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## **Taming the Time Zone: National Large-Scale Assessments as Instruments of Time in the Russian Federation**

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**Abstract:** Nationwide large-scale assessments (NLSA)—an example of cross-border policy mobility—manifest a proliferating means of governing formal schooling. In the Russian context, NLSA takes the form of a compulsory graduation examination called the Unified State Examinations (USE). In this article, we explore how a mobile policy instrument of the NLSA participates in the relational processes of time- and space-making in a particular federated context of Russia, and how this process intertwines with and is shaped by the presence of multiple time zones. We argue that NLSA is an instrument of time that attempts to achieve centralization of the complex federated structure of the Russian Federation. Yet, the work of the NLSA is not a smooth process in a country characterized by territorial vastness, a complex federated structure, and the existence of multiple time zones. Guided by the theory of logistical power and sociological perspectives on time, as well as empirical insights, we show how the time zones need to be tamed in order for the NLSA

to exercise its centralizing role. Discursively, the time zone is introduced and publicly discussed to symbolically characterize Russia and justify political actions or their outcomes. Bureaucratically, the desire for simultaneity and synchronicity takes the form of a meticulous ordering of a sequence of actions through prescriptive documentation that regulates the NLSA. Technologically, synchronicity, simultaneity, and instantaneousness rely on and engender an expanding national infrastructure that mediates social relations and the processes of conducting the NLSA, cutting across the time zones and federal units. Based on this analysis, we propose that scholarship on policy mobility and education policy sociology at large could benefit from examining the relationship between time and education policy and governance in four intertwined ways: the time of policy, context as time, policy instruments as instruments of time, and time in policy instruments.

**Keywords:** Russian Federation; governance; time; space; national large-scale assessments; performance technology

### **Domando la zona horaria: Evaluaciones nacionales a gran escala como instrumentos de tiempo en la Federación Rusa**

**Resumen:** Las evaluaciones a gran escala a nivel nacional (NLSA, por sus siglas en inglés), un ejemplo de movilidad política transfronteriza, manifiestan un medio proliferante de gobernar la educación formal. En el contexto ruso, NLSA toma la forma de un examen de graduación obligatorio llamado Exámenes Estatales Unificados (USE). En este artículo, exploramos cómo un instrumento de política móvil de la NLSA participa en los procesos relacionales de creación de tiempo y espacio en un contexto federado particular de Rusia, y cómo este proceso se entrelaza y está conformado por la presencia de múltiples zonas horarias. Argumentamos que NLSA es un instrumento del tiempo que intenta lograr la centralización de la compleja estructura federada de la Federación Rusa. Sin embargo, el trabajo de la NLSA no es un proceso fluido en un país caracterizado por la vastedad territorial, una estructura federada compleja y la existencia de múltiples zonas horarias. Guiados por la teoría del poder logístico y las perspectivas sociológicas del tiempo, así como por conocimientos empíricos, mostramos cómo las zonas horarias deben ser domesticadas para que la NLSA ejerza su función centralizadora. Discursivamente, la zona horaria se presenta y se discute públicamente para caracterizar simbólicamente a Rusia y justificar las acciones políticas o sus resultados. Burocráticamente, el deseo de simultaneidad y sincronidad toma la forma de una ordenación minuciosa de una secuencia de acciones a través de la documentación prescriptiva que regula la NLSA. Tecnológicamente, la sincronidad, la simultaneidad y la instantaneidad se basan y generan una infraestructura nacional en expansión que media las relaciones sociales y los procesos de realización de la NLSA, atravesando las zonas horarias y las unidades federales. Sobre la base de este análisis, proponemos que los estudios sobre la movilidad de las políticas y la sociología de las políticas educativas en general podrían beneficiarse al examinar la relación entre el tiempo y la política educativa y la gobernanza en cuatro formas entrelazadas: el tiempo de la política, el contexto como tiempo, los instrumentos de política como instrumentos del tiempo, y el tiempo en los instrumentos de política.

**Palabras-clave:** Federación Rusa; gobernanza; tiempo; espacio; evaluaciones nacionales a gran escala; tecnología de rendimiento

### **Domando o fuso horário: Avaliações nacionais em larga escala como instrumentos de tempo na Federação Russa**

**Resumo:** As avaliações em larga escala em todo o país (NLSA) – um exemplo de política de mobilidade transfronteiriça – manifestam uma proliferação de meios de gobernar a educação formal. No contexto russo, o NLSA assume a forma de um exame de graduação obrigatório

chamado Exames Estaduais Unificados (USE). Neste artigo, exploramos como um instrumento de política móvel da NLSA participa dos processos relacionais de criação de tempo e espaço em um contexto federado particular da Rússia, e como esse processo se entrelaça e é moldado pela presença de múltiplos fusos horários. Argumentamos que a NLSA é um instrumento do tempo que tenta alcançar a centralização da complexa estrutura federada da Federação Russa. No entanto, o trabalho da NLSA não é um processo tranquilo em um país caracterizado pela vastidão territorial, uma complexa estrutura federada e a existência de múltiplos fusos horários. Guiados pela teoria do poder logístico e pelas perspectivas sociológicas sobre o tempo, bem como por insights empíricos, mostramos como os fusos horários precisam ser domesticados para que o NLSA exerça seu papel centralizador. Discursivamente, o fuso horário é introduzido e discutido publicamente para caracterizar simbolicamente a Rússia e justificar ações políticas ou seus resultados. Burocraticamente, o desejo de simultaneidade e sincronicidade assume a forma de uma ordenação meticulosa de uma sequência de ações por meio de documentação prescritiva que regula a NLSA. Tecnicamente, sincronicidade, simultaneidade e instantaneidade dependem e engendram uma infraestrutura nacional em expansão que medeia as relações sociais e os processos de condução da NLSA, atravessando os fusos horários e as unidades federativas. Com base nessa análise, propomos que os estudos sobre mobilidade política e a sociologia da política educacional em geral poderiam se beneficiar do exame da relação entre tempo e política educacional e governança de quatro maneiras interligadas: o tempo da política, o contexto como tempo, os instrumentos políticos como instrumentos do tempo, e tempo em instrumentos de política.

