

## Museums as Complex Systems in the Face of the War

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### Abstract

Museums lose their conceptual complexity and polysemy under conditions of war, forced confrontation, and struggles for survival, which may lead to a loss of diversity in the long run. Parametric General Systems analysis allows us to consider a museum as a system and to explore substratum, structural, and conceptual types of simplicity and complexity. Such qualitative analysis makes it possible to move the discussion from the ideological and value sphere to the field of rational and science-based justification. This justification, in turn, illustrates why it is important to maintain complex interpretations in Ukrainian museums during the current war.

**Key words:** museum, war, complexity, simplicity, substratum, structure, concept, parametric general systems theory, Ukraine

### Introduction

The war taking place in Ukraine is having a painful effect on all spheres of social and cultural life, including museums, which face new challenges and problems. If crises such as war divide social reality into 'right' and 'wrong' and, in many ways, simplify the interpretation and assessment of events taking place, then sociocultural sites such as museums face the difficult task of how to avoid conceptual over-simplification and maintain not only their material assets but also their fundamentally high intellectual complexity.

Since the beginning of the full-scale Russian invasion of Ukraine, the priority for Ukrainian museums has been the physical safeguarding of collections. According to Igor Poronik, director of the Odesa Museum of Western and Eastern Art, the main problems caused by the invasion involved the evacuation of collections (which initially failed to be carried out properly due to a lack of suitable packing materials for extended storage), staff downtime (unpaid salaries and lack of livelihood), and the lack of involvement by higher-level museum officials. Externally, European countries know very little about Ukrainian museum collections and therefore do not always realize the value of Ukrainian museums and the need for preserving them.<sup>1</sup> Alongside these problems, which for the most part can be solved with funding and attention from higher-level officials, there are also socio-philosophical problems whose solution lies in the conceptual arena.

The solution to these problems largely depends on what Ukrainians want their museums to be after the war. What ideologies will the institutions represent and what identities will they adopt? Historically, museums were often not neutral or objective in what they exhibited and collected. There were often some explicit or implicit aims – for example, to show the greatness and superiority of one's own culture and demonstrate the backwardness and primitiveness of another's, to show the sorrow and suffering of a nation, to glorify military victories and national heroes. Whatever the aims may be today and in the future, what remains indisputable is that museums must preserve themselves as complex conceptual systems with many functions. If

they become solely ideological tools, museums lose their scientific and humanitarian credibility.

### Methodology

To investigate the conceptual simplification currently observed in Ukrainian museums, we adopt a systematic-methodological approach to define the criteria of simplicity and complexity. Parametric General System Theory (PGST) methodology (Uyomov 1978) allows a qualitative analysis of humanitarian objects where quantitative methods are not always relevant. Developed in the 1960s-1970s by Ukrainian philosopher and researcher Avenir Uyomov, PGST is still successfully used in various socio-humanitarian fields (Leonenko et al. 2016) to analyse complex systems where using system theories based on mathematical tools such as those advocated by W. Ross Ashby (1962), John von Neumann (1958), Russell L. Ackoff and F.E. Emery (1972), and Ilya Prigogine and Isabelle Stengers (1984) is not appropriate. At the same time, contemporary museum approaches, for instance, decolonization, indigenous inclusion, critical feminist museology, and artistic or activist interventions do not provide the necessary level of theorization because they are more specialized.

Parametric General System Theory proposes a procedure for transforming any object into a substratum of some structure corresponding to a fixed concept. For example, a museum as a system can be represented in this way: the substratum of the system is the museum's exhibits; the structure of the system is the relations and interconnections between collections and exhibitions; the concept of the system is the dominant idea, the mission of the museum to which activities are subordinated. Also, PGST allows us to talk about system-specific characteristics of the subject of study: attributive and relational system parameters (Uyomov et al. 2002). Relational system parameters characterize the relationships of any system to each other concerning concepts, structures or substratum and their combinations. For example, two similarly structurally-organized museums can be called isomorphic. And if museums have different exhibits and organizational principles but are united by one concept, which is most often reflected in their names, the museums can be called isoconceptual museums. For example, the Odesa Art Museum and the Kharkiv Art Museum both display art collections. In contrast, attributive system parameters characterize the system itself and are the basis for dividing it into classes. Such parameters include reliability, completeness, complexity, stability, variability, regenerativity, and autonomy. Simplicity and complexity are also attributive system parameters. These allow us to look at the problems of museums and analyse their responses in times of war. In Parametric General System Theory, the assessment of the simplicity and complexity of a system depends on which system descriptor the simplicity or complexity relates to – the substratum, the structure, or the concept. Substratum, structure, and concept are first-order descriptors, and the relationship between them will be second-order descriptors, for instance, structure-substratum relation, substratum-structure relation, etc. Thus, the following types of simplicity-complexity can be distinguished: substratum simplicity-complexity, structural simplicity-complexity, and conceptual simplicity-complexity.

