

The Transition of New Tendencies from Neo-Avant-Garde Subculture to Institutional Mainstream Culture. An Example of Network Analysis.

Kolešnik, Ljiljana

Source / Izvornik: **Modern and Contemporary Artists' Networks. An Inquiry into Digital History of Art and Architecture, 2018, 84 - 122**

Book chapter / Poglavlje u knjizi

Publication status / Verzija rada: **Published version / Objavljena verzija rada (izdavačev PDF)**

<https://doi.org/10.31664/9789537875596.05>

Permanent link / Trajna poveznica: <https://urn.nsk.hr/urn:nbn:hr:254:605097>

Rights / Prava: [In copyright](#) / [Zaštićeno autorskim pravom.](#)

Download date / Datum preuzimanja: **2024-04-27**



Repository / Repozitorij:

[PODEST - Institute of Art History Repository](#)

INTRODUCTION

History of international art movement New Tendencies, attracted researchers attention just recently, following a (re)discovery of the series of discursive events (seminars, conferences, colloquia), and exhibitions (*Computers and Visual Arts, Tendencije 4, Art and Computers, Tendencije 5*), held in Zagreb, at the end of the 1960's, and at the beginning of 1970s. Shortly after they were “discovered” – between 2006, and 2010 – New Tendencies became the subject of several large international exhibitions,¹⁵⁵ presenting legacy of the movement in terms of an important and forgotten episode of new media art history. Art works and printed materials (exhibition catalogues, magazines, working papers), private and official correspondence among the artists, curators, and theorists engaged in discussions on the “computer supported visual research”, a central theme of New Tendencies between 1968 to 1973, were carefully collected, described, and interpreted in order to provide a discursive framework for the inclusion of that particular episode from the overall story of the movement

¹⁵⁵ Die Neuen Tendenzen Eine europäische Künstlerbewegung 1961-1973, Museum für konkrete Kunst Ingolstadt, Sept 29. 2006 – Jan 7., 2007; Leopold-Hoesch-Museum, Düren, 28 Jan-25 Mar 2007; bit international – [Nove] tendencije Computer und visuelle Forschung. Zagreb 1961-1973, Neue Galerie Graz am Landesmuseum Joanneum, 28.4-26.8.2007; bit international. [Nove] Tendencije - Computer und visuelle Forschung, Zagreb 1961-1973, ZKM, Karlsruhe, 2008/2009; New Tendencies and Architecture: Abstraction, Ambience, Algorithm, International Architecture Exhibition, Venice, Aug 2014. Nowa sztuka dla nowego społeczeństwa / New Art For New Society, Muzeum Współczesne Wrocław, 2015.

in the canon of new media art history.¹⁵⁶ In the course of that process – lasting from 2005 to, approximately, 2010 – archival documents on New Tendencies earlier history, on the events and exhibitions held between 1961 and 1965, were also carefully explored, and explained, but in a manner which downplayed, or outright neglected the ideological presumptions of the movement, and its direct engagement with the social, and political reality at the time. The strategy of curtailing and decreasing the importance of New Tendencies' social objectives,¹⁵⁷ and their relation to both Europe's new left, as well to the political, social and cultural practices of Yugoslav socialism, to make them fit to a predefined requirements of the new media art history canon, sparked the interest in the that period in the history of New Tendencies. The result was still another, recently published series of monographs and studies on cultural, social and political framework of the movement, which constructed their accounts of New Tendencies by closely following the traces they have left in visual arts and visual culture (graphic design, experimental film, TV), but also in a debates on cultural policies, and political issues at the time.¹⁵⁸ Along with the

¹⁵⁶ Tobias Hoffmann: Die neuen Tendenzen: Eine europäische Künstlerbewegung 1961-1973 (Heidelberg: Edition Braus, 2006); Christoph Klütsch: Computergrafik: Ästhetische Experimente zwischen zwei Kulturen. Die Anfänge der Computerkunst in den 1960er Jahren (Vienna/New York: Springer, 2007); Margit Rosen, at al., eds: A Little-Known Story about a Movement, A Magazine, And the Computer's Arrival In Art: New Tendencies and Bit International, 1961-1973 (Cambridge Mass.: MIT Press, 2011).

¹⁵⁷ See, for example, Rosen, A Little Known.

¹⁵⁸ Jasna Jakšić, Ivana Kancir, eds.: Nowa sztuka dla nowego społeczeństwa / New Art For New Society (Wrocław:

descriptions of working procedures, communication practices, personal, and professional relationships among artists, art groups, and cultural professionals involved with the movement, they also provided a detailed, theoretically informed analysis of New Tendencies' ideological, and social aspirations, presented on the background of the global Cold War politics, and in relation to the transition from industrial to post-industrial, information society. Descriptions of New Tendencies as an attempt in formulating a socially progressive artistic practice engaged with science and technology, also assumed explanations of its inner conflicts, and contradictions grounded in a thorough examination of historical documentation (publications, private and official letters, manuscripts), public responses (exhibitions reviews in daily press and specialized mag-

:Muzeum Współczesne Wrocław, 2015); Armin Medsoch: New Tendencies. Art at the Threshold of the Information Revolution (1961 - 1978) (Cambridge Mass.: MIT Press, 2016); Ljiljana Kolečnik, "Zagreb as the Location of the New Tendencies International Art Movement (1961-73)", in Art beyond Borders: Artistic Exchange in Communist Europe (1945-1989), eds. Jérôme Bazin, Pascal Dubourg Glatigny, and Piotr Piotrowski (Budapest: Central European University Press, 2016), 311-321; Ljiljana Kolečnik, Nikola Bojić, Artur Šilić, "Reconstruction of Almir Mavignier's Personal Network and its Relation to the First New Tendencies Exhibition. The example of the Application of Network Analysis and Network Visualisation in Art History", *Život umjetnosti* 99 (2016), 58-79; Jacopo Galimberti: Individuals against Individualism Art Collectives in Western Europe (1956-1969) (Liverpool: Liverpool University Press, 2017); Armin Medsoch: "Cutting the Networks in Former Yugoslavia. From New Tendencies to the New Art Practice", *Third Text*, 32/4 (2018), 546-561, DOI: 10.1080/09528822.2018.1528716.

azines, critical studies, polemics), and comparison with similar artistic tendencies at other European locations.

As a consequence, some previous explanations of the important turning points and well-known events from the overall history of the movement were proven to be ideologically biased, and superficial. The same could be claimed for the contact points, divergences and borderlines among certain political and aesthetic choices constituent to its programmatic orientation, seeming to be quite different if approached from the perspective informed by the social and political history of the 1960s, and 1970s. In other words, those recent findings, and accounts made it clear that it is necessary to conduct a thorough reexamination of both poetic and political configuration of on New Tendencies.

The attempt in describing process of articulation, and dissemination of the discourse on art and technology created in the context of that art movement between 1961 and 1965, that is, the attempt in describing series of exhibitions, and discussions comprising for the chronology of the movement's transition from the framework of neo-avant-garde artistic subculture to the realm of institutional culture, grounded on the reconstruction and analysis of exhibition, which is in the focus of this study, represents a contribution to this effort in reexamination, and reinterpretation of New Tendencies.

Period between 1961 and 1966, that is, from the first to the third Zagreb exhibition,¹⁵⁹ critical for the articulation of New Tendencies' view on the art-science-technology relation, is distinguished from the next phase

159 Nove Tendencije 3.8-14.9.1961, Galerija suvremene umjetnosti, Zagreb; Nove Tendencije 2, 1.8.-15.9.1963, Galerija suvremene umjetnosti, Zagreb; Nova tendencija 3, 13.8-19.9.1965, Galerija suvremene umjetnosti, Zagreb.

in their history (1968-1973), as a phenomenological, artistic, and – in terms of the engaged approach to the existential reality of modern, industrial society – cultural entity on its own right, which is, as such, also included in the historic narratives on kinetic and programmed art of the 1960s. Although inscribed in those narratives as an international art movement, the insistence on self-imposed theoretical, and formal rigor, and on the "ideological concentration and commonality of goals", typical for the organization model of art movement, was apparent only in period between 1963 and 1965. What New Tendencies were before that short-time interval, and after 1965, how they were organized and which was their *modus operandi* is another, serious question.

Some authors as, for example, Piotr Piotrowski, perceive New Tendencies as an ambitious, periodical exhibition of contemporary art,¹⁶⁰ which managed to transcend national and ideological borders established by the Cold War politics. Preferring the signifier "New Tendencies biennale", and basically referring to the rhythm of Zagreb exhibitions, such approach tends to overlook the overall meaning and effects of numerous discussions, working meetings, publications, international conferences, competitions, and other events configuring temporal landscape of New Tendencies. It is, of course, true that Zagreb exhibitions sustained their biannual rhythm – with the single exception of the interval between the third and fourth exhibition – throughout the entire period between 1961 and 1973, but at the moment when Zagreb City Council brought a decision to turn New Tendencies in the periodical presentation of contemporary art, at the beginning of 1962, the inten-

160 Piotr Piotrowski, "Why were there no great Pop art curatorial projects in Eastern Europe in the 1960s?" Baltic Worlds 3-4 (2015), 10-16.

sive discussions on its potential to outgrow such format, were already underway.¹⁶¹ In that respect, describing New Tendencies as just another, although important "biannual exhibition" of the Cold War era, might be unjustified, but it is – from my point of view – as inappropriate, as it is a widely accepted signifier "international art movement".

Gathering, over the period of twelve years a several hundred artists from three continents, and from both sides of the Iron curtain, New Tendencies were simply too big, and lasted too long, to maintain the level of formal coherence, poetic integrity, and theoretical rigor implied by the term "artistic movement". There were, however – as in the period between 1963 and 1965 – some serious attempts in defining a common program, shared goals and rules of conduct intended to provide New Tendencies with the prerogatives of an art movement. However, both the nature of these prerogatives, that have been too formal, and restrictive, and the oppressive manner of the attempts of their impositions were met with the resistance. The response to such an attempts in a wider cultural context sympathetic to the concept of "art as research", was a mixture approval and restrain, or as American artist and art critic Georg Rickey has put it, back then in 1964, "There is something necrological about isolating and labeling a movement, at any rate by an outsider. But if the participants become aware of what they have in common and begin to pool their thinking, an event of some importance in history takes place".¹⁶² It is quite possible that Rickey's opinion was

161 Among the meetings on that subject, the most important was the one held at the studio of group GRAV, in Paris, in November 1962.

162 George Rickey, "The New Tendency (Nouvellet Tendence -recherche continue)", Art Journal XIII (1964), 279.

modeled according to his involvement in the sphere of influence of group ZERO – a loose, and unrestrictive type of associations among artists, art groups and art collectives – which, regardless of poetic and theoretical similarities, did not make any attempt in “labeling and isolating” those similarities. Most probably because then, in mid-1960s, it was simply at odds with the period’s *Zeigeist*.

The opinion of Armin Medosch is a bit different, and he claims that the failure to carry on such transformation was one among the important reasons why New Tendencies found themselves at the brink of dissipation in mid-1960s.¹⁶³ If approached from the perspective of their social, and political aspirations, the attempt to counteracting the intensified commodification of art and devastating influence of art market, assumed – apart from disciplined, joint action guided by clearly defined objectives – the “historical (self)consciousness”, and “theoretical awareness”¹⁶⁴ that – in case of New Tendencies – was not achieved to the extent required for the transformation into an art movement. From the perspective of the events comprising for the story of New Tendencies in late 1960s, however, the very fact that such transformation did not happen, seems as a very important reason because of which they have managed to survive – not only the severe crisis in the aftermath of the 1965 exhibition, but also some tensions, and critical situations generated both inside, and outside of their

ecosystem. That what kept them going – in my opinion – was gradual and spontaneous development of New Tendencies as a social network running in the background of the pursuits for a more structured – formalized, restrictive and exclusive – model of organization. Grounded both in institutional and interpersonal ties, its core was established between 1961 and 1965, due to skillful exploitation of its communication potentials, from 1967 on developed into a versatile social structure, which had an important role in changing the course of New Tendencies. Enlarged and invigorated by the influx of new artists, art groups, and – in particular – art theorists, it has become a strong relying point of the activities conducted the last phase of New Tendencies, which also involved charting of the their new organizational structure¹⁶⁵ that was dynamic, flexible, open towards different, experimental art practices, much closer to the present-day concept of artistic platform, than to the notion of art movement.

¹⁶⁵ It is Darko Fritz’s thesis that it is justified to describe New Tendencies as a network, rather than as art movement, due to the methods and practices of communication – combination of meetings, travels, and correspondence – adopted and widely used in the course of movement’s history; see see Darko Fritz, “New Tendencies”, *Oris* 54 (2008): 176-191.; by the same author, “Histories of Networks and Live Meetings. Case Study: [new] Tendencies 1961-1973(1978)”, in *Re-live09*, Melbourne 2009. It was, however, the same communication model applied already in the late 1950s in the framework of neo-avant-garde subculture, but also in number of other social systems (economy, science, education), resulting from development of postal services, railroad and highway networks, and telecommunications, also stimulated by the changes in visa regimes in Europe after 1957.

However, since in the observed period between 1961 and 1965, New Tendencies were at least partially operating as art movement, I am going to use that signifier in this study, more as a matter of convenience, than as a reference to the model of organization to which they pertained.

METHODOLOGY

As it was already stated, the articulation and dissemination of New Tendencies’ discourse on art and science, and their transition from the social and artistic context of neo-avant-garde artistic subculture to mainstream institutional culture, will be described on the background of the exhibitions held between 1961 and 1965, interconnected by same participants (artist, art groups, curators, organizers), and presented through the series of network visualizations. Methodology applied is a combination of narrative interpretation of textual sources, network visualizations, and corresponding maps, that is, a combination of cultural and quantitative analysis, applied in a “soft mode” – that is, in a manner that gives the advantage to epistemic objectives of art history, over those of network analysis, relayed on customary concepts of centrality, detection of strong and weak ties, identification of structural holes, etc. It is focused on the structure of the whole network, and the relationship between network topography to the real-life situation of European avant-garde art scene in late 1950s and 1960s, captured and presented by the network visualizations.

The networks to which such analysis is applied is based on data about 213 single, collective, and thematic exhibitions, divided – in the interest of analysis – into four temporal groups: exhibitions held between 1958 and 1961, providing insight into the neo-avant-garde art scene at the time, that was also presented at the first New Ten-

dencies exhibition; exhibitions organized in 1962-1963 representative for the configuration of the movement’s artistic environment in the stage of their consolidation, and recognition in terms of an authentic response to mainstream artistic culture; the exhibitions staged in 1964-1965, indicative of the New Tendencies’ appropriation by the institutional culture, and global art market. Professional and social network of New Tendencies, which brought together artists, art groups, and art collectives who took part in all five Zagreb exhibitions, is also reconstructed, presented by network visualization, and explained in terms of ruptures and discontinuities in the overall history of the movement.

Analysis of exhibition networks, where the exhibitions are also understood as representative of particular artistic tendency, was expected to answer the following questions: How are the exhibitions in the network connected (through which artist, art groups, curators, art critics)? Which is the measure of their centrality? Which exhibitions / artists / art groups, are bridging the network or network’s structural holes? Do they play such role in just one time interval, or throughout the entire observed period? Data on the exhibitions, artists, art groups and exhibition spaces, which served as a foundation for network analysis and visualizations were collected from variety of digital and analogue sources,¹⁶⁶

¹⁶⁶ The list of the used sources is far too long to be given in this study. References to the sources are entered in the ARTNET database, and accessible at <http://artnet.s2.novenaweb.info/web/Login.aspx?ReturnUrl=%2f-web%2fizlozba%2fPageIzlozbaList.aspx%3fpag%3d1%26query%3d%26periodfrom%3d%26periodto%3d%26tag%3d10%26sort%3dda-tum&page=1&query=&periodfrom=&periodto=&tag=10&sort=datum>

¹⁶³ Armin Medosch, *Automation, Cybarnation and the Art of New Tendencies (1961-1973)*, dissertation (London: Goldsmiths, University, 2012), 131.

