From Control to Neurocoordination: The Transformation of Public Governance Logic in the Context of Cognitive Complexity

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Abstract.
The relevance of this study stems from the transformation of the operating conditions of modern public governance in the context of digitalization, information overload, and the growing cognitive complexity of the social environment. The classical industrial model of governance, based on normativity, hierarchy, and control, is gradually losing its effectiveness in conditions of high uncertainty, accelerated communication processes, and fragmented interpretations. Increased regulation, hyper-accountability, and administrative pressure lead to a decrease in the adaptability of systems, an increase in cognitive overload, intensified decision paralysis, and the formation of defensive models of organizational behavior.

The main body of the text is devoted to an analysis of the transition from the industrial model of control to the neuro-coordination model of public governance. Public governance is viewed not only as an institutional regulatory mechanism but also as a process of cognitive, emotional, and semantic coordination of collective experience. Particular attention is paid to the phenomenon of the crisis of trust as a crisis of neurosocial coordination, in which a gap emerges between formal institutions and the collective perception of social reality. The logic of slime mold collective behavior is used as a model of distributed coordination, demonstrating the possibility of effective adaptation of a complex system without a rigid centralized control center.

The results of the study consist in the development of a model of the cognitive architecture of collective experience, including the processes of perception of environmental signals, interpretation, emotional synchronization, formation of a vision of the future, coordination of actions, and adaptation. A generalized formula for the cognitive architecture of society is proposed as a framework tool for diagnosing governance crises, evaluating reforms, analyzing information policy, and designing neuro-coordination models of the government. The main threats to the cognitive cohesion of society are also systematized, and mechanisms for exiting problematic areas of governance are proposed.

Conclusions. It is substantiated that the stability of modern social systems will be determined not exclusively by the rigidity of administrative control, but by the ability to create a space of collective understanding, trust, emotional synchronization, and a shared vision of the future. The conclusion is drawn regarding the need to transition from information governance to the governance of the cognitive and semantic environment, where the government's key resource becomes the ability to maintain collective connectedness, self-organization, and adaptive coordination of society under conditions of high uncertainty.

Keywords: public governance, neuromanagement, cognitive architecture, neurocoordination, information overload, slime mold, collective coordination

Від контролю до нейрокоординації: трансформація логіки публічного управління в умовах когнітивної складності

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Анотація.
Актуальність дослідження зумовлена трансформацією умов функціонування сучасного публічного управління в контексті цифровізації, інформаційного перенасичення та зростання когнітивної складності соціального середовища. Класична індустріальна модель управління, заснована на нормативності, ієрархії та контролі, поступово втрачає ефективність в умовах високої невизначеності, прискорення комунікаційних процесів і фрагментації інтерпретацій. Посилення регламентації, гіперзвітності та адміністративного тиску призводить до зниження адаптивності систем, зростання когнітивного перевантаження, посилення decision paralysis та формування захисних моделей організаційної поведінки.

Основний матеріал присвячено аналізу переходу від індустріальної моделі контролю до нейрокоординаційної моделі публічного управління. Публічне управління розглядається не лише як інституціональний механізм регулювання, а і як процес когнітивної, емоційної та смислової координації колективного досвіду. Особливу увагу приділено феномену кризи довіри як кризи нейросоціальної координації, за якої виникає розрив між формальними інститутами та колективним сприйняттям соціальної реальності. Як модель розподіленої координації використано логіку колективної поведінки slime mold, що демонструє можливість ефективної адаптації складної системи без жорсткого централізованого центру управління.

Результати дослідження полягають у розробленні моделі когнітивної архітектури колективного досвіду, яка включає процеси сприйняття сигналів середовища, інтерпретації, емоційної синхронізації, формування образу майбутнього, координації дій та адаптації. Запропоновано узагальнену формулу когнітивної архітектури суспільства як framework-інструмент для діагностики криз управління, оцінювання реформ, аналізу інформаційної політики та проєктування нейрокоординаційних моделей держави. Також систематизовано основні загрози когнітивного зв'язку суспільства та запропоновано механізми виходу з проблемних зон управління.

Висновки. Обґрунтовано, що стійкість сучасних соціальних систем визначається не виключно жорсткістю адміністративного контролю, а здатністю формувати простір колективного розуміння, довіри, емоційної синхронізації та спільного образу майбутнього. Зроблено висновок про необхідність переходу від управління інформацією до управління когнітивним і смисловим середовищем, де ключовим ресурсом держави стає здатність підтримувати колективний зв'язок, самоорганізацію та адаптивну координацію суспільства в умовах високої невизначеності.

Ключові слова: публічне управління, нейроуправління, когнітивна архітектура, нейрокоординація, інформаційне перевантаження, slime mold, колективна координація

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Introduction.

