

Chapter 6

Complexity Theory in Public Administration and Metagovernance

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Abstract The notion of complexity has been used as unique phenomenon that attempts to define social systems in last 20 years. Societies can be considered natural complex system that featured by multi-actors and nonlinearity, ability to adapt local conditions, self-organizing and coevolution. Through this chapter, three features of complexity theory are going to be used to analyze its application in public administration. In other words, today societies are determined with multi actors, nonlinear relationship of actors, self-organizing and co-evolution. The next part is going to give a brief discussion about relations between civil society and state because civil society as a both actor and independent system that cover huge number of individual actors from complexity theory perspective. The last but not least, how governance perception is changed and then answer of can metagovernance considered as a new way to govern complex societies is seeking. So, through this chapter there is an attempt to understand dynamics of complex societies and its implementation on public administration and civil society and state relationship from eyes of complexity theory and last part would discuss metagovernance as a response to effects of complex societies on public administration.

Keywords Complexity theory · Governance · Self-organizing · Metagovernance · Civil society

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6.1 Introduction

We are all unique. Although carrying similar codes of DNA, these codes are not the same featuring an individual design. Every one of us is part of a greater system, but also represent an independent system. As an agent, everyone is completely independent, yet they are definitely interdependent from and interconnected to each other. Therefore, every agent has a complex notion of self-being and existence through varying roles whereas interdependence is the norm of communal life. In a world where our affiliated communities increase in numbers as our roles vary within every different community, we belong to given circumstances.

How governance model can be sustainable in such complex societies? Throughout the history, public administration has faced dramatic changes. Until 1950s, public administration approach mostly based on hierarchical models of governance. Then the world started to experience market-based models of governance in 1970s. In 1990s and onwards the network governance model became more and more illuminator. In 2000s three models of governance led to two main problems in public administration. First, these three governance models became contradictory with each other. As a second problem, none of them could meet the needs of complex social systems and its implementation on public administration. Patterns of shifting public administration models are actually embedded in the rapid intensifying complex structure of society.

Complexity theory definitely brings a new insight to both society and public administration. Society as natural complex system appeared with interconnected multi actors in each level of action. That's why throughout this chapter, there will be a brief summary of complexity theory and its application in public administration. During the last part we shall be delivering upon how complex the relations between civil society and the state could be through the lens of complexity theory and where metagovernance fits in understanding the modern challenges to the public administration.

6.2 Complexity Theory

The early second half of the twentieth century has been period of the new achievements for development of post-positivist approaches in social sciences. Starting with 90s, not only trends of natural science changed but also its implementation on social science became controversial. End of the Cold war and new dynamics in international economy fostered emergence of new paradigms on public administration because the new world would be determined by multi actors and multi-level governing which characterized by non-linearity, unpredictability and flux. "The new "nonlinear paradigm" has important implications for public policy (Kiel qtd in Morçöl 2005, 297). Among developments, the notion of "complex dynamic systems" is taken from biology that is one of the main pillars in the formation of complexity theory (Klinj 2008; Teisman and Klinj 2008).

Although complexity theory has been widely used in biology rather than social sciences, since society has been considered as complex phenomenon after 20th century, complexity theory has gained importance in public administration too. There are both internal and external resources of intensification of complexities in society such as increasing of multi identities, redefinition of political entities, fuzzy boundaries between agents and erosion of national sovereignty.

“Societal complexity that flows from growing functional differentiation of institutional orders within an increasingly global society with all that this implies for the widening and deepening of systemic interdependencies across various social, spatial, and temporal horizons of action” (Jessop 1997)

These new patterns of societies have challenged limitations of rationality based classic approaches to public administration, so complexity theory and its implementation on public administration offer a new way to understand complex nature of societies and public administration. To understand complexity theory and its application on public administration, general framework and characteristics of complexity theory can be summarized as follows;

The main characteristics of complexity theory can be summarized as follows; (a) a large number of similar, independent and interdependent agents; (b) constant responses from these agents to other agents; (c) adaptiveness to new situations in order to survive; (d) self-organization, in which order in the system forms spontaneously; (e) local rules that apply to each agent; and (f) Coevolution (Valle 2000).