**Palavras-chave:** Federação Russa; governança; tempo; espaço; avaliações nacionais em larga escala; tecnologia de desempenho

## **Taming the Time Zone: National Large-Scale Assessments as Instruments of Time in the Russian Federation**

Nationwide large-scale assessments (NLSA)—an example of cross-border policy mobility—manifest a proliferating means of governing formal schooling. In the Russian context, NLSA takes the form of compulsory graduation examinations called the Unified State Examinations (USE) in the last year of (high) school education. The exam constitutes one of the most important education policy reforms of the past 20 years, aimed at standardizing curriculum implementation and the evaluation of education quality through annual, nationally designed testing of individual learning achievements. The data produced by the examinations is aggregated to render legible and governable a range of actors beyond individual students, such as teachers or various levels of educational administration, including federal units (e.g., Gurova, 2019; Piattoeva, 2015).

NLSAs can be adapted to various political programs, and far from being merely technical, they structure public policy according to their intrinsic logic (Lascoumes & Le Galès, 2007; also Rose & Miller, 1992). The Russian government has recently sought to rebalance power in favor of the federal center. Due to Russia's vastness and complex, asymmetrical federalism, the government deploys different policy instruments for achieving this goal. In this context, education has become both a target and a means of reformatting federal relations, including through the introduction of the USE. The USE is commonly presented by the Russian authorities as a tool for generating unbiased, reliable, and transparent data across the entire country, alongside promoting meritocracy and quality education by arguably exposing corruption, cheating, and inequalities in the provision of education across regions. These ambitious promises have led to the rise of procedural objectivity

that accentuates uniformity through the meticulous standardization and stabilization of the sociotechnical processes and environments of testing (Piattoeva & Saari, 2018). The vast size of the Russian territory and its economic, political, cultural, and temporal diversity complicate the task of making the examination uniform. Russia covers 11 time zones, which means that the maximum time difference between the regions can reach up to 10 hours: for example, the city of Kaliningrad (GMT+2) is located in the western part of Russia and Petropavlovsk-Kamchatsky (GMT+12) in the northeastern. Implementing the NLSA in a uniform manner across Russia thus also implies attempting to synchronize the exam across and despite the presence of multiple time zones.

Our interest is in how a mobile policy instrument of the NLSA participates in the relational processes of time- and space-making in a particular federated context of Russia, and how this process intertwines with and is shaped by the presence of multiple time zones. Educational governing is “perhaps one of the most salient areas in which concrete dealings with time become explicitly visible, as regional, national or international governmental actors explicitly aim for the creation of specific sorts of time” (Decuyper & Vanden Broeck, 2020, p. 603). The relationality of time and space means that they are co-produced, and the governance of and through time bears consequences for spatiality and the relations of power in space. Time and space are in turn fabricated with and generative of specific instruments and policy instrumentation (Decuyper & Vanden Broeck, 2020; cf. Lascoumes & Le Galès, 2007) that “steer or more implicitly nudge educational actors and/or systems in preferred directions” (Decuyper & Vanden Broeck, 2020, p. 603), thus requiring analytical attention to the concrete means of time- (and space-)making. In this study, we approach the NLSAs (and Russian USE in particular) as both data-intensive globally circulating policy instruments that have spread across education systems (Verger et al., 2019) and as instruments of time- and space-(re)making (Lingard & Thompson, 2017). They serve the production of a certain time by patterning actions in time and performing temporal processes such as synchronization, succession, repetition, or pace that then also contribute to space-making.

Examining the time zone as a materialized and instrumentalized embodiment of time enables us to highlight and analytically engage with the unique character of Russia’s context. Time zones were established by international conventions for legal, commercial, and social purposes, although for contemporary people they might seem mundane and fade into the background as a naturalized condition that shapes life subtly. However, the time zone is like other units of time such as hours or minutes that turn time from an abstract notion to a countable and hence controllable resource, making it shared social knowledge and shaping human experience. The time zone can also be subordinated to political will. For instance, in the context of China, which is fiscally decentralized and geographically vast, the time zone produces uniformity through practical and symbolic affordances of the uniform “Beijing time zone” (Hassid & Watson, 2014). The time zone has in fact often played out symbolically and discursively, as in Lithuania changing its time zone multiple times to accommodate the political elite’s identification with either the EU or Russia (Pavlovaite, 2003). Castells (2010) has approached the time zone as conducive to the proliferation of interdependent financial markets utilizing slight discrepancies between market values at opening and closing times across global financial hubs located in different time zones. These examples signal that the time zone is a material and discursive element of national and global temporal orders, that it can be deployed for the governance of populations and systems, and that the time zone enables the exercise of power.

Empirically, our study relies on diverse sources of data generated from open media sources and official documentation. It consists of decrees and reports on the preparation and conduct of the USE complemented with interviews, newspaper articles, and public speeches downloaded from the official websites of the Russian state institutions and diverse media outlets. We traced how the themes of time and time zone are manifested in this diverse pool of materials utilizing keyword

searches such as “time,” “time zone,” and “USE.” The official documentation was particularly important for examining the steering of the mundane actions and routines that structure the examination in time to produce simultaneity and synchronicity across multiple time zones. The interviews with officials or school-level actors documented in media sources helped to shed light on how the time zone is referenced in public debates and political decisions on NLSA’s implementation.

