

COGNITIVE SOVEREIGNTY AS A STRATEGY FOR ENSURING STABILITY UNDER CONDITIONS OF GLOBAL INTERCONNECTEDNESS: CONCEPTUALIZATION AND OPERATIONALIZATION

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Abstract. This article examines the conceptualization and operationalization of the concept of 'cognitive sovereignty' in relation to the task of ensuring state stability under conditions of global interconnectedness. Unlike existing interpretations, which reduce cognitive sovereignty primarily to information security or technological independence, in this work it is defined as society's structural capacity for the autonomous production, critical evaluation and transmission of meaning at all levels — individual, institutional and state. The methodological foundation consists of a theoretical synthesis of the concepts of the network society (Castells), 'regimes of truth' (Foucault), soft power (Nye), surveillance capitalism (Zuboff), epistemic injustice (Fricker), cultural flows (Appadurai) and postcolonial criticism (Spivak). Three systemic threats have been identified: semantic intervention through the media and algorithmic environment, digital colonialism as an asymmetry of infrastructural control, and epistemic dependence as the structural impossibility of independent knowledge production. As a counter-strategy, the concept of 'open selectivity' is proposed and substantiated; this concept presupposes the existence of a stable core of values that functions as society's 'semantic immune system'. The concept is illustrated through an analysis of the language and education policies of Kyrgyzstan and other Central Asian states. It is concluded that cognitive sovereignty is a necessary condition for both internal stability and equal participation in global dialogue. The research findings are applicable in the fields of political philosophy, digital policy and post-Soviet studies.

Keywords: cognitive sovereignty; open selectivity; semantic intervention; digital colonialism; epistemic injustice; semantic immune system; language policy; Central Asia

1. INTRODUCTION

The transition from the information society to the cognitive phase of development is transforming the very substance of state sovereignty. Whereas in the Westphalian model sovereignty was defined as the state's monopolistic control over territory and the population within it [9], under conditions of total digital interconnectedness the key processes of identity formation, historical memory and value orientation now unfold beyond physical and jurisdictional borders. Global communication networks, algorithmic platforms and transnational cultural industries create a fundamentally new environment for the production of meaning, one in which traditional instruments of state regulation prove conceptually limited.

In academic discourse, the concept of "cognitive sovereignty" already appears in several contexts: in the philosophy of education, as the individual's right to intellectual autonomy [10, 16]; in security studies, as the protection of the state's "cognitive space" from manipulative influence [15, 18]; and in postcolonial studies, as the epistemological dimension of decolonization [12]. However, none of the existing interpretations offers an integrated theoretical framework linking the individual, institutional and state levels of cognitive autonomy into a single analytical construct applicable to policy tasks.

This gap defines the aim of the present article: to develop an operational definition of cognitive sovereignty as a multilevel concept and to substantiate the strategy of "open selectivity" as a practical mechanism for ensuring it. The study addresses the following tasks: (1) to critically position the author's concept in relation to existing interpretations; (2) to synthesize a theoretical foundation from convergent concepts of social and political theory; (3) to identify and systematize threats to cognitive sovereignty; (4) to operationalize the concept of "open selectivity" through measurable institutional criteria; (5) to verify the concept using material from Kyrgyzstan and the Central Asian region.

The practical significance of the study is determined by the fact that small and medium-sized states, including the post-Soviet republics of Central Asia, are most exposed to the risks of "semantic intervention" and

epistemic dependence owing to asymmetries in technological, media and academic resources. The conceptual framework developed here offers analytical tools for diagnosing and shaping policy in this area.

2. THEORETICAL FOUNDATIONS AND LITERATURE REVIEW

2.1. The Place of the Author's Concept in Existing Debates

Existing approaches to cognitive sovereignty can be systematized into three directions. The first, philosophical-epistemological, treats it as an individual right to intellectual autonomy and independence of judgment [10]. This direction traces back to the Kantian principle of "sapere aude" and has been developed primarily within analytic philosophy and the philosophy of education. The second direction, within security studies, understands cognitive sovereignty as the protection of the state's "cognitive domain" from disinformation, propaganda and psychological operations [15]. The third direction, postcolonial and decolonial, foregrounds the epistemological dimension: the right of non-Western societies to produce knowledge outside Western paradigms [12, 17].