So, complex systems are ‘composed from numerous interacting identities (actors), each of actors behave in its local context according to some rules, laws or dynamics (Maguire and McKelvey 1999). When each actor responds its local conditions, it also changes the whole system so in which millions of agents can easily shape the whole system. It makes the system self-organized and new patterns of the system cannot be understood by influence of each agent. It leads to not only self-organizing but also unpredictability. Equilibrium of systems—or well-known stability can be changed by unexpected events. In that point, both positive and negative feedback mechanism systems start to work. Positive feedback drives changing while negative feedback (balancing and moderating) maintains the stability of the system. “...the idea that complex social systems can work both with positive and negative feedback” (Erçetin et al. 2013). For example, a central heating system is where the thermostat registers a drop of temperature and activates an adjustment mechanism, which restores the temperature again. However, in social systems there are fewer mechanical relations because a social system has more complex social relations and interactions. That’s why within such diversity the system can result in a locked position.

Sure, it is not easy to introduce all features of complexity theory into public administration but this chapter is going to focus on three of them which are multi-actors and non-linear dynamics, self-organizing, and co-evolution. Besides, there will be short discussion on civil society and state relationship from complexity theory perspective.

6.2.1 Multi-Actors and Non-linearity

Not only natural systems but also social systems are naturally complex and non-linear. Cilliers suggests that the number of humans involved in social relations is extremely large in a setting in which human interaction is realized through dynamic exchange of information with different patterns of interactions (1998). These social relations are composed of huge number of individuals that make social systems dynamic and unpredictable. In other words, human as an agent is both part of this system and determinant of it, so it is impossible to understand such a complex society and its interactions with rational based decision making approaches. Lindblom's first workings diagnosed the limitations of rational based decision-making process which does not include comprehensive approaches. "Assuming that organizations were unified, rational actors" (Braybrooke and Lindblom 1963). However, scholars suggest that public administration is more than state centric that includes unified and rational actors. Today, with the effect of globalization and reemergence of international systems brought undeniable diversity of actors. Public policy implementation started to be a complex notion and multi-actor approach was introduced (Pressman and Wildavsky 1973). All actors have their own network and there are interrelations of networks within public administration. This feature makes decision-making process more difficult. Any incremental changes in actors would result in changes in the whole system. Also, these incremental changes of actors would cause instability where negative feedback would not work and the system could always be in a deadlock situation. "... The cumulative effects of various small steps could, at some point, reach the moment where the system would just about to lose its stability (or its seemingly stable position)" (Klinj 305) It is also well known as the edge of chaos. It directly emphasizes dynamic structure of public policy making and pushes to focus on a new way of governance.

Secondly, a linear relationship means expected results paralleling to how much time and energy is put as an effort. However, in a nonlinear relationship, the rewards are unexpected to put an effort. Actually, it is hard to find a linear relationship in real life because almost all interactions can be described as nonlinear relationship. The feature of nonlinearity is directly interconnected with multi-actors characteristic of complex systems. In the definition of complex system; it is emphasized that "The interactions themselves have a number of important characteristics. First, the interactions are nonlinear" (Richardson 2006) As well as multi-actors characteristic of complex system, nonlinearity result in unpredictability. It means that the decision making process cannot be managed by simple way of governance. "...dynamical, and nonlinear forces existing in the relationships among social actors that are not easily explained by simple motivations (for gain or the avoidance of loss), and that cannot be mapped in the long run as more than probabilities" (Lewin 1997). In other words, governance of complex system tends to be more risky and complicated and can not be analyzed by state centric approach anymore.

6.2.2 Self-organization

Self-organization means complex system can evolve itself to a higher level of complexity. According to Kauffman, biological systems are typically in non-equilibrium states, and they have a tendency to evolve to the “edge of chaos” (1993). It is completely internally driven process that does not need any external forces to transform themselves. It also means that each actor has its own dynamics and these dynamics have capacity to transform themselves and the system as a whole. The new structure of system arises from actors’ dynamism. This process (self-organizing) can occur many times by responses of actors to given conditions, repeated in the system. The most well-known example of self-organizing is “homeostasis” which is the self-maintaining nature system from the cell to the whole organism. Self-organizing has been one of the reasons why systems succeed in adapting to new landscapes. Self-organization and its application on public administration is one of the most interesting ones because it depends on rational decision making theory. Actors are expected to be in public administration always behave within limit of laws. However, as Teisman and Klinj mention actors in public administration not always behave according to laws or principles but have self-organizing capacity (2008). It refers that decisions of actors should be analyzed in course of their dynamism and self-organization capacity.