The relevance of this study stems from the transformation of the operating conditions of modern public governance systems in the context of digitalization, information overload, the acceleration of social processes, and the growing cognitive complexity of the administrative environment. The traditional model of administrative governance, shaped by the logic of industrial society and based on the principles of normativity, hierarchy, and control, increasingly demonstrates limited effectiveness in conditions of high uncertainty and constant environmental volatility. Increased regulation, the growth of bureaucratic reporting, and the expansion of oversight mechanisms often lead not to improved performance but to the emergence of a "management simulation" effect, in which the system's key task becomes demonstrating compliance with established requirements rather than achieving tangible results.

In modern management practice, this manifests itself in phenomena such as decision paralysis, cognitive overload, a decline in institutional adaptability, and the formation of defensive models of organizational behavior. An excess of information, multiple interpretations, and constant reporting pressure create a situation in which management structures begin to reproduce a reactive operational logic focused on minimizing risks and maintaining external stability, rather than on strategic development. As a result, control gradually loses its coordinating function and begins to act as a factor reinforcing organizational inertia.

Research in the field of neuromanagement and neurocognitive approaches to management takes on particular significance in this context.

Studies examining human mirror neuron mechanisms as the basis for social coordination, empathy, and collective interaction provide additional insight into this issue. This allows us to view public governance not as a system of linear subordination, but as an environment for the coordination of meanings, interpretations, and models of joint action.

The scientific novelty of this study lies in the integration of neurocognitive approaches, Charles Jacobs' concept of neuromanagement, Marco Iacoboni's theory of mirror neurons, and contemporary models of strategic coordination within the context of public governance. Unlike traditional studies, which focus primarily on institutional control mechanisms, this work considered governance as a process of shaping a cognitive environment that reduces information noise, maintains trust, and fosters collective understanding.

The novelty of the approach also lies in interpreting public governance through a shift from the logic of external control to the logic of neurocoordination, where the system's key resource becomes the ability to create conditions for self-organization, distributed interaction, and strategic coordination of actions. The example of the collective behavior of slime mold is used as a theoretical metaphor for such a model, demonstrating the possibility of effectively coordinating a complex system without a centralized control center.

Thus, the study aims to rethink the role of control, trust, and cognitive coordination in modern public governance and to develop a conceptual framework for the transition from managing information to managing semantic and neurocognitive processes.

Research Methodology. The methodological foundation of this study is based on an interdisciplinary approach, elements of systems and cognitive analysis, and the concepts of neuromanagement, sensemaking, and distributed coordination. The study employs methods of theoretical synthesis, comparative analysis of management models, framework modeling, and interpretive analysis of contemporary approaches to public governance in conditions of cognitive complexity and information overload.

Review of publications. The issue of transforming public governance amid growing complexity, digitalization, and information overload is actively developing in several interconnected areas, namely neuro-management theories, cognitive management research, neuropolitics, theories of sensemaking, adaptive management, and contemporary concepts of strategic coordination.

One of the most significant areas is neuromanagement, which examines organizational behavior through the lens of cognitive and neuropsychological mechanisms. Charles Jacobs (Jacobs, 2015) criticizes traditional control models based on the behaviorist logic of management through rewards and punishments. The researcher emphasizes that excessive administrative control leads to cognitive dissonance, the destruction of intrinsic motivation, and the formation of defensive organizational behavior. Jacobs pays particular attention to the role of the environment as a factor determining the collective adaptation of the system.

The research of Marco Iacoboni (Iacoboni, 2008), devoted to mirror neurons and the mechanisms of empathy, has had a significant influence on the development of neurocognitive approaches to social interaction. The author views mirroring as a universal foundation of human communication, underpinning processes of social learning, cooperation, and the formation of collective identity. In the chapters on neuropolitics and existential neuroscience, Iacoboni demonstrates that political preferences and so-

cial trust are formed not exclusively through rational processes, but through mechanisms of emotional synchronization and neurocognitive reflection.

In recent years, neurocognitive research on leadership has been further developed in the context of the digital environment, emotional burnout, and cognitive overload. Rock (2009), within the framework of the SCARF model, demonstrates that organizational structures are capable of activating both defensive and cooperative neural responses depending on the level of trust, autonomy, and social predictability of the environment. Lieberman's (2013) research demonstrates that social interaction and a sense of belonging are not supplementary but fundamental conditions for human cognitive resilience, and that processes of social isolation and excessive pressure activate the same neural mechanisms as physical threats.

Research on the emotional and cognitive state of organizations in conditions of digital hyperstimulation takes on additional significance. Goleman and Davidson (2017) note that constant informational pressure reduces the capacity for strategic attention and increases the level of reactive behavior among management structures. In turn, Kahneman (2011) demonstrates that under conditions of high complexity, the decision-making system begins to rely primarily on fast cognitive heuristics, which increases the risk of errors, stereotyping, and managerial inertia.

Research in the field of sensemaking and collective interpretation of reality is presented in the works of Karl Weick (Weick, 1995), who views an organization as a system of continuous meaning-making. According to his approach, coordination becomes possible only when a shared interpretive space exists. In conditions of uncertainty, it is precisely the processes of collaborative sensemaking that allow organizations to maintain stability and adaptability. The contemporary development of this approach is linked to the research of Maitlis and Christianson (2014), who emphasize that in crisis-ridden and unstable environments, sensemaking becomes a key mechanism for organizational survival and strategic adaptation.

