Museum as technology

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There are no complex studies in the field of cultural theory on the effectiveness of the museum. It is not clear what are the main versions of the sociocultural purpose of the museum. It has not been revealed which sociocultural applications of the museum are harmful to the institution and society as a whole, and which are not. The meta-problem of research is caused by the fact that the empirical question of choosing the best strategy for the functioning of the museum has not been brought to the theoretical level. There are only particular scientific discourses that have not passed the procedure of scientific criticism and logical-deductive testing. Thus, the scientific problem of the sociocultural purpose of the museum in view of its institutional specifics can be solved by formulating scientific theories that correspond to the particular directions of empirical use of the museum.

Keywords: museum as a sociocultural institution, the sociocultural purpose of the museum, the institutional specifics of the museum, curatorship, culturological museum, sociocultural technology.

Introduction

Contemporary museums are caught in a paradoxical situation today. On the one hand, they are viewed as something outdated and unnecessary under new circumstances given the Internet and global access to cultural heritage and knowledge on the whole. In this view, museums are left with the not very attractive role to serve as storage places for extinct culture which would only draw curiosity as an amusement but never be relevant again. On the other hand, the number of museums in the world is growing, and they are often at the forefront of social discourses. Moreover, museums are referred to both when considering the use of civilisational heritage and in the context of quite futuristic projects. It is impossible to ignore the theme of museums and monuments because of the destruction of identities which characterises the present. It is customary to soothe the phantom pains of a lost place in the world with the help of the past, specifically as represented through expositions. It is not the least part either that museums are playing in the context of informational confrontation, which has a distinct historical front. After all, we are coming to the main practical problem associated with museums: should we place our hopes on them in the future or, on the contrary, is it useless to actualise their work – and should one just let them pass away into eternity? According to museologist Tomislav Šola,[1] it is quite possible that the place of museums should be taken by other cultural heritage

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[1] ŠOLA, Tomislav. *Eternity Does Not Live Here Any More: A Glossary of Museum Sins.* Zagreb: Hitra produkcija knjiga, 2012.

institutions which still have to be constructed. Unfortunately, there is not even a vague idea of what they should be.

Museum institutions are responding differently to the challenges of time. Some are trying to keep up with the times or even get ahead, actively using multimedia technologies wherever possible. Such institutions are willingly uploading their digitalised collections to the global network and implementing fashionable practices in their research and educational activities. Other museums are behaving in a more conservative way, believing that it is by resisting digitisation that they will be able to maintain their social significance and utility. Some museums are maintaining confidence, relying on their powerful collections and taking advantage of the widespread interest of tourists in them. For others, it is becoming harder to attract visitors. Some museums are engaged in active promotional activities to increase their attractiveness, while others believe that they should adhere to conservative academism. Some institutions are extroverts, and others are completely locked within themselves and determined upon self-isolation, as if they were trying to wait out the bad weather of social challenges. Many museums, like several centuries ago, are focused on patriotic education. Others are trying to present identities that have been neglected for a long time. Usually, museums are proud of their political mission, even if increasingly difficult to implement: the political climate is becoming too changeable and museums do not have time to re-adjust. Some institutions have fallen behind the political context so much that they are faced with social ressentiments, and it is not so important whether such feelings are in connection with decolonisation or, for instance, decommunisation. Many institutions are sure they have no other chance but to step into market relations and finally obtain profits. Others are appealing to their cultural uniqueness and trying to prove their right to receive state or communal funding, while, at the same time, expanding their sources of income.

As we can see, it is fruitless to search for a universal purpose applicable to any museum to make it useful and important for society at all times. However, it is in our hands to institutionally readjust museums so as to maximise their efficiency. Yet, empirical observations alone are not enough to clarify the direction to take. It is unclear which of the above-mentioned museum strategies will eventually be successful and which of them will have devastating effects on institutions without the possibility of redress. Therefore, it is necessary to consider the issues raised at the theoretical level, by transforming everyday problems into scientific ones.