6.2.3 Co-evolutionary

Co-evolutionary means ‘the evolution of one domain or entity (that) is partially dependent on the evolution of other related domains or entities, or one domain or entity changes in the context of the other(s)’ (Mitleton-Kelly 2003). In this definition, entities reflect individuals and organization as an actor; it is much related to the level where actors operate. Morçöl defines (2012) the term “an emergent and self-organizational complex system. The relations among the elements (actors) of this complex system are nonlinear and its relations with its elements and with other systems are co evolutionary”. In detail, we can interpret notion of “co-evolutionary” in public administration in two ways. First, subsystems-networks can evolve with other subsystems. Second, while a decision making occurs within one agents’ network, it can also be another decision in another network, so, decision making can co evolve with decision making in another network. Kaufmann exemplifies the term of co-evolutionary with prisoner dilemma where lives of two participants are both independent but interdependent. The next part will be about analysis of civil society as an agent and state relationship in public administration under the light of complexity theory.

6.3 Civil Society and State Relations with Complexity Theory

As we mentioned today, public administration cannot be perceived as rational decision making boundaries which based on top-down, hierarchical decision making process. New century brought its new concepts to public administration too. Complexity theory is not a new phenomenon but completely challenging and new in public administration literature. Complexity theory reshapes public administration with multi-actors & nonlinearity relationship, self-organization and co-evolution features. From this perspective, we will analyze civil society and state relations as an actor.

Civil society and state relationship has always been questionable and suspicious. There is no doubt, definition of civil society and its relationship has been changed. Then we will give an analysis of civil society and state relations with complexity theory. In the early 20th century, Gramsci who had intensive work on civil society and state relationship, defined civil society as a part of political society of hegemony, and it had been used to strengthen hegemony. He suggests that state is the sum of political society and civil society where both parts are providers of hegemony (Gramsci 1971). Furthermore, Gramsci suggests that through civil society, hegemony can get consensus of people by mass media, churches and associations that called “manufactured consensus”. Despite his position on civil society and state relationship, he also claims that civil society is also an opposing power to hegemony but it is embedded in cultural discourses (Heywood 1997).

On the other hand, Habermas suggests a completely different definition in the late 20th century. “Civil society is made up of more or less spontaneously created associations, organizations and movements, which find, take up, condense and amplify the resonance of social problems in private life, and pass it on to the political realm or public sphere” (Habermas qtd in Nuscheller 2003). Public sphere is in civil society and it is a kind of platform for individuals to discuss mutual issues and concerns so there is a kind of communication process among individuals. We can consider understanding of civil society by Habermas is more positive than Gramscis’. In contrast to Gramsci, Habermas claims that civil society is source of criticism towards state in terms of civil society and state relations; he suggests that civil society is frequently seen as a focal for limiting the power of the state.

Differences between Gramsci and Habermas reveal that almost within a hundred years, the perception of civil society and its relationship with state have completely changed and lastly we are going to analyze the relationship with complexity theory. During this analyze, we will reconsider civil society from ‘associational’ view common today, which defines civil society as a ‘third sector’ compose from voluntary organizations and NGOs. “...as it develops, civil society will consist of a range of local groups, specialized organizations and links between them to amplify the corrective voices of civil society as a partner in governance and the market” (Connor qtd in Ghaus-Pasha 2005).

90s brought an important space of number of actors in civil societies that were increasing in many countries especially focusing on democratization. Not only

political atmosphere but also international economy fostered increasing number and role of actors in civil society. It also facilitates effectiveness of civil society as an actor in public administration. From complexity perspective, civil society is both an actor in complex public administration and represents independent system itself. In other words, civil society and its structure also represent a complex system itself. Civil society has self organization capacity, and consists of small units of actors-individuals in local societies which have its own dynamics. Therefore, existence of civil society depends upon a complex equilibrium among diverse groups and associations. Furthermore, civil society organizations are co-evolutionary with their international and transnational network. Also, different actors from socio-economic groups can co-evolve in civil society that makes it unique among other agents in public administration. Also, today civil societies have transnational networks that provide its effectiveness in public administration. In case of civil society and state relationship, complexity theory gives a new insight. Because of civil society as both one of actors in public administration and complex system itself, it has a different relationship with state. So, civil society would have role as neither Gramsci's nor Habermas suggested. This has more broad and complex relations as naturally emerged. For example, democratization efforts of any country, especially the quest for a new Constitution should therefore continue, giving the ability to discuss and debate all public policy matters and empathize with each other (and with the State) for all citizens. The end-result, a brand new constitution, is of course a very important target to achieve. Yet, the process itself creates new space for all kinds of participatory democratic discussion models within civil society.