The problem of bounded rationality and cognitive overload was further developed in the works of Herbert Simon (Simon, 1979), who demonstrated that an increase in the volume of information does not automatically lead to improved decision quality. On the contrary, information overload can increase decision paralysis and reduce the system's ability to make strategic choices. Contemporary research on digital bureaucracy confirms this trend. Thus, Dunleavy et al. (2006) note that the digitization of public governance, in the absence of cognitive adaptation, may not reduce but rather increase managerial complexity due to the growth of reporting flows and information control.

The issue of adaptive and networked governance plays a special role in contemporary research. Ansell and Gash (2008) view collaborative governance as a coordination model based not on administrative enforcement, but on trust, horizontal ties, and joint decision-making. In later works, Ansell and Boin (2019) emphasize that the resilience of public institutions in times of crisis is determined by the ability of systems to rapidly restructure mechanisms of collective coordination and interpretation of events.

Recent works on the philosophy of coordination and strategic capacity are of significant importance to this study. In the Strategic Capacity model (Anpilohov, 2026), strategic development is viewed as the result of the interaction between Meaning, Trust, and Horizon under environmental constraints. This model emphasizes that a system's sustainability is determined not only by resources but also by the ability to form a collective understanding and interpretation of the future.

The development of cognitive approaches to understanding management is also linked to research on visual thinking and sense-making. Works on the Visual Turn and attention management (Ivanova, 2025) show that in highly complex conditions, it is precisely imagery and cognitive structures that begin to play a key role in organizing collective perception and decision-making. Building on this approach, the research by Ivanova and Anpilohov (2025) demonstrates the link between visual attention coordination, investment attractiveness, and the system's ability to form sustainable models of collective trust.

Contemporary research increasingly emphasizes the shift from information management to cognitive environment management. Thus, Bawden and Robinson (2020) emphasize that the key problem of the digital society is not a lack of information, but the inability of systems to filter, interpret, and coordinate streams of meaning. In this context, management is beginning to be viewed as a mechanism for organizing attention, trust, and collective interpretation.

Despite a significant body of research, existing approaches remain fragmented. Theories of neuromanagement are primarily focused on the corporate environment, research on neuropolitics are focused on the mechanisms of political behavior, and work on strategic management rarely takes into account neurocognitive mechanisms of coordination and trust-building. This necessitates an integrative approach that allows public governance to be viewed as a system of cognitive, semantic, and neurosocial coordination.

Main text.

From Control to Neuromanagement: The Transformation of the Logic of Public Governance. The classical model of public governance historically developed within the logic of industrial rationality, where the stability of the system was ensured through normativity, hierarchy, and control. It was assumed that the institution's effectiveness directly depended on its ability to minimize deviations, strengthen oversight, and maintain the predictability of the behavior of system participants. Within this model, governance was viewed as a mechanism of external influence based on regulations, performance indicators, sanctions, and constant reporting.

However, in the context of the modern digital environment, this logic is beginning to reveal its inherent limitations. The growing complexity of social processes, the acceleration of communication, and constant informational pressure make it impossible to exercise full centralized control over all elements of the system. Moreover, increased administrative pressure often leads to the opposite effect – a decrease in adaptability and the emergence of defensive patterns of organizational behavior.

Charles Jacobs (Jacobs, 2015) emphasizes that excessive control* activates defensive cognitive mechanisms and gradually erodes a person's intrinsic motivation. Under conditions of constant monitoring, an employee begins to focus not on achieving results, but on reducing the risk of punishment. A situation arises in which it is not solving the problem that becomes important, but minimizing the likelihood of failure being detected. Such a behavioral model creates a specific form of organizational distortion, where the system begins to reproduce not productivity, but a demonstration of manageability.

**** Note***

The word "control" derives from the Old French contrerôle (contre-rôle).

Etymologically, it consists of two parts:

contre – "against," "opposite," "on the opposite side"

rôle – "list," "scroll," "record," later – "role"

Originally, contre-rôle referred to a duplicate list used to verify another list – that is, a mechanism for verification, monitoring, and comparison.

In other words, control did not originally arise as a means of supporting action, but as a system for verifying compliance with established procedures.

It is important that the word rôle was originally associated specifically with a scroll or a list of regulations.

In this logic, a person is viewed not as a source of independent action, but as a bearer of a set of duties, norms, and expected functions.

In other words, control is historically linked to the establishment of order through: the codification of rules, the comparison of behavior with a prescribed model, the detection of deviations, and the subordination of individual action to a system of normative roles.

In this model, a person acts not so much as a subject of initiative as a "scroll of functions" that must conform to a predefined structure.

Therefore, control is not merely observation. It is a method of organizing a system in which stability is achieved through verification of compliance with roles, instructions, and regulations.