### Complexity and simplicity

These concerns relating to complexity and simplicity become particularly meaningful in the context of controversies over the definition of museums. The definition of a museum, with a mission and other concepts embedded in it, determines how a particular museum is assessed and perceived by specialists and the community. In fact, in Prague, on 24 August 2022, the Extraordinary General Assembly of ICOM (International Council of Museums) approved the proposal for the new museum definition with 92.41 per cent of members' votes. The new ICOM museum definition is:

A museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection and knowledge sharing.<sup>2</sup>

The new definition was adopted after several years of debate. At the previous ICOM conference, in Kyoto in 2019, a consensus was not reached, and no vote was taken. The most problematic lines in the definition proposed at the time were:

Museums are democratising, inclusive and polyphonic spaces for critical dialogue about the pasts and the future. Acknowledging and addressing the conflicts and challenges of the present, they hold artefacts and specimens in trust for society, safeguard diverse memories for future generations and guarantee equal rights and equal access to heritage for all people.<sup>3</sup>

The revision was necessary because museums have had to navigate increasingly complex societal and cultural landscapes, leading to radical adjustments or reinventions of their principles, policies, and practices in recent decades. The emphasis on social engagement in the 2019 definition ran contrary to the traditional mission 'to collect, preserve, research, interpret, exhibit', which was associated with conditions of elitism and hermeticism. The controversy demonstrates that the image of the museum is becoming more and more complex – complexity is increasing on the conceptual level, where the museum's goals are being formed, and on the structural level, where the museum's links with the local community, international contacts, and methods of representation of collections are reflected, as well as on the substratum level, where museum exhibits are presented in a new way, incorporating augmented reality technologies, sensory experiences, and novel approaches to interactivity.

In 'Museum Manners: The Sensory Life of the Early Museum', C. Classen discusses the importance of sensory perception in the formation of early European museums (Classen 2007), but this early movement quickly disappeared and only reappeared recently. Now more and more museums are becoming open and democratic, but to a certain degree, Ukrainian museums are just beginning their democratization journey and the formation of new social and sensory functions. In the West, many museums have become cultural and communication centres where visitors can spend their free time in a fun and educational way. In Ukraine, however, most people still associate museums with academic institutions, where they have to be quiet and not touch anything with their hands. They expect museums to retain their traditional roles.

The accepted ICOM text retains the main tasks of museums: to research, collect, conserve, interpret, and exhibit tangible and intangible heritage. Interpretation becomes especially significant in times of crisis and social turbulence, including the war taking place in Ukraine. To interpret historical events is, first and foremost, to understand and evaluate them in one way or another. Based on the well-known principle of the hermeneutic circle in philosophy (developed by M. Heidegger (1971), H.-G. Gadamer (1975), etc.), we can conclude that understanding an object involves a cyclical and contextual process of interpreting so that there is no definitive or final interpretation of an object. Instead, interpretation is a process which cannot, in principle, be completed or stopped. And the museum appears as a complex system precisely because it includes and evokes multiple interpretations simultaneously.

'To understand means to simplify', the Strugatsky brothers said in *The Time Wanderers* (Strugatsky and Strugatsky 1988). And indeed, by stopping at one chosen interpretation, we inevitably simplify or oversimplify a complex object. Ukrainian museums have experienced waves of such conceptual simplifications in the relatively short period of 32 years since the end of the Soviet era in 1991. Originally, Ukrainian museums presented the achievements and greatness of the Soviet Union, and many Ukrainians continued to see the Soviet period as part of their history and culture. Just 16 years later, in 2007, Ukrainian President Viktor Yushchenko opened the 'Museum of Soviet Occupation' in Kyiv, which caused controversy in society,<sup>4</sup> and the museum was vandalized. Yet museums should strive to reflect multiple perspectives on history and culture, including the history of the Soviet Union and its influence on Ukraine. This can be a challenging task, but it can help create a complex and more objective picture of the past, as well as a cautionary one.