The article proceeds as follows. We start by describing the specific character of Russian federalism and then move to introducing our theoretical approach that combines ideas of the theory of logistical power (Joyce & Mukerji, 2017; Mukerji, 2010) with sociological and historical research on time as an instrument of power and governance (e.g., Adam, 2004). In the empirical section, we examine the production of a uniform time through the NLSA and the taming of the time zones and demonstrate the heuristic and analytical potential of our theoretical underpinnings. The discussion considers the implications of this analysis for the study of policy mobilities in federations and suggests directions for future research in policy sociology.

### **Federalism in Russia: Asymmetrical, Authoritative, and Multinational**

The Russian Federation is a presidential system in which extensive powers for the *de jure* ruling of the country are centered on the president (Moreno & Obydenkova, 2013). As of May 2022, it consists of 85 autonomous formations, the so-called subjects of the Federation, including two internationally disputed areas (i.e., the Republic of Crimea and the city of federal importance, Sevastopol). Russia is a case of authoritarian federalism where federalism is constitutionally inscribed, but its practical implementation seeks to put the sub-federal units in a relationship of federal subordination, not negotiation or bargaining (Starodubtsev, 2018). The central government is in charge of developing political programs, while the regions handle their administrative implementation. During Boris Yeltsin’s time in office as the first president of the Russian Federation (1991–1999), federal subjects and central authorities in Moscow engaged in a heterogeneous mesh of bilateral agreements largely to soothe the secessionist moods of some regions, thus undermining a transparent division of responsibilities and rights regardless of the region in question. This, together with the federation’s differentiated structure as identified below, explains why Russia has been described in terms of an asymmetrical federalism (e.g., Moreno & Obydenkova, 2013). For the incumbent president, Vladimir Putin, one of the main objectives has been to strip the subjects of the federation of their autonomous powers granted in individually negotiated contracts (e.g., Zuber, 2011). In addition to abandoning such contracts, Moscow has also inserted federal representatives to monitor the federal subjects locally.

An important feature of the Russian Federation is also its multinational character: as a successor of the Union of Soviet Socialist Republics (USSR), Russia continues to be composed of nation-state republics, national-territorial units, and administrative-territorial entities (Zuber, 2011). The first two types are defined as the homelands of designated ethnic groups whose right to a degree of territorial and political sovereignty emanates from their cultural or linguistic distinctiveness from the ethnic Russians and others. The Federal Treaty of 1992 outlined the special status of the republics, granting them asymmetrically more fiscal benefits and increased autonomy to create regional institutions and legal provisions (Moreno & Obydenkova, 2013). The multinational feature of the federation was then also acknowledged by the Law on Education (Russian Federation, 1992) confirming the right to receive comprehensive education in languages other than Russian in many such regions, as well as to teach local history or literature (Piattoeva, 2009).

However, after 2006, the subnational units became implementers of federal policy, the regional component in the curriculum was abolished, and the federal government introduced federal

education standards (Starodubtsev, 2018). Moreover, all school textbooks now undergo federal textbook scrutiny before being accepted as teaching materials so as to reduce the diversity of textbooks, including streamlining their content in areas of political contention, such as history. The number of teaching hours allocated to the Russian language has increased, and the teaching of “national” languages was made voluntary, requiring written permission from the legal guardians (see Piattoeva et al., 2023). Under the presidency of Vladimir Putin, public education was thus increasingly recentralized to foster the development of a state-centered national identity (Piattoeva, 2009; Suleymanova, 2018). The introduction of the USE, which tests the knowledge of the federal curriculum and can only be taken in Russian, has not only added an important centralizing tool to Moscow’s governing toolkit, but has also critically impacted the role of education in and about other languages and cultures due to the USE’s high stakes for students and their families, teachers, and education administrations (Suleymanova, 2018). Some commentators argue that USE has had a more profound impact than the eradication of the ethno-regional component from the curriculum (Suleymanova, 2018).

The main bodies responsible for education policy at the federal level are the Ministry of Education and the Federal Service for Supervision in Education and Science (*Rosobrnadzor*). The ministry creates frameworks for educational policy while Rosobrnadzor ensures the implementation of federal norms in regional structures, including the uniform implementation of the USE throughout Russia. Since 2018, Rosobrnadzor has become an independent agency that functions as part of the government of Russia, which means it is no longer subordinate to the Ministry of Education. At the regional level, regional ministries of education host a supervisory department financed by the federal budget and headed by a federally appointed figure who oversees organizations subordinated to the regional government and the activities of municipal authorities in education (Starodubtsev, 2018).

Thus, by now, the asymmetric nature of Russia has somewhat shifted from manifesting differences in the statuses of regions and their relations with Moscow to an asymmetry of power between Moscow and the regions. Moreno and Obydenkova (2013, pp. 156–175) summarize how the latest reforms aim at “synchronizing” the legislation—that is, federal and regional constitutions and provisions to establish an “executive vertical of rule of law” under central control. Yet, elements of non-centralization persist (Busygina et al., 2018) such as the continuing presence of ethnic regions and lack of resources to implement their total control by the center. Regardless of the tightening grip of the federal government and the president through legislation, restrictions on regional and local elections, and the establishment of new steering structures, the regional governments can exercise some discretion by, among others, leveraging information asymmetries—that is, by not providing the center with complete information about local matters or even by providing disinformation (Busygina et al., 2018).