In public governance, this trend is particularly evident. Reporting is gradually beginning to replace actual action, quantitative indicators are becoming more important than the quality of processes, and coordination is supplanting initiative. Under such conditions, institutions begin to avoid acknowledging mistakes, since any identification of a problem is perceived as a threat to stability and a source of potential sanctions. As a result, innovation begins to be viewed not as a resource for development, but as a risk factor that disrupts the predictability of the system.

Paradoxically, increased control leads to a decline in the organization's ability to recognize its own limitations. The system focuses on maintaining external stability and formal compliance with requirements, while actual processes gradually lose coordination and strategic coherence. This is precisely why overly controlled structures often maintain the appearance of stability until a sudden crisis strikes, after which deep internal disorganization is revealed.

In contrast to the industrial model of control, neuro-governance offers a different logic for organizing interaction. Its goal is not to control every individual action, but to create a cognitive environment capable of fostering trust, intrinsic motivation, adaptability, and the ability to jointly interpret situations. In this model, management begins to be considered not as a mechanism of coercion, but as the organization of a space for interaction within which the participants in the system are able to coordinate their actions independently.

This approach is closely linked to contemporary research on the neurocognitive mechanisms of social behavior. Marco Iacoboni (2008), analyzing the phenomenon of mirror neurons, demonstrates that human interaction is based not so much on rational communication as on processes of neurocognitive reflection and emotional synchronization. Social coordination arises from the ability of system participants to perceive and interpret each other's actions as part of a shared space of interaction. This means that management effectiveness is determined not solely by the quality of formal instructions, but by the system's ability to create a shared framework of interpretation and trust.

The issue of cognitive dissonance takes on par-

ticular significance in the context of neuro-management. Jacobs (2015) notes that the constant demand to demonstrate effectiveness in the absence of the ability to actually influence the situation gradually erodes the connection between action and the meaning of that action. As a result, individuals begin to perceive organizational activity as a process of formally reproducing procedures, rather than as participation in the collective transformation of the environment.

In public institutions, this leads to several interrelated consequences. First, there is a loss of agency: individuals cease to perceive themselves as agents of change and begin to act solely in a mode of procedural survival. Second, the level of cognitive initiative declines. The higher the degree of administrative pressure, the less likely individuals are to independently analyze the situation and propose new solutions. Third, institutional passivity is formed: the system begins to avoid any changes, as any deviation from the norm increases the likelihood of sanctions. Finally, an effect of hidden chaos emerges, in which external stability masks internal disorganization and a lack of real coordination.

One of the most illustrative examples of distributed coordination, cited by Jacobs, is the collective behavior of slime molds. Despite the absence of a centralized brain or control center, this biological system is capable of finding optimal pathways, redistributing resources, adapting to environmental changes, and coordinating collective behavior. The key element of such an organization is constant local feedback between the elements of the system, rather than a centralized command.

A model of behavior analogous to slime mold for human society. Slime mold has no single control center, yet it is capable of finding efficient pathways, bypassing obstacles, and connecting resource points. For human society, in our view, this logic can be represented as a model of distributed action, where order arises not from above, but through local signals, trial connections, and the gradual reinforcement of successful solutions.

In the classical management model, action begins at the center: first a plan is formed, then rules, then control over execution. In the slime mold model, action begins differently – with a diffuse search. Different participants in the system try out small solutions, react to the environment, establish successful connections, and gradually form a stable network of interactions.

The main principle of this model is not to manage everything directly, but to create conditions under which the system itself finds viable trajectories (Meyer & Davis, 2003).

1. Diffuse scanning of the environment. The first stage is not about issuing orders, but about sensitivity. The social system must pick up on weak signals: new needs, local problems, shifts in sentiment, resource shortages, and emerging opportunities.

In society, this can be done by local communities, professional groups, volunteer networks, educational institutions, digital feedback platforms, and public discussions.

The goal of this stage is not to make a big decision right away, but to see where tension or opportunity arises.

2. Small pilot actions. A slime mold doesn't build a perfect network right away. It "tests" different directions. Similarly, society should develop not only major reforms but also small-scale social experiments.

These can be pilot projects, temporary solutions, local initiatives, service prototypes, test communication formats, as well as experimental production processes. For example, Pixar operates on a similar logic, where ideas go through numerous intermediate versions, collective discussions, test scenes, and constant revisions. Instead of rigidly following a predetermined plan, an environment of continuous testing and adaptation is created, in which viable solutions are gradually strengthened and further developed. The main principle of this stage: test first, then scale up.

3. Strengthening viable connections. If a particular approach proves effective, the slime mold reinforces it. In a social system, this means that if a local practice works, it should receive more resources, attention, and institutional support. For example, a successful volunteer initiative becomes a municipal program, or a local educational initiative is incorporated into the curriculum; an effective format for assisting citizens is scaled up to other districts; a successful digital platform becomes a permanent communication tool. This gives rise not to an artificial order, but to an order discovered through practice.