An example of simplification is the situation of the Odesa Pushkin Museum, which is now closed to visitors, while the museum staff fear for their lives.<sup>5</sup> Alexander Pushkin is a significant historical figure in the formation of the cultural identity of Odesa; he stayed in the city from 1823 to 1824 and the works written during that time became an integral part

of the city's culture. But in the context of today's Ukrainian national ideology, Pushkin is a symbol of Russian domination in opposition to Ukrainian identity. Similarly, numerous acts of vandalism against the Pushkin monument and calls by activists to destroy 'symbols of Russian imperialism' simplify the narrative and are at odds with the purpose, mission, and main functions of museums outlined by ICOM.

To understand more clearly at what level the simplification of a museum as a system takes place and how this theory applies to Ukrainian institutions, it is worth looking at the following types of simplicity-complexity within a holistic system: substratum, structural and conceptual. In this systemic modelling, processes and characteristics that are hidden and not evident in descriptive analysis become visible.

In the case of substratum simplicity-complexity, the system's elements can be counted. Thus, museums with extensive collections of exhibits covering multiple eras and cultures are substratum more complex than small and highly specialized museums, where all the exhibits correspond to a unified concept. The strategy of substratum simplification can be seen in Ukrainian museums during the war, although the process began even earlier. It is a strategy of immediate erasure from a memory of all events that do not correspond to the current narrative. The increase in the removal of Soviet period exhibits in and beyond museums is linked to a group of Ukrainian laws on decommunization passed in 2015. Sergei Laevsky, director of the Chernihiv Historical Museum and the president of the Ukrainian National Committee of the International Council of Museums (ICOM), acknowledges the difficulties of this process:

The military-historical department of our museum is decorated with stained glass windows depicting red flags and other symbols of the Soviet period, including the Communist Party. We will carefully remove and store each piece of glass, number them, and hide them in our archives. On the first floor of the military-historical exposition, there is a bas-relief depicting two Red Army commanders of the Civil War period (the Ukrainian Revolution) – Mykola Shchors and Vasyl Bozhenko. Since it cannot be removed without destruction, we have decided to cover this bas-relief. In addition, we will remove items from the exposition that may cause irritation. However, we will do so carefully because we must give visitors the right to draw their own conclusions. This is difficult, but we are prepared to take this path. We have already started working on the concept of a future exposition that will take into account the history of Ukraine regardless of its inclusion in the Russian Empire and, later the Soviet Union. It will be the Ukrainian history of Ukraine. It will be different from the history of Ukraine as part of the Russian Empire and the Soviet Union.<sup>6</sup>

The demolition of monuments to Soviet and Russian figures and the renaming of streets are additional examples of this strategy of decommunization and de-Russification. The history of the monument to the founders of Odesa (also known as the monument to Catherine the Great) is illustrative. The original monument was built in 1900, but after the October Revolution in January 1918, the monument to Catherine was covered with tarps, and on 1 May 1920, the structure was dismantled. The figure of Catherine was dismembered, and fragments of the bronze Catherine and the figure of the founders of Odesa ended up in the archive of the Odesa Museum of Regional History. During the Soviet period, different historical figures were placed on the pedestal (Adam Mickiewicz, a huge head of Karl Marx, a monument to sailors of the battleship Potemkin). Yet in 2007 the Odesa City Council decided to restore the monument to the founders of Odesa. But as part of de-Russification in Ukraine, the monument was dismantled again on 28 December 2022.<sup>7</sup> Creating a homogeneous semantic substratum was a straightforward simplification involving the museum's collections. It is worth noting that the history of almost every nation has similar pages. If history were to teach anything, there would be a lesson learned: neither the physical relocation of peoples nor the cultural displacement of traces of the historical past has brought prosperity, for the most viable systems are those that are more heterogeneous.

To explain, the less diversity in the connections and relations between elements, the higher the degree of structural simplicity in a system. Simplifying tendencies in museum

practice at the structural level reduce the range of connections among the system elements. An example might be the classification of exhibits by one chosen criterion (historical, chronological, geographical), which might obscure other connections. In contrast, a structural-complex museum system implies the acceptance of a variety of models for classifying or representing exhibits, which allows different structures and, accordingly, various interpretations to be realized in exhibits. Suppose the structure of a museum exhibition is intended to transmit only an officially recognized image of the past. In that case, it relies on a unified historical narrative with the state's history at the forefront. But a more complex approach to forming museum exhibitions is possible: viewing historical events from the perspective of alternative sources, for example, marginal groups, various social minorities, or eyewitness testimony. This representation will make it possible to see not only one history and one truth but also other connections. For example, the official history of triumphs and achievements can appear as a history of injustice, cruelty and wasted sacrifice.