In general, museum studies are popular in humanities. This is due to the fact that this area of research, as a matter of fact, focuses on studying social institutions, traditions and technologies. Yet, the findings proposed by researchers typically do not go beyond the existing modus operandi in museum studies. There are relatively few researchers engaged in the utilitarian branch of museology. Perhaps the already-mentioned T. Šola is the world leading museologist today. On the basis of the empirically oriented works of K. Hudson[2] and ecomuseology researchers, Šola believes that the most productive is a consolidated approach to the entire diversity of cultural heritage: movable and immovable monuments, and material and non-material cultural values. If museums cannot ensure such consolidation, they will have to be seriously reformatted. At the same time, Šola emphasises that museums may not turn away from urgent social problems, be shelters for academism and elitism or service the ruling classes. They must integrate all

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[2] WAGENSBERG, Jorge. The "total" museum, a tool for social change. In: *História Ciências Saúde-Manguinhos* 12(Suppl), 2005, pp. 309–321.

the wisdom of the world to overcome the most outstanding problems of humankind, and in particular, environmental challenges.

It should be said that museologists tend to be tolerant scientists, largely refraining from criticism of each other's works. As a rule, they target the museum as such, which seems to be guilty because of its shortcomings, or dedicated museum practicians who do not have reliable theoretical tools. Thus, Šola targets his critical arrows at the museum as an institute. The latter, after all, withstands the criticism (in practice, the museum holds firm enough). Still, there are researchers who tend to value museums highly. For example, M. Castells[3] is convinced that it is museums which will be able to resolve the main problem of our time – the lack of mutual understanding. M. Henning[4] views museums as one of the key institutions by which to comprehend the trends in the media field. Many researchers believe that museology will be more effective if included in major philosophical discourses, with M. Foucault's and B. Latour's works being the most popular among them. E. Hooper-Greenhill[5] has made an especially thorough contribution to this direction of research. However, the museum agenda evades such studies, and it appears that a museum is an epiphenomenon of more significant sociocultural processes. The same can be said about the inclusion of a museum in the discourse of historical memory, which remains no less popular.

Particular attention should be paid to theoretical museum studies which are supposed to explain what the best way is to use museums for the benefit of society. Yet, many researchers think that theory is, first of all, an unnecessary descriptive complication with the help of additional abstractions that leads to rather trivial conclusions that a museum needs to be rebuilt in accordance with the changes that modern society is undergoing. The highest level of abstract thinking was demonstrated by M. Fehr,[6] a German researcher and curator. The scientist noted that Germans are expected to provide the most outstanding examples of theorisation, but that, in fact, the museum theory in his country is very far from the desired level. Fehr believes that a better situation regarding theorisation can be observed in the United Kingdom. However, for the most part, Great Britain relies on the works of French intellectuals, who have been less interested in museums.

Important are the works of J. Wagensberg Lubinski[7] and T. Bennett,[8] who consider the museum as a workshop or laboratory for transforming the surrounding reality (environment). According to Wagensberg, the museum creates a new type of person with a scientific worldview through appropriate educational programmes. Bennett is convinced that a museum exposition matters a lot for transforming entire communities of people by changing their identities. However, the researchers do not pay attention to the technological side of these processes.

G. Bazin[9] ends his historical research from the mid-point of the 1960s with a prediction for the museum. And it should be said that, in general, it is confirmed. The organisational culture of museums is becoming more and more like a corporate one. PR and marketing

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[3] BENNETT, Tony. Civic laboratories: Museums, cultural objecthood and the governance of the social. In: *Cultural Studies*, 19(5), 2005, pp. 521–547.

[4] BAZIN, Germain. *The Museum Age*. New York: Universe Books, 1968.

[5] POPPER, Karl. *Conjectures and Refutations: The Growth of Scientific Knowledge*. London: Routledge, 2002.

[6] POPPER, Karl. Three Worlds. 1978, https://tannerlectures.utah.edu/_resources/documents/a-to-z/p/popper80.pdf

[7] BOURDIEU, Pierre. Cultural Reproduction and Social Reproduction. In: R. Brown (ed.), *Knowledge, Education, and Cultural Change*. London: Tavistock Publications, 1973, pp. 71–84.