This appraisal alerts us to the contingency of governing Russia, creating the need for indirect means of governance and using education as a target and a means of reformatting the federal relations. Indeed, socio-economic statistics, public opinion polls, and electoral results have become important instruments of governance by monitoring and evaluation (Starodubtsev, 2018), with the USE as one such tool. Kolarova, Samaganova, Samson, and Ternaux (2006) argue that Russia addresses its territorial immensity and complex administrative system by investing in infrastructural networks and tools of information governance to ensure cohesion. As we describe in the theoretical section, these forms of logistical power function, among other means, through time reorganization, and therefore, the space of Russia is made subordinate to the center through the means of time-making.

The complex relationship of time, space, and infrastructure is aptly illustrated in a speech by the then president of the Russian Federation, Dmitry Medvedev, in 2009, who also signed the document making the USE compulsory across the country:

Modern high-speed optical lines will be laid on our territory, equipment of increased productivity will be installed and the potential of already built lines will be fully utilized, there are also a lot of them. This will ensure the exchange of ever-increasing flows of information both between Russian regions and between different countries. Russia, spanning 11 time zones, is destined to become a key link in the global information infrastructure.

By the way, about time zones. We are traditionally used to being proud of their number, because it seemed to us a vivid illustration of the greatness of our Motherland. This is indeed the case. But have we ever thought seriously about how such a fractional division allows us to effectively govern our country, does it not lead to the use of too expensive technologies? Examples from other countries (United States of America and China) show that it is possible to manage with less time difference. These are big countries. (Rossiyskaya Gazeta, 2009)

The recent history of Russia is an acute reminder of the complexity and political nature of time in the form of the temporal organization of society in general and time zones in particular.<sup>1</sup> Nowadays, the boundaries of time zones run along the Russian Federation subjects' borders, which means that they are defined politically, reflecting Russia's federal structure (on the political nature of time zones, see Hassid & Watson, 2014; Stevens, 2016). The leading role of Moscow is manifested in symbolic and practical time organization: Moscow time has been assigned by federal law as a universal reference point for time-keeping in the country (Russian Federation, 2011). It is symbolically manifested in labeling time in the regions as MSK+ and people living in other time zones frequently have to coordinate and adjust their local rhythms to the Moscow time zone (Karaseva & Momzikova, 2019). As the lengthy quote above shows, Russia's multiple time zones are discursively referred to as a symbol of its territorial greatness, but they also make the governance of the Russian federation costly and challenging, adding complexity to the tiered nature of the federation. Time is a resource and a target of power, but it needs to be decontextualized and instrumentalized to serve asymmetrical federalism. We turn to the relationship between time and power next.

### **Logistical Power and the Taming of Time**

Our overall theoretical approach builds on understanding the exercise of power and governance as discursive, sociomaterial, and technoscientific—that is, as functioning through diverse impersonal and indirect means (Piattoeva & Vasileva, 2022). We turned to Mukerji's (2010) theory of logistical power to shed light on how governance is exercised through ordering objects and taming the natural environment by developing and modifying various material things—from infrastructures to user manuals—thereby shaping the conditions of political possibilities and forms of collective life on a bounded territory (Joyce & Mukerji, 2017; Mukerji, 2010). Orchestrating material, technological, and bureaucratic infrastructures that rely on and generate mundane practices that

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<sup>1</sup> The time zone came into being at the 1884 Prime Meridian Conference in Washington, DC, to replace the world's impossible patchwork of local times with a universal system of territorial mean times. The world was subsequently divided into 24 zones, each with a single mean time determined by astronomers at the Royal Observatory in Greenwich (Ogle, 2015). Russia has made several adjustments to its time regime in the 2000s, including reforms of the time zones and daylight savings (e.g., BBC, 2014).

constitute the everyday life of citizens, logistical power also affects the processes of meaning-making and knowledge production. The material order is always embedded in and embeds the broader social and cultural norms and visions. Therefore, logistical power is inevitably involved in “building cultural imaginaries about the future to turn political goals into ways of life” (Joyce & Mukerji, 2017, p. 10).

The theory of logistical power helps us understand how the state performs itself impersonally across many sites by both shaping and acting through the environment in which human life unfolds (Mukerji, 2010) and how it does so through inventing and connecting diverse objects (Joyce & Mukerji, 2017). As the state exists in multiple configurations, it is also always in formation, an ongoing experiment that reacts to changing political circumstances. Researchers trace the emergence of logistical power to the attempts to consolidate monarchial territorial control by disciplining the local elites who challenged direct authority. The logistical power undermined the local elites with the help of infrastructural projects with not only highways and canals but also post offices and document archives that spread across the state territory and brought the power of the state down to the local level shaping everyday life (Joyce & Mukerji, 2017; Mukerji, 2010). In this manner, logistical power partakes in constructing a singular unit of power while appearing outside of politics as merely technical and material, as if sitting passively and having no connection to strategic actions by those holding or seeking to exercise power (Mukerji, 2010).

The governing affordances of logistical power offer fruitful insights into any state, and in the case of Russia, which consists of a large number of constituents scattered across a vast territory, it seems to be particularly promising. Logistical power reminds us that states are not solid units but shifting assemblages of heterogeneous human and non-human actors and distributed sites that might act independently of each other. It invites researchers to examine how practices and objects seemingly unrelated to the exercise of state power may indeed make the state “complicitous in everyday life” (Joyce & Mukerji, 2017, p. 15). We see education as a key site of statehood and the USE as a practice imbued with bureaucratic and technoscientific elements enabling but also relying on the exercise of logistical power. The time zone is equally a site and a tool of logistical power ordering a myriad of activities on the vast territory of Russia from commerce to political events.

