On Digital Art History: The Objectives and the Results of the Project ARTNET

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MODERN AND CONTEMPORARY ARTISTS'
NETWORKS.
An Inquiry into Digital History of Art
and Architecture

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Attempting to identify DAH's promise and usefulness very quickly leads to questions about the epistemological tenets of the entire discipline. The intersection of art history and digital culture is just another – excellent – occasion to do so in our time. Otherwise, we risk ceasing to provide a useful contribution to our societies' intellectual enrichment.[1]

If one would ask what has changed in the perception of digital art history over the last five years, since the publication of Johanna Drucker's seminal text "Is There a 'Digital' Art History?",[2] which initiated a wider debate about the assumptions, possibilities, and consequences of applying digital technology in disciplinary practices of the history of art, the answer would be straightforward – Noting much. The fundamental division into the digitizing and digital art history, suggested by Drucker, namely, a division on the activities aimed at the advancement of digital tools for "everyday use" (facilitating access, browsing, retrieving and presenting data from digital sources), and on analytic techniques enabled by computational technology, still largely determines the configuration of this new research field. DAH's recent increased visibility, summed up by the term "digital turn", is simultaneously explained as an inevitable consequence of the global transformation in all areas of human activity, including all aspects of knowledge creation/dissemination, and as an opportunity of art history to catch up with other humanities disciplines that have much longer experience with the applica-

tion of digital technologies. Thanks to the recently published, and well-documented studies on this subject, it is clear that the story of art history's "delayed" inclusion in the realm of digital humanities is difficult to sustain. The interest of art historians in the computational methods was manifested already at the end of the 1960s, and continues ever since, but in the 1980s and early 1990s, when literary studies or linguistics made a significant advancements in that area, art history "lagged" behind not because of its innate conservativism and distrust in the technology, but because the ideas of how computing could be used in its disciplinary practices, largely exceeded available technological and software solutions.[3] The present situation is quite the opposite. Digital technologies offer the array of new application opportunities, there are a number of open access software solutions, and almost endless possibilities for designing custom-made computer programs adjusted to quite specific research questions, but the developments in the field of digital art history are not following those technological advancements. For Jorge Sebastián Lozano, the possible reason for such situation, and for the restrained relation of art historians towards digital art history is its "alleged minimal interest for interpretive purposes connected to qualitative and quantitative methods".[4] The re-

1   Elli Doulkaridou, „Reframing Art History", International Journal for Digital Art History, no. 1 (2015): 79.

2   Johanna Drucker, Is There a "Digital" Art History?, Visual Resources, no. 1-2, Vol. 29 (2013): 5-13.

3   The prototype of Zagreb Institute of Art History database, developed in 1992-1994, was never implemented, since at the time the software solutions allowing management of images, GIS visualizations, or 3D libraries of architectural elements, integral to concept of that database, were simply not available. Microsoft's offer of cooperation on further development of that project was declined by the Institute.

4   Jorge Sebastián Lozano, "Digital Art History at the Crossroads", kunsttexte.de, no. 4 (2017): 2.

sentiment of quantitative methodology, also explains – at least partially – rather strong criticism of some ground-breaking projects as it is Maximilian Schich's research in cultural history, published in the article "A Network Framework of Cultural History", and transformed into a very popular, animated network visualization Charting Cultures.[5] The objective of that visualization was to characterize „processes driving cultural history" by reconstructing „aggregate intellectual mobility over two millennia through the birth and death locations of more than 150,000 notable individuals", whose movements through the space and time was meant to „retrace cultural narratives of Europe and North America using large-scale visualization and quantitative dynamical tools and to derive historical trends of cultural centres beyond the scope of specific events or narrow time intervals".[6] The visualization, whose epistemic purpose was "to help the group of researchers to find and understand quantitative patterns" also serves as an argument supporting the proposition of "systematic science of art and culture", a new research paradigm that "integrates qualitative inquiry and observation, with methods of computation, natural science, and information design", applied in a „distributed, lab-style environment inspired by architectural think tanks, corporate design studios, and labs in physics or systems biology".[7] Schich's visualization, focusing on the white male figures, sug-