[8] LATOUR, Bruno. Give Me a Laboratory and I will Raise the World. In: *Science Observed* 141, 1983, pp. 140–169.

[9] DAWKINS, Richard. *The Selfish Gene*. Oxford: OUP, 2016.

departments are becoming more important than, for example, research units. Bazin assumes that the museum network will finally switch to market relations, and that, as a result, only the strongest institutions will survive. One should note that such a pessimistic forecast is built on the historicist methodology. And even if the forecast is true, it should be clarified whether such a prospect is, indeed, so threatening and whether museum activities should be restructured to avoid such adverse circumstances instead of regretfully counting one's losses.

The *main research problem* is raised by the fact that none of the researchers has aimed to test the effectiveness of each of the possible directions for the social and cultural use of a museum. Based on this, we can propose, justify, test (logically, theoretically and empirically) and, following successful verification, reinforce such a theory that would solve all the problems that were not and could not be resolved with previous theories – in other words, the problem of how and under what conditions a museum can be useful to society.

Thus, the *goal of the research* is to formulate an optimal theory and, as a result, a technology for the utilitarian social and cultural use of a museum.

Method

To successfully achieve the goal, it was decided to use the most universal research methods. In general, this research is based on K. Popper's[10] concept stating that there is no special method in the natural sciences or in the humanities. The scientific approach is even less useful because it shifts the inductive method (supposedly key to the natural sciences) onto research in humanities. According to Popper's approach, the inductive method is deceptive, since observation itself does not automatically lead to scientific discoveries. This study is built in a deductive way, as it starts from a problem to be solved, in particular, during targeted observations.

In general, this study is based on a *problematic and hypothetical approach*, where the problem is the starting point of the study. As its trial solution, a certain hypothesis is proposed, which in turn generates new problems. The next hypothesis is supposed to resolve all the problems of the previous hypotheses, but, again, it will face new problems. However, with each subsequent solution, a new hypothesis offers a better approximation to the truth.

The *falsificationism* theory of K. Popper is also fundamental for this study. It helped to structure a considerable number of works on museum studies according to the ways how the scientific problem of social and cultural purpose of a museum is settled. The method of scientific criticism (trial and error method) set the basis for formulating the relevant museum theories, identifying the degree of their argumentation and falsification, and measuring how close the theories have got to the truth. At the same time, Popper's scientific criticism has allowed the avoidance of essentialism, dogmatism and historicism. It helped to discard the methodological approaches, which are immunised against falsificationism.

The application of K. Popper's *demarcation criterion* (science is essentially characterised by the existence of a research problem and the possibility to refute any hypotheses) has allowed the rejection of pseudo-scientific museum studies and the inclusion of non-orthodox works in the scientific discourse. In the course of criticism, such works, although containing a metaphysical element, may bring valuable information to resolve the identified research problem.

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[10] TALEB, Nassim. *Antifragile: Things That Gain from Disorder*. London: Penguin, 2013.

The *"Three worlds" theory* of Popper[11] is essential for this research. If a problem is not resolved, one should rise to the next level. Popper's worlds play the role of these levels: from a first level where the museum appears as a warehouse-exposition of artifacts, through a second world of communication up to a third level where the institution of a museum uses cultural capital to address urgent problems. In the process of this research, Popper's ideas were somewhat adjusted: it turned out necessary to implement a fourth world of empirics to show the complex interaction among the worlds and the role of empirics in social engineering, aimed at transforming the museum and the society.

In addition, when exploring the market and laboratory theory of the museum, the concept of *"cultural capital"* of P. Bourdieu[12] was used for this research. B. Latur's theory,[13] associated with the prominent role of laboratories for the transformation of society, has also been useful for understanding the museum as a laboratory. When studying the museum as an integral part of social communications, it was important to apply "the medium is the message" theory of M. McLuhan, as it clearly states that communication is indifferent to meanings, whereas museums are, in fact, meaning-making institutions. When addressing the problem of a breach between a meaning and its vehicle, the concept of "meme" of R. Dawkins[14] was helpful, particularly important in refuting the media and communicative theory of the museum.