¹⁶⁴ For the original use of both see in Renato Poggioli, “The concept of a movement”, in *The Theory of Avant-garde* (Cambridge, MA: Harvard University Press, Belknap Press, 1968), 19.

stored, and processed with the application of network visualization, and spatial data presentation interfaces, a built-in digital tools of ARTNET database.

Narrative interpretation of textual and visual sources, network visualizations, maps and data obtained by quantitative analysis is structured according Dieter Pörschmann's model of periodization¹⁶⁷ applied in his recent study on the manifestations of artist-as-curator phenomena in the practice of group ZERO / ZERO movement/. It assumes a subdivision of a series of events comprising for the overall history of certain phenomena, into a short-time intervals provided with the inner ("micro-scale") periodization of their own. Such division allows for more precise identification of key events and breaking points within the observed period's general chronology, also enabling a more precise determination of their role and meaning in the overall story on particular phenomenon, or process subjected to such type of analysis. Pörschmann's appellation of the short-time intervals to which he subdivided account on the group ZERO, was also partially adopted and applied to periodization of the observed period in the New Tendencies early history, which therefore does not follow the usual chronology defined by the rhythm of exhibitions. In the interest of more precise description of New Tendencies' relationship with the artistic subculture of the neo-avant-garde, the period between 1958 and 1961 is also included, and approached as a "gestation

phase"¹⁶⁸ of the movement, which defined its initial poetic stratification.

"GESTATION" PHASE: 1958 – 1961

New Tendencies had its origins in the neo-avant-garde artistic subculture – a complex social structure, comprised of artist, art groups, art collectives, art critics, independent production, and dissemination spaces, and their public, sharing common psychological, physical, and emotional space, and loosely related by the common, critical view of the mainstream culture. From its nascent in mid-1950s, it was based on solidarity, mutual support, and, upon "the awareness that together you are strong, while alone you are lost in a world that does not understand and does not want to perceive what you are doing,"¹⁶⁹ shared among the representatives of different, not always clearly distinguishable artistic positions, brought together by the same sense of belonging to the new, technologically driven society, and by the shared fascination with its accelerated development that was radically transforming both human environment and sphere of social life. The generation which created social space of neo-avant-garde subculture, articulated its position not only in terms of the resistance to conservative cultural establishment, unresponsive to "visual requirements" of contemporary society, but also in opposition to postwar idea of social stability, reflected in the mainstream visual culture and its detachment from existential reality. Intense communication and exchange among the locations of most dynamic avant-garde ac-

tivities – Düsseldorf, Munich, Paris, Antwerp, Amsterdam or Bern, but also among Padua, Udine, Ulm or Cholet – outlined in late 1950s, and at the beginning of 1960s outlined the (shifting) contours of a complex, rhizomatic social, artistic, and economic structure created of numerous interconnected, intersected or just loosely related personal, and collective networks that were unified – regardless of poetic differences among their actors – by the strong opposition to the excessive subjectivity and existential anxiety of Art Informel's "sloppy painting full of pep and wild gestures, filthy wrinkles and antique oxidations".¹⁷⁰ It's overwhelming, suffocating presence encouraged search for a different concept of art, assumed – in the mid-1950s – the feeling of loneliness, exclusion, and complete dependence on one's own devices. It will change towards the end of the decade into awareness that "other artists had the same feelings and were engaging in similar actions and approaches",¹⁷¹ and a desire for communication, which – according to Heinz Mack – in the case of group ZERO led to the formation of

what we call nowadays a network [and] ... since all these artists in different countries had been at one stage in connection to one another, this word 'network' goes along with the fact that a net can capture everything, and can hold things together that might be lost if they are alone.¹⁷²

While ZERO found its stronghold in the metaphorical potential of nature, in the play with light, and movement, using advanced technology, new materials, new working methods, and relying on the legacy of Bauhaus, other artist who joined group's network, or occasionally participated in ZERO's activities, developed their own views on the most proper method of expressing their opposition to mainstream art and visual culture. Most of these, different tendencies – some of them strongly politicized – will find their proper theoretical articulation towards the end of this time-interval in which the maturation of their ideas and principles assumed a zealous creative activity, intense networking – frequent travels, numerous meetings, discussions, and continuous, circular correspondence – and frequent cross-disciplinary collaborations. Out of few hundred exhibitions, staged at that period, which outline a poetic, and media diversity of neo-avant-garde artistic subculture, almost hundred individual, and collective exhibitions were related to artistic practices presented, or considered for presentation, at the first New Tendencies exhibition. Seventy nine exhibitions, selected from that overall number comprise for a separate layer within neo-avant-garde exhibition infrastructure, composed of independent exhibition spaces (Hessenhuis58, in Antwerp, Otto Piene Studio in Düsseldorf, Studio N, in Padua), artist-run galleries (Galleria Azimuth in Milan, Studio F in Ulm, Galerie Nota in Munich, Galerie Renate Boukes, Wiesbaden; Galerij A, Arnhem, New Vision Centre Gallery, London), and at the commercial galleries committed to the presentation of neo-avant-garde art (Galerie Schmela, Düsseldorf; Galerie Dato, Frankfurt; Galerie Iris Clert, Paris; Galleria Pater, Galleria Danese, Galleria Apollinaire in Milan; Internationale galerij OREZ, The

167 Dirk Pörschmann, "'M.P.U.E.' Dynamo for ZERO: The artists-curators Heinz Mack, Otto Piene, and Güther Uecker", in *The Artist as Curator. Collaborative initiatives in the international ZERO movement 1957-1967*, eds. Tiziana Cainaello, Mattijs Visser (Gent: MER. Paper Kunsthalles, 2015), 17-58.

168 Term "gestation period" was first used by Armin Medosch in the similar context; see Medosch, *Automation*, 69.

169 Helga Meister, *Zero in der Düsseldorfer Szene: Piene, Uecker, Mack* (Düsseldorf: Jan van der Most, 2005) 65; cited according Pörschmann, „M.P.U.E“, 17.

170 Stephanie Bailey, "Heinz Mack in conversation", *Ocula*, 22 December 2014, <https://ocula.com/magazine/conversations/heinz-mack/> Accessed June 23, 2018.

171 Ibidem., <https://ocula.com/magazine/conversations/heinz-mack/> Accessed June 23, 2018.

172 Ibidem., <https://ocula.com/magazine/conversations/heinz-mack/> Accessed June

● artist-run galleries and independent exhibition spaces ● private galleries ● museums

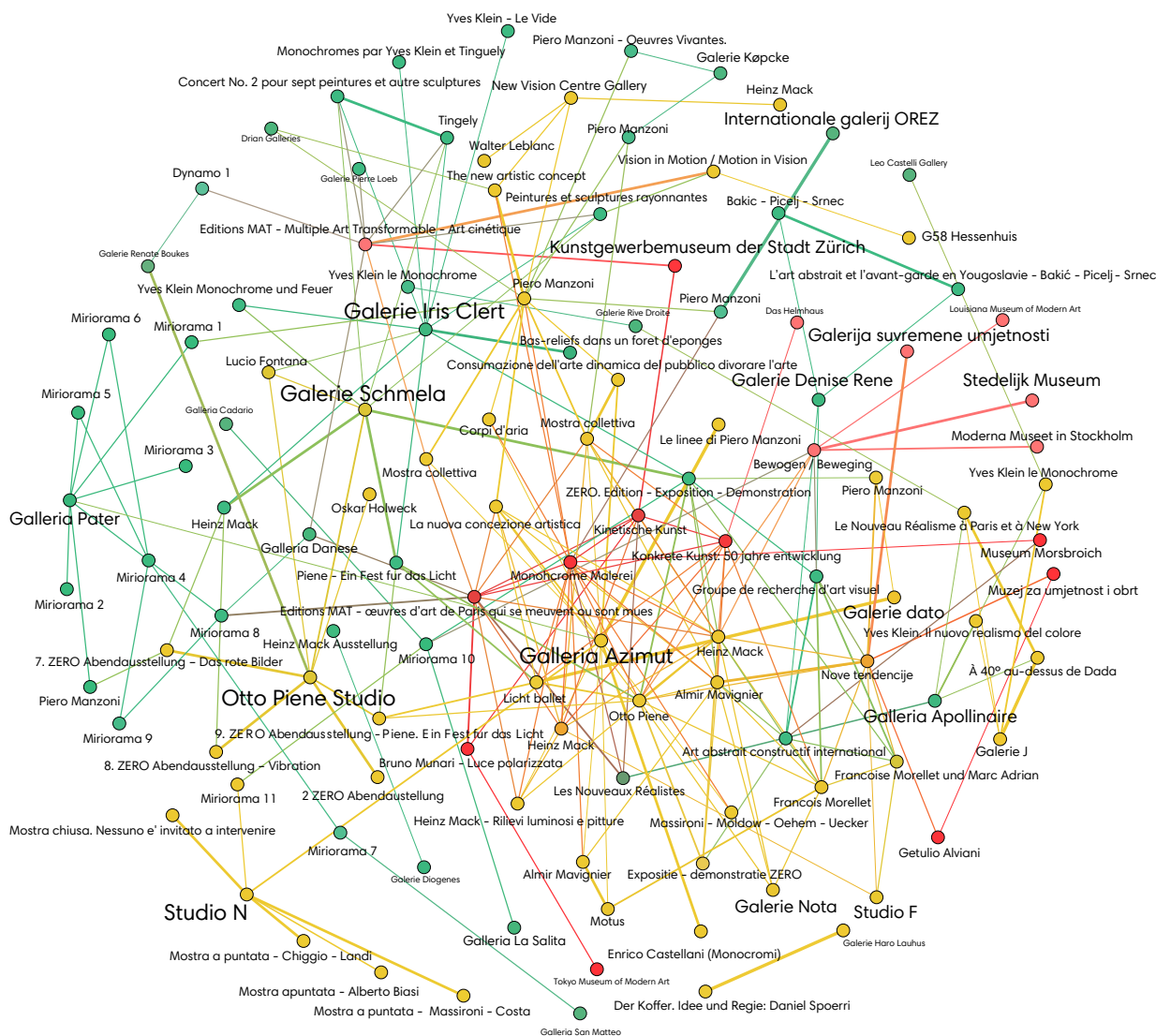


Fig. 1
Visualization of neo-avant-garde exhibitions' infrastructure network established between 1958 and 1961 that involves future members of the New Tendencies, and outlines the relations among independent art scene (artists-run galleries, independent exhibition spaces), art market (private galleries), and institutional mainstream culture (museums)

Hague; Galerie J, Paris; Galerie Schindler, Bern; Galerie Kasper, Lausanne; Galerie K pckke, Copenhagen), which formed their own network. In most cases, and pertaining to the "pronounced and undaunted do-it-yourself mentality"¹⁷³, curators, and organizers of those exhibitions were artist themselves, who took responsibility not only over the technical, financial, and communication matters, but also over the manner in which the artworks, their own or those of like-minded artists, will be displayed and represented to public.

The list of exhibitions curated, and organized between 1958 and 1961 by Otto Peine, Heinz Mack, Piero Manzoni, Enrico Castellani, Yves Klein, Jean Tinguely, Daniel Spoerri, Walter Leblanc, Gerhardt von Graevenitz, Hank Peeters, and number of other artists is quite long. Along with one-man shows, artist also curated a collective exhibitions, frequently displaying the works of particular art group, and artists from its inner circle. Even though the financial construction of such exhibitions was modest, they usually had catalogues, edited by artists themselves, and often printed at small local printing houses. In some situations function of the catalogue was performed by artist magazines, or vice versa – the magazine was standing for the exhibition, but in a printed form.¹⁷⁴

173 P rschmann, «'M.P.U.E'», 18.

174 Legendary, third issue of magazine ZERO, was composed out of artists printed works, texts and graphic interventions, by Fontana, Klein, Manzoni, Castellani, Dorazio, A. Pomodoro, Lo Savio, Peetres, Schoonhoven, Pol Bury, Van Hoyedonck, Mavignier, Soto, Spoerri, Arman, Roth, and quit a few German artists. It was publicly presented with great pomp, at ZERO Edition, Exposition, Demonstration (July, 1961), which resembled Fluxus festivals, and involved active participation of public. See in Meister, Zero, 78.

Position of particular gallery in the topography of neo-avant-garde exhibition infrastructure network related to New Tendencies (Fig. 1) denotes the intensity of that gallery's activities, but also the strength and number of its ties with other network actors. Based upon such criteria, central position in the network, and in category of artists-run galleries, is occupied by Gallery Azimut run by Piero Manzoni, and Enrico Castellani in Milan, from December 1959 to July 1960. Active only eight months, it has allowed Manzoni and Castellani to organize thirteen, mostly group exhibitions, to launch gallery's spin-off publication, magazine *Azimuth*, and to acquire the reputation – in particular within artistic circles – of the most dynamic, and engaged new exhibition space. Along with the surveys of Lombardian independent art scene, the most important exhibition supporting such perception was *La Nuova Concezione Artistica /New Artistic Concept/*, an early overview of European neo-avant-garde, which brought together artists from Germany (ZERO movement), France (Yves Klein, Tinguely), and Italy (members of Gruppo N and Gruppo T). Emphasis on international presentations, and inclusion of both European, and American artists (Rauschenberg, Jasper Johns, Ira Moldow), which turned Gallery Azimut into the most important hub in the neo-avant-garde infrastructural network at the time, motivated Almir Mavignier, an Matko Me trovi , curators of first *New Tendencies* to consult Manzoni regarding Italian selection at the exhibition. Although it is not explicitly stated, from the correspondence preceding the exhibition it is possible to conclude that it was Manzoni who made that selection.¹⁷⁵ Manzoni, Castellani, and Nanda Vigo first met with group ZERO, that is, with Otto Piene, and Heinz Mack, on the occasions of

175 Matko Me trovi , "Nepoznate potankosti - Iz sa uvane korespondencije s Pierom Manzoniem", *Fantom slobode* 3 (2010), 207-216.

the eight ZERO *Abendausstellung*, held in Otto Piene's Studio in 1958. Taking the most prominent position in the network topography in the category of independent exhibition spaces, and established two years before Gallery Azimut, it was exemplary of artists' self-organization in late 1950s, when, according to Heinz Mack, both his and Piene's studios, were acting as "workshops, platforms for discussions and were used occasionally as gallery spaces, opening for one-night events, or used as meeting points for a few artists and friends".¹⁷⁶ In the course of 1957 and 1958, Piene and Mack organized there eight group exhibitions (*Abendausstellungen* 1 - 8), and several happenings involving artists from Belgium, Netherlands, Switzerland, and France. Collaboration with Italian artist started, as it was already mentioned, in 1958, at the end of that cycle. From 1959 on, Otto Piene's Studio remained the stronghold of ZERO's communication and networking, but curatorial activities, almost exclusively related to presentation of the group / ZERO movement/ were performed at other exhibition venues, both independent and commercial. In the category of commercial galleries, the most prominent position in network topography is occupied by Galerie Schmela. Established in 1957 in Düsseldorf, it owes such prominent position, and much of its real-life fame, to early, and close co-operation with Mack and Piene.¹⁷⁷ Except

¹⁷⁶ Baily (2014), <https://ocula.com/magazine/conversations/heinz-mack/> Accessed June 23, 2018.