The material means and sites of the exercise of state power have expanded and multiplied, concealing power but also engendering problems of coordination (Joyce & Mukerji, 2017). Thus the case explored in this paper is a curious example of the seemingly unrelated tools of logistical power (the USE and the time zone) crossing and posing a problem of coordination and compatibility. As we show in the empirical analysis, this problem is addressed through inventive solutions that demonstrate the ongoing and unfinished nature of state engineering. Furthermore, as logistical power is exercised through non-human forms, such as the mending of natural environment, we experimented with the idea of time itself being a natural resource available for governance if tamed through material means. Yet, the theory of logistical power does not address time specifically. Sociological and historical research on time as an instrument of power and governance (cf. Adam, 2004; Landahl, 2020) helped us understand how time is tamed into an instrument of logistical power.

Time connotes something that is varied and in flux. Modern time management harnesses technologies and culture to tame and direct these “moody fluctuations and to submit them to ordering—to hardwire them into lasting temporal regimes or cultures” (Stine & Volmar, 2021, p. 17). The history of time shows how the invention of clock time strove to disassociate human activities from earthly and cosmic rhythms and processes. Thus, one of the pillars of modern time is its decontextualization—that is, independence from the physical world, which allows for “entirely new associations, linkages and contents to be developed and imposed” (Adam, 2004, p. 114) and enables the strategic use of time as an important aspect in the exercise of power (Nawotny, 1996).



Material time is time that is numbered, counted, ordered, and thus potentially controlled. It enables the production of synchronization, rhythmic repetition, or invention of instantaneity as central elements of social organization and the regulation of collective existence through time (Adam, 2004). Those in command of the knowledge and technologies of time decontextualization are able to exercise power. The time zones that once emerged as an outcome of complex political activity and technological development (Ogle, 2015) to govern populations and optimize economies could now be regarded as a semi-natural element that has disappeared into the background, while exercising agency without intentionality, as a matter of things. At the same time, the time zone can be strategically awakened: Hassid and Watson (2014, p. 173) have argued that “larger countries or multinational entities like the EU may find it easier to rely on symbolic centralization rather than potentially costlier fiscal or administrative forms,” referring particularly to the time zone as a means of a symbolic exercise of power leading to centralization.

Digitalization has accelerated time decontextualization and provided means of overcoming vast distances and spatial separation, making possible simultaneous and instantaneous presence. Adam (2004) writes of becoming all-seeing and being everywhere at once and nowhere in particular, and Keightley (2012, p. 7) highlights the gradual abstraction of time from space “resulting in an experience of non-material co-presence.” These observations have led to speculations that space is rendered irrelevant and the qualities of time such as sequence and duration are erased in favor of instantaneousness. However, Adam (2004) places a caveat on this optimistic diagnosis: in daily practice nothing is replaced, but altered by the imposition of the new: “other modes of time remain very much in evidence” (Keightley, 2012, p. 3). The time zone is a reminder of the continued presence of different temporal orders that prevent the ideals of instantaneousness or simultaneity or erasure of space from fully materializing. At the same time, instantaneousness, simultaneity, or “real time” are (Western) ideals to which governing technocrats aspire despite the impossibility of their full achievement.

Digital and analog technologies are key to shaping how time is organized in society; “a sense of time emerges from our relationships with a variety of instruments and devices” (May & Thrift, 2003, p. 4). These devices either mark the passage of time or alter our conception of the nature and direction of its duration and passing (May & Thrift, 2003). An object that might be thought of as a mere instrument of time may also work to alter our conceptions of space and vice versa. The history of time zones, for instance, shows how they emerged in the context of intensifying long-distance trade, the invention of the telegraph, and modern transportation, all of which called for efficient regulation and transparency based on the standardization and coordination of time. The railways could not function effectively and safely without a standardized time on the one hand and an agreed upon time grid that brought distant places into a common frame of reference on the other. Moreover, traveling between two set points in space takes a determined number of hours and minutes, thereby eliciting additional conceptions of distance and proximity in space.

Indeed, temporal knowledge is deployed in societies to organize not only their life in time but also in space. In this article, we keep a close eye on the relationality of time and space and how space is produced through temporal elements (cf. Adam 2004, Ch. 5). Social science research has tended to keep time and space separate and ignore how time is bound up in the spatial organization of society, and vice versa (Decuyper & Vanden Broeck, 2020; May & Thrift, 2003). The time zone is a pertinent example of the relationality between time and space. Time can be measured in degrees of longitude and longitude in hours. Uniform and standardized time may “establish commensurability and comparability and allow for commodification and exchange” across a spatial unit (Ogle, 2015, p. 22). Time zones created particular regions, prompting new relations and processes within spaces that previously had little in common. But regions also shape time zones, such as Russia aligning time zones with the borders of its federal units or China adhering to one

time zone to invoke uniformity. At the same time, time zones mark differences and separation between spaces, thus generating dual processes of unification and division, homogenization and diversification. This also means that spaces that we envision as divided into spatially demarcated administrative units, such as the complex federal structure of Russia, are in fact only one of several arrangements. Time zones emerging from the historical processes of time regulation add another tier to this complexity. These complexities of and intertwinement between time, space, or administrative structure are all factors contributing to how global policies might be enacted in specific contexts.

In the following, we examine how the implementation of standardized assessment has led to the mobilization of various material and discursive resources for taming the time zone in order to enable governance through the NLSA. The theory of logistical power invites us to trace the exercise of impersonal, materialized state power in the granular practices of coordination and maintenance, which turn technical knowledge and the collaboration of local actors into an asset (or a potential risk) and a pillar of the exercise of power (Mukerji, 2010). These insights call for analytical attention to how logistical power operating on the level of practices and routine actions is wielded, which became the analytical locus in our empirical analysis. We considered taming of the time zone from three distinct dimensions: (1) discursive: an analysis of the meanings assigned to certain decisions and practices; (2) bureaucratic: an exploration of the normative documentation prescribing behavior of human and non-human actors; and (3) technological: an examination of the technoscientific infrastructure in which the normatively prescribed behaviors unfold. We assume that the three dimensions are intertwined and constitute the exercise of logistical power.