Especially important for the methodology of the research have been the concepts of *"antifragility"* and *"skeptical empiricism"* of N. Taleb,[15] who is a leading theoretician in applied research. These concepts, accordingly, can be combined well with Popper's theory of theoretical knowledge. Finally, the above-mentioned methodological framework was instrumental for clarifying the role of the museum in element-by-element social engineering within the technological approach to museums.

In this research, *B. Mandelbrot's theory of fractality*[16] was also used, however, without its mathematical foundation. This theory helped to clarify the interaction of the museum with other social institutions, which is characterised by mutual exchange. This was necessary to establish the institutional uniqueness of a museum, which, in turn, is an essential precondition for identifying an optimal social and cultural use of a museum.

When exploring the subjectivity of a museum and its ability to act as a factor of socio-cultural transformations, and not only a reflection of the prevailing socio-cultural relations, the concept of *rhizome developed by Jo. Deleuze and F. Guattari*[17] proved to be effective. This theory describes the relations in a de-hierarchised sociocultural environment, which is modern society characterised by hyper-communication and hyper-innovation, as well as its closely intertwined heterogeneous elements.Accordingly, changes in any part of the rhizome (society) can have consequences for another part, although, at first glance, they may seem completely unrelated. This feature explains the socio-engineering efficacy of the museum and imposes high social

[11] MANDELBROT, Benoit. Fractals and the art of roughness. 2010, https://www.youtube.com/watch?v=ay8OMOsf6AQ
[12] DELEUZE, Gilles., GUATTARI, Felix. *A Thousand Plateaus: Capitalism and Schizophrenia*. Minneapolis: University of Minnesota Press, 1987.
[13] MALRAUX, Andre. Museum without walls. In: *Voices of Silence*. St Albans: Paladin, 1974.
[14] RUDENKO, Serhii. Borysovych. *Muzei yak tekhnolohiia* [Museum as technology]. Kyiv: Lira-K, 2021 [in Ukrainian].
[15] HENNING, Michelle. *Museums, Media and Cultural Theory*. New York: Open University Press, 2005.
[16] HOOPER-GREENHILL, Eilean. *Museums and the Shaping of Knowledge*. London and New York: Routledge, 1992.
[17] WAGENSBERG, Jorge. The "total" museum, a tool for social change. In: *História Ciências Saúde-Manguinhos* 12(Suppl), 2005, pp. 309–321.

responsibility on such an institute. The theory of the social rhizome complements Mandelbrot's fractality theory and Taleb's theory of anti-fragility .

Conclusions

We managed to formulate the main theories of the museum: kunstkammer, political, media-communicative, market and laboratory. Kunstkamer theory was heavily influenced by the scholastic theory of museality. The problem of authenticity was one of the key ones in Kunstkamer theory. Ecomuseology (ecomuseum studies) was an interesting spin-off of the Kunstkammer approach. The political theory, in fact, is not represented by solid works. Its frame is made up of relevant practical museum strategies. It was found that media and communicative theory was one of the most developed ones, mainly owing to Western researchers' works. Market theory is represented in various pieces of applied research of museum marketing, management, PR etc. Yet, its theoretic basis, was in fact too unstable and relied mostly on research and concepts from other fields of knowledge, for example, cultural (creative) industries and social enterprise. Streamlining separate research works into theoretical units made it possible to identify the level of their falsification and argumentation.

So, the refutation started with Kunstkammer theory, which is foundational for museology. This theory is based on the following postulates. The material substrate defines the informational field of an artifact. Authenticity is inextricably linked with the specific state of its material carrier. A museum is just an imperfect form of the discovery, preservation, research and presentation of monuments. Forms will be changing, but the cultural heritage is eternal. It results in the following conclusions. The semantic content of an artifact is, actually, confined in the artifact itself, and the museum worker just reveals it. Authenticity identification can be reduced to physical and chemical analysis of the material substrate of the artifact. To some extent, museums even have a harmful effect on artifacts because representations potentially threaten material carriers.