4. Weakening ineffective paths. Slime mold does not "punish" a failed direction – he simply stops directing energy toward it. This is an important principle for society: not all mistakes need to turn into a bureaucratic drama. Failed projects should not be endlessly monitored, but rather quickly analyzed and gently phased out. This reduces the fear of failure and makes the system more adaptable.

5. Network instead of hierarchy. In the slime mold model, power arises not from the center, but from connectivity. For society, this means a transition from a "center – executors" model to a "nodes – connections – action pathways" model.

It is not only governing bodies that are important there, but also intermediaries – namely coordinators, facilitators, local leaders, expert groups, mediators, digital navigators, and cultural and educational institutions. They do not command the system, but help connect needs, resources, and actions.

6. Memory of pathways. A slime mold, as it were, "remembers" which paths were effective. In society, this function is performed by case databases, instructions, solution maps, open archives of practices, and methodological recommendations. But it is important that memory does not turn into a dead set of regulations. It should not be a scroll of rules, but a map of possible pathways.

Generalized formula of the model: Signal → Trial → Connection → Reinforcement → Network → Memory → New Adaptation

For practical work in a managerial environment, it might look like this: Need → Local Initiative → Testing in Practice → Support for a Successful Solution → Scaling up → Institutionalization → Re-adaptation

The main point of the model. The slime mold model for human society shows that effective management can be built not only on control, orders, and a prescriptive role. It can be built on sensitivity, distributed search, trust in local initiatives, and the system's ability to amplify what truly works and discard what does not give results.

This approach is particularly important in conditions of uncertainty, when it is impossible to lay out all the rules in advance. Under these conditions, it is not the most rigid system that becomes strong, but the one that can quickly sense changes, test solutions, and reconfigure connections.

This example is particularly relevant for 21st-century public governance. Modern social systems are far too complex for fully centralized control. Attempting to manage all processes exclusively from the top leads to increased information overload, cognitive collapse, and a state of decision paralysis, in which the presence of a large volume of information does not ensure the ability to make strategic choices.

Under these conditions, there is a need to transition from an industrial model of governance to a neuro-coordinative model (Table 1). While industrial logic is based on control, command, and regulation, the neuro-coordinative approach focuses on support, coordination, and adaptation. Centralized decision-making is gradually giving way to distributed coordination, behavior management to environmental management, and the enforcement of regulatory compliance to the organization of interpretive space.

Table 1.
Comparison Table of the Industrial Management Model and the Neuro-Coordination Model

Industrial model	Neuro-coordination model
control	support
order	coordination
regulation	adaptation
centralized decision	distributed coordination
behavior management	environmental management
fixation	interpretation

Source: developed by the author

Thus, the task of the modern government is no longer to exercise total control over society, but to maintain an environment within which the self-organization of collective actions becomes possible. The effectiveness of public governance begins to be determined not so much by the rigidity of administrative intervention as by the system's ability to ensure cognitive coherence, trust, and a shared understanding of ongoing processes. It should be noted that this approach is not suitable for certain areas of public governance where the strict requirements of classical control and centralization are necessary (e.g., national security, emergency response, allocation of critical budgets).

From this perspective, governance is not a mechanism of linear subordination but a form of coordination of collective experience under conditions of high uncertainty. This implies a shift from the logic of managing information to the logic of managing the cognitive and semantic environment, where the system's key resource becomes the ability to form stable models of collective interpretation and interaction.

However, the transition to such a management model faces a number of serious constraints. The main problem is that systems that have long operated under a logic of strict control gradually lose their capacity for self-organization. Under constant administrative pressure, system participants become accustomed to focusing not on the development of the environment, but on risk minimization and formal compliance with requirements.

One of the key obstacles is a decline in intrinsic motivation. If the system is dominated exclusively by control and sanctions, initiative begins to be perceived as a potential threat. People strive not to improve processes, but to avoid responsibility. As a result, institutional apathy arises, in which even obvious problems continue to recur due to a lack of willingness to take responsibility.

Corruption is no less significant a problem. In

an environment of excessive regulation and highly complex procedures, formal rules begin to be used not as a means of coordination, but as a tool for distributing access and exerting administrative pressure. A paradoxical situation arises: the more complex the control system, the higher the likelihood of shadow mechanisms forming to circumvent restrictions. As a result, the system's energy is directed not toward solving problems, but toward adapting to bureaucratic barriers.

A lack of trust also poses a serious constraint. Distributed coordination is possible only when system participants assume at least a minimum level of good faith on the part of one another. With low levels of trust, the system begins to strive for constant verification of every action, which in turn returns it to an industrial model of control and an overload of regulations.

An additional problem arises from the lack of a shared vision of the future. In the distributed coordination model, the system must understand not only the current rules but also the direction of collective movement. If society lacks a vision of the desired future, local initiatives begin to break down into unconnected actions. A fragmented activity effect arises: individual elements of the system may be very energetic, but their actions do not coalesce into a common trajectory of development.

