of agents? How to cope with the unpredictable effects of the growing number of interactions between single agents as well as temporary and non-temporary groups of agents?

The theoretical considerations on the consequences and solution are intellectually very tempting. But our ambition was to propose a theoretical idea of a possible solution which is deeply connected to the everyday reality of a public administration on the municipal level. Thus finally we have come up to the concept of a hybrid model of public administration, which through the idea of nodes connects the vertical and horizontal logic its work. A practical explication of above idea of is a Creative Multilevel Hub, which is a real project ready to implement in every city and in every latitude in the world.

Our idea of municipal management development is simultaneously visionary and expedience. Abandoning the sectorial or vertical approach to the social reality leads to the situation when the decision process will be constantly based on asking the question about the city (how to do?) and not on restrain (this can't be done) and looking for the limits, which do not allow undertaking necessary actions.

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