In the process of refutation, it was found that the symbolic and source-based use of artifacts extends far beyond the characteristics of their material carrier. A vulgar, things-based understanding of authenticity leads to a paradox: the more efforts are made to preserve the carrier, the more the approach contributes to simulations of historical reality. In general, authenticity is a conditional and hypothetical category. One can be sure in deconstructable authenticity only.

Ecomuseology, also known as "new museology", was supposed to overcome the Kunstkammer theory limitations caused by an excessive concentration of attention on things. Ecomuseology has placed the human, not artefacts, at the centre of museum activities. In the end, "new museology" took the central idea of Kunstkammer theory to its peak: a human was museumised as an artefact. To preserve authenticity, entire regions had to be conserved. Supposedly, it was to help revitalise them. In the course of refutation, it was shown that: firstly, eco-museums need special conditions connected with the modernisational difference inside the country; secondly, artificially conserved communities will not continue developing: to turn a community into a museum relic and deprive it of its future is not humanistic; thirdly, communities are increasingly virtualised, and there is a trend towards an "abstract society"; and, fourthly, as an interesting institutional spin-off, eco-communities are unable to replace traditional institutions.

The consequences of the latent implementation of the archaic Kunstkammer theory and its derivatives can be observed within decommunisation in Ukraine and similar processes. Calls for the reinterpretation, museumification etc. of monuments encounter a primitive identification of matter with the meaning invested in this matter. In fact, such a view differs little from the original fetishism. Yet, one should not accuse decommunisers of low culture or barbarity. Relevant social technologies for symbolic space transformation had not been developed, and decommunisation providers had to rely on ancient and time-tested methods of ritual vandalisation for the cleaning of symbolic space.

Therefore, it is necessary to propose another theory that will, on the one hand, be more focused on the semantic load of artifacts, and on the other hand, will allow the re-interpretation of artifacts according to a specific situation. For example, in the context of deccomunisation, artifacts could be moved to museums with a political profile. On the other hand, from a broader point of view, all museums, regardless of their profile, are political (as well as historical). So, a political theory, which is more developed than Kunstkammer theory, comes to the foreground.

The institutional experience of the National Museum of the History of Ukraine in World War II demonstrates that the same collection can be used both for the bashing of "Bandera movement participants" and the glorification of the Ukrainian nationalist underground, and what is more, within the same representation. That is, auxiliary tools can help generate antinomical interpretations around a single collection. This is put into play in the creation of hybrids which are used in informational war. A hybrid state causes a relativist attitude towards the truth. And if a museum is not to abandon its scientific function, it should continue to presume that truth is not absent, but that there are simply better or worse approximations of the truth. However, critical thinking does not mean that both of two controversial statements are correct (in fact, only one of them may be correct or they may even both be wrong). That is, facts which cannot be verified should not be placed in the same category as verifiable facts. Here, it should also be remembered that the absence of proof is not proof of its absence in the future.

The main problem of informational war is that to win such a war requires the transition to the state of permanent confrontation, manipulation and confusion in the understanding of reality. Instead, a museum can throw the information war off its agenda, creating conditions for the clash of various conceptual frameworks, spreading a culture of scientific criticism, and creating an environment intolerant of manipulation. Better than narratives, a museum can unite the society around creating new social development projects. So, after discarding the political function, a museum can do much more for politics by building a proper political culture.

Political theory can be replaced with a media and communicative theory. This is far enough away from fetishism, and the messages broadcast by a museum can have any meaning, not only a political one. Thus, in order to unite people, a museum needs to resolve the key problem of communication – the absence of mutual understanding. For this purpose, something like a special museum type of communication, language or communication protocols have to appear. In other words, it is necessary to create a medium for the interaction of various conceptual frameworks, i.e., the creation of a common ground for them. In the end, this will lead to attempts at creating a new consolidating conceptual framework. The advantage of a museum is not in uniting, but in providing a collision of such frameworks. Therefore, museum communication, language and communicative protocol are metaphors which are dangerous if perceived too literally.