gesting their pivotal role in transforming cultural history of the world, and disregarding "the power dynamics of gender, class, race, religion, and ethnicity, while obscuring social forces such as economics and politics",[8] is often taken as an example of positivistic view of data which can "suppress important theoretical questions despite the appearance of giving us greater access to knowledge".[9] Although a foreseen objections on the biases of their metadata, Schich and his team have addressed in the supplementary materials to the article "A Network Framework of Cultural History", the responses to above-mentioned 5'36'' video animation of their visualization, and to the proposal of systemic science of art and culture remained strongly divided. The negative stance towards the application of quantitative methods in art history, articulated through the discussion on their epistemic usefulness, and following public presentation of Schich's research, can be summarized by Clair Bishop's opinion that "computational metrics can help aggregate data and indicate patterns, but they struggle to explain causality, which in the humanities is always a question of interpretation".[10] Acknowledging the arguments of both sides involved in this discussion, and aware of the discomfort caused by the pronounced empiricism of digital art history's methodological landscape, Jorge

Sebastián Lozano's assertion, given in the introductory quotation of this text that digital art history presents itself as an opportunity to re-examine "the epistemological tenets of the whole discipline",[11] seems as a valuable suggestion aiming at bridging "the gap between traditional methods and innovative computational practices".[12] Of course, it raises the question which "traditional" methods he has in mind, since in the each "turn" towards a specific, new set of problems that art history made in the last four decades, it has adapted and adjusted to its epistemological needs a series of methods developed in the framework of other, mostly humanistic disciplines. Digital art history undoubtedly implies even greater interdisciplinarity, but as Lozano says, "Computer scientists are just the last guests to an ongoing banquet where many and different diners have taken their share and enriched the conversation too."[13] Practitioners of digital art history, such as Schich, have a bit different view. Highly critical towards the "definition of digital humanities according to leading practitioners [which] still implicitly assumes that the application of technology in art history is an engineering problem, producing means that the actual researchers doing their inquiry",[14] they sustain a long-lasting debate on whether art historians entering that field of art historical inquiry require equal proficiency in disciplinary knowledge and knowledge of technology. There is not

a definite answer to that question (yet), and the figure of the "translator" – the person who has the expertise in both humanities and computing, and serves as mediator in the communication between art historians and engineers – which regained importance in the most recent discussions[15] on the future of digital art history, seems like juts a temporary solution.

From our point of view, knowledge of art history that goes hand in hand with the understanding of digital technology is an essential precondition for practicing digital art history. It does not assume complex programming skills or deep understanding of system analysis, but rather the insight in the systemic way of thinking, which enables one to structure the meaningful research question and choose digital tools appropriate to the type of analysis it entails. We are using here the term art history in a meaning which does not entirely adhere to the traditional understanding of the discipline, but rather to the borderline between art history, social sciences, information sciences, art, and design. Methods and experiences of natural sciences can be a valuable addition to the interdisciplinary tissue of digital art history, but following the experiences acquired at the project ART-NET, whose results are partially presented in this book, it would be equally useful if the rational systemic thinking emerging from the cross-fertilization of art history, information science, and digital technology, would be supplemented by the insights of artist and designers. Somewhat different nature of their research might prompt the new ways of thinking, which are – in our opinion – the essential precondition for more imaginative, and yet

5   Maximilian Schich, Chaoming Song, Yong-Yeol Ahn, Alexander Mirsky, Mauro Martino, Albert László Barabási, and Dirk Helbing. "A Network Framework of Cultural History," Science 345, no. 6196 (August 1, 2014): 558-62; link to video Charting Cultures, which has almost 1.3 million views.

6   Ibidem. 558.

7   Maximilian Schich, "Figuring out Art History", DAH-Journal (preprint), no. 2 (2015): 2.

8   Miriam Kienle, "Between Nodes and Edges: Possibilities and Limits of Network Analysis in Art History", Artl@s Bulletin, no. 3/6 (2017): 5.