¹⁷⁷ Heinz Mack even claims that he and Günther Uecker were the persons whom Alfred Schmela asked for advice on how to open his private gallery, and what to exhibit there. Schmela opening exhibition, Klien's *Yves, Propositions monochromes* (1957) was organized, according to Mack, on the suggestion of artist Norbert Kricke; see in Bailey <https://ocula.com/magazine/conversations/heinz-mack/>

for preparing their own exhibitions held in that gallery, Mack and Piene were also informally involved in organization of the exhibitions of their fellow artists (Yves Klein, Jean Tinguely, Lucio Fontana), and served as Alfred Schmela's liaison with a wider neo-avant-garde community. Through Ira Moldow, whom Mack first met in Milan, he established relations with American artists, and was first in Germany – a few years later – to show the works of Robert Motherwell, and Kenneth Noland.¹⁷⁸ Group ZERO also had contacts with Parisian Gallery Iris Clert, which staged Heinz Mack's solo exhibition in 1958. However, a highly visible position of that gallery in network topography, is primarily the result of its ties with other exhibition venues, established through Yves Klein, and his numerous exhibitions held at both artist-run, and commercial galleries, and within a wide geographic area from Milan, Düsseldorf, Antwerp, London, and Amsterdam to Paris. It is also important to notice, that both Iris Clert and Gallery Schmela were – at the time – important liaisons of the neo-avant-garde artists with art-market, and institutional culture. Gallery Denise Réne performed the same function for the members of group GRAV, and for few Croatian artists, representatives of neo-constructivism, who entered the international art scene in 1958-1959. Through both of these groups her gallery established ties with *New Tendencies*, reaffirmed with the exhibition *Art abstrait constructif international* (Paris, 1961; Leverkusen, 1962), held three months after the *New Tendencies*,

[com/magazine/conversations/heinz-mack/](https://ocula.com/magazine/conversations/heinz-mack/) Accessed June 23, 2018.

¹⁷⁸ Anette Kuhn, *Zero: eine Avantgarde der sechziger Jahre* (Frankfurt am Main & Berlin: Propyläen-Verl., 1991), 42; Dietmar Elger, Elizabeth M Solaro, *Gerhard Richter: A Life in Painting* (The University Of Chicago Press, 2010), 33-34.



Map 1.

Spatial distribution of the neo-avant-garde exhibitions between 1958 and 1961

condition to their inclusion in the economy of institutional culture was the establishment of a proper contestation framework, exhibitions *Kinetische Kunst*, organized at Stadts Kunstgewerbemuseum in Zürich (1960), *Konkrete Kunst: 50 Jahre Entwicklung*, organized by Helmhaus, also in Zürich (1960), and *Monochrome Malerie*, held at Museums für Gegenwartskunst Morsbroich (1960), were intended to provide them with the proper set of historical references. Therefore, in all three cases, contemporary art was presented as integral to continuity of ideas, and problems related to historical development of art phenomena from the focus of the exhibition. While the position of the museums in network topography reflects their real-life distance from the neo-avant-garde subculture, the central position of the exhibitions they have organized, and their multiple ties with other network actors, denote such strategy.

The relation between the institutional culture and neo-avant-garde subculture is presented with greater clarity by the visualization of same data used for the visualization of neo-avant-garde exhibition infrastructure, but approached through the perspective of bipartite exhibition – artist network (Fig. 2). At the level of its topography, the center of the network, crowded with number of tightly interconnected exhibitions, represents the real-life space of neo-avant-garde artistic subculture, while the exhibitions surrounding that space, with just few exceptions, outline a real-life realm of institutional mainstream. Strength of ties among network actors, denoted by the thickness of connecting lines depends – in case of exhibitions – upon number of common participants among two exhibitions, while in case of exhibition – person ties, thickness of the connecting line points to the role (organizer, catalogue editor, author of the text in the catalogue) particular person played in the exhibition. Therefore, a tick line connecting the exhi-

bition *Art abstrait constructif international*, (Paris, 1961), and exhibition *Groupe de recherche d'art visuel*, (Paris, 1961) points that they had a strong tie, since the entire group GRAV participated in both of them; the thick tie between Matko Meštrović and *New Tendencies*, points to his multiple roles in the exhibition (assistant curator, author of the text in the exhibition catalogue). Robert Rauschenberg, on the other hand, had only one role in the exhibitions *Bewogen/Beweging* and *Le Nouveau Réalisme à Paris et à New York*, that of participating artists, meaning that his connection to them was weak, and therefore presented by the thin lines. Rauschenberg's position in the topography of the network, much closer to the second of these two exhibitions, reflects his closer real-life relationships with *Le groupe des Nouveaux Réalistes*. Although each and every connection between two network actors could be described in these terms, from the perspective of *New Tendencies'* relation to neo-avant-garde artistic subculture, structure of the whole network is much more interesting and informative, since it also presents the relations among different artistic tendencies constitutive to its social space. Quite similar to the position of certain galleries, and exhibition spaces in the topography of infrastructural network, artistic tendencies articulated towards the end of the observed period, and presented in this network visualization with the series of exhibitions, are also positioned at the very edge of the area representing the real-life space of neo-avant-garde subculture. Therefore, the exhibitions related to the group of *Nouveaux Réalistes*, formed on Pierre Restany's initiative, and officially established in October of 1960, occupy the upper left corner of network visualization. It is true that some of group's members – Jean Tinguely, Yves Klein, and Daniel Spoerri – were strongly involved with the international neo-avant-garde much before the group

was formed, but since the rest of its members did not have previous artistic or social relations with other network actors, the position of the *Nouveaux Réalistes* in network topography is bit remote from its core. Gruppo N, and Gruppo T, represented by the exhibitions placed on the opposite side of the network, and also distanced from its central area, were established just a few months before *Nouveaux Réalistes*, but their position in the topography of the network – both in relation to French group, and towards each other – is a bit different. In contrast to the *Nouveaux Réalistes*, Gruppo T had a multiple strong ties with key personalities of Lombardian neo-avant-garde (Manzoni, Castellani, Fontana, Dorfles) established much before it was formed towards the end of 1959. Moreover, members of the group Davide Boriani, Giovanni Anecshi, Gianni Colombo, and Gabriele Devecchi, were directly involved in technical preparations for the opening of Gallery Azimut, and were also integral to the group of young artist who belonged, as well as Manzoni and Castellani, to Lucio Fontana's circle.¹⁷⁹ Reasons why Gruppo T was placed at the edge of the neo-avant-garde's social space, are the dates of their inaugural, programmatic exhibitions (*Mirrorama's* 1-11), held in 1960-1961, and the fact that except for the first one, which also included Manzoni, Fontana, Munari, Tinguely, and Enrico Baj, participants at all other exhibi-

179 See in MANZONI: *Azimut*, exhibition catalogue, Gagosian Gallery, 17.11.2011 – 6.1.2012 (London: Gagosian Gallery, 2011). A good impression on how young generation of artists perceived Lucio Fontana, gives Heinz Mack: "Fontana was a kind of colleague who supported and inspired us, giving us this affirmation and awareness that we were on the right path ... his work was so useful to us; so near to what we were doing.", in Baily <https://ocula.com/magazine/conversations/heinz-mack/> Accessed June 23, 2018.

tions from that series were only group members. Gruppo N, on the other hand, was located in Padua, and except from initial connections with Milan avant-garde milieu, established through the participation of Manfredo Massironi and Eduardo Landi in the exhibitions organized at Gallery Azimut, it had just a few other connections with Milanese artistic. It was also formed towards the end of the observed period, and early exhibitions by which it is represented in the visualization, were held at group's atelier (Studio N), not yet integrated into the existing neo-avant-garde infrastructure.

In the center of the network there is Spoerri's *Editions MAT – Multiple d'Art Transformable*, exhibition displayed for the first time in Paris, in Galerie Loeb, at the end of 1959. Described as "an anthology of multiples in sculpture, with the theme of real or perceptual movement",¹⁸⁰ it was the collection of small-scale transformable kinetic objects, produced on affordable price in a series of one hundred items resulting from Spoerri's collaboration with artists of different generations – from Dieter Roth to Joseph Albers, and Marcel Duchamp.¹⁸¹ Organized and managed by Spoerri, and touring Europe throughout 1960 (Munich, Zurich, Krefeld), it was a very important reference for *New Tendencies*, both in regard to the for-

180 Lisa Cempellin, *The Ideas, Identity and Art of Daniel Spoerri. Contingencies and Encounters of an 'Artistic Animator'* (Wellington: Vernon Press, 2017), 1-3.

181 The initial Edition MAT included works by Yaacov Agam, Pol Bury, Enzo Mari, Bruno Munari, Man Ray, Dieter Roth, Jesús Rafael Soto, Jean Tinguely, and Victor Vasarely. On the occasion of its presentation in Zürich, collection was supplemented with works of Joseph Albers, Marcel Duchamp, Heinz Mack, and Frank Malina; More on MAT Editions; see in Katerina Vatsella, *Edition MAT: Daniel Spoerri, Karl Gerstner und das Multiple: die Entstehung einer Kunstform* (Bremen: Hauschild, 1998).

mat of multiple, and model of production. Other important exhibitions, according to calculations (Table 1- 3), which took into account the strength, and multiplicity of ties among network actors, belong to the production of group ZERO (Heinz Mack's solo exhibition held in Milan, in March 1960; *Expositie - demnstratie ZERO*, Arnhem, 1961; *ZERO Edition, Exposition, Demonstration*, Dusseldorf, 1961), whose activities dominate the central area of the network. It is not particularly surprising since, in 1961, ZERO was already, and spontaneously operating as an international movement, overarching almost the entire social space of neo-avant-garde artistic subculture.

Eigenvector centrality	
Heinz Mack	0.860773
ZERO. Edition - Exposition - Demonstration	0.846478
Editions MAT - Paris	0.777507
Nove tendencije	0.775177
Expositie - demnstratie ZERO	0.658741

T.1

Closeness centrality	
Expositie - demnstratie ZERO	0.45584
ZERO. Edition - Exposition - Demonstration	0.407643
Nove tendencije	0.391677
Heinz Mack	0.391198
Editions MAT - Paris	0.373832

T.2

Betweenness centrality	
Nove tendencije	11044.82245
Editions MAT - Paris	5515.746477
Heinz Mack	3720.42398
ZERO. Edition - Exposition - Demonstration	2636.716467
Expositie - demnstratie ZERO	2169.756536

T. 3

Table 1-3. Ranking of the exhibitions held between 1958 and 1961, and related to neo-avant-garde artistic subculture, according to T1) Eigen centrality, T2) Closeness centrality, T3) and Betweenness centrality measures

In comparison to the exhibitions situated within the central network area, tightly interconnected by common participants (curators, organizers, authors and editors of the catalogues), according to the calculations of centrality none of the large, professionally curated exhibitions – *Kinetische Kunst* (Zürich, 1960), *Monochrome Malerei* (Leverkusen, 1960), *Konkrete Kunst: 50 Jahre Entwicklung* (Zürich, 1960 *Art abstrait constructif international*, (Paris, 1961), except from the *Bewogen / Bewegung*, (Amsterdam, Stockholm, Copenhagen 1961-1962), managed to enter the group of five or even ten important exhibitions at the time.

The largest of these exhibitions, *Bewogen / Bewegung*, opened in March, 1961, first at Stedelijk in Amsterdam, was transferred and restaged a month later at Moderna Museet, in Stockholm under the title *Rörelse Konsten /Movement in Art/*, and moved again, at the end of 1961 to Louisiana Museum, in Copenhagen. The objective of the exhibition, curated by Pontus Hultén, with the assistance of Daniel Spoerri, was to outline “the history of artists’ interest in movement, from Futurism to contemporary art”,¹⁸² and across the broadly understood field of visual arts, which included “kinetic art, performance, happenings and film, along with a host of ‘static’ artworks”.¹⁸³ A specific of the selection was an overstated number and position of Tinguely’s works in the exhibition display, and the inclusion of other representatives of Nouveaux Réalistes, Raymond Heins, and Niki de Saint Phale. Concerning a pronouncedly critical view of

182 According to the catalogue of the exhibition, there were 223 artworks displayed by 83 authors; more on the exhibition see in Anna Lundström, “Movement in Art. The layers of an exhibition”, in Pontus Hultén and Moderna Museet the Formative Years, ed. Anna Tellgren (Stockholm, London: Moderna Museet & Koenig Books, 2017), 67-93.

183 Ibidem., 68-69.

their work, in particular in the milieu of the contemporary French art scene, stemming, amongst others, from Nouveaux Réalistes affirmative relation towards American pop-art, it was a rather brave curatorial decision.¹⁸⁴ The selection also included a group of artists – Heinz Mack, Julio Le Parc, Otto Piene, Dieter Roth, Paul Talman, Günther Uecker – who will, in just a few months, attend the first Nove Tendencije exhibition. Although its venue belonged to the system of institutional culture, the exhibition *Nove Tendencije* (Zagreb, 1961) was firmly embedded in the neo-avant-garde subculture. It was conceived, and curated by Brazilian artist Almir Mavignier, and closely followed “do-it-yourself” principle typical for the practice of group ZERO, with whom Mavignier was associated from 1958, and therefore strongly relied on his wide personal network that included artists from both Europe, and Latin America¹⁸⁵. Mavigier’s assistant was young

184 Still another peculiarity of Hultén’s selection was also the inclusion of Robert Rauschenberg, who already had a firm, contacts with both Parisian and Lombardian neo-avant-garde. Few months after Bewogen / Bewegung he took part in Restany’s exhibition Le Nouveau Réalisme à Paris et à New York, with artworks recognized in the Parisian intellectual circles, in particular those close to Galerie Denise Réne, as an epitome of “Americanization”, a (political) strategy meant to undermining European postwar culture. Such perception strongly affected the position of Nouveau Réalisme at the Fench, and consequently European art scene at the time; see, for example, Catherine Dossin, “To Drip or to Pop? The European Triumph of American Art”, Artl@ Bulletin, Vol. 3, Issue 1 (Spring 2014), 79-103.

185 For the reconstruction, and visualization of Almir Mavignier’s personal network in 1960, see in Kolečnik, Bojić, Šilić, “Reconstruction”, 58-79. https://www.ipu.hr/content/zivot-umjetnosti/ZU_99-2016_058-

Croatian art critic Matko Meštrović, a well-informed intellectual, also not the employee of the Gallery of Contemporary art,¹⁸⁶ who will play a very important role in the overall history of the movement. Claim that Nove tendencije – for the first time – brought together works of young European artists from diverse backgrounds, who for the most part never met, or seen of each other’s work, was only partially true. It was true for Croatian artists, who started to forge their way towards international art circles only at the end of the 1950’s, and probably for few other authors called after the initial participants list, based on Mavignier’s personal network has been exhausted. Guided by his understanding of shared artistic, aesthetic and social values, and by the similarities in technical aspects of art production, Mavignier put together a complex overview of diverse art practices opposing the excessive subjectivity, individualism, and idiosyncrasy of Art Informel. Bringing to the fore value system of the first postwar generation, its radical stance against hegemonic model of high modernist artistic culture, and concept of art “growing out of the diverse structures of modern life”,¹⁸⁷ *Nove Tendencije* achieved international success, although within still limited circles of neo-avant-garde artists, and among art critic sympathetic to their critical stance on the Informalist mainstream.