What is special about the museum's media nature is that the institution of the museum acts as an alien element in the body of communication, although it does correct the deformations caused by communication. In this sense, it is important to take into consideration the interaction among Popper's three worlds. The second world (communication) is prone to expansion. It creates simulations of the first world (physical objects). On the one hand, it is necessary, but on the other hand, the virtual starts to replace the real. In addition, the second world is a recipient of the third world, the institutional use of cultural capital to address urgent problems: from there it draws meanings which are packed into memes in the framework of communication. For more effective distribution, preservation and copying, memes should be as little overloaded with meanings as possible. The field of memes is constantly expanding, and the third world is becoming more and more isolated. An outcome of this trend may be that there will be many information exchange acts, but less and less new knowledge will be generated. Moreover, if the non-return valve between the third and the second worlds is damaged, memes will penetrate into the third world, squeezing the meaning out of there, too.

A museum has a special ability to fill memes penetrating from the second world with meanings. A museum can resolve the problem of the splitting of Popper's worlds. Also, museums provide for interaction between the third and the fourth worlds (combined theory and experience-based acting), ensuring the use of humanitarian knowledge for improving social institutions, traditions and technologies. If we follow the logic of the second world's expansion, whose main facilitator is presently the Internet, then the fourth world can be completely virtualised.

As we can see, the media and communicative theory is unable to fully describe and unleash the potential of a museum. However, it can be assumed that just as communicative companies are, first of all, successful businesses exploiting the second world, so the market theory will fit a museum as well. This theory can resolve the issues of all its predecessors. Artefacts have value in terms of both material and meaning implementation. It is the interpretation of artefacts that creates the added value of artefacts. The political situation significantly weakens the position of the museum. Yet, if market-oriented, a museum can become financially independent and create informational products according to public needs. If necessary, these may also be propagandistic products. The market theory clearly points to the rootedness of a museum in the fourth and the third worlds. This institution can sell meanings in a world where their number is getting smaller and smaller. However, if there is no demand, the usual communicative experience based on observing ancient artefacts without getting too deep into their content can be offered.

Still, the explanatory power of the market theory is misleading. The theory disguises an applied area which can be used in relation to the Kunstkammer (attractions, museum experience and tourism), political (execution of a propagandistic assignment or a political technology) and media-communicative (production of memes which later await serialisation within cultural industries) theories. On the whole, the conversion of cultural capital into economic capital is the key problem of the market concept of a museum (which is true for many other institutions in the cultural and creative sector). So far, it can be achieved only by delving into the second world, which is now being actively exploited. However, it can be expected that the applied direction of the market theory of a museum can also acquire the status of theory when the mechanisms for exploiting the third world in order to influence the fourth world are gradually revealed – when social technologies are capitalised like natural technologies. But to achieve this, it is necessary to find an optimal theory of a museum as an object emerging from the interaction of the third and the fourth worlds. In that case, the market theory, although being

dependent on a corresponding museum theory, will not be an applied theory as it will resolve quite a new problem. As we can see, a museum can be the first institution to form the basis for testing the use of the Popper's third world.

So, all the previous theories are, overall, refutable. Thus, it is necessary to formulate a new theory which comes closer to the truth. Two problems are to be addressed within this theory. The first problem is that, in terms of the conceptual comprehension of the technological aspects of the museum's functioning, research has not advanced further than the formalised practice of working with collections and expositions. The second problem is caused by the fact that in addition to settling certain political tasks, as well as functions related to education, science and sources, no hypotheses exist on other possible directions of the social and cultural use of a museum. In short, it is not known for sure how this institution works and how it can be used. The available knowledge is enough to use the existing museum institutes, but there is little to raise their social and cultural usability.

To solve the first problem, it is necessary to conceptualise curatorship activities, which was preliminarily done in the framework of avant-garde museology and A. Malraux's[18] thoughts about an imaginary museum. First of all, curatorial technologies concern a collision of science and art, which results in their unique museum symbiosis. Secondly, they concern the multimedia nature of museum activities. Thirdly, they focus on overcoming the limitations caused by objects and collections, competing scientific programmes, ideological and propaganda manipulations, curatorial concepts etc. In general, the field deals with the limitations caused by the features of each of the four worlds.