Cognitive inertia within management structures also becomes a significant constraint. Organizations that have operated for decades under a vertical order structure often perceive self-organization as a threat to controllability. As a result, any strengthening of horizontal connections begins to be interpreted as a loss of control rather than an increase in the system's adaptability.

Fear of making mistakes is a separate issue. In a culture of strict accountability, a mistake is considered as proof of incompetence rather than as a learning opportunity. This leads to the suppression of experimentation and a reduction in the system's ability to find new solutions. Meanwhile, the slime mold model assumes the constant presence of trials, temporary pathways, and failed attempts as a natural mechanism of adaptation.

Furthermore, the digital environment does not in itself guarantee coordination. An excess of information without interpretation mechanisms can increase chaos, cognitive overload, and decision paralysis. Therefore, the transition to a neuro-coordination model requires not only technological platforms but also the development of a culture of shared understanding, interpretation, and trust (Table 2).

Table 2

Table of Solutions to Problematic Areas of Management

Problem/ Problematic area	How it manifests	Consequences	Possible solution
Decline in intrinsic motivation	Working "for the report, not for the task" avoiding initiative	Institutional apathy	Transition from a culture of punishment to a culture of participation and meaning
Excessive control	Multi-level approvals, excessive reporting	Loss of adaptability, slower decision-making	Delegation, local autonomy, trust-based mechanisms
Corruption	Bypassing complex procedures through informal connections	Loss of resources and trust	Simplification of processes, transparency of decision-making pathways
Lack of a shared future	Uncoordinated local actions	System fragmentation	Formulation of a collective development scenario
Cognitive inertia	Repetition of old models in new conditions	Inability to adapt	Pilot zones for change and experimental formats
Fear of failure	Hiding problems, refusing to experiment	Stagnation and a decline in innovation	Introduction of a safe environment for testing solutions
Information overload	Excess data without understanding	Decision paralysis	Visualization, cognitive filtering, semantic coordination
Low level of trust	Constant verification and suspiciousness	Increased transaction costs	Development of horizontal connections and collaborative practices
Formalization instead of action	Substitution of results with reporting	The illusion of stability	Assessment based on actual changes in the environment
The gap between the central and local levels	The center is out of touch with actual processes	Erroneous decisions and loss of feedback	Constant local channels of signal feedback

Source: developed by the author

It is important to understand that the neuro-coordination model of governance does not imply any rejection of the government or institutions; rather, it proposes a change in the very logic of governance. According to this logic, the center of the system does not perform the impersonal function of total control, but rather begins to ensure the maintenance of coherence, trust, direction, and the organization of conditions for self-organization. In such a model, stability arises not from the rigidity of the structure, but from the system's ability to constantly reconfigure interaction pathways in response to changes in the environment.

An additional dimension of this problem is explored in the works of Marco Iacoboni, particularly in his book Mirroring People (Iacoboni, 2008). The researcher demonstrates that the mirror activity of human neurons is a fundamental mechanism of social interaction. One person does not simply interpret the actions of another person rationally –he or she neurophysiologically "mirrors" them within his or her own cognitive system. This makes empathy, social learning, cooperation, collective behavior, and the formation of political identity possible.

From the perspective of public governance, this means that governance is always not only and not so much an institutional process as a neurocommunicative one. The government cannot function solely through laws, regulations, and administrative procedures; it must form predictable models of collective perception and emotional synchronization.

The concept of neuropolitics takes on particular significance for the analysis of contemporary political processes. Iacoboni demonstrates that human political behavior is shaped not only through rational analysis of programs or ideological constructs. Mechanisms of emotional reflection, group identification, and a sense of belonging to a collective "we" play a significant role. People tend to support those political structures whose actions are perceived as cognitively understandable, emotionally coherent, and socially recognizable.

In this context, the crisis of trust in government institutions should be viewed in a much broader sense than mere institutional inefficiency. This is a crisis of neurosocial coordination. If citizens cease to perceive the actions of the authorities as logical, predictable, and internally consistent, a gap emerges between the formal structure of governance and the collective perception of social reality. The institutional system may continue to function administratively, however it loses the ability to maintain society's cognitive cohesion.

Such a situation is particularly characteristic of an era of high informational turbulence. Modern people are simultaneously immersed in a multitude of competing interpretive streams: government communications, digital media, online communities, algorithmically generated newslines, and emotionally charged political narratives. As a result, the government ceases to be the sole center of meaning coordination and finds itself forced to compete for attention, trust, and the interpretation of reality.

The existential neuroscience that Iacoboni refers to raises the issue to an even deeper level. People need not only information or security, but also a sense of belonging to a collective reality and the ability to influence the common future. When a governance system reproduces uncertainty, cognitive overload, a sense of powerlessness, and the inability to participate in decision-making, a state of existential fragmentation of society arises.

Such fragmentation leads to the breakdown of long-term social coordination. People begin to seek alternative mechanisms of belonging and collective meaning. This explains the rise of radical ideologies, emotional forms of political mobilization, online communities, and populist movements. Under such conditions, political identity is formed not so much around rational development programs as around an emotional sense of belonging, comprehensibility, and collective representation.