Conceptually simple systems are those systems where the object cannot be defined in any other way than through the thing itself, in which case the object is understood to be self-identifying. In other words, conceptually simple systems are those systems that can be represented as systems in only one sense. Correspondingly, conceptually complex systems are systems that allow for an infinite number of interpretations. This is precisely the simplicity-complexity level at which the idea of multiculturalism and diversity resides. Although this idea is losing popularity during the war in Ukraine, it is the one that guarantees cultural rights to the fullest extent, and it is the one that was proclaimed at the ICOM conference in Prague in 2022. Ideally, all cultures have the same rights to be represented in museums and to be available for scientific study and public discussion. However, emerging ideological factors, the assertion of Ukrainian identity and the elimination of Soviet and Russian cultural heritage make this idea an almost unattainable ideal for contemporary Ukrainian museums.

A crucial task for Ukrainian museums is to rethink how to exhibit and interpret Russian art, particularly in light of the fact that the Odesa Fine Arts Museum contains a significant collection of Russian art. This is not the first time in Ukrainian history that a similar ideological problem has arisen. In the 1930s, the museum fund of the USSR divided its formerly united collection according to territorial principles. It formed the Odesa Museum of Western and Eastern Art to house European and Asian art and the Museum of Russian and Ukrainian Art, now known as the Odesa Fine Arts Museum, for other works. This division contributed to the ideological simplification of each museum's mission. In the current context, Kirill Lipatov, head of the scientific department of the Odesa Fine Arts Museum, believes that two solutions exist. A new secret special fund could be created so all the Russian art could be removed and hidden, as it was during Stalin's regime in the 1930s; all the works illustrating repression and inconsistencies within the Soviet ideology of Ukrainian art were taken to one museum and were only exhibited in independent Ukraine. Alternatively, every museum would be enabled to develop a new policy for working with this art. Lipatov states:

I have never agreed with the opinion that art is separate from politics, as art always carries the impulse of politics and transmits a certain conventional and political language. Discussing a new approach to curating an exhibition, I want to show how the image of Ukraine and Ukrainians, the indigenous peoples of Crimea, has evolved in the imperial consciousness, how these new territories are perceived, and how the Russian landscape school emerges from these landscapes.<sup>8</sup>

Neither approach is purely rational and independent of ideological attitudes or value preferences, and neither contributes to solving the problem at a structural level. There is not much scientific relevance in reasoning about values in natural language, the semantics of which is overloaded with meaning. And even more so, political activities and decision-making will never reflect the level of conceptual sophistication possible in museums but will create public tension time and again.

## Conclusion

The current full-scale Russian invasion of Ukraine brings the danger of ideological suppression of

everything that used to link the histories of Ukraine and Russia. Such strategies of displacement and erasure from the memory of the past have a cultural impact through the reduction of diversity and deprive museums of their status as intellectual institutions dedicated to multiple perspectives. This leads to the question of how museums should handle this material now. In museum practice, historical distance is important: the smaller it is both in time and space, the greater the public involvement, and the greater the disputes and conflicts because it is difficult to find a common assessment of historical events. So now, in the midst of a brutal war, it sometimes seems impossible to avoid emotion in discussions about how and why Ukrainian museums should represent the past. Shifting the discussion to the field of structural analysis and using the systems approach to research museums as complex intellectual objects may make it possible to move from emotional descriptions and intuitive evaluations to a rational justification of strategies of sociocultural activity. Although Parametric General System Theory assumes qualitative rather than quantitative analysis of the object, it proves to be promising for the study of complex social systems. And construction of a systemic museum model allows us to observe and evaluate simplifying and complicating strategies in museum activities at different levels – substratum, structural, and conceptual.