The author's concept differs from each of these directions while simultaneously synthesizing them. Unlike the philosophical-epistemological approach, it is oriented toward the collective and institutional level rather than individual autonomy. Unlike the security approach, it treats cognitive sovereignty not as a protective shield but as a positive capacity for the production of meaning. Unlike postcolonial concepts, it aims at operationalizable policy recommendations rather than normative critique. The proposed framework thus claims an integrative character.

2.2. The Network Society and the Power of Programming

In his foundational work *The Rise of the Network Society*, Manuel Castells showed that the key structural feature of the new era is the network as the basic form of social organization. In the network society, power is concentrated in the nodes of communication networks through which information and symbolic codes circulate. Castells emphasizes that the capacity to "program" networks (setting their goals and operating algorithms) and to "reprogram" them (altering the direction of flows and the rules of access) becomes a central source of power [2, p. 469–472]. In later work he specifies this observation further: "power in the network society is communication power" [3, p. 53]. A subject deprived of access to the "programming" of networks inevitably finds itself in the position of an object of others' algorithmic logics.

2.3. Regimes of Truth and Discursive Power

Michel Foucault developed the concept of the "regime of truth" in his lecture courses at the Collège de France and in "The Order of Discourse" (1970), not in *Discipline and Punish*, as is frequently and erroneously stated in the literature. By regime of truth, Foucault meant the set of procedures by which a society distinguishes true from false statements and attaches to truth certain effects of power [5, p. 131–133]. In the context of cognitive sovereignty, the following is of fundamental importance: a society deprived of the capacity to form its own "regimes of truth" is compelled to think of itself through interpretive matrices belonging to others, which progressively erodes its discursive autonomy.

2.4. Soft Power, Surveillance Capitalism and Epistemic Injustice

Joseph Nye showed that in an age of informational abundance, the capacity to shape others' preferences becomes more strategically significant than the application of coercion [13, p. 90–94]. In the context of cognitive sovereignty, this means that external actors can influence a society by transmitting value models perceived as neutral or universal.

In *The Age of Surveillance Capitalism*, Shoshana Zuboff describes the mechanism by which digital platforms appropriate "behavioral surplus", data on user actions converted into a commercial and political resource [19, p. 8–12]. This creates a structural asymmetry: technologically advanced centers accumulate data and control platforms, while other states function primarily as data suppliers and passive consumers of content.

Miranda Fricker introduces the concept of epistemic injustice, a situation in which a subject is denied the status of a full-fledged holder of knowledge. She distinguishes "testimonial injustice" (when a given group's voice is discounted in advance) from "hermeneutical injustice" (when a community lacks the recognized

conceptual resources to make sense of its own experience) [6, p. 1–28]. On a global scale, this manifests as the dominance of particular intellectual centers and theoretical paradigms, as a result of which societies without a developed national humanities tradition find themselves in the position of "objects of study" rather than equal subjects of theoretical creation.

2.5. Cultural Flows, Postcolonial Critique and the Limits of the Concept

Arjun Appadurai showed that global cultural flows ("ethnoscapes", "mediascapes", "ideoscapes") do not automatically lead to homogenization; they interact with local contexts, giving rise to new forms of cultural self-identification [1, p. 32–36]. This observation is of fundamental importance: the resilience of a national culture is determined not by its degree of isolation from external influences but by its capacity to actively interpret and localize them. Postcolonial critique [17, 12] adds a normative dimension: the very question of whose categories describe the reality of peripheral societies is itself political.

At the same time, the limitations of the proposed concept must be acknowledged. The thesis of a "cultural core" is vulnerable to critique in the spirit of Hobsbawm and Ranger, who pointed to the "invention of tradition" as a political process [8]. Furthermore, the concept risks being co-opted to legitimize authoritarian control over the information space under the banner of "protecting identity". These risks are acknowledged in the present work and constitute one of the reasons why the operationalization of "open selectivity" is deliberately built on procedural rather than substantive criteria, that is, it defines not the content of "correct" meanings but the institutional conditions for their democratic production.