9   Michael P. Lynch, The Internet of Us: Knowing more and Understanding Less (New York: W. W. Norton, 2016): 161.

10   Claire Bishop, "Against Digital Art History", Humanities Futures. Franklin Humanities Institute, 2017; https://humanitiesfutures.org/papers/digital-art-history/ Accessed 24 June, 2018.

11   Jorge Sebastián Lozano, "Digital Art History at the Crossroads", kunsttexte.de 4 (2017): 3.

12   Elli Doulkaridou, "Reframing Art History", International Journal for Digital Art History, no. 1 (2015): 73.

13   Jorge Sebastián Lozano, "Digital Art History at the Crossroads", 5.

14   Maximilian Schich, "Figuring out Art History", 10-11.

15   See "Art History in Digital Dimensions. A Report on the Proceedings of the Symposium Held in October 2016 at The Phillips Collection, Washington D.C. and the University of Maryland, College Park", February 2017.

more complex approach to the object of art historical inquiry. In the case of project ART-NET, the objects of inquiry were the models of organization and communication in the background of modern and contemporary artists' and architects' networks. They were approached from the perspective of the hypothesis that there is some definite number of those models that can be identified, explained, described, and applied in the further research of the 20th and 21st century artists' networking practices as a patterns pointing out to the elements which defy their characteristics as to the source of new research questions. Following the results of in-depth research on a few specific, individual examples of artists' networks, conducted prior to the beginning of the project, it was also supposed to prove that a diversity of organisation and communication models underlying artist networks operative on a particular art scene, and at the particular historical moment within the observed period is proportional to the dynamics of that art scene's participation in the transnational cultural exchange.

Two reasons motivated the choice of modern and contemporary artists' networks as an object of the research. The first was an important role of artists' groups and associations which – already at the beginning of the 20th century – invented new models of communication framing the development of transnational professional and social networks, which critically marked several periods in the history of modern and contemporary art. Often positioned at the margins of the institutional artistic culture, artists' and architects' networks are overcoming national, cultural and linguistic barriers, supporting new, and emerging art practices or – as in the case of architects' networks – promoting new understanding of architecture and urban planning. Serving as a transnational platforms for cultural exchange and cooperation, they involve a variety of actors – visual artists, writers, po-

ets, designers, architects, film-makers, photographers, art critics, gallerists, art dealers, intellectuals – whose complex and multiple relationships, were the second reason for choosing artist's and architects' networks as an object of research. Although they might seem as a quite well-researched topics of art history and history of architecture, information on the artists' and architects' networking practices are fragmentary, dispersed through multiple publications, and online resources. The latter are almost exclusively dedicated to the particular phenomena from the context of the historical avant-garde (Dadaism, Surrealism, Constructivism),[16] neo-avant-garde (art group ZERO, Fluxus, Conceptual Art),[17] and new media art, or to

16   Online resources for Dadaism http://www.ubu.com/historical/dada/; http://www.dada-companion.com/; http://archives-dada.tumblr.com/; http://www.dada-data.net/en/hub; https://www.lib.uiowa.edu/dada/; Surrealism http://icaadocs.mfah.org/icaadocs/THEARCHIVE/Browse/; http://nad-realizam.rs/; https://www.postwarculture-atbeinecke.org/revolutionarysurrealism; Constructivism https://www.dhi.ac.uk/rva/; https://thecharnelhouse.org/; http://www.rusartnet.com/biographies/russian-artists/20th-century/avant-garde/constructivist;

17 Online resources for group ZERO http://www.zerofoundation.de/foundation.0.html; http://www.4321zero.com/, Fluxus http://www.ubu.com/; https://thestudio.uiowa.edu/fluxus/
Conceptual art in Latin America http://icaadocs.mfah.org/; in Hungary http://www.c3.hu/vrm/index_en.html; Moscow http://conceptualism.letov.ru/CONCEPTUALISM.htm Central Europe and Yugoslavia http://digitizing-ideas.org/; Western Europe http://search.freefind.com/find.html?si=61902956&pid=r&n=0&_charset_=UTF-8&bcd=%C3%B7&query=conceptual+art; Fluxus https://thestudio.uiowa.edu/fluxus/content/flux-year-box-2; http://members.chello.nl/j.