079_Kolesnik_Bojic_Silic.pdf

186 For a detailed story on organization of the first New Tendencies exhibition see Rosen, A Little Known; Rosen, Weibel bit international; Medosch, New Tendencies.

187 Manifesto, written and signed by Biasi, Mack, Manzoni, and Massironi in 1960 on the occasion of the exhibition *La Nuova Concezione Artistica*, quoted by Lucilla Meloni, ed. Gruppo N. Oltre la pittura, oltre la scultura: l’arte programmata. (Frankfurt am Main & Milano: Fondazione VAF & Silvana Editore, 2009), 45.

However, the position of that exhibition in the topography of exhibitions network (Fig. 2) does not have much to do with the real-life reception of the exhibition, but rather confirms that New Tendencies provided a comprehensive overview of neo-avant-garde tendencies with – broadly defined – neoconstructivist orientation.¹⁸⁸ Placement of *Nove Tendencije* along the upper right side of the network core, is determined by the number of Italian, and German, and artists from other locations of neo-avant-garde activities who took part in the exhibition, and also with the absence of Dutch authors, and *Nouveaux Réalistes*, positioned on the opposite side of the network. The connections of *Nove Tendencije* with other network actors are predominantly weak, but numerous and direct, which provide the exhibition – when translated into the measures of centrality (Tables 1–3) – with the third position within the group of five most important exhibitions held between 1958 and 1961. Other exhibitions organized by the museums and encompassed by this visualization, were excluded from the calculations since their relations to the neo-avant-garde subculture was mediated by the system of institutional culture. If they would have been taken into account, *Nove Tendencije* would take the position of the fifth most important exhibition in the observed period.

PHASE OF ESTABLISHMENT, AND CONSOLIDATION: 1962 – 1963

Except from his approach to organization, and curation of New Tendencies, the influence of Mavignier's affiliation with ZERO, was also manifested through his communication with Matko Meštrović, preceding the

¹⁸⁸ Term neoconstructivism is used as a signifier for art practices which put forward Futurism, Constructivism, Bauhaus, and De Stijl, as their historical references.

exhibition. Consistent with ZERO's expansion strategy, which assumed the support to persons, and locations responsive towards group's concept of art, in one of the letters they exchanged at the time, Mavignier outlined "the opportunity of young critics", like Meštrović, "to come to Germany, and have contacts with people, artist and ideas that might help give impulse to some new forces among you"¹⁸⁹ as perhaps the most important outcome of *Nove Tendencije* exhibition. Fulfilling the promise lurking behind the lines of that letter already at the beginning of 1961, Mavignier provided Meštrović with the opportunity to stage the exhibition of Yugoslav contemporary painting at Galerie F, in Ulm.¹⁹⁰ The exhibition was followed by Meštrović's visit to Düsseldorf, and Zürich, where he missed a desired meeting with Max Bill, establishing, instead, contact with Karl Gerstner. From Zurich, Meštrović went to Munich to meet with Gerhard von Graevenitz, whom he will get to know much better during his stay in Paris, at the beginning of 1962. For the young art critic, with few previous direct contacts with the foreign artists, it was crucially important encounter with the artistic, cultural, and social milieu to which he will be firmly tied throughout the 1960s, and equally important for the future of New Tendencies.

Artists who were later invited to recall their impressions of the first New Tendencies exhibition, often described that event in terms of 'epiphany' – a singular moment

¹⁸⁹ Medosch, *Automation*, 55.

¹⁹⁰ Meštrović's selection was an overview of Yugoslav art scene at the time, and encompassed a rather wide range of art practices – from geometric abstraction to naïve art. After Ulm, it was supposed to be restaged in Berlin, but it did not happen due to the political tension between Germany and Yugoslavia, issuing from Yugoslav recognition of DDR.

of a sudden, shared awareness that right there, behind those exhibited artworks, there was already the entire art movement, nameless and invisible to the general public, but ready to articulate its artistic, aesthetic and social objectives. Following that "instant recognition", discussions on the programmatic orientation of the movement started while the exhibition was still running, and continued throughout 1962, creating the core of New Tendencies' social and professional network. Communication model in the background of that process was common to neo-avant-garde of the late 1950s assuming working meetings, frequent travelling among groups of people and locations involved in the project, and a lot of circular correspondence. Almost immediately after the first Zagreb exhibition – in October 1961 – Meštrović received the grant for visiting Paris,¹⁹¹ and in the following months – until February 1962 – joined forces with group GRAV, Equipo 57, Gerhard von Graevenitz, and other like-minded artists on creating the programmatic outline of the new art movement. Meštrović's personal benefit gained from those meetings was, according to his own statement, "the encounter with the new ideas" and development of "vocabulary, relating to emerging new notions in art".¹⁹² If one compares his articles written before New Tendencies, with those from 1963 to 1965, the advancement in type, structure, and vocabulary of his critical, and theoretical discourse is simply – astonishing. It was even more important concerning the fundamental transformations happening in his immediate cultural environment. At the beginning of the 1960s, and corresponding to changes in Yugoslav internal and

¹⁹¹ Meštrović stayed in Paris from October 1961, to February 1962.

¹⁹² Matko Meštrović, 13.05.1965. Letter to Gerhard von Graevenitz. Archive: MSU Zagreb

foreign politics,¹⁹³ Zagreb, a local cultural center with lively, but conventional mainstream art, suddenly turned into a vibrant location of international experimental art, hosting New Tendencies, Music Biennale (MBZ), the international biannual survey of avant-garde, and experimental music, and festival of amateur experimental film (Genre Film Festival – GEFF),¹⁹⁴ which all required a proper critical response, impossible without acquisition of new epistemic, and discursive devices. In that respect, Meštrović was well ahead of its colleagues from Gallery of Contemporary Art, which appointed him the chief-curator of *Nove Tendencije 2*. Gallery also provided finances for his participation in the meetings, and discussions on the fundamentals principles and program objectives of international art movement New Tendencies, that was formed in 1962 and by the intense communication among Zagreb, Paris and Milan.¹⁹⁵ French *Groupe de Recherche d'Art Visuel* (GRAV), established in 1960, with the ambition "to fashion Marxist aesthetics compatible with works ascribable to the tradition of abstract art",¹⁹⁶ played a very important

¹⁹³ More on political situation in Yugoslavia, and on its relation with the Cold War cultural politics, see in Ljiljana Kolečnik, "A Decade of Freedom, Hope and Lost Illusions. Yugoslav Society in the 1960s as a Framework for New Tendencies", *Radovi Instituta za povijest umjetnosti* 34 (2010), 211–224.

¹⁹⁴ In 1961 Zagreb City Council accepted the proposition of avant-garde composer Milko Kelemen to establish Music Biennale of Zagreb (MBZ). It was also decided that MBZ and NT should run together every two years and that the first issue of the combined events should happen in spring 1963.

¹⁹⁵ More on that process see in Denegri, *Exat* 51, and Medosch, *Automation*.

¹⁹⁶ Jacopo Galimberti, "The Early Years of GRAV: Better Marx than Malraux",

role in that process, imposing itself as a leading force of the movement by the series of its programmatic texts, published in the immediate aftermath of *Nove Tendencije* – declaration *Assez de Mystifications / Stop with Mystification* issued in September 1961, along with GRAV's participation at the second *Bienal de Paris*, and the pamphlet *Transformer l'actuelle situation de l'art plastique*, issued in October 1961, explaining group's view on the relationship between art and society, on the traditional value of visual art, and on certain aspects of visual reception. They were followed by the group's statement *Nouvelle Tendance*, published along the exhibition *L'Instabilité* (Paris, March, 1962), as a summary of discussions led between Paris and Milan, emphasizing that the term employed in its title “was already used on the occasion of the *Nove Tendencije* exhibition in Zagreb in 1961”, as a signifier of phenomena which “appeared simultaneously among young designers at different points in the world”, and just “began to give a more homogeneous character”.¹⁹⁷ That new phenomenon, described as “the evolution [which] can bring new ways of conceiving, appreciating and placing the work in society”, was rising against “the sterile situation which now produces, day after day, thousands of works labelled lyrical abstraction, formless art, Tachism, etc., and also against the fruitless extension of a lagging mannerism based on the geometric forms . . . of Mondrian and,”¹⁹⁸ that is, against both Informalist mainstream, and geometric abstraction. New Tendencies – in

GRAV's interpretation – had quite similar, negative view of other neo-avant-garde currents. While praising neo-Dadaists and Nouveaux Realistes for their disrespect towards “traditional considerations of beauty”, they also pointed out the “contradiction between their anti-art and effort to baptize the object anew”, as essentially different from New Tendencies' “search for clarity” with no other objective than transformation of art (“plastic activity”) into practice which “makes its primary elements evident” to human eye, as opposed to the “eye of the intellectual, the specialist, the aesthete, the sensitive”.¹⁹⁹ The idea of “art as continuous (visual) research”, introduced by that GRAV's statement, also highlighted the understanding of art – science relation, specific for New Tendencies as art movement, akin with the questions of its approach to the concept of authorship. Drawing on Umberto Eco's term “epistemological metaphor”, Jacopo Galimberti, describes such understanding as quasi-scientific, and as an example of “appropriation of scientific values and practices”, with the purpose to “evoke an approach to knowledge and society without actually trying to turn art into a science”.²⁰⁰ According to Galimberti, the appropriation and mediation of scientific paradigm, also allowed GRAV (New Tendencies) to

... borrow the notion of authorship typical of the scientific community, in which discoveries and publications are generally accredited to a team. On the other hand, it engaged with abstract and process-based works devoid of individual signature supplemented by the descriptions of artistic engagement which resembles the process of scientific research.²⁰¹

199 Ibidem

200 Galimberti (2015), 7.

201 GRAV, *Tendances*, n.p.

The programmatic insistence on clarity, therefore, assumed the act of creation which is based on the same type of rational reasoning which is guiding scientific research, fully transparent, and devoid of any mystification. In comparison to other art groups, coming together at this period to define a common program of the movement, devoted to the social aspects of art production, and to the operation of art-market mechanisms, the position of GRAV was more pragmatic, and concerned with the means and devices that will allow for better understanding of visual perception, in order to apply that knowledge in creation of new art objects / spatial situations that will induce viewers' active response, and the awareness of their own perceptive, sensory capacities. In other words, and articulated in theoretical terms, the objectives of “art as research” was to “determine objective psycho-physical bases of the plastic phenomenon and visual perception”, to change our “manner of perceiving visual phenomena ... [and] enhance our entire perception apparatus”, in order to facilitate better understanding of the “phenomenology of the world and society”.²⁰²

The important consequence of defining art as research, was the change in the status of artwork that members of New Tendencies understood rather as a report on particular stage of the research process, than as definite, completed visual statement, or – more precisely – as a “strictly visual situation” without any element outside its “homogenous” structure that does not allow any kind of interpretation beyond

202 Matko Meštrović, *Untitled* (The Ideology of the New Tendencies), in *Nove tendencije 2*, exhibition catalogue, Galerija suvremene umjetnosti, Zagreb, 1.8.-15.9.1963. (Zagreb: Galerija suvremene umjetnosti, 1963). n. p.

its purely physical features.²⁰³ Similar to the scientific research, which approves repetition of experiments, and recreation of the results obtained by other scientist, the objective of New Tendencies was to create artworks that could be endlessly modified in the course of visual research, and endlessly reproduced by anyone willing to follow artist's instructions.²⁰⁴ At the beginning of the 1960s, forms of artistic behaviour which diminished importance of authorship, endorsed collective authorship (Gruppo N, Equipo 57) and production of anonymous, unsigned artworks (GRAV), undermining the fetishization of a unique, authorial personality, were not new. In case of New Tendencies they were also accompanied by the propositions on new forms of organization that would make it integral to the operative principles of the movement that were discussed but not fully implemented.²⁰⁵

Programmatic orientation of New Tendencies in regard to the institutional art mainstream gained a more comprehensive articulation in *Bulletin N° 1*, document published shortly after the exhibition *Nove Tendencije 2*, held in Zagreb, in August 1963,²⁰⁶ with the intention to summarize the actual situation of the movement, and to identify the risks coming from its social context. Along with the possibility that NT would be absorbed into the art scene, or turned into the new form of academism due to repetition of its

203 GRAV, *Tendances*, n.p.

204 Such understanding of New Tendencies' objectives was strongly advocated by Gruppo N; Meloni, Gruppo N, quoting and explaining the views of Manfredo Massironi, 361, 131.

205 Meloni, Gruppo N, 362.

206 *Bulletin N° 1*, August 1961, type-written document, Archive MSU, Zagreb; published in English translation in Rosen, *A Little Known*, 145-147.

OwnReality (13), 2015, online, URL: <http://www.perspectivia.net/publikationen/ownreality/13/galimberti-en>, 14; Accessed 23 April 2017.

197 GRAV, *Nouvelle Tendance*, 1962; <http://www.julioleparc.org/grav10.html> Accessed 12 March 2017.

198 Ibidem.

results of the discussions led in the course of *Nove Tendencije 2*, but also the exclusive nature of the timeline of the exhibitions and events accounting for the pre-history of the movement,²⁰⁹ led to the first serious breach in the social dynamics of the movement, and at the moment when “NT was about to be absorbed by the art system”.²¹⁰ The beginning of New Tendencies’ transition to the institutional culture is at least partially related to the appearance of *arte programmata*, artistic tendency praising the algorithmic logic of contemporary experiments with concrete poetry, and expanded to the production of Gruppo N, and Gruppo T as the examples of the same, rational and “programmed” approach to the problems of visual arts. The exhibition *Arte programmata. Arte cinetica. Opere moltiplicate. Opera aperta* (Milano, 1962) intended to present that new art phenomena, first at the Italian, then international arts scene,²¹¹ accelerated a wider recognition of both New Tendencies, and other – broadly defined – neoconstructivist trends concurrent to gestural abstraction. Notion of *arte programmata* certainly contributed to the ongoing discussions on the state of contemporary art, at the time particularly intense at the Italian cultural scene, but also indicative – due to the role of Venice Biennale in the global Cold War cultural politics – of general atmosphere and di-

209 Nouvelle Tendence - recherche continue. Evolution de sa composition, typewritten, 1963, Archive of MSU, Zagreb.

210 Medosch, *Automation*, 130.

211 With the ample financial support by Olivetti, the exhibition was touring Europe, and from 1964 through the USA as well. After Milan, where it was first displayed, it was restaged in Venice (joined by GRAV), Düsseldorf, London, and at the twelve locations in USA, finishing its journey in MOMA, in 1966.

rections at the international art scene. They assumed an astringent criticism of individualism, and social disinterestedness of Informalist mainstream, and involved the most influential art critics at the time, as Giulio Carlo Argan, who were advocating closer relations between art and science, and collective work practices, as opposed to excessive subjectivity of gestural abstraction. Critical assessment of artistic mainstream, was backed up by the series of concomitant exhibitions – *Oltre la Pittura - Oltre la Scultura*, Milano and Torino, April - May 1963; the international *Biennale di San Marino - Oltre l'informale*, July 1963; *nuova tendenza 2*, Venice, December 1963 – pointing to art phenomena from the context of New Tendencies, as an important, and convincing response to Art Informel. Discussions on the state of contemporary art scene acquired international dimension due to the strategic, and simultaneous staging of *Biennale di San Marino* and Annual AICA Congress (*Convegno internazionale artisti critici e studiosi d'arte*) organized in Rimini, and attended by large Croatian delegation supportive to New Tendencies, by Latin American radical art critics, and moderated by both Argan, and Pierre Restany who, at the time, was the most important liaison between American Pop-art and European art scene. The contribution of art critics, and of the discussions led in Rimini to the wider recognition of New Tendencies cannot be overstated. They were reflected in Argan’s articles published in the most-read Italian daily newspapers, and art magazines shaping both public opinion, and interests of art-market.