### **Taming the Time Zone by Discourses**

As noted above, the number of time zones of the federation is presented by the Russian state as both a great achievement and demonstration of its significance and global power and also an obstacle that makes the governance of the territory more complicated. In the context of the USE, the time zone issue was raised in 2013 by an active information campaign launched in the media, associated with criticism of the USE due to massive violations, such as cheating through the publication of examination questions on the internet. Dmitry Medvedev, who was the prime minister at the time, uttered an iconic phrase, the meaning of which was seized on and repeated by other authorities:

Sometimes I think that it's a pity that we don't have one time zone in our country, as in some of our large neighboring countries, because in the Far East [students] passed [USE], and everything, of course, was published online, and after that the cheating began. (Forbes, 2013)

Rosobrnadzor named the development of unique task sets for each time zone as one of the measures to counteract violations. The diversity of time zones was discursively constructed as a natural obstacle that prevented the effective implementation of the assessment in that year; it was also constructed as an objective reason for the failure of the examination project that claimed to offer objectivity and transparency in examinations and produce reliable evidence for decision-making. In this manner, the argument that problematized and reinforced the need for federal administrative intervention to address the multiplicity of time, embodied in the number of time zones, was publicly articulated as a leading objective of education policy.

However, according to reports by the Federal Institute of Pedagogical Measurements (FIPI), at least since 2010, options for the USE tasks were developed taking into account the presence of different time zones in the Russian Federation (without specifying their number) "to ensure the protection of information from dissemination at the end of the exam in some territories from being

transferred to other territories” (FIPI, 2011, p. 32). Moreover, the diversity of time zones and the need to vary exam assignments for each time zone were already discussed in 2001 by the editorial board of the journal *University Management* (*Universitetskoe Upravlenie*, 2001). In 2004, *Rossiyskaya Gazeta* quoted the then-head of Rosobrnadzor, Viktor Bolotov, who warned school graduates about scammers offering answers to the USE tasks on the internet for a fee. Bolotov claimed that this was a complete scam since there are unique exam items for each time zone (Agranovich, 2004). Therefore, it seems that differences in the time zones were taken into account when administrating the exam since 2013 and the reason for massive cheating discussed widely in the media has remained a mystery.

This example demonstrates, in particular, that time is tamed not necessarily by changing the mechanical flow of time, introducing new time units, or implementing methods of synchronization of time. It is also subordinated to the political will discursively (i.e. references to time justify political actions or their outcomes, including challenges that emerged in the process of policy implementation). In our specific case, the time zone was instrumentalized for the needs of education policy. The time zone was tamed by presenting it as a seminatural element—a physical obstacle—which then explained failures, helped to suppress criticism, and simultaneously presented the federal authorities as capable of and in fact central to inventing a solution. The solutions focused on taming the time zone using bureaucratic and technological means, as we discuss next.

### **Taming the Time Zone by Bureaucratic Means**

The federal structure of Russia—where the sub-federal units, or regions, are seen as implementers of prescribed policies—has led to a great increase in reporting (Gurova, 2019; Starodubtsev, 2018). As the examples below show, the examination project introduces a variety of managerial actions that seek to produce and steer a smooth operation of the assessment across the whole of Russia. The USE resembles classical bureaucracy—an administrative system characterized by hierarchy, centralization, impersonality, formality, a large set of rules, and technical rationalization (Blau, 1956; Olsen, 2006). The examination is coordinated by ordering procedures and actions in time in the preparatory stage, during the examination days, and during the following period of scoring, storing, and appeal. In this manner, the exam itself is divided into distinct phases unified by the annual centralized calendar. The timeframes are determined by Rosobrnadzor—thus symbolizing the superior authority of the federal government over the sub-federal governing structures. The mandatory calendar spills over to other administrative and educational activities taking place throughout the school year, such as mock exams, extra-curricular preparatory classes, or administrative meetings of regional authorities and school actors (Gurova, 2019). The quote below communicates how the preparatory stage of the exam is mandated in an official document prescribing in detail the implementation of the exam:

Preparatory stage: organizational and technological activities held in the PPE  
[“examination point”—the location of the exam] on the eve of the exam.

Checking the readiness of the PPE is carried out in two stages:

Stage 1 – no later than two weeks before the start of exams by decision of the chairman of the GEC [state examination commission of the subject of the Russian Federation] – members of the GEC. When checking readiness, the designated individuals check the compliance of the PPE with the requirements established by the Procedure, readiness (operability, safety) of the PPE equipment, with the participation of a technical specialist perform activities to confirm the settings of the authorization station that ensures interaction with a specialized federal portal.

Stage 2 – not later than one calendar day before the exam – by the head PPE and the head of the organization on the basis of which the PPE is organized. According to the results of the check, form PPE-01 “Certificate of readiness for PPE” is filled out (printed from the collection of forms for conducting GIA-11 in 2021), which remains in the PPE and is made available upon request. (Rosobrnadzor, 2021a, p. 17)

The administrative protocols prescribe the starting times (10 a.m.) for each individual exam across the country in accordance with the local time zone. The documents also dictate a *sequence* of timed actions that produce synchronicity. The quote below shows how teachers or administrators placed in individual examination rooms (auditoria) are instructed to inform examinees during the exam. They are given precise lines and their timing in the instructive documents, as in the following:

Instruction for staff monitoring exam procedure in the individual examination rooms:  
 “Important! Time allotted for briefing and completing registration fields of USE forms is not included in the total time of the examination work.

Do not forget to transfer the answers from the draft and KIM [exam sheets] to the answer sheets with a gel capillary pen with black ink.

You can start completing the assignments. The briefing is over.