Last but not least, we are going to discuss how governance approaches transformed shortly and then metagovernance as a form of governing of complexity public administration in next parts.

6.4 From Government to Governance—A New Age

In the two parts, we mentioned that due to economic and political patterns since 20th century resulted in intensive complex societies that encourage scholars to revisit public administration. Complexity theory directs attention from government to governance. As beginning, government is body of structure of public institutions. The state is run by a government that has a consensus from citizens to run the affairs of the state. On the other hand, term of governance refers activities of government. In the last 20 years, the notion of governance has got into literature of public administration. There are numerous definitions of governance by scholars. Fredrickson and Smith to suggest that governance has become “a virtual synonym for public management and public administration” (2003). On the other hand, Kooiman defines governance as “the emerging pattern arising from governing” (1993), and Lowndes and Skelcher add an actor's perspective to their governance definition. In addition, Rhodes suggests six different approaches of governance from governance as corporate governance to self-organizing networks (1997). Even Farazmand

furthered the idea of governance with international dimension. So, all these different approaches to governance show that meaning of governance is both multidimensional and open to be evolved.

“...governance is more than ‘what governments do to get their jobs done’: the term governance refers to the relations between public-sector actors and societal actors when addressing public issues” (Meuleman 2008). That’s why governance modes and approaches should be revisited. It is hard to say only one mode of governance can be compatible with new complex public administration. Although it is obvious that different modes of governance have their own unique failure by unpredicted complexity and their implementations, there are three main time periods of how theories of governance failed. The first wave was in 70s; there were series of governing of welfare states and it led to development of idea of pluralism. Throughout 80s and 90s, public sector couldn’t be the main stakeholder anymore. They started to describe state as complex body composed of institutions that exercise its power through network. In other words, state as a main agent argument lost its importance. In 2000s, the main arguments became eminent which are new models of fragmented state exercise power within formal and informal networks and civil society and state relationship has fuzzy and blurred boundaries. While the transformation of government to governance emerged naturally, new patterns of “governance” require both theoretical and practical approaches. New governance should focus on networking and comprehensive mode of all actors with fragmented and differentiated political system. Then, how we can achieve sustainable governance? or How ideal governance should be? became the main question of new researches about governance.

6.5 Metagovernance-“Governance of Governance”

Metagovernance can be considered an answer to those questions. Therefore the utilization of all kinds of governance models at all levels/orders including the metagovernance is overarching. Literally, “meta” comes from Greek word means after or beyond. In Jessop’s definition, “metagovernance involves the organization of the conditions for governance in its broadest sense”, and its “umbrella mode” is “managing the complexity, plurality, and tangled hierarchies found in prevailing modes of co-ordination”, so metagovernance puts itself beyond all modes of governance. Indeed, it concerns “the judicious mixing of market, hierarchy, and networks to achieve the best possible outcomes from the viewpoint of those engaged in meta-governance”. Not only Jessop but also some other scholars define metagovernance. Kooiman defines metagovernance as a third-order governance invoking normative ideals in the governing of institutional systems of governance (2003). On the other hand, Meulaman suggests that metagovernance is a means by which some degree of coordinated governance is produced, by designing and managing sound combinations of hierarchical, market and network governance (2009).

Not only definitions of metagovernance, but also practical dimension of metagovernance questionable. As mentioned, complexity theory gives a new insight to public administration and governance. As Jessop defines metagovernance as governance of governance should be beyond classical practice of governance modes. Characteristics of complexity theory and metagovernance are compatible and complimentary to each other. Jessop claims that metagovernance is a ‘containing process’ shoulder by the state but tends to failure. On the other hand, Bell and Hindmoor suggests effectiveness in metagovernance practice by emphasising the extent of resources and capacities still at the disposal of states (2009). In short, metagovernance should compass both analytical networking with all actors and have social and political identity. That’s why; metagovernance can be achieved through three ways;

- (1) be inclusive of multi-actor structure
- (2) to provide but non intervene to self-organizing and coevolution
- (3) to construct social and political identity.