the artists who have a prominent position in the canonical narratives of modern and contemporary art. Charting the networks based on the relationships of well-known artists would be quite easy, but the results will only confirm the knowledge which is already there, although not presented in the form of network visualization. Since the intention of the project was also to reveal the unforeseen transnational histories of artistic exchange, the archival data, both analogue and digital, were used to track as many actors of a particular artists' or architects' network, as possible and to describe their ties with other network members by at least three out of 20 predefined types of social relationships. Due to the research conducted prior to the beginning of the project, we already knew that majority of artists' networks related to the historical avant-garde and developed at the geographic peripheries of European cultural space, as well as in Latin America, were personal, ego-networks, frequently related to the particular avant-garde magazine, its editor, and close circle of associates. The other insight that we had prior to this project concerned the relationships between the avant-garde networks, which have formed – in different periods of the 20th century – a rather dynamic, although fragile ecosystems of their own. Within those ecosystems it was possible to distinguish at least four different types of tightly interwoven and complex networks – the on formed by art magazines and publications, related by the same authors, editors, and publishing houses; the other one composed of artistic concepts, and ideas circulating among different locations, and acquiring location-dependent meanings; the network of exhibitions, and public events presenting those concepts and ideas, and social networks established both by professional and private contacts among their

seegers1/flux_files/fluxus_archives.html; http://georgemaciunas.com/about/.

actors. Although the focus of the research was on the social networks, we could not overlook their multiple intersections with the networks of objects (magazines, publications), concepts, and events (exhibitions, actions, happenings, performances). A decision to pursue the research on artists' and architects' social networks, parallel to the investigations on the networks of objects, concepts, and events, came as an outcome of the debates following the identification of the problem that was not recognized prior to the beginning of the project, that is, the problem of high discrepancy between the available digital data sources on the (former) West and (former) Central-East European artists. While a number of large West European and USA museums provide open access to their datasets, similar datasets generated by the Central-East European museums – do not exist. Since they had to be collected, checked, and prepared using analogue data sources, it soon became clear that our data collections will be far from complete, meaning that any conclusions concerning organizational models of artists' networks would not meet the criteria for generalization, required by the very concept of the pattern. Although we could accept the approach according to which "the lack of specific sources can be better overlooked as long as the general discourse can still hold together a forceful argument",[18] it was quite clear that bias in our datasets evident in the network visualizations just confirms the canonical narrative on the history of modern and contemporary art. Therefore, we have chosen to concentrate on the transformation of the ARTNET database network visualization interface into a multilingual collaborative real-time research platform open to the international research community invited to use and upgrade available datasets. Sub-

18   Jorge Sebastián Lozano, "Digital Art History at the Crossroads", 5.

sequent gradual data accumulation might be the way for overcoming the said bias, allowing – sometime in the future – for another attempt in the visualization of artists' networks, hopefully with more promising results. Apart from resolving the problem of data availability, the most demanding task at this project was, as Miriam Posner has already put it, the "reconstituting historical evidence into data that can be easily recognized by the computer", and facing the fact that it "can distort the historical record by establishing definitive categories for entities that were originally ambiguous or more fluid".[19] However, that type of the constraint, coupled with the comprehension that "data are constructed as an interpretation of the phenomenal world, not inherent in it",[20] and that such construction bears both the imprints of all previous interpretations, as it will be also marked by the manner in which data were adopted to requirements of our research objectives, posed a rather serious question – How to make the users of our data aware of their constructed nature, and of the hypothesis framing the choices we have made while structuring our datasets? It is a very complex question, and – in our opinion – one which cannot be answered by new technical solutions.