While such critical interventions into the public sphere, and above-mentioned exhibitions provided discursive framework for the inclusion of New Tendencies, that is, inclusion of art practices pertaining to the concept of “art as (visual) research” into the system of institutional culture, other seg-

ment of the movement, closer to the views and practices of group ZERO continued with its geo-cultural expansion. Differences between those two parallel flows within New Tendencies, demonstrated in *Bulletin N° 1*, were clearly articulated, by Jean-Pierre Yvaral, at the end of 1963.

Zero and NUL whose spirit is a little touched with Neo-Dada, are slightly earlier movements than NTrc [Nouvelle Tendence - recherche continue]. Several of their members joined NT at the start, but strayed later, their positions being too far from the general spirit of NTrc and one can say that there is no affinity with the exhibitions called Zero and NUL.²¹²

Division lines between those two groups, that were together structuring the poetic field of New Tendencies, were obvious already at the first Zagreb exhibitions. *Nove Tendencije 2*, made them even clearer, justifying Jack Burnham’s proposed differentiation of the movement on the proponents of “experimental objectivity, anonymity, perceptual psychology, and socialism” and those who were advocating “individual research, recognition, poetry, idealism, immateriality, luminosity, and nature”.²¹³ According to Burnham, the representatives of the “idealistic” group affiliated with group ZERO in Düsseldorf, were Dutch group Nul, part of the Munich group, Piero Manzoni, and artists from Lucio Fontana, and Yves Klein’s circles. “Frankfurt Grupe”,

212 Jean-Pierre Yvaral, December 1963, Letter to Georg Rickey; see Rickey (1964), 276.

213 Jack Burnham, Beyond Modern Sculpture: The Effects of Science and Technology on the Sculpture of This Century. (New York: George Braziller, 1968), 247; cited according Medosch, *Automation*, 71-72.

which pertained to the same “idealistic” wing of NT, Burnham either consciously omitted, or simply did not recognize as separate entity. On the other side of that great divide, there was French group GRAV, Italian Gruppo N, and Gruppo T, part of the Munich group affiliated with Gallery Nota and Gehrard von Graevenitz, Yugoslav (Croatian) artists, and artists from other socialist countries.

Although it is almost impossible to miss the echoes of ideological bias implied with such division,²¹⁴ and a rather simplified application of certain categories essential for understanding the overall story of New Tendencies, visualization of exhibition network related to New Tendencies in 1962-1963 (Fig. 3), confirms Burnham’s division on two groups, differentiated by both the understanding of art – science relation, the objectives of that relationship, but also by their relation to the mainstream culture. The gap caused by these differences, which could be explained in the terms of structural hole would be also clearly visible in the network topography, if it was not bridged by the intervention of art critics, that is, by the international *Biennale di San Marino*, which brought them together outside and beyond the framework of New Tendencies, and give the equal attention to both “neo-Dadaists”, and “rational-

214 The artists from the Eastern bloc (art group Dviženije USSR; Edward Krasinski, Sándor Szandaï, Hungary; Zdeněk Sýkora, Czechoslovakia), took part only in NT’s third exhibition – *Nova tendencija 3*, held in 1965. Considering that next, fourth NT exhibition was held in 1969, a year after Burnham published his book, a decision to include them in the group of “rationalists/socialists”, is arbitrary, ideologically biased, and cannot be confirmed either by the chronology of the movement, characteristics of their artworks, or personal political choices.



Map 2.
Spatial distribution of exhibitions related to New Tendencies in 1962-1963

ist” layer of the movement. Result of such strategy was a rather interesting, and quite important proposition of the new poetic configuration of the European art scene that doubtlessly influenced the next, XXXII Venice Biennale. The importance of the 1963 international *Biennale di San Marino* is also confirmed by the calculations of centrality measures, according to which it was most important of twenty-seven exhibitions related to New Tendencies, and encompassed by this visualisation (Table 4-6).

Betweenness centrality	
Biennale di San Marino - Oltre informale	10284.05118
Nove tendencije 2	6942.808422
Europäische Avantgarde	6017.023097
ZERO - Der neue idealismus	3553.341686
Oltre la pittura oltre la scultura	2868.075843
Bewegte Bereiche der Kunst	1988.979946

T. 4

Eigencentrality	
Nove tendencije 2	0.810169
Biennale di San Marino - Oltre informale	0.769657
Oltre la pittura oltre la scultura	0.694803
nuova tendenza 2	0.648735
Europäische Avantgarde	0.550563

T. 5

Closeness centrality	
Biennale di San Marino - Oltre informale	0.507968
Nove tendencije 2	0.50495
Europäische Avantgarde	0.479323
Arte programmata	0.463636
Bewegte Bereiche der Kunst	0.458633

T. 6

Table 4-6 Ranking of the New Tendencies-related exhibitions held in 1962-1963, according to T4) EigenCentrality, T5) Closeness centrality, T6) and Betweenness centrality measures

Still another reason for high ranking of *Biennale di San Marino* was the inclusiveness of its selection encompassing both gestural and geometric abstraction, figurative painting, and almost all art groups involved with New Tendencies. According to the same calculations, *Nove Tendencije 2* is ranked as second most important among exhibitions held in 1962-1963, followed by other exhibitions both those close to the concept of “art as research”, and to the poetics of group ZERO. A dense layer of ties among the exhibitions positioned on the right side of the network visualization, where the exhibition *Nove Tendencije 2* is also placed, points to the process of movement’s consolidation, but also to the establishment of its relationship with the institutional culture. In comparison, the exhibitions related to group ZERO, including the most important one *ZERO – Der Neue Idealismus*, were still firmly embedded in the exhibition infrastructure of neo-avant-garde subculture. Even the exhibition *Nul [62]*, important and early survey of art production emerging form ZERO’s sphere of influence, held in Amsterdam in Stedelijk Museum, was organized, prepared, designed and financed by group Nul, while the museum provided only its technical support.²¹⁵ While both Zagreb exhibitions were collectively curated by artists, all other exhibitions related to the

215 According to the interview with Hank Peeters: “Nul62 only happened because of an unexpected gap in the museum’s schedule, an intensive lobbying effort and the artists agreeing to shoulder the costs themselves – including transport, set-up, insurance and even posters and catalogues. Willem Sandberg’s contribution was limited to making the exhibition space available”, see in *nul = 0. The Dutch Nul Group in an International Context*, exhibition catalogue, eds. Colin Huizing, Tijs Visser (Schiedam, Amsterdam: Stedelijk Museum & NAI Publisher, 2011), 18.

concept of art as research, except of *nuova tendenza 2*,²¹⁶ had professional curators, or art critics in the role of curators.

Spatial distribution of the exhibitions held in 1962–1963 (Map 2) points out Netherlands, as the location of most intense activities, which has a lot to do with the energy group Nul invested in numerous exhibitions, and events (“demonstrations” according to ZERO terminology), organized at the time. New locations at this map, if we compare it with the time interval between 1958 and 1961, are Rome, Torino, and Genoa, on the south, and Edinburgh further north. However, majority of exhibitions were still staged in the geographic area outlined by Italy, Switzerland, Germany, Austria, Netherlands, and Yugoslavia. Some of them already crossed the Atlantic, reaching USA and Latin America, which appears on the map due to the GRAV’s travelling exhibition *L’instabilité*, organized by Galerie Denise Réne, and staged in 1962–1963 in New York, and Sao Paolo.

THE PHASE OF INTEGRATION INTO THE INSTITUTIONAL MAINSTREAM: 1964 – 1965

The attempt in consolidation, or more precise – formalization, and regulation of New Tendencies, in 1963, had a far-reaching negative effect, evolving through 1964 and culminating with the exhibition *Nova tendencija 3*, held in Zagreb, in August – September 1965. The exhibition and its side events were the last attempt in New Tendencies transformation, and reintegration

216 Antje von Graevenitz, “Gerhard von Graevenitz as Curator, Gallerist, Editor, and Lecture Organizer”, in *The Artist as Curator. Collaborative initiatives in the international ZERO movemnet1957-1967*, eds. Tiziana Cainaello, Mattijs Visser (Gent: MER. Paper Kunsthalle, 2015), 290–91.

of its efforts informed by the concept of art as continuous research. However, the right moment for achieving the inner cohesion of New Tendencies has passed, and all the risks coming from the social environment, already identified in 1963, were growing with each new exhibition.

From the point of view of its public perception, 1964 was the year of movement’s unquestionable success at the international art scene. In March 1964 the restaged version of *Nove Tendencije 2*, was transferred from Venice to Museum Morsbroich in Leverkusen, displayed under the title *Neue Tendenzen*. The curator was Udo Kulterman, art critic and then director of the Museum, well-known to Meštrović, and Lombardian avant-garde with whom he had close contacts from the end on the 1950s. Opened with the lectures by Umbro Apollonio, the most vocal advocate of New Tendencies in Italy, and Matko Meštrović, the exhibition was quite successful.

Exactly a month before the Leverkusen exhibition was closed, New Tendencies had their debut in Paris. The title of the exhibition was *Propositions visuelles du mouvement international Nouvelle Tendance*, it was organized by the Musée des Arts Décoratifs, staged in Louvre, at the Pavillon de Marsanof, and opened in late April of 1964. Intended as solo exhibition of group GRAV, it was turned into the presentation of New Tendencies, since the group extend that invitation to all movement members. The selection of artworks was made by ballots, the exhibition design and presentation were impeccable, and – as Matko Meštrović said, recalling the event – it was a large and “beautiful exhibition”. However, the reactions of the public were not at all enthusiastic, and from the perspective of the exhibiting artists – it was a big disappointment.

Paris exhibition was closed just nine days before the opening of the XXXII Venice Biennale, and at about two weeks before the

opening of *Documenta III* in Kassel. New Tendencies were presented at Biennale in the central, Italian pavilion with artworks and environments of Gruppo N, Gruppo T, Erico Castellani and Enzo Mari. The response was better than in Paris, but still quite disappointing, since in the focus of both art critics, and public were American Pop-Art, and minimalism. However, the success or disappointment with the presentation in Venice, was far less important regarding the future of New Tendencies, than astonishing fact that the very idea of taking part in the exhibition that was setting the trends, and strongly affecting international art market, pointed out – just a few months before – as a most serious threat to New Tendencies, has not been put in question. Perhaps the artists exhibiting at the Italian pavilion were convinced that it is possible for the movement to retain its artistic and ideological integrity, while displaying the results of visual research shoulder to shoulder with the “fetishized commodities” of institutional visual culture, but it also might be that majority of movement’s members were not interested any more in checking the results of such appraisal.

Instead, and parallel to Biennale, GRAV and Zero also took part in a special exhibition *Light and Movement* organized within the framework of *Documenta III* in Kassel. However, and opposite to both Parisian debut and Venice Biennale, the *Light and Movement* exhibition or – more precisely – the selection of works by Mack, Piene, Uecker and group GRAV put together in a haste just before *Documenta* opening, and displayed in one, single room were met with critical appraisal as the example of genuinely innovative art.²¹⁷

The year 1964 came to an end with the establishment of *Nove tendencije 3* Organi-

217 Frank Popper, *Die kinetische Kunst: Licht und Bewegung, Umweltkunst und Aktion* (Cologne: DuMont Schauberg, 1975), 181.

zation Committee intended to assess the situation, and propose possible solutions and lines of action, that could counteract the damaging influence of art market and almost completed inclusion on New Tendencies in the mainstream culture. The latter became a matter of urgency, after William Seitz’s exhibition *The Responsive Eye* opened in MOMA, in February 1965.²¹⁸ Seitz included in his selection number of artworks produced in the framework of New Tendencies,²¹⁹ framed by the explanatory discourse which has stripped them off their ideological, and socially engaged pretext, and described as

... art without relationships— more accurately, an art with a different order of relationships. The asymmetrical dialogues between large and small, above and below, empty and full, or bright and dull that took place across picture surfaces have been ended either by central placement or uniformity. Too much diversity of form impedes perceptual effect. Certain of these works therefore have a stronger family resemblance to mechanical patterns, scientific diagrams, and even to screens and textured surfaces than to relational abstract art.”²²⁰

218 The exhibition *The Responsive Eye*. was held at MOMA, New York, February 23–April 25, 1965; restaged at City Art Museum of St. Louis, May 20–June 20, 1965; Seattle Art Museum: July 15–August 23, 1965; The Pasadena Art Museum: September 25–November 7, 1965; The Baltimore Museum of Art: December 14, 1965–January 23, 1966.

219 Out of 97 participating artist and art groups, 40 were members of New Tendencies.

220 Seitz, William. “Introduction”, exhibition catalogue, *Responsive Eye*. MOMA, New York, February 23–April 25, 1965 (New York: MOMA, 1965), 8.

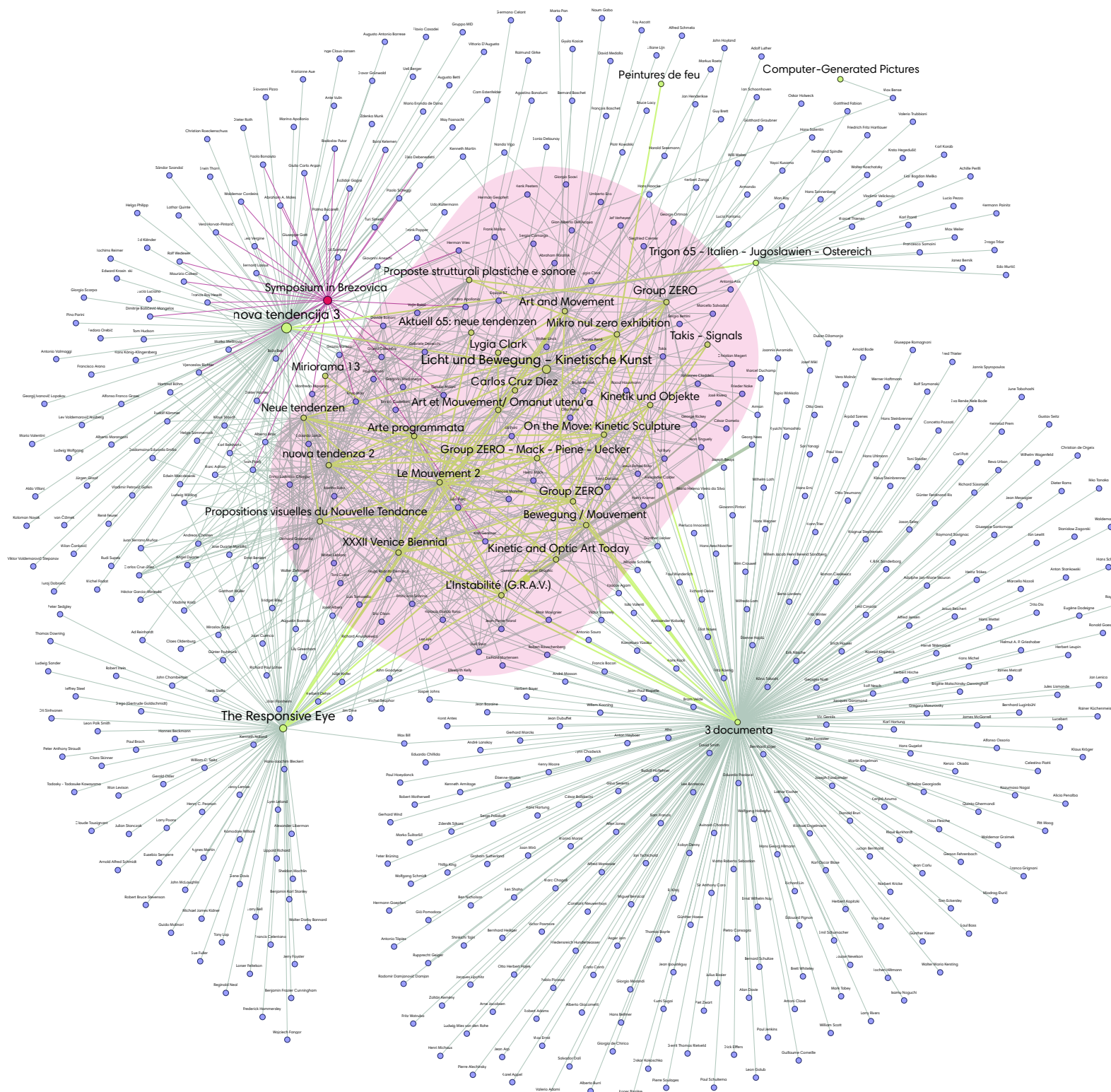


Fig. 4.
Network of group exhibitions held in 1964-1965, related to New Tendencies

The exhibition *Responsive Eye*, according to Pamela Lee, soon became the most popular exhibition in MOMA's history²²¹ attended by more than 180.000 visitors.²²² Contrary to the general approval by the New York art audience, it was severely and unanimously attacked by art critics, as trivial and shallow.²²³ Mass-media visibility of artists experimenting with physical properties of color, and movement, propelled by this exhibition and framed by the proliferation of terms Kinetic, and Op-Art applied to both the production of New Tendencies, and a growing number of artworks that successfully emulated some of movement's formal solutions, while striving for the superficial, and playful optical effects, quickly endorsed and appropriated by the fashion industry, popular culture, and art market, undermining and degraded New Tendencies' grounding aesthetic principles, and its confidence in the socially transformative potential of art – science relation.