Good luck!

30 minutes before the completion of the examination work, you must announce:

There are 30 minutes left until the end of the examination work.

Do not forget to transfer answers from KIM and drafts to the answer sheets with a gel capillary pen with black ink.

5 minutes before the completion of the examination work, you must announce [...]

(Rosobrnadzor, 2021a, p. 176)

These prescriptions aim to produce a particular temporal order—a *succession* of actions—that must be observed methodically and in a certain order. Because of the existence of different time zones, it is not possible to achieve simultaneity—that is, to perform the exam and related actions simultaneously across Russia in real time. Simultaneity is thus replaced by an orchestrated sequentiality that can only be achieved through a careful breakdown of actions in time and their ordering. Adam (2004) defines succession as the opposite of simultaneity. However, our observation helps to understand how succession does not so much replace simultaneity but generates asynchronous simultaneity: all actors placed in the same time zone perform successive actions in a simultaneous manner, while actors placed in other time zones enact exactly the same orders asynchronously.

Galison’s *Einstein’s Clocks and Poincaré’s Maps: Empires of Time* probes the question of simultaneity: what does it mean to say that events are simultaneous? In this question, the elements of time, space, and event come together (Galison, 2004). Not only modern rationality but also technologies are central to valuing and producing simultaneity as a procedural and practical accomplishment rather than an abstract thought. Simultaneity has meant synchronizing clocks by telegraph signals and accounting for delays in transmission. In other words, simultaneity is dependent on synchronicity materialized in the coordination of clocks—a demonstrable sociotechnical process. In the examples above, the documents dictating exam administration synchronize technical and human actors. Simultaneity emerges as a coordination of segmented and ordered actions, taming the time zone into a predictable delay in transmission. Unification across space is thus enabled through meticulous segmentation and command of actions in time.

## Taming the Time Zone by Technical Infrastructure

As examinations are highly technology-intensive, the time-prescribed activities do not only concern those human actors who are directly linked to the examinations but also extend to and rely on technical matters and the exam infrastructure. Originally initiated as a simpler procedure consisting of filling out examination sheets under the supervision of a local teacher, the exam began to be supplemented with metal detectors, a video surveillance system, a token, computers, and printers, all of which depend on access to the infrastructures of electricity and the internet (Piattoeva, 2016; Piattoeva & Vasileva, 2022). The infrastructure has started to play the leading role in enabling the examination, and any failure, lag, or disconnect can jeopardize the entire assessment project as a uniform performance. Or put differently, the reliance of the examination on the affordances of digital technologies (printing of confidential examination questions, online surveillance, reporting, scoring, for instance) enables an extra layer of control through time coordination but also control over adherence to timed actions.

In the examination instructions referred to earlier, which closely resemble a user manual, human actors appear as service staff, or even as cogs in a machine, whose main task is to start and execute the work of the mechanism on time. For instance, this is how the actions of on-site personnel are coordinated in time:

No earlier than 10:00 local time, the organizer of the auditorium, responsible for printing the EM [examination materials], removes the electronic carrier with the EM from the secure package, installs it into the CD (DVD) drive of the EM printing station, enters the amount of EM (equaling the actual number of exam candidates in a given auditorium) for print and starts the EM decryption procedure (decryption procedure can be initiated if a technician and a member of the GEC have previously loaded and activated the access key to the EM), fixes the date and time of opening the electronic carrier with the EM in the form of PPE-05-02 “Protocol of the exam procedure in the auditorium.” (Rosobrnadzor, 2021a)

All examination procedures are performed under the gaze of video surveillance, whose coverage is expanding every year. The live situations are monitored by both artificial intelligence (AI) and trained (human) observers (Kommersant, 2020). AI’s neural networks perform surveillance instantaneously, and human observers are recruited federally and can be located in any time zone to monitor the exams and report violations such as cheating or non-compliance with administrative procedures by logging onto the internet portal, WatchUSE (*Smotri EGE*). The video material is also recorded and stored until March 1 of the following year (Rosobrnadzor, 2021b) and revisited in cases of complaints or appeals. Notably, the success of the USE is counted in time units—identification of precise numbers (e.g. 2,807,703 hours of broadcasts in 2021)—that exemplify wide coverage and effectiveness (Rostelecom, 2021).

The infrastructure plays the role of an independent and unbiased intermediary that paves the way for an objective assessment and governing of the education system. The video surveillance system subverts the time and space distinctions, allowing an observer as a representative of the state to be present and interfere at any exam point across the entire country and at any time within an almost year-long period. The central authorities’ ambition to unite and control the complex timespace of the country (cf. May & Thrift, 2003) is materialized in the situation-information center of Rosobrnadzor in Moscow, equipped with a special screen wall that simultaneously broadcasts live or recorded video material of the exam across the 85 regions of Russia. The wall pictures Russia as a flat totality broken down into televised examination rooms rather than regions or time zones. Akin

to a control room, it instills a seemingly neutral powerful realist epistemology (Kitchin et al., 2017) erasing the fragmented time of the time zones, or space as divided into the sub-federal units.

## Discussion

The unique presence of multiple time zones in Russia has both enhanced and impeded the process of federal-wide unification and standardization pursued by the Russian government with the mandatory introduction of national examinations.<sup>2</sup> The presence of multiple time zones evidences the lack of a unified spatio-temporality (cf. Sassen, 2000) and poses a challenge to the desire for a smooth and efficient order. The time zone intervenes in the attempts of the federal administration to homogenize and centralize by means of the synchronization and simultaneity promised by NLSA. The time zone leads the authorities and experts to diversify the examination content in order to substantiate their claims of objectivity and fairness that legitimized the introduction of the USE in the first place. Yet the time zone also enables further interventions as the central authorities endeavor to tame the time zone discursively, through bureaucracy and technology. These endeavors shed light on the practices of largely mundane logistical power that attempt to produce a nationally bounded time order that reduces federal fragmentation in space.