Received: 25 January 2023

Finally Accepted: 27 April 2023

## Notes

- 1 'Життя одеських музеїв під час війни' ['Life of Odesa Museums During the War'], GRAD. UA 13 September 2022. <https://grad.ua/programmy-tv/tema-dnya/94277-zhittja-odeskih-muzejiv-pid-chas-vijni.html>, accessed 26 May 2023.
- 2 'Museum Definition', International Council of Museums 2022. <https://icom.museum/en/resources/standards-guidelines/museum-definition/>, accessed 26 May 2023.
- 3 'ICOM Announces the Alternative Museum Definition that will be Subject to a Vote', International Council of Museums 25 July 2019. <https://icom.museum/en/news/icom-announces-the-alternative-museum-definition-that-will-be-subject-to-a-vote/>, accessed 26 May 2023.
- 4 Natalia Khyzhnyak and Oles Konashevych, 'Суперечка про Музей радянської окупації в Україні' ['The Debate about the Museum of Soviet Occupation in Ukraine'], BBC 13 June 2007. [https://www.bbc.com/ukrainian/entertainment/story/2007/06/070613\\_ukr\\_anti\\_communist\\_oh](https://www.bbc.com/ukrainian/entertainment/story/2007/06/070613_ukr_anti_communist_oh), accessed 26 May 2023.
- 5 Dmytro Bogomolov, 'Музеї під час війни: хто та як працює в Одесі' ['Museums During the War: Who and How Works in Odesa'], Новини.LIVE [News.LIVE] 9 October 2022. <https://odesa.novyny.live/odesskie-muzei-vo-vremia-voiny-kakie-zavedeniia-zhdut-posetitelei-a-kakie-zakryty-57895.html>, accessed 26 May 2023.
- 6 Natalia Potapchuk, 'Музеї і декомунізація. Розповідати правду не можна брехати. Як показати історію України без "залізної" прив'язки до Російської імперії та Радянського Союзу, у складі яких вона була?' ['Museums and Decommunization. Telling the Truth Cannot be Lied To. How to Show the History of Ukraine Without the "Iron" Connection to the Russian Empire and the Soviet Union, of which it was a Part?'], Ukrinform 30 June 2015. [https://www.ukrinform.ua/rubric-other\\_news/1859590-muzeii\\_i\\_dekomunizatsiya-rozpovidati-pravdu-ne-mogna-brehati\\_2069572.html](https://www.ukrinform.ua/rubric-other_news/1859590-muzeii_i_dekomunizatsiya-rozpovidati-pravdu-ne-mogna-brehati_2069572.html), accessed 26 May 2023.
- 7 The Kyiv Independent News Desk, 'Odesa Begins Dismantling Monument to Russian Empress', The Kyiv Independent 28 December 2022. <https://kyivindependent.com/odesa-begins-dismantling-monument-to-russian-empress>, accessed 26 May 2023.
- 8 'Музеї під час війни. 'Можливо, сьогодні одесити бачать експозицію востаннє'. Як Одеський художній готувався до війни' ['Museums During the War. "Perhaps, Today, the People of Odesa will see the Exposition for the Last Time". How an Odesa Fine Arts



Museum Prepared for War'], The Village 31 May 2022. <https://www.the-village.com.ua/village/culture/museum-at-wartime/326411-odessa-museum>, accessed 26 May 2023.

## References

- Ackoff, R. and Emery, F.E. (1972) *On Purposeful Systems: An Interdisciplinary Analysis of Individual and Social Behavior as a System of Purposeful Events*, Chicago: Aldine-Atherton.
- Ashby, W.R. (1962) 'Principles of the Self-organizing System', in Heinz von Foerster and George W. Zopf (eds) *Principles of Self-Organization: Transactions of the University of Illinois Symposium*, 255-87, London: Pergamon Press.
- Classen, C. (2007) 'Museum Manners: The Sensory Life of the Early Museum', *Journal of Social History*, 40 (4) 895-914.
- Gadamer, H.-G. (1975) 'Hermeneutics and Social Science', *Cultural Hermeneutics*, 2 (4) 307-16.
- Heidegger, M. (1971) *Poetry, Language, Thought*, translation and introduction by Albert Hofstadter, New York: Harper & Row.
- Leonenko, L.L., Lyashenko, D.N., Rayhert, K.V. and Terentyeva, L.N. (eds) (2016) Уёмовские чтения I-IV (2013 – 2016): Материалы международных научных чтений памяти Авенира Уёмова на философском факультете ОНУ им. И. И. Мечникова [*Uyomov Readings I-IV: Materials of International Scientific Readings in Memory of Avenir Uyomov at the Faculty of Philosophy of the I.I. Mechnikov Odesa National University*] Odesa: Print House.
- Neumann, J. von (1958) *The Computer and the Brain*, New Haven: Yale University Press.
- Prigogine, I. and Stengers, I. (1984) *Order Out of Chaos: Man's New Dialogue with Nature*, Toronto: Bantam Books.
- Strugatsky, A. and Strugatsky, B. (1988) *The Time Wanderers*, translation by Antonina W. Bouis, New York: St. Martin's Press.
- Уйомов, А.И. (1978) Системный подход и общая теория систем [*The Systems Approach and General Systems Theory*] Moscow: Thought.
- Уйомов, А.И., Сараева, И.Н. and Cofnas, A.Y. (2002) Общая теория систем для гуманитариев [*General Systems Theory for Humanitarians*] Warsaw: Universitas Rediviva.