Already in the course of 1964, but in particular after MOMA exhibition, it has become clear that initial, shared commitment to resist the inclusion in the economy of institutional culture, was forgotten somewhere along the way towards the individual, or group affirmation. New Tendencies

became vulnerable to commodification and trivialization of its results, and divisive regarding their consequences. The topic of *Nova tendencija 3* – “ideological concentration and commonality of goals”, reflected the awareness of the situation, prompting exhibition's Organization Committee to instigate a serious (political) discussion on the objectives of the movement, and its obvious crisis. Integral to that decision was the competition for the “Dissemination of examples of [visual] research” conceived as application of the results of the visual research, emphasizing the possibility of New Tendencies stronger contribution to “visual requirements” of industrial society. Design will become the subject of New Tendencies' theoretical considerations only much later, in 1968, and its appearance at the horizon of the movement at the time, could be related to the conviction that more pragmatic orientation might prevent its pending dissipation. It also might be the reason why – for the first time – the organizers of the exhibition were art historians, art critics and theorists, instead of artists themselves. However, compared with other sections of the exhibition, overview of projects concerning the problem of disseminating research examples,²²⁴ was disappointing, regardless of unexpectedly enthusiastic artists' response to the competition, and intensified the feeling that New Tendencies have come to a dead end. It was a bit paradoxical, since *Nova tendencija 3* was still another large, and “beautiful exhibition” with 114 participants, presenting at two locations 137 examples of bold experiments with light, movement, and space; the objects with intriguing optical effects whose smooth, slick surfaces

introducing new type of “industrial” aesthetics, and first interactive environments, and playful, ludic, engaging ambiances, but also quite a few artworks that were repetitive, superficial, and – redundant. It is not to say that rigor, rationality and quasi-scientific discipline of earlier artworks was completely gone in favor of a more frivolous and eye-pleasing results, but it was quite obvious that the movement, as it presented itself at this exhibition, was incongruent with the radicalism of its theoretical discourse. Perhaps the best account of the exhibition, and of the reasons causing the crisis of New Tendencies at the time, was given by Manfredo Massironi, who concluded, with resignation that

... when one is looking around he sees that ... mediocrity is spreading and decay threatening, and that these are dangers characteristic of all kinds of intellectual work taking place within a capitalistic society.²²⁵

One-day discussion with artist, art critics, and art theorists involved in the inception and promotion of the movement, but also those for whom it was the first, direct encounter with the New Tendencies, organized in the course of the exhibition, confirmed Massironi's assessment, brought to the surface all problems, and controversies of the movement, and made it clear that the concept of visual research was exhausted, and that the damage done by the inclusion of New Tendencies in the economy of mainstream culture was beyond repair.

In 1975, from the ten-year distance of *Nove tendencije 3*, and two years after the story of New Tendencies was definitely over, in his talk at the MIT conference *Arttransition*, Matko Meštrović gave an early and rather objective assessment of movement's achievements. In a lengthy article based on the transcript of that talk, reflecting on the relations between art, and science, Meštrović put forward his honest opinion on the reason of the movement's failure, “In the field of art and science we can follow only phenomenological changes. Essential changes can occur and must be expected only in the understanding and evaluation of human work”.²²⁶

The network visualization of exhibitions held in 1964-1965 (Fig. 4) is encompassing 43 group exhibitions held mainly in the museums and influential, commercial galleries, which played a crucial role in the final transition of New Tendencies formal solutions to artistic mainstream. In the same period there was at least twice as many solo-exhibitions of artists involved with movement, organized by the private galleries, because – up to 1964 and in 1965 – majority of independent spaces, and artist-run galleries comprising for the neo-avant-garde infrastructure already ceased to exist. The sheer number of these exhibitions that would be concentrated in the central area of the network, would make it illegible, and since the concentration of collective exhibitions on the same position in network topography convincingly denotes dynamics of New Tendencies assimilation in the institutional mainstream

221 The opening of the exhibition was recorded in the 26' documentary *The Responsive Eye*, filmed by Brian de Palma. <https://www.mymovies.it/film/1965/the-responsive-eye/>

222 Pamela M. Lee, *Chronophpbia: On Time in the Art of the 1960s* (Cambridge Mass.: MIT Press, 2004), 160.

223 Dylan Kerr, “MOMA: The Groovy Years: 7 Transformative Exhibitions from the Swinging Sixties”, *Artspace*, 16 October, 2016. https://www.artspace.com/magazine/art_101/lists/moma-archives-1960s-54286 Accessed 17 June 2018.

224 *Nova tendencija 3*, exhibition catalogue, Galerija suvremene umjetnosti, 13.8.-3.10.1965 (Zagreb: Galerija suvremene umjetnosti, 1965)

225 Manfredo Massironi, “Kritičke primjedbe na teoretske priloge unutar Novih Tendencija od 1959 do 1964 godine”, exhibition catalogue, *Nova tendencija 3* (Zagreb: Galerija suvremene umjetnosti, 1965): 23-33.

226 Matko Meštrović, “Art Transition versus World Transition – Some Reflections on the phenomenological and essential changes”, in *Art in Transition*, (October 15-19, 1975), 42-45, Cambridge Mass.: Centre for Advanced Visual Studies, Massachusetts Institute of Technology, 1975.



Map 3.

Spatial distribution of the exhibitions held in 1964-1965, related to New Tendencies

culture, solo-exhibitions were excluded from the visualization. Network structure is composed out of two main, clearly distinguished and almost equally large segments – one, occupying the right and upper part of network graph is related to art practices integral to New Tendencies, and includes exhibition *The Responsive Eye*, *Nova tendencija 3*, and number of other art shows mainly presenting kinetic, and optic art; the other segment, positioned on the left lower side of network visualization is occupied by *Documenta III* that with its 353 participants, including the representatives New Tendencies, was the largest exhibition held in 1964-65.

Area in the center of the network (marked with a light read ellipsoid), integral to the sphere of kinetic, and optical art related to New Tendencies, covered by a dense layer of multiple ties among number of smaller exhibitions, is concentrator of network activities, also bridging the gap between exhibitions related to New Tendencies, and *Documenta III*. Those exhibitions constituent to that area were either disseminating results of the research on visual perception according to the grounding principles of New Tendencies, or providing the overview of art practices integral to the movement, and those developing at its “edges”, presented as a new mainstream paradigm. *Nova tendencija 3*, ranked as the second most important exhibition in the observed time interval according to calculations of centrality measures (Table 7-9) is positioned at the edge of the “concentration” zone, in whose center there is the exhibition *Licht und Bewegung – Kinetische Kunst – Lumière et Mouvement* – the most important collective exhibition held in 1964-1965, due to its poetic configuration, tied to almost each, and every exhibition in the central network zone. Curated by Harald Szeeman, and first displayed at

Bern Kunsthalle, it was a comprehensive overview of art practices dealing with the subjects of light, and movement and operating at the borderline of art and technology. Other exhibitions constitutional to the “concentration zone” with almost similar objectives were *Kinetic and Optic Art Today* (Albert Knox Gallery, Buffalo, 1965), *Art and Movement* (Royal Scottish Academy, Edinburgh, 1965; curated by Frank Popper, and Guy Brett) *Art et Mouvement: Optique et Cinétique / Omanut utenu'a: 'omanut optit veqintit / (Galerie Denise Réne, Museum of Modern Art in Tel Aviv, 1965; collaboration Jaen Cassou, Frank Popper), end number of other, more or less ambitious shows pertaining to certain aspect of kinetic or optic art. Perhaps the earliest among them was the exhibitions *Le Mouvement 2*, opened at the end of 1964, at Galerie Denise Réne, echoing *Le Mouvement 1*, the first, legendary presentation of kinetic art after WWII, curated by Pontus Hulten and staged at the same gallery in 1955. The authors of explanatory texts in the catalogue of *Le Mouvement 2* were Frank Popper, art critic of younger generation, and future theorist of new media art, and Jean Cassou, then director of the National Museum of Modern Art. The selection of exhibited art works was both the statement on pending, and insuppressible penetration of American pop-art into European cultural space, and attempt in reconfiguration of New Tendencies (extended to Latin America) in terms pertaining to the Denise Réne's profile at the international art market, symbolically closing the story on New Tendencies, which happened between the two exhibitions, even before it was officially over.*

Closeness centrality		
Licht und Bewegung – Kinetische Kunst – Lumière et Mouvement	0.431579	Bern, Brussels
Group ZERO	0.421811	London
Group ZERO – Mack, Piene, Uecker	0.421811	New York
Nova tendencija 3	0.406209	Zagreb
The Responsive Eye	0.386549	New York

T7

Betweenness centrality		
Nova tendencija 3	51965.9717	Zagreb
Licht und Bewegung – Kinetische Kunst – Lumière et Mouvement	12445.7925	Bern, Brussels
Le Mouvement 2	8506.61686	Paris
Mikro nul zero exhibition	6808.60313	Rotterdam
Art and Movement	5913.44175	Edinburgh

T8

Eigenvector centrality		
Nova tendencija 3	0.350339	Zagreb
Licht und Bewegung – Kinetische Kunst – Lumière et Mouvement	0.336103	Bern, Brussels
The Responsive Eye	0.332433	New York
Propositions visuelles – Nouvelle Tendance	0.324862	Paris
Le Mouvement 2	0.306951	Paris

T9

Table 7-9 Ranking of the New Tendencies-related exhibitions held in 1964-1965, according to T7) EigenCentrality, T8) Closeness centrality, T9) and Betweenness centrality measures

The number of collective exhibitions related to New Tendencies in this period contributed to overall growth of exhibition activities in 1964-1965, they will soon become typical for years when two large art exhibitions – Venice Biennale and Documenta

– “met”. Some of those exhibitions either crossed the Atlantic (Map 3), or were organized in USA, as the first presentation of particular individual oeuvre, or production of particular art group. The exhibition Arte programmata, arte cinetica, opere moltiplicate, opera aperta, started its tour through American museums in 1964, and was displayed, with the support of Smithsonian Museum at twelve different locations, commencing its journey at MOMA in 1966. After the successful presentation in New York, the exhibition Responsive Eye, which included a number of European artists, was also displayed at several other locations in USA (Seattle, St. Louis, Pasadena, and Baltimore). In 1964 Howard Wise Gallery in New York organized the first exhibition of group ZERO (*Group ZERO – Mack, Piene, Uecker*), and in 1965 the exhibition of both ZERO group, and artists from the sphere of its influence. Also in 1964, in the same gallery, Georg Rickey curated the exhibition *On the Move: Kinetic Sculpture*, which brought together European and American artists and served as the announcement of ZERO’s exhibition. In 1964, GRAV’s exhibition *L’instabilite* was still touring Latin America, reaching few locations in Brazil, and Buenos Aires, and by the solo-exhibition of Bruno Munari at Isetan stores in Tokyo, in 1965, the aesthetics, and view on art, close to the optics of New Tendencies, extended also to Asia, as final touch on the image of that art movement as an art phenomenon with the global outstretch.

Exhibition *The Responsive Eye* was just one albeit the most important event in the series of events comprising for the operation of the institutional culture performed upon New Tendencies aiming at the inclusion, and assimilation of that new art phenomena in the institutional system of arts. MOMA exhibition contributed to that process by glancing over the ideological, and social objectives of New Tendencies, and pro-

viding the grounds for the “invention” of appropriate signifiers which de-contextualized, and singled out art practices integral to that movement in terms of their obvious marketability. The assimilation and dispersion of its formal solutions into the mainstream art and visual culture, went parallel to the process of disintegration of New Tendencies social tissue. Art groups (Nul, Gruppo N) were dissolved, number of artists involved in the movement – as, for example, central figure of Dutch group Nul, Hank Peetres – decided, at about 1965, to give up on art and change their profession, while others left Europe for USA – some for good, some just temporally – trying to build their careers in New York, and after 1964, the unquestionable metropolis of modern art. Others continued with their work in framework of international art mainstream, developing their personal discourse on art in different directions. In the light of such developments the organization of next, the fourth New Tendencies exhibition under the aegis of continuity with the period between 1961 and 1965, was not only pointless, but simply – impossible.

CONCLUSION

A frequent objection to digital art history is the claim that the results obtained by the application of empirical methods, that is, of quantitative analysis, developed in response to the requirements of social sciences, cannot give any fundamentally important contribution to the epistemological objectives of discipline. Network analysis is often in the focus of such critical observations, taken as an example of dry, and more or less pointless calculations of number of ties between people or objects, by which digital art history intends to replace “carefully reasoned historical narrative”. Superficial, and uniformed such a view disregards the simple fact that network

analysis could be conducted in different manners, on both big, and small datasets, and depending on how it was used could answer both simple and rather complex research questions. In this study it is applied – as it was already stated – in a ‘soft’ manner, resting upon a substantial body of operative knowledge on thus approached art historical phenomenon, so that readers can comprehend the level of its artistic, social, and political complexity. Unless such type of analysis is preceded by research findings that bring essentially important, new information, the basic precondition for its application is a clear idea on how already available data should be reused in order to reveal the information that are already there but have been concealed, or overlooked due to the generally accepted narrative on the art phenomena in question. In the case of New Tendencies it assumes the concentration on micro-situations, that is on the short time periods in-between the first and third Zagreb exhibition, and on the ‘gestation’ period preceding the very appearance of that art phenomena. It is already framed by “carefully reasoned historical narrative”, or – more precisely – several historical narratives differentiated by the perspective from which they approach the New Tendencies. The knowledge provided by those narratives, and data on which they are based, informed the choice of the angle, and analytic approach exercised in this study. It is focused on New Tendencies’s transition from independent, to institutional culture, observed in relation to the parallel process of movement’s poetical articulation, and attempts at establishing its activities and model of the organization according to the principles of an art movement. Since the existing studies on the history of New Tendencies, which encompass the period between 1961 and 1965 are focused either on the relationship of the movement to its social and political context, or on its

programmatic principles – the manner in which they were conceptualized, theoretically funded and applied – the relation of New Tendencies to the mainstream culture is explained in somewhat general terms. It is pointing to the deterioration of those programmatic principles under the influence art-market / market logic of capitalism, as the main reasons for both the unsuccessful transformation of New Tendencies into a “proper” art movement and its inability to resist the absorption into mainstream culture.