The quantitative methods used in this project were already there when the ARTNET was launched. The possible difference it might have introduced lays in the fact that the usefulness of these methods was tested on datasets describing different types of networks (social networks, net domes, exhibition networks, networks of events), to which they were applied with different epistemic objectives. In comparison with the projects based on the big data processing, which best serves the inquiries on the irruptions and breaks in the historical flow of the events, the approach that was chosen at this project brought in the focus of the inquiry the reasons and nature of such irruptions. Therefore, a type of the research conducted at the Institute of Art History in Zagreb, between 2014 and 2018, could be described as the combination of close and distant data viewing, that is, as the combination of qualitative and quantitative analysis, where the latter was applied in its "soft mode". The term "soft mode" was invented to describe the omission of certain procedures integral to network analysis that we did not find relevant for the selected model of interpretation. It also denotes a shared discomfort of the ARTNET's research team regarding the limited potential of network visualizations to transfer the available data on the temporal dynamics of the network actors' relationships, which is – in our opinion – quite serious technical, as well as a theoretical problem that will be addressed in the project's next research cycle.

Although they were strongly relying on the processing power of IT, the members of the research team tried to maintain the above-mentioned art historical epistemological awareness, conscious of the tense relationship between the analytic practices of art history and empirical, observer-independent quantitative methods. The ambition to design digital tools that will acknowledge „the ambiguity, uncertainty and the historical situatedness and constructed character of [art historical] knowledge", and provide „the ways of working with these concepts within a digital environment",[21]

remained – the ambition. In the case of the ARTNET project, it assumed the process of through analysis and deconstruction of the traditional model of art historical inquiry, and it's subsequent (re)construction in digital environment in terms of the "open system", which allows metadata flexibility that goes against the grain of the over formalized, and definite metadata content. However, and as in the prevailing number of ongoing DAH projects, a computationally remediated object of our inquiry was a discourse on art history, rather than visual object whose complexities require, in our view, a radical change in the way of thinking about how do we apply available digital tools, and with which purpose.

Turning back to the possibility of bringing some generally viable conclusions on the organization models of artists' networks, that were the initial object of our research, we believe that close data viewing – the one which takes into account social aspects of artistic culture (class, gender, ethnicity, cultural differences) – cannot be eliminated from the account of the processes of art history. In comparison to big data-driven research, such an approach does not allow for general conclusions on the nature, and organization models of artists networks, but –in our opinion – the results of close data viewing, applied at this project, are epistemically more convincing, and could be rather useful in developing computational models responsive to already mentioned „ambiguity, uncertainty and the historical situatedness and constructed character of [art historical] knowledge".[22]

Research conducted at the project is presented by the six case studies published in this book range from the examination of exhibition networks reflecting cultural exchange among different Central European locations at the beginning of the 20th

century; ego-networks of individual artist which outlines the particular segment of his career, but also the spatial, and temporal trajectories that were followed by the number of other Central-East European artists active in the first decades of the 20th century; social network of CIAM formed around its regular, and thematic meetings, bringing to the fore different ideological, and political choices of its actors, taken as an important source of the network's organization structure, its dynamics, and ruptures; the networks of exhibitions outlining the transition of the particular art phenomenon – the international art movement New Tendencies – from the framework of the neo-avant-garde subculture where it was situated in the late 1950s, to the realm of institutional culture towards the mid-1960s, also describing the relations among different artistic tendencies involved with the movement, and the role of art criticism in its dissolution; the network of sculptors and architects emerging from the public competitions for antifascist, and socialist monuments, a rather specific, local phenomena positioned at the ideologically most sensitive contact zone between the art and socialist state; the net dome of contemporary independent culture, its structural features, dynamics, together with shared artistic, and social values of its actors.

Along with the network visualizations, the results of quantitative data analysis, are presented by the different types of statistical calculations, and graphs, integral to the overall model of interpretation. Although it gives the advantage to the epistemic objectives of art history, rather than those of network analysis, the combination of both analytic methods, provides the view on the art phenomena encompassed by this publication that would be hardly possible without the application of digital technology.

19 Miriam Posner, as quoted in Johanna Drucker et al.: "Digital Art History. The American Scene", Perspective. Actualité en histoire de l'art, no. 2 (2015): 8.

20 Jorge Sebastián Lozano, "Digital Art History at the Crossroads", 5.

21 Miriam Kienle, "Digital Art History 'Beyond the Digitized Slide Library': An Interview with Johanna Drucker and Miriam Posner", Artl@s Bulletin, no. 6/3 (2017): 123.

22 Ibidem.