As a result, each conceptual framework corrects the shortcomings of the other. It is especially important that textual limitations of the humanities are taken on by visual media. The role of text in the museum setting as compared to in purely textual media is reduced due to changes in its status – in the museum representation text only illustrates the artefacts. Museum curatorship is a unique fusion of art and science. Like a theory, an art work demonstrates a virtual shell in order to offer a designing of reality (rather than to reflect it in a trivial way, as is sometimes thought). On the contrary, an imitation of reality takes the viewer's mind farther from reality. At the same time, social technologies materialised in art works may lack the scientific criticism which afford a gradual movement towards the truth. On the whole, science and art share a methodological element: they are based on the trial and error method and objectified in the process of public criticism. Acquiring forms of representation, the science of humanities in a museum, in some ways, becomes similar to art, by offering society a variety of options for social development, which aim to prepare society for obvious and hidden challenges. In other words, representation takes upon itself the mistakes of society and demonstrates the probable consequences provoked by them. A museum enables society to gain experience, including pain, without living through it in real life – and thus to intensify empirics.

Switching to the second problem, related to seeking ways of using a museum optimally, it should be noted, that an important turn in the understanding of museums took place due to avant-garde museology, which originated from representatives of the historical avant-garde and continues to evolve up to this day. This direction is not recognised as scientific by everyone. Yet, a scientific approach is not born simply from the scientific style of writing. It emerges when brave and interesting solutions to existing social problems are proposed. And this is exactly how

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[18] BENNETT, Tony. Civic laboratories: Museums, cultural objecthood and the governance of the social. In: *Cultural Studies*, 19(5), 2005, pp. 521–547.

avant-gardists posed the question – in a direct way – about the future of the museum. Their considerations suggest that a museum has to make a turn from history to reality. The institution does not have to be a temple of scientific history cherishing its narratives. On the contrary, it should instrumentalise history, using the latter as an empirical basis for overcoming acute social and cultural problems. Here, it means much more than just the propagandistic support of a specific political regime. According to the avant-garde approach, a museum is supposed to become a social engineering laboratory that can apply to all spheres of life. It should be noticed that avant-garde museum studies included and sometimes still include some concepts which are incompatible with science and which lead to utopian engineering in one way or another. It should be stressed that element-by-element social engineering rejecting holism and sensitive to practical feedback is more inherent for a museum, in accordance with its technological features.

In the framework of avant-garde museum studies, it was not specified what social problems exactly can be resolved by a museum, but the main trend was for the institution to aim at societal modernisation. The key problem of a modernisation discourse is to identify which changes benefit society and which do not. In this regard, a number of competing concepts of modernisation are circulating in scientific discourse. Based on the element-by-element socio-engineering approach, they all need empirical testing. Yet, a mechanism for such testing does not exist. So, each theory of modernisation relies mainly on supporting examples.

The attempts to adapt modernisation theories to museum activities have not been fruitful because the discussion was evolving around the definition of modernisation. It is important to note that, to promote modernisation, a museum should not unconditionally follow any of the modernisation theories. The museum has reliable instruments for the empirical testing of modernisation theories. In the end, museum laboratory technologies can be used to verify any innovations in public life. The verification of innovations in the museum takes several stages: reconciliation with the historical empirical basis, work on a curatorship project based on internal criticism caused by the collision of heterogeneous conceptual frameworks, and release of the results of this work in the form of museum representation for public review. And again, after releasing the representation, critical comments will be expressed. In this case, the public acts as a sort of focus-group. Finally, based on the results of museum work, a verdict can be reached on an innovation: whether it should be implemented or, on the contrary, whether a slowdown of progress in this area should be favoured. After that, one can proceed to a careful social approbation. However, museum work does not end there. It is necessary to take into consideration the innovation's implementation effects, helping to specify the innovation concept through retesting it with museum tools.