The intention of this study was not to question such explanations, but rather to give a closer look to the process of programmatic articulation, and self-representation of the movement, including the identification of key moments, and decisions that have, or have not been made, and whose consequences strongly affected New Tendencies’s early history.

The most important insight provided by such an approach, and by the application of network analysis is a role of art critics in the process of New Tendencies’s transition to institutional culture, which is either systematically overlooked or described in a manner which is encompassing both artists, and art critics with the same ideological, and political objectives. It is not a persuasive argument since it disregards the inner dynamics of the movement before, and after its inclusion in the economy of institutional culture. According to William Altshule it is a transition “From ground-breaking shows assembled by artists themselves, to those conceived by art-dealers, art critics, gallerists, and impresarios”, resulting with “artist becoming increasingly less able to control the circumstances under which their work came before public”, and leaving them “disempowered just as their commercial and social prospects were improving”. In that respect, and according to network

visualization it was possible to indicate the *Biennale di San Marino*, as the critical moment when that process of disempowerment has begun. It did not assume the change in the intensity of art production, at least not in the immediate aftermath of that exhibition, but rather the regard of New Tendencies from retrospective, historical perspective both by artists themselves (*XXXII Venice Biennale*, New Tendencies Paris exhibition), and by art historians, and art critics as well (*The Responsive Eye*, *Licht und Bewegung – Kinetische Kunst – Lumière et Mouvement*).

In the next stage of the research, based on such conclusion, the exhibition networks generated and analyzed for the purposes of this study could be extended to include art critics involved in New Tendencies, and to provide a bit different angle from which the relation between art production, writing on art and interests of art-market in the 1960s could be approached and examined.

10: *In Search of a Utopia of the Present 1953–1981*. Rotterdam: nai010 publishers, 2006.

Smithson, Alison, ed. *Team 10 Meetings 1953–1984*. Delft: Delft University of Technology, Faculty of Architecture, 1991.

Somer, Kees. *The Functional City. The CIAM and Cornelis van Eesteren, 1928–1960*. Rotterdam: nai010 publishers, 2007.

Van Es, Evelin, et al., eds. *Atlas of Functional City. CIAM 4 and Comparative Urban Analysis*. Zürich, Bussum: gta Verlag & Uitgeverij THOTH, 2014.

Wakeman, Rosemary. "Rethinking postwar planning history." *Planning Perspectives*, no. 2 (2014): 153–163.

Weissmann, Ernest. "We had another version of the charter." *Arhitektura*, no. 189–195 (198–1985): 32–37.

ARCHIVAL SOURCES

Bauhaus Archive, Gropius-Nachlass Collection, 12/505, Gropius, Walter, Letter to Sigfried Giedion, February 14, 1935.

gta ETH, 42-AR-14-130/131, Aspects of Program for CIAM X at Dubrovnik to be given final form at Padova, Aug. 2/3. 1956.

gta ETH, 42-AR-1-1/21, CIAM 6 documents. Bridgwater, 1947.

gta ETH, 42-JT-4-125/211, 7 CIAM Bergamo 1949. Document.

gta, ETH JT-6-1/139, CIAM 8. 1951 Report of Hoddesdon Conference.

gta ETH, 42-X-115A, CIAM 10 Dubrovnik 1956.

gta ETH, 42-AR-X-4, Les documents de Sigtuna 1952.

gta ETH, 42-JT-12-317/353, Projet d'assistance techniques des Nations Unies.

gta ETH, 42-K-1930-W, Weissmann, Ernest, Letter to Sigfried Giedion, November 19, 1930.

Hrvatska akademija znanosti i umjetnosti, Hrvatski muzej arhitekture, Vladimir Antolić Personal Archive, Radna grupa Zagreb, The first draft of the alternative version of the Athens Charter, August 10, 1933.

LJILJANA KOLEŠNIK

The Transition of New Tendencies from Neo-Avant-Garde Subculture to Institutional. Mainstream Culture. An Example of Network Analysis
pp. 84–122.

Amaral, Aracy, ed. *Projeto construtivo brasileiro na arte: 1950–1962*. Rio de Janeiro: MAM, 1977.

Argan, Giulio Carlo. *L'arte Moderna 1770–1970*. Firenze: Sansoni, 1971.

Arte y cibernética: San Francisco, Londres, Buenos Aires. Exhibition catalogue. Centro de arte y Comunicación (CAYC): Buenos Aires, 1971.

Azimuth 1 (3 September 1959), Milano, EPI editorials periodicals italiani.

Azimuth 2 (1 January 1960), Milano, EPI editorials periodicals italiani.

Bagley, Benjamin. "Loving Someone in Particular." *Ethics* 125/ 2 (January 2015): 477–507.

Berzano, Luigi, and Carlo Genova, *Lifestyles and Subcultures: History and a New Perspective*. London: Routledge, 2015.

Burnham, Jack. *Beyond Modern Sculpture: The Effects of Science and Technology on the Sculpture of This Century*. New York: George Braziller, 1968.

Cainaello, Tiziana, and Mattijs Visser, eds. *The Artist as Curator. Collaborative initiatives in the international ZERO movemnet1957–1967*. Gent: MER. Paper Kunsthalle, 2015.

Calvert, Gemma, Charles Spence, and Barry E. Stein, eds. *The Handbook of Multisensory Processes*. Cambridge Mass.: The MIT Press, 2004.

Cempellin, Lisa. *The Ideas, Identity and Art of Daniel Spoerri. Contingencies and Encounters of an 'Artistic Animator'*. Wellington: Vernon Press, 2017.

Computer und visuelle Forschung. Zagreb 1961–1973. Exhibition catalogue. Karlsruhe: ZKM, 2007.

Corà, Bruno. *Tinguely and Munari. Exhibition catalogue. Tinguely e Munari – I Opere in azione*, CAMeC. La Spezia: Centro Arte Moderna e Contemporanea, 2004.

D'Assunção Barros, José. "Mário Pedrosa e a Crítica de Arte no Brasil." *Ars – Revista do Programa de Pós-Graduação em Artes Visuais (ECA) do Escola de Comunicação e Artes da Universidade de São Paulo* 6/11 (January–July 2008): 40–61.

Denegri, Jerko. "Inside or Outside 'Socialist Modernism'? Radical Views on the Yugoslav Art Scene 1950–1970". In *Impossible Histories – Historical Avant-gardes, Neo-avant-gardes, and Post-avantgardes in Yugoslavia 1918–1991*, edited by Dubravka Djurić and Miško Šuvaković. Cambridge Mass.: The MIT Press, 2003.

Denegri, Jerko. *Constructive Approach Art: Exat 51 and New Tendencies*. Zagreb: Horetzky, 2004.

Denegri, Jerko. "Die Bedingungen und Umstände, die den ersten beiden Ausstellungen der Nove Tendencije in Zagreb (1961–1963) vorausgingen". In *bit international. [Nove] tendencije – Computer und visuelle Forschung, Zagreb 1961–1973*. Exhibition catalogue. Karlsruhe: ZKM, 2007.

Die Neuen Tendenzen: eine europäische Künstlerbewegung 1961–1973. Exhibition catalogue. Ingolstadt, Düren: Museum für Konkrete Kunst, Ingolstadt (29 September 2006–7 January 2007); Leopold-Hoesch-Museum, Düren (28 January–25 March 2007).

Dhoest, Alexander, Steven Malliet, Jacques Haers, and Barbara Segaeert, eds. *The Borders of Subculture: Resistance and Mainstream*. London: Routledge, 2015.

Dossin, Catherine. "To Drip or to Pop? The European Triumph of American Art." *Artl@s Bulletin*, Vol. 3, No. 1 (Spring 2014), 79–103.

Drew Egbert, Donald. *Social Radicalism and the Arts – Western Europe. A Cultural History from the French Revolution to 1968*. New York: Alfred A. Knopf, 1970.

Elger, Dietmar, and Elizabeth M Solaro. *Gerhard Richter: A Life in Painting*. University of Chicago Press, 2010.

Fritz, Darko. "New Tendencies / Nove tendencije." *Oris* 10/54 (2008): 176–191.

Galimberti, Jacopo. *Individuals against Individualism Art Collectives in Western Europe (1956–1969)*. Liverpool: Liverpool University Press, 2017.

García, Maria Amália. "Ações e contatos regionais da arte concreta. Intervenções de Max Bill em São Paulo em 1951." *Revista Universidade de São Paulo* 79 (September–November 2008): 196–204.

Gelder, Ken. *Subcultures: Cultural Histories and Social Practice*. London: Routledge, 2007.

Granzotto, Giovanni. "Arte programmata e cinetica: origini, successo, declino, rinascita." In *Arte programmata e cinetica Italiana. Exhibition catalogue* (11 October – 8 December 2013, MACBA). Buenos Aires: Museo de Arte Contemporáneo de Buenos Aires (MACBA), 2013.

Von Graevenitz, Antje. "Gerhard von Graevenitz as Curator, Gallerist, Editor, and Lecture Organizer." In *The Artist as Curator. Collaborative initiatives in the international ZERO Movement 1957–1967*, edited by Tiziana Cainaello and Mattijs Visser, 290–291. Gent: MER. Paper Kunsthalle, 2015.

Hoffmann, Tobias, ed. *Die neuen Tendenzen: Eine europäische Künstlerbewegung 1961–1973*. Heidelberg: Edition Braus, 2006.

Huizing, Colin, and Tijs Visser, eds. *nul = 0. The Dutch Nul Group in an International Context. Exhibition catalogue. Schiedam, Amsterdam: Stedelijk Museum & NAI Publisher, 2011.*

Jakšić, Jasna, and Ivana Kancir, eds. *Nowa sztuka dla nowego społeczeństwa / New Art for New Society*. Wrocław: Muzeum Współczesne Wrocław, 2015.

Kadushin, Charles. *Understanding Social Networks. Theories, Concepts and Findings*. New York: Oxford University Press, 2012.

Klütsch, Christoph. "The Summer 1968 in London and Zagreb: Starting or End Point for Computer art?" In *Proceedings of the 5th Conference on Creativity & Cognition*. New York: ACM, 2005: 109–117.

Klütsch, Christoph. *Computergrafik: Ästhetische Experimente zwischen zwei Kulturen. Die Anfänge der Computerkunst in den 1960er Jahren*. Vienna/New York: Springer, 2007.

Kolešnik, Ljiljana. "Zagreb as the Location of the New Tendencies International Art Movement (1961–73)". In *Art beyond Borders: Artistic Exchange in Communist Europe (1945–1989)*, edited by Jérôme Bazin, Pascal Dubourg Glatigny and Piotr Piotrowski, 311–321. Budapest: Central European University Press, 2016.

Kolešnik, Ljiljana, Nikola Bojić, and Artur Šilić. "Reconstruction of Almir Mavignier's Personal Network and its Relation to the First New Tendencies Exhibition. The example of the Application of Network Analysis and Network Visualization in Art History." *Život umjetnosti*, no. 99 (2016): 58–79.

Konkrete Kunst – 50 Jahre Entwicklung. Exhibition catalogue. Zürich: Kunsthalle, 1960.

Krampen, Martin, and Günter Hörmann, eds. *Die Hochschule für Gestaltung Ulm / The Ulm School of Design*. Berlin: Ernst & Sohn, 2003.

Kuhn, Anette. *Zero: eine Avantgarde der sechziger Jahre*. Frankfurt am Main & Berlin: Propyläen-Verl., 1991.

Lundström, Anna. "Movement in Art. The layers of an exhibition." In *Pontus Hulten and Moderna Museet the Formative Years*, edited by Anna Tellgren, 67–93. Stockholm, London: Moderna Museet & Koenig Books, 2017.

MANZONI: Azimut. Exhibition catalogue. Gagosian Gallery, 17 November 2011– 6 January 2012. London: Gagosian Gallery, 2011.
Margozi, Mariastella. "Arte programmata, arte cinetica. Categorie e declinazioni attraverso le poetiche". In *Arte programmata e cinetica Italiana*. Exhibition catalogue. Buenos Aires: MACBA – Museo de Arte Contemporáneo, 2013.

Medosch, Armin. *New Tendencies Art at the Threshold of the Information Revolution (1961–1978)*. Cambridge, Mass.: MIT Press, 2016.

Medosch, Armin. "Cutting the Networks in Former Yugoslavia. From New Tendencies to the New Art Practice." *Third Text*, 32/4 (2018): 546–561.

Meister, Helga. *Zero in der Düsseldorfer Szene*. Pieni, Uecker, Mack. Düsseldorf: Jan van der Most, 2005.

Mehring, Christine. "Television Art's Abstract Starts: Europe circa 1944–1969." *October* 125 (Summer 2008): 29–64.

Meloni, Lucilla, ed. *Gruppo N. Oltre la pittura, oltre la scultura: l'arte programmata*. Frankfurt am Main & Milano: Fondazione VAF & Silvana Editore, 2009.

Meštrović, Matko. "Computer and Visual Research – Ways of Thinking and Scope of Acting." In *Dispersion of Meaning. The Fading Out of the Doctrinaire World?* Cambridge: Cambridge Scholars Publishing, 2008.

Meštrović, Matko. ("The Ideology of the New Tendencies" / untitled contribution). Exhibition catalogue. *Nove tendencije 2*, Gallery of Contemporary Art, Zagreb, 1 August–15 September 1963. Zagreb: Gallery of Contemporary Art, 1963.

Meštrović, Matko. "Nepoznate potankosti: iz sačuvane korespondencije s Pierom Manzoniem." *Fantom slobođe* 3 (2010): 207–215.

Meštrović, Matko. "Povijesni prostor i procesi modernizacije : neke kriteriološke i epistemološke napomene." *Društvena istraživanja* 5/6, 25/26 (1996): 1009–1026.
Monochrome Malerei. Exhibition catalogue. Leverkusen: Sdäisches Museum Schloss Morsbroich, 1960.

Neue tendenze. Exhibition catalogue. Leverkusen; Sdäisches Museum Schloss Morsbroich, 1963.

New Tendencies 2. Exhibition catalogue. Zagreb: Gallery of Contemporary Art, 1963.

Nove tendencije. Exhibition catalogue. Zagreb: Gallery of Contemporary Art, 1961.

Nuove tendenze 2. Exhibition catalogue. Venezia: Fondazione Querini Stampalia, 1963.

Op art. Exhibition catalogue. Schirn-Kunsthalle, Frankfurt (17 February–20 May 2007). Köln: König, 2007.
Participation – Groupe de Recherche d'Art Visuel: à la recherche d'un nouveau spectateur – Garcia-Rossi, Le Parc, Morellet, Sobrino, Stein, Yvaral. Exhibition catalogue (11 February–31 March 1968, Museum am Ostwall). Dortmund: Museum am Ostwall, 1968.