3. MATERIALS AND METHODS

The methodological foundation of this study is based on theoretical synthesis as a form of conceptual analysis. The primary task is not to construct a theory "on top of" each of the cited authors individually, but rather to identify points of convergence between heterogeneous theoretical traditions and, on this basis, form an integrated analytical framework. This approach is applied in political theory to develop "middle-range" concepts capable of mediating between macrosociological theories and empirical research [11].

To systemise threats to cognitive sovereignty, a comparative conceptual analysis method was used: phenomena identified in the literature (semantic intervention, digital colonialism, algorithmic manipulation, linguistic marginalization) are mapped onto levels of analysis (technological, discursive, epistemic) to construct a systematic typology.

The operationalization of the concept of "open selectivity" is carried out through the development of criteria that allow for institutional measurement: the presence/absence of national digital ecosystems, the share of the national language in educational and media platforms, the volume of state funding for humanities research, and population digital literacy indices.

A case study is used for the empirical verification of the concept based on material from Kyrgyzstan and, in a comparative perspective, the states of Central Asia. The case was selected according to the criterion of a "typical case": Kyrgyzstan possesses characteristics typical of small post-Soviet states (limited technological resources, a multilingual environment, dependence on external platforms) while simultaneously having a number of initiatives in language and digital policy that lend themselves to analytical assessment. The empirical base includes UNESCO reports on linguistic diversity in the digital environment [21, 22], materials from the OSCE Regional Centre for Central Asia, ITU data on the region's digital infrastructure, as well as studies on the language policy of post-Soviet states.

4. RESULTS: CONCEPTUALIZATION AND SYSTEMATIZATION OF THREATS

4.1. Operational Definition of Cognitive Sovereignty

Based on the theoretical synthesis conducted, cognitive sovereignty is defined as a society's structural capacity across three interconnected levels:

1. **Individual level:** The capacity of citizens for critical, reflective perception of information, distinguishing between facts and interpretations, and identifying manipulative techniques;
2. **Institutional level:** The presence of national knowledge-producing institutions (the humanities, independent media, education systems) capable of forming and reproducing their own interpretive frameworks;

3. **State level:** The presence of a regulatory and infrastructural environment that ensures the availability and sustainability of national semantic resources (language, historical memory, cultural heritage) in the digital space.

This definition differs from existing interpretations in three fundamental ways. First, it is multilevel and does not reduce cognitive sovereignty to either individual or state autonomy. Second, it is positive: sovereignty is defined through the capacity to produce meaning, rather than merely defend it. Third, it is procedural: it does not prescribe specific content for "correct" thinking, but describes the institutional conditions for autonomous meaning production.

4.2. Typology of Threats to Cognitive Sovereignty

Based on the conceptual analysis, three systemic types of threats are identified, differing by their mechanism of impact and level of analysis.

- **The first type of threat — semantic intervention** — is implemented at the discursive level through the deliberate or structural imposition of external interpretive frameworks. Under conditions of asymmetric media and technological resources, external actors gain the ability to set the agenda, establish frameworks for interpreting events, and transmit value models perceived as neutral or universal. Crucially, semantic intervention is not necessarily intentional: it can occur through market mechanisms of cultural production (Bollywood, Hollywood, global news agencies) without any malicious intent from its sources.
- **The second type of threat — digital colonialism** — is implemented at the technological level through a structural asymmetry in the control over digital infrastructure. As Zuboff demonstrates, transnational tech corporations accumulate user behavioral data and convert it into a commercial and political resource, while users themselves are deprived of access to the mechanisms of this transformation [19]. E. Pariser describes the adjacent phenomenon of "filter bubbles": recommendation algorithms select content matching users' pre-existing attitudes, which reinforces cognitive isolation and displaces local agendas with global trends [14, pp. 9–18]. The practical consequence is a situation where states that do not own their own platforms and algorithms effectively delegate sovereign powers over public discourse management to private external actors.
- **The third type of threat — epistemic dependence** — is implemented at the level of knowledge production. If a society lacks a developed national tradition in the humanities, it is forced to borrow categorical frameworks from external sources to describe its own reality. In Fricker's terms, this constitutes "hermeneutical injustice" on a global scale [6]. Postcolonial theorists—Spivak, Mignolo, Quijano—pointed out that the very distinction between "theorists" and "informants/carriers of empirical material" reproduces a hierarchy in which non-Western societies remain objects of others' conceptual systems [12]. For Kyrgyzstan and Central Asia, this manifests specifically in the fact that the interpretation of key historical processes (nomadic identity, Soviet legacy, post-Soviet transformation) is conducted predominantly within frameworks shaped outside the region.