Firstly, multi-actors and nonlinearity are two of the characteristics of complex system. As mentioned in the beginning, from individuals to civil society organizations, small units of network compose multi-actor structure of society. Multi-actors would lead to social and institutional interrelations and bigger systems. Despite classical modes of governance that give weight to state and market actors, metagovernance should be inclusive and broad. In other words, metagovernance should consider dynamics of multi-actor in governance process.

Secondly, metagovernance would provide but not intervene in the self-organization capacity of actors. As discussed, each actor has potential of self-organization. During self-organization process, the system would evolve to new one. In other words, self-organization capacity of each actor implements opportunities for system. Furthermore, related with providing self-organizing also would have positive effects on coevolution because consequences of self-organization of any actor would affect other actors and system. Due to this process, the system would experience action learning of coevolution. In such a complex system, intervention to self organization and co evolution of actors can lock the whole system and it would result in failure. Although metagovernance mechanisms should facilitate self organization capacity and coevolution of actors, it is impossible to underestimate this process completely because of this metagovernance should also include construction of social and political identity.

Thirdly, metagovernance cannot be only related with governing of networks or multi actors, it should cover social dimension of this process too. Within such a complex system, common social and political identity can be considered a “constructive element”. This dimension of metagovernance depends on social constructivism approach which suggests that identities form interest and it forms behavior actors. Identity construction would have an impact indirectly on dynamics of actors and self-organization capacity in long term and then it will also determine the destiny of the system. So, construction of social and political identity would have

long term effects on actors and system itself. “Thus, they stress that governance can be exercised efficiently through the construction of social and political meaning and identity” (Sørensen 2006).

6.6 Conclusion

State centric, rational based theories have been the center of theoretical discussions in public administration. What is modern governance? or Is sustainable governance possible? Answers of these questions can be found in society. Dynamics of society have been evolved in the 21st century. There are many external and internal dynamits that triggered new and unique features of society such as globalization, technological developments and liberalization of ideas. It is hard to confine and draw boundaries to new features of society but we can say that society is nested with network compose from relations of multi-actors.

Complexity theory is an alternative way to understand and analyze new society. It is generally used in biology however it has been transferred to social sciences to define and naturally complex social systems. Main features of complexity theory are multi-actors, nonlinear relationship, adaptiveness to conditions, self-organizing and coevolution. This chapter would limit analyzing of public administration with complexity theory with three of these features, which are multi-actors and non-linearity, self-organizing and co-evolution. Civil society is not only one of the actors in the greater system but also it also represent independent complex system that's why civil society and state relationship is revisited from complexity theory perspective. Civil society and its meanings changed in 21st century. It became more inclusive and strengthened its power in decision making process even it started to be called as third sector in public administration. It is remarkable development of effectiveness of individual actors who has capacity of self-organizing and coevolution with other actors. In other words, complexity theory implements more effective and multidimensional influence of civil society in this relationship.

As expected, all new patterns pushed us to revisit government and modes of governance. Governance theories are generally focus on three main modes of governance hierarchical, market and network. Nevertheless, all modes of governance experienced its failure. It debunks a demand for combination of these three modes of governance and also broader way of governance to meet challenge of complex societies. That's why Jessop and other scholars define metagovernance as “governance of governance” which governing complexities, plurality and hierarchies within networks. Basically, metagovernance and its scope seem highly compatible with characteristics of complexity theory, so, how metagovernance can be exercised in real life became important question. Metagovernance can be realized in three ways; (a) be inclusive to multi actors structure (b) to provide but non-intervene to self-organizing and coevolution c)to construct social and political identity. The approach to metagovernance as “umbrella mode”, which emphasize covering all actors in all level, is directly fit into inclusiveness of metagovernance.

Secondly, self-organizing and coevolution ability of actors should be provided but there should be no direct intervention to internal dynamics of each actor however it is impossible to ignore all implementations of self-organizing and coevolution of actors. That's why lastly, construction of social and political identity is a requirement for social dimension of metagovernance. It provides to manage multi actors and nonlinearity characteristics of system.

To sum up, throughout this chapter, we attempt to give an approach that combines complexity theory and metagovernance. It is not completely end-result chapter but it can be considered as a skeleton of two new phenomenons how they coevolve with each other in public administration. While our complex societies transform themselves, seeking of sustainable governance model would be continued.

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