Poggioli, Renato. "The concept of a movement." In *The Theory of Avant-garde*. Cambridge, MA: Harvard University Press, Belknap Press, 1968.

Pieni, Otto, and Heinz Mack, eds. *ZERO 1*. Düsseldorf, 1958.

Pieni, Otto, and Heinz Mack, eds. *ZERO 2*. Düsseldorf, 1958.

Pieni, Otto, and Heinz Mack. *Zero*. Cambridge, Mass.: MIT Press, 1973.

Pieni, Otto, Heinz Mack, and Gunther Uecker, eds. *ZERO 3*. Published on the occasion of the exhibition *ZERO – Edition, Exposition, Demonstration, Galerie Schmela, Düsseldorf (July 5 1961)*. Düsseldorf: Galerie Schmela, 1961.

Pieni, Otto. "Die Entstehung der Gruppe ZERO (1964)". In *4 3 2 1 ZERO*, edited by Dirk Pörschmann and Mattijs Visser. Düsseldorf: Richter Fey, 2012.

Piotrowski, Piotr. "Why were there no great Pop art curatorial projects in Eastern Europe in the 1960s?" *Baltic Worlds* 3–4 (2015): 10–16.

Popper, Frank. *Die kinetische Kunst: Licht und Bewegung, Umweltkunst und Aktion*. Cologne: DuMont Schauberg, 1975.

Popper, Frank. *Art – Action and Participation*. London: Studio Vista, 1975.

Pörschmann, Dirk. "'M.P.U.E.'Dynamo for ZERO: The artists-curators Heinz Mack, Otto Pieni, and Güther Uecker." In *The Artist as Curator. Collaborative initiatives in the international ZERO movemnet* 1957–1967, edited by Tiziana Cainaello, Mattijs Visser, 17–58. Gent: MER. Paper Kunsthalle, 2015.

Pörschmann, Dirk, and Mattijs Visser, eds. *4 3 2 1 ZERO*. Düsseldorf: Richter Fey, 2012.

Reichardt, Jasia, ed. *Cybernetic serendipity: The computer and the arts*. Exhibition catalogue. London: Studio International 104 (1968).

Rickey, George. "The New Tendency (Nouvellet Tendance –recherche continue)." *Art Journal* XIII (1964): 272–279.

Rosen, Margit, ed. *A Little-Known Story about a Movement, a Magazine, and the Computer Arrival in Art New Tendencies and Bit International, 1961–1973*. Cambridge Mass.: MIT Press, 2011.

Rosen, Margit. "'They Have All Dreamt of the Machines and Now the Machines Have Arrived': New Tendencies – Computers and Visual Research, Zagreb, 1968–1969." In *Main-frame Experimentalism*, edited by H.B. Higgins and Douglas Kahn. Berkeley: University of California Press, 2012.

Rosen, Margit. "Die Maschinen sind angekommen. Die (Neuen) Tendenzen – visuelle Forschung und Computer". Exhibition catalogue. *bit international. [Nove] tendencije – Computer und visuelle Forschung, Zagreb 1961–1973*. Karlsruhe: ZKM, 2007.

Rubino, Giovanni. "Italian Art in Yugoslavia, 1961–1967: An Overlooked Chronicle." *Artl@s*, Vol. 3, No. 1 (Spring 2014): 49–61.

Rubino, Giovanni. "Sviluppi dell' arte programmata italiana in Jugoslavia dal 1961 al 1964". *Studi di Memo-fonte* 9 (2012).

Rubino, Giovanni. *The New Tendency: visual, kinetic and programmed works of art through exhibitions and the art critique between Italy and Croatia from 1963 to 1967. Dissertation*. Udine: University of Udine, 2011–2012.

Seitz, William. "Introduction." Exhibition catalogue. *Responsive Eye* (23 February–25 April, 1965, Museum of Modern Art, New York). New York: Museum of Modern Art, 1965.

Spirale: internationale Zeitschrift für junge Kunst. Bern: Spirale-Verlag, M. Wyss, [1953]–1964.

Susovski, Marijan, ed. *Exat 51 & New Tendencies: Avant-garde and international events in Croatian art in the 1950s and 1960s*. Exhibition catalogue. Cascais: Centro Cultural de Cascais, 2001.

Tendencija 3. Exhibition catalogue. Zagreb: Galerija suvremene umjetnosti, 1965.

Vatsella, Katerina. Edition MAT: Daniel Spoerri, Karl Gerstner und das Multiple: die Entstehung einer Kunstform. Bremen: Hauschild, 1998.

Weibel, Peter, ed. *Bit international – [Nove] tendencije – Computer und visuelle Forschung: Zagreb 1961– 1973*. Exhibition catalogue. Graz: Neue Galerie am Landesmuseum Joanneum, 2007.

Weibel, Peter. "Kunst als K hoch 8. Eine Korrektur". Exhibition catalogue. *bit international. [Nove] tendencije – Computer und visuelle Forschung, Zagreb 1961–1973*. Karlsruhe: ZKM, 2007.
ZERO aus Deutschland 1957–1966 und heute. Exhibition catalogue (3 December 1999–12 March 2000, Galerie der Stadt Esslingen). Ostfildern/Ruit: Hatje Cantz, 2000.

Zero Italien: Azimut/Azimuth 1959/60 in Mailand und heute. Exhibition catalogue (3 December 1999–12 March 2000, Galerie der Stadt Esslingen). Esslingen: Galerie der Stadt Esslingen, 1996.

Zero: 1958–1968 tra Germania e Italia. Exhibition catalogue, Siena: Palazzo delle Papesse (29 May–19 September 2004). Milano: Silvana, 2004.

ONLINE SOURCES

Bailey, Stephanie. "Heinz Mack in conversation." *Ocula*, 22 December 2014, <https://ocula.com/magazine/conversations/heinz-mack/> Accessed 23 June 2018.

Annick Bureaud. "From Zero to Sky Art. Interview with Otto Pieni." *Art Press* 322, April 2006. Accessed 21 July, 2018. <http://www.annickbureaud.net/wp-content/uploads/2011/01/PieneEN.doc.pdf>

Conversation with Otto Pieni. Accessed April 13 2018. <https://www.youtube.com/watch?v=96lynQzdi9I>

Collicelli Cagol, Stefano. "De Vitaliteit in de Kunst (1959–1960) and Van Natuur tot Kunst (1960) at the Stedelijk Museum, Amsterdam." *Stedelijk Studies* 2, Stedelijk Museum, Amsterdam. Accessed December 11, 2017. <http://www.stedelijkstudies.com/journal/exhibition-history-and-the-institution-as-a-medium/>

Galimberti, Jacopo. "The Early Years of GRAV: Better Marx than Malraux." *OwnReality* (13), 2015, online, URL: <http://www.perspectivia.net/publikationen/ownreality/13/galimberti-en> Accessed 23 April 2017.

Gallery Schmela (1957–2008). Accessed 7 September, 2018. <http://www.oac.cdlib.org/findaid/ark:/13030/kt6z09s3jn/>

Graham, Philip. *Hypercapitalism - Political economy, electric identity, and authorial alienation*. Accessed 5 December 2017. https://www.researchgate.net/publication/38184233_HypercapitalismPolitical_economy_electric_identity_and_authorial_alienation

GRAV, *Nouvelle Tendance*, 1961; <http://www.julioleparc.org/grav10.html> Accessed 12 March 2017.

“Interview with Emmett Williams: Fluxus Artist Extraordinaire.” *UMBRELLA*, March 1998; Accessed 11 July, 2018. <http://colophon.com/umbrella/emmet.html>

Itaú Cultural, a digital encyclopaedia of Brazilian culture. Accessed 11 July, 2018. <https://www.escriptoriodearte.com>

Piero Manzoni Foundation. Accessed 26 August, 2018. <http://www.pieromanzoni.org>

Almir Mavignier personal website. Accessed 17 July, 2018. http://www.mavignier.com/aus_ein.htm

Lidija Merenik, “Before the Art of New Media.” *Mute*, 3 October (2007). Accessed 23 October, 2018. <http://www.metamute.org/editorial/articles/art-new-media>

Medosch, Armin. “The Ultimate Avant-garde: New Tendencies and Bit International.” The Next Layer (2008). Accessed 26 August, 2018. <https://web.archive.org/web/20121218030835/http://www.thenextlayer.org/node/731>

Meštrović, Matko. “Art and Technology – Yesterday and today.” Talk delivered at the XXXII AICA Congress, Japan. 1998. Accessed 8 July, 2018. https://monoskop.org/Matko_Meštrović#Essays

Frieder Nake, Susi Grabowski. *Computers in fine art, aspects of history and aesthetics*. Accessed 21 July, 2018. <http://www.agis.informatik.uni-bremen.de/LER-NEN/Aktuell/webArt/01.pdf>

Hans-Ulrich Obrist. “Systematic Thinking by the Late François Morellet”. *Art* (July 2016). Accessed 17 July, 2018. <http://www.culturedmag.com/francois-morellet/>

Poinsot, Jean-Marc. “Pierre Restany: The Letter to Leo Castelli.” *Critique d’art [En ligne]*, 22 | Automne 2003, mis en ligne le 27 février 2012, consulté le 30 juillet 2016. URL: <http://critiquedart.revues.org/1878> ; DOI: 10.4000/critiquedart.1878

Round table discussion “New Tendencies and Architecture: Abstraction, Ambience, Algorithm”, *International Architecture Exhibition, Venice*, 8 August, 2014. Accessed 18 May, 2016. <http://www.mavignier.com>

Smithsonian American Art Museum. *Nam Jun Paik Collection. Interview of Artist Otto Piene*. Accessed 21 July, 2018. <https://americanart.si.edu/research/paik/resources/piene>

Jesus Rafael Soto personal website. Accessed 5 December 2017 http://www.jr-soto.com/fset_savie_uk.html

“Alexander Wollner”, *Itaú Cultural, a digital encyclopaedia of Brazilian culture*. Accessed 26 April, 2018. <https://www.escriptoriodearte.com/artista/alexander-wollner/>

Zero Foundation. Accessed 26 August, 2018. <http://www.zero.com>

SANJA HORVATINČIĆ
Between Creativity and Pragmatism: A Structural Analysis and Quantitative Survey of Federal Competitions for Yugoslav Monuments and Memorial Complexes (1955–1980)
pp. 124–165.

[Sekretarijat Izvršnog odbora Odbora za izgradnju spomenika na Petrovoj gori]. “Tko gura privatni interes”. *Vjesnik* March 23, 1975.

Andersson, Jonas E., Gerd Bloxham Zettersten, and Magnus Rönn. “Editors’ Comments.” In *Architectural Competitions – Histories and Practice*, edited by Jonas E. Andersson, Gerd Bloxham Zettersten, and Magnus Rönn, 7–11. The Royal Institute of Technology and Rio Kulturkooperativ, 2013.

Baković, J. Nikola. “Konkurs za izgradnju Spomen-parka u Čačku iz 1962. godine.” *Izvornik. Građa međupštinskog istorijskog arhiva Čačak*, 32 (2016): 301–334.

Baković, J. Nikola. “Konačan odabir idejnog rešenja za projekat Spomen-parka u Čačku.” *Izvornik. Građa međupštinskog istorijskog arhiva Čačak* 33 (2017): 315–342.

Barjaktarević, Bogoljub. “Podići ili ne podići. O sudbini spomen–obilježja rudarima u Labinu”. *Danas* October 12, 1982.

Baylon, Mate. “Javni arhitektonski natječaji u Beogradu između dva rata.” Čovjek i prostor: arhitektura, kiparstvo, slikarstvo i primijenjena umjetnost, vol. 226, no. 26 (1975): 10–13.

Bernik, Stane. “Trije natečaji.” *Sinteza. Revija za likovno kulturo*, vol. 2, no. 7 (October 1967): 38–43.

Bihalji-Merin, Oto, ed. *Jajinci: povodom konkursa za idejni projekt spomenika žrtvama fašizma, Jajinci – Jugoslavija*. Belgrade: Publicističko-izdavački zavod Jugoslavija, 1958.

Bjažić Klarin, Tamara. Arhitektonski i urbanistički natječaji između dva svjetska rata (1918.–1941.) – slučaj Zagreb. Zagreb: Institute of Art History, 2018.

Burstow, Robert. “Western European Modernism in the Service of American Cold-War Liberalism.” In

Art and Ideology: The Nineteen-Fifties in a Divided Europe, edited by Ljiljana Kolečnik, 37–56. Zagreb: Croatian Society of Art Historians, 2004.

Čepić, Mirko. “Spomenik NOBe u Mariboru.” Čovjek i prostor: arhitektura, kiparstvo, slikarstvo i primijenjena umjetnost, no. 53 (September 1956).

Chupin, Jean-Pierre, Carmela Cucuzzella and Bechara Helal (eds). *Architecture Competitions and the Production of Culture, Quality and Knowledge: An International Inquiry*. Potential Architecture Books Inc., 2015.

Davidović, Jelena. “Tri spomenika u spomen-parku ‘Kragujevački oktobar’.” Šumadijski anali: časopis za istorijografiju, arhivistiku i humanističke nauke, vol. 2, no. 2 (2006): 236–255.

Dragičević, Zana. “Spomenik na Petrovoj gori – prilog istraživanju i revalorizaciji.” *Anali Galerije Antuna Augustinčića*, no. 32–33; 34–35 (2015): 385–404.

Franković, Eugen. “Spomenik Titu u Zagrebu – kakav i gdje? Izraz epohe”. *Vjesnik* March 8, 1985.

Frković, Josip. “Memorijalac spašava privatnik”. *Večernji list* September 30, 1989.

Gamulin, Grgo. “Nesporazum o spomeniku. U povodu odgovora arh. Igora Toša”. *Hrvatsko Sveučilište* October 13, 1971.

Gamulin, Grgo. “Spomenik na Kozari.” *Život umjetnosti*, no. 15/16 (1971): 129–142.

Gamulin, Grgo. “Znak u vremenu.” *Dometi : književnost, kultura, društvena pitanja*, no. 3–4 (1970).

Horvatinčić, Sanja. “Monuments Dedicated to Labor and the Labor Movement in Socialist Yugoslavia.” *Etnološka tribina : godišnjak Hrvatskog etnološkog društva*, vol. 44, no. 37 (2014), 153–168.

Horvatinčić, Sanja. “Povijest nemogućeg spomenika: izgradnja spomenika žrtvama fašizma u Jajincima.” *Anali Galerije Antuna Augustinčića*, no. 32–33; 34–35 (2015): 261–282.

Horvatinčić, Sanja. *Spomenici iz razdoblja socijalizma u Hrvatskoj – prijedlog tipologije*. PhD Thesis. Zadar: University of Zadar, 2017.

Janković, Nataša. “Architectural Terri(s)ories: Jajinci Memorial Park in Belgrade.” *AM Journal*, no. 12 (2017): 81–98.

Jelić, S. “Radnički dinar za spomenike”. *Borba* January 4, 1980.

Joyeux-Prunel, Béatrice. “ARTL@S: A Spatial and Trans-national Art History Origins and Positions of a Research Program,” *Artl@s Bulletin*, Vol. 1, Iss. 1 (2012): Article 1.

Judt, Tony. *Postwar: A History of Europe Since 1945*. New York: The Penguin Press, 2005.

Karge, Heike. *Sećanje