Lingard (2021) has argued that time and temporality have been overlooked in most education policy sociology while being implicitly present in that work in multiple ways. Our analysis shows how time is indeed an explicit and implicit target and a means of practicing politics, policy, and governance, and how time materializes in different forms such as the time zone or the NLSA. Research on policy mobility has emphasized the role of context—that is, how globally mobile policies are enacted in a specific place and time. We suggest that thinking of policy mobility as a question of time deserves further exploration. To start with, Lingard (2021, p. 11) encourages interrogating the *time of policy*. He references his earlier work with Rizvi (Rizvi & Lingard, 2010) to remind us of the question “Why was this policy developed now?” Our analysis has thus started with a contextualization of the Russian Federation explaining the role of impersonal policy instruments, such as the NLSA as a means to serve the federal project of unification and centralization in Russia. The paradox is that while the Russian federal authorities exercise the upper hand over the legislation, budget, and political programs, they continue to be dependent on the regions to produce data and implement federal policies. In this context, they continuously search for effective policy instruments.

Another way to approach a contextually sensitive analysis of global policies is to think of *context as time* and how time produces and differentiates between contexts often unproblematically perceived as homogeneous spatial containers (cf. Sassen, 2000). In the Russian case, we chose to concentrate on the presence of a remarkable number of time zones that makes Russia different from other countries in general and the federal states in particular. The time zones symbolize and concretize Russia’s vastness, but way beyond that, they partake in the enactment of mobile policies and policy instruments. Thus, next, we propose studying policy instruments as *instruments of time* and the *time in policy instruments*.

The former connotes how policy instruments govern through ordering time and the latter highlights how the instrument itself folds in diverse components, including temporal ones. In other words, the instrument of time references the external affordances of the instrument to govern through time, while time in policy instrument directs attention to its inner workings—that is, its

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<sup>2</sup> We thank the anonymous reviewers for pointing out that other federal countries share with Russia multiple time zones and standardised testing. It will be interesting to study how, if at all, the “problem” of time zones is addressed in these contexts, and if recent developments in testing (e.g., introduction of adaptive testing technology) resolve the issue of time zones across contexts.

time-critical factors and disparate temporal processes essential for smooth operation (cf. Stine & Volmar, 2021). Yet the distinction between inner and outer is not clear-cut, and as we have shown, regulations imposed on the internal workings of the instrument perform many of its external governing functions. We believe that this analytical distinction may enrich and nuance studies of policy instruments beyond a focus on Russia or federal states, contributing to debates on time in education policy and sociology more generally.

First, the NLSA and the time zones are instruments of time (cf. May & Thrift, 2003). In their respective ways, they participate in the construction of temporal orders that produce wholes and parts in space. Answering the call for this special issue, our article shows how contemporary policy spaces are being created and recreated by globally mobile and locally adapted policy instruments, and how these instruments act on and in space by structuring time. This observation is particularly interesting in the context of federated countries that often span large distances and diverse populations and claim to respect and take account of these differences, accommodating them through diversified territorial and administrative arrangements. Referring to Benedict Anderson's "imagined community," Lingard (2021) reminds us of the role of education in producing territorialized communities. Anderson (2006) has also identified how that imagined, territorially bound community was produced in and with the help of ordering time. The community as a sociological organism moves through homogeneous, empty time structured by synchronized clocks and calendars (Anderson, 2006). It produces a community in anonymity by both representational and material means. In Anderson's original example, the novel and the newspaper not only communicated particular representations of the nation but also performed a steady, anonymous, simultaneous, and repeated activity distributed in space (Anderson, 2006). Just as the novel or the newspaper can be described as globally mobile instruments of their time, the NLSAs are similarly globally traveling instruments of time characteristic of our age. NLSAs are adjusted and subjected to the production of anonymity and simultaneity within a bounded space of a specific state, while also contributing to the production of that space.

Second, instruments come with and rely on user manuals, such as the ones we analyzed in this paper. Symbolically, their authorship signals who has the right to make the rules, who has an overview of the system as a whole, and who monitors and penalizes, should the prescriptions be broken. Studying such manuals, we realized that NLSA is like a Russian matryoshka doll composed of multiple sociotechnical elements of different sizes and varied complexities. Mechanical prescriptions of procedures and technical specifications encompass a component of meticulous timing—thus our proposed term of time *in* policy instruments—although these temporal elements might remain under the radar. The exam will only work smoothly if all elements—both human and non-human—interconnect in a *timely* manner. As we have shown, *coordination* of these elements materializes through actions that are temporally prescribed through calendars and clocked time. Moreover, the *sequence* of timed actions produces a synchronicity shared in space, bringing spaces into being. Through these prescribed, temporally ordered elements—the *mundane logistics of the exam*—the USE emerges as an instrument of time potentially encompassing the entire Russian Federation.

In our analysis, we reverted repeatedly to the most difficult question of all: what is time? Thinking of governance as a logistical endeavor, we see time as relational to and produced by its instruments, while the instruments of time are not necessarily recognizably about time—that is, they extend way beyond familiar clocks and calendars. Our research shows how attention to time, its regulation, and its regulatory affordances also brings us to the question of space. Time regulation produces space, (re)constructs boundaries, and grants the means of governance across vast distances. But modern time also remains embedded in space, despite frequent claims to the contrary. The time zone is a forceful reminder of this relationality. Attempts to overcome the governance complexities of large entities may be made through the taming of time. How time is a means of

regulating diverse societies, and how time also intervenes in the success of governmental interventions, deserves further scholarly attention.

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