Linguistic marginalization should be examined separately as a cross-cutting mechanism linking all three types of threats. Language is not merely a tool for communication, but a carrier of a unique worldview—a point emphasized by Wilhelm von Humboldt, who developed the concept of *Weltansicht* [20, pp. 70–75], and later in the 20th century by the Sapir-Whorf hypothesis of linguistic relativity. If a national language is not represented in educational platforms, machine translation systems, and natural language processing (NLP) technologies, younger generations are forced to think about complex social processes predominantly in external languages, accompanied by the inevitable transfer of foreign semantic matrices. According to UNESCO data, over 90% of internet content is produced in just ten languages, whereas the majority of the world's languages are effectively excluded from the global digital space [21]

5. DISCUSSION: THE "OPEN SELECTIVITY" STRATEGY AND ITS OPERATIONALIZATION

5.1. Theoretical Rationale for the Strategy

The conceptual response to the identified threats is the strategy of "open selectivity"—a dialectical synthesis that overcomes the false dichotomy between isolationism and passive assimilation. Historical experience demonstrates that societies that artificially restricted external information contacts eventually lost their

innovative potential and proved vulnerable in a competitive environment. On the other hand, passive openness without internal evaluative criteria leads to the erosion of identity and strategic disorientation.

The theoretical basis for the concept of "open selectivity" is Appadurai's model of cultural hybridity: global flows interact with local contexts, giving rise to new forms of identification rather than mechanical unification [1]. Resilience is determined not by isolation, but by the capacity for active interpretation and redefinition of borrowed meanings. This idea correlates with the concept of a "cultural immune system" in biosocial analogies [7]: an immune system does not destroy all external impacts, but distinguishes foreign elements from compatible ones, integrating the latter into an organic whole.

5.2. Operationalization: Criteria for "Open Selectivity"

To prevent the concept of "open selectivity" from remaining a mere metaphor, it must be operationalized through measurable criteria. The following four groups of indicators are proposed:

- **Group 1: Institutional indicators of knowledge production:** Presence of national research centers in the social sciences and humanities; volume of state funding for humanities research (% of GDP); number of academic publications in the national language indexed in international databases; presence of national expert platforms participating in shaping the public agenda.
- **Group 2: Digital infrastructure indicators:** Presence of national platforms for public services, education, and media; proportion of traffic routed through national nodes (as opposed to foreign ones); representation of the national language in NLP systems, machine translation, and voice assistants; existence of national data localization legislation.
- **Group 3: Media literacy and critical thinking indicators:** Proportion of the population that has completed media literacy programs; inclusion of media literacy in mandatory educational curricula; presence of independent fact-checking organizations; level of trust in diverse information sources (based on national sociological surveys).
- **Group 4: Linguistic resilience indicators:** Share of state digital services operating in the national language; availability of digital archives, corpora, and educational resources in the national language; dynamics of national language usage in education, science, and media broken down by age cohorts.

Together, these indicators make it possible to build comprehensive country profiles of cognitive sovereignty and track their dynamics, avoiding both politically motivated self-evaluations and external normative judgments.

5.3. The Mechanism of the "Semantic Immune System": Procedural Criteria

The concept of a cultural core as a "semantic immune system" receives a procedural, rather than a substantive, interpretation in this work. This is a fundamentally important clarification: a substantive interpretation (defining the specific "correct" content of the core) would inevitably vest the state with the authority of an arbiter of truth, paving the way for authoritarian control. The procedural interpretation, conversely, defines not the content, but the conditions for its legitimate production.