From this perspective, modern public governance must work not only with normative structures but also with the cognitive architecture of collective experience. This implies a shift from managing behavior alone to managing the environment of perception, interpretation, and coordination of meanings. In such a model, the government's key resource is no longer merely its administrative capacity to control processes, but also its ability to maintain society's cognitive cohesion, reduce the level of collective anxiety, and shape a vision of a shared future.

This is precisely why the neuro-coordinative model of governance involves the development of mechanisms for collective participation, feedback, visualization of complex processes, public interpretation of decisions, and the formation of comprehensible scenarios for the future. Without this, even technically effective reforms may be perceived by society as strange and threatening, since they are not integrated into the system of collective neurosocial reflection.

A model for working with the cognitive architecture of collective experience. The logic of slime mold demonstrates that the stability of a complex system arises from the ability of its elements to sense the environment, exchange signals, and reinforce successful pathways of interaction. Human society functions in a similar manner.

The cognitive architecture of collective experience can be understood as the set of mechanisms through which society perceives events, interprets changes, builds trust, and coordinates collective actions.

Unlike the classical administrative model, which focuses on controlling behavior, this model operates at the level of collective understanding.

Its structure can be represented as follows: Signal → Interpretation → Emotional synchronization → Vision of the future → Coordination → Adaptation.

In the first stage, the system must, so to speak, pick up on subtle signals from the environment: shifts in public sentiment, local crises, new demands, and forms of behavior. Much like slime mold, the task is not to suppress deviations but to increase the system's sensitivity.

Next comes the level of interpretation. An event in and of itself does not determine the public reaction – the key lies in the explanation of what is happening. If the government, for example, fails to provide a clear interpretation, society begins to create competing versions of reality. Therefore, what becomes important is not the volume of information, but reducing the chaos of interpretations.

The next level is related to emotional synchronization. As we recall from Marco Iacoboni's research, social interaction is based on mechanisms of neurocognitive mirroring. People must not only understand the system's actions but also emotionally relate to them. If decisions are perceived as strange or unjust, a gap emerges between institutions and collective perception.

The formation of a shared vision of the future takes on particular significance. Without it, society breaks down into a multitude of short-term reactions and unconnected initiatives. It is precisely this vision of the future that binds local actions into a unified trajectory of development: Vision of the Future → Meaning → Trust → Coordination → Action.

After that, the possibility of distributed coordination arises. In this model, the state/government? no longer functions as a totalitarian controller but instead moves toward the role of maintaining the system's cohesion: it connects initiatives, reinforces successful practices, reduces conflict, and supports horizontal communication.

As in the slime mold model, effective pathways gradually strengthen and become established. However, institutionalization must not turn into a "dead scroll of control." The system must retain the ability to constantly adapt, experiment, and restructure interaction pathways in response to changes in the environment. Thus, there are specific threats to the implementation of cognitive architecture (Table 3).

Table 3

Major Threats to Cognitive Architecture

Threat	Consequence
Information overload	Loss of interpretive ability
Fragmentation of narratives	Breakdown of collective understanding
Overcontrol	Lack of initiative
Distrust	Loss of coordination
Lack of a future	Increased anxiety and radicalization
Cognitive fatigue	Passivity and refusal to participate
Simulated participation	Loss of institutional legitimacy

Source: developed by the author

Generalized formula for the cognitive architecture model. The model can be represented as follows: $CA = (S + I + E + F + C) - D$

where:

CA – *Cognitive Architecture;*

S – *Sensitivity (sensitivity to signals);*

I – *Interpretation (the ability to interpret);*

E – *Emotional synchronization;*

F – *Future image;*

C – *Coordination (coordination of actions);*

D – *Disintegration factors (factors of fragmentation: fear, chaos, overload, distrust).*

Thus, modern public governance can be viewed not only as a system for distributing authority and resources, but also as a mechanism for maintaining society's cognitive cohesion. In an environment of information turbulence, a government's stability is determined not so much by the strictness of control as by its ability to foster a space of collective understanding, trust, and joint action.

This model can be used as a framework tool for diagnosing and designing modern public governance systems.

First and foremost, the formula allows for analyzing the causes of a social system's loss of stability. In the classical model, a crisis is usually explained by a lack of resources, institutional failures, or insufficient management efficiency. However, in conditions of informational complexity, the problem often arises at the level of society's cognitive cohesion. For example, information overload reduces society's ability to interpret events (I), a crisis of trust weakens emotional synchronization (E), the absence of a development strategy destroys the vision of the future (F), and bureaucratic fragmentation reduces the level of coordination (C). At the same time, rising anxiety, conflict, and uncertainty reinforce factors of disintegration (D). As a result, the system may retain

formal functionality but gradually lose its internal cohesion.