The results of the study[19] have shown that the optimal utilitarian use of a museum is realised in a laboratory theory, according to which a museum will develop, verify through social experience and conduct testing of social technologies. An element-by-element (piecemeal) approach is at the heart of museum work as a laboratory. This theory is important given that natural sciences and engineering have laboratories operating as tools to intensify the production of empirical data to reinforce or refute theoretical knowledge. It is only in socio-humanistic studies that an experiment takes place in real-life conditions.

On the basis of the laboratory theory of a museum, it is possible to express some views on the *prospects* of further research. Certainly, comprehensive empirical testing of the laboratory theory would be desirable. As for today, some elements of the laboratory approach can be

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[19] BAZIN, Germain. *The Museum Age*. New York: Universe Books, 1968.

observed in the activities of many museums, which have mostly hybrid strategies. Some institutions even declare such an approach, for example, Mystetskyi Arsenal in Kyiv. Yet, empirical data about the implementation of laboratory theory in museum strategies is very scarce. Moreover, museum workers have previously had no solid theoretical foundations for their work, except for fruitless discussions around the concept of "modernisation". Now, the situation, using a laboratory strategy, will improve.

It should be noted from a theoretical point of view that a museum can be a factor of the harmonious interaction of the four worlds. This research has shown that the third world (science and art) is threatened by simulation. The main criterion for detecting pseudo-science and pseudo-art is in their seeking to avoid or falsify a problem (theoretical or practical) at the basis of both research hypotheses and social technologies embedded in artworks. Yet, it is not enough just to define such criteria. It is necessary to elaborate mechanisms for overcoming the negative phenomena. Thus, a hypothesis has been proposed that a museum can become a reliable filter against the third world simulations, since a museum representation is resistant to imitations.

Some problems are related to the second and first worlds. In particular, the second world entirely replaces the first world. In addition, the second world is becoming increasingly manipulative, which is specifically due to creating simulations of the first world. It is quite obvious that a museum should always support the provisions of its representations with first world artefacts. This is not anything special. At the same time, based on this feature, museum anti-simulation technologies can be developed. However, for that to happen, scientific provisions have to survive in the second world, which hollows out meanings and uses criticism not for refutation, but, on the contrary, for apologetics. Finally, the research has found that it is art, first of all, in the form of museum representations, that can provide a protective shell for scientific representations.

Art itself is exploited by such super-institutes as politics, business and religion. Each of these can utilise violence for its purposes. If we consider its social and transformational potential, art can also be viewed as a super-institute. However, each of the previously-mentioned super-institutes can rely upon violence. Yet, having no solid institutional subbase, art becomes scattered among other social institutions. Considering the above-stated, it is the museum that can create such a subbase. After all, thanks to this, art can become the most powerful and most productive super-institute, making changes towards a better social reality, including to other super-institutes, while taking an independent position towards them. Moreover, scientific provisions acquire an additional protective shell which is created by the institution of the museum. As a result, the museum can become an important instrument in making the social life of humankind more rational in general. Many believe that there is too much rationality, and that this is even harmful to social life. But real social life is more irrational, it seems. And it is rationality that has caused such a considerable shift in natural technologies. So, it can be expected that improved rationality, provided by museums as laboratories of piecemeal social engineering, will have a positive impact on social technologies and institutions too.

This rather abstract picture, projected into the future, certainly requires empirical testing as well. To do that, museums need to base work upon the laboratory theory. In that case, after taking into account the empirical data, follow-up research could advance far beyond the proposed ideas.

One of the advantages of exploring museums as a technology is that for the first time a single research work has actually modelled the process which is to take place in cultural studies and museum studies in general. It would be helpful if the research vectors of museum utilitarian usage took shape by themselves and researchers grouped around research problems, raising hypotheses, refuting them and raising new ones again. That not being the case, the author has engaged in something like the re-assembling of museum studies and part of the cultural studies field. Hopefully, it is a theoretical contribution that will aid museum studies going forward in something more like constructing a cathedral than putting up picket fences.

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