The procedural criteria for the "compatibility" of borrowings with the cultural core are formulated as follows: An external influence—an idea, technological model, or social practice—is evaluated according to three parameters:

1. Does it reinforce or undermine institutional pluralism and the possibility of public debate?
2. Does it expand or narrow citizens' access to producing and contesting meanings?
3. Is it compatible with the reproduction of the national language as a living tool of intellectual life?

If, based on these criteria, an influence expands cognitive autonomy, it should be integrated and localized. If it narrows autonomy, mechanisms of critical discussion and, if necessary, normative regulation are activated—but strictly through democratic procedures.

5.4. Verification Based on Material from Kyrgyzstan and Central Asia

Kyrgyzstan represents an illustrative case for verifying the concept due to several characteristics: a multilingual environment (Kyrgyz, Russian, and Uzbek operate in parallel), significant dependence on Russian and global media platforms, limited resources for developing digital infrastructure, and yet a demonstrated political will to shape language and educational policy.

An analysis using the proposed indicators reveals the following picture. In the field of institutional knowledge production, the situation remains vulnerable: the proportion of publications by scholars from

Kyrgyzstan in internationally indexed journals is extremely small, humanities research is underfunded, and interpretations of key historical processes (the Soviet era, interethnic relations, regional integration) are largely shaped outside the country. In terms of digital infrastructure, the Kyrgyz language is virtually absent from existing NLP systems and machine translation platforms of major tech companies. Nevertheless, positive steps have been taken in recent years: open language model projects for Turkic languages are developing, initiatives to digitize epic heritage ("Manas") are being implemented, and measures are being taken to expand the presence of the Kyrgyz language in state digital services.

In a comparative perspective, Kazakhstan demonstrates a more proactive digital sovereignty policy (e-government development, the "Digital Kazakhstan" program, partial data localization), but also faces the challenge of Russian-language dominance in the media space. Uzbekistan has recently pursued an intensive policy of transitioning official administration to the Uzbek language, creating both opportunities and risks for institutional continuity. Tajikistan and Turkmenistan demonstrate models close to isolationism, which, according to the proposed concept, is not an optimal strategy as it limits access to external resources for development. Kyrgyzstan, possessing the most open media environment in the region, has the best institutional prerequisites for implementing specifically the "open selectivity" strategy.

At the same time, the limitations of this case study must be acknowledged: verification is primarily qualitative due to the lack of systematic quantitative data across a number of proposed indicators. This points to a promising direction for future empirical research.

6. CONCLUSION

The study yields the following primary results:

- First, an operational, multilevel definition of cognitive sovereignty has been developed. Covering the individual, institutional, and state levels, it fundamentally differs from existing interpretations through its positive character (focusing on the production of meanings rather than merely their defense) and its procedural nature (focusing on institutional conditions rather than substantive content).
- Second, a systematic typology of threats has been proposed—encompassing semantic intervention, digital colonialism, and epistemic dependence—linked to specific mechanisms of impact at each of the three levels of analysis.
- Third, the concept of "open selectivity" has been operationalized through four groups of measurable indicators, allowing it to move from the realm of normative rhetoric into the domain of analytical diagnosis and comparative country studies.
- Fourth, applying the concept to material from Kyrgyzstan and Central Asia revealed characteristic vulnerabilities (dominance of external platforms, linguistic marginalization in the digital space, weakness of the institutional base for humanities research). It demonstrated that the strategy of "open selectivity" structurally corresponds precisely to the conditions of states possessing an open media environment but limited technological resources.

The theoretical significance of the study lies in providing an integrative framework that connects disparate discussions on information security, postcolonial epistemology, and digital policy into a unified analytical concept. The practical significance is determined by the applicability of the proposed indicators for shaping state policy in education, language regulation, and digital infrastructure development.

This study has several limitations that point toward directions for future work. Empirical verification of the concept requires systematic collection of quantitative data across the proposed indicators in a comparative perspective. The question of precisely how the "renewal" of the cultural core occurs—namely, the mechanisms of its legitimate transformation without losing its function as a "semantic filter"—remains open. Finally, the analysis of specific policy instruments (data localization legislation, media literacy programs, language corpora) requires separate applied research. Addressing these tasks forms the agenda for subsequent studies.

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