It is particularly important that the model allows for a theoretical explanation of crises in formally stable governments and institutions. In such situations, regulations remain in force, reporting is carried out, and the administrative structure is preserved; however, society gradually loses trust in the system, the sense of a collective future disappears, the chaos of interpretations intensifies, and emotional tension grows. Thus, the institutional framework continues to exist, but the overall cognitive architecture (CA) indicator begins to decline. This creates a situation of hidden disorganization, where external stability masks an internal breakdown of coordination.

The model can also be used to evaluate reforms. In this case, it serves as a tool (Table 4) for verifying the cognitive compatibility of changes with society. A reform may be technically effective but provoke resistance if it destroys emotional connectedness or fails to form a clear vision of the future.

Table 4

Tool for assessing the cognitive compatibility of changes with society

Component	Test question
S – Sensitivity	Does the system detect real environmental signals?
I – Interpretation	Do people understand the meaning of the changes?
E – Emotional synchronization	Is there emotional acceptance of the reform?
F – Future image	Is a clear vision of the future taking shape?
C – Coordination	Does the reform strengthen coordination?
D – Disintegration factors	Does the reform increase anxiety and chaos?

Source: developed by the author

This approach is particularly important for analyzing information policy. In the digital environment, governance is less and less about the simple transmission of information and more and more about organizing the space of collective understanding. Therefore, when evaluating communication strategies, it is necessary to consider whether they reduce interpretive chaos, strengthen trust, create a sense of citizen inclusion in the collective process, and support the vision of a shared future. From this perspective, effective communication is not about maximizing the flow of information, but about maintaining the cognitive cohesion of society.

The formula also allows us to describe the transition from an industrial model of the government to a neuro-coordinative one. In this model, the Center of the system functions not only as an administrative apparatus but also as a mechanism for harmonizing interpretations, reducing anxiety, and supporting a collective direction of movement.

The practical value of the model also lies in the possibility of visualizing it. The formula can be used as a basis for constructing diagnostic matrices, radar models, heat maps, dashboard systems, expert scales, and AI-assisted analysis of large datasets. Each parameter can be assessed on a relative scale, after which a map of the system's cognitive stability is generated. This allows for the analysis not only of formal governance indicators but also of the underlying state of social coordination.

This model takes on particular significance in connection with the logic of slime mold. Slime mold demonstrates that the stability of a complex system arises not from maximum structural rigidity, but from the ability of its elements to sense environmental changes, exchange signals, and reinforce effective pathways of interaction. The cognitive architecture of society functions in a similar way. A system becomes stable when it is capable of perceiving signals, interpreting events, maintaining emotional connectedness, holding onto a vision of the future, and adaptively coordinating the actions of its participants. Thus, the stability of the modern government is determined not only by the power of control, but also by the quality of coordination of collective experience.

Conclusions.

This study shows that the classical industrial model of public governance, based on normativity, hierarchy, and control, is gradually losing its effectiveness in the context of digitalization, information overload, and the growing cognitive complexity of the social environment. Increased administrative pressure, hyper-regulation, and constant reporting often lead not to improved performance, but to the formation of defensive models of organizational behavior, a decline in initiative, and an increase in decision paralysis. Under such conditions, governance begins to reproduce not the development of the system, but a demonstration of controllability and formal compliance with requirements.

Excessive control destroys intrinsic motivation and intensifies cognitive dissonance, whereas the neurosocial processes of reflection, trust, and emotional synchronization serve as the foundation of collective coordination.

This paper justifies the transition from an industrial model of governance to a neuro-coordinative model, within which the government is considered not exclusively as a system of administrative coercion, but as an environment for the organization of

collective understanding, interpretation, and interaction. It is shown that the stability of the modern social system is determined not only by the rigidity of the institutional structure, but also by society's ability to perceive signals from the environment, form a shared vision of the future, maintain trust, and adaptively restructure pathways of interaction.

The logic of slime mold collective behavior is used as a theoretical model of distributed coordination, demonstrating the ability of a complex system to adapt effectively without rigid centralized control. Based on this, a model of the cognitive architecture of collective experience has been developed, incorporating processes of signal perception, interpretation, emotional synchronization, formation of a future image, coordination of actions, and adaptation of the system to environmental changes.

The proposed formula for cognitive architecture: CA=(S+I+E+F+C)−D, allows us to view government stability as the result of the interaction between sensitivity to environmental signals, the ability to interpret, emotional synchronization, the presence of a vision of the future, and the coordination of actions, while simultaneously accounting for the influence of factors of disintegration. The practical value of the model lies in its applicability as a framework tool for diagnosing governance crises, evaluating reforms, analyzing information policy, and building AI-assisted systems for monitoring the cognitive stability of society.

Thus, modern public governance must shift from the logic of information control to the logic of governing the cognitive and semantic environment. The key resource of the 21st-century government is not only the administrative capacity to regulate processes, but also the ability to sustain collective understanding, reduce the level of social fragmentation, build trust, and provide conditions for the self-organization of collective action in conditions of high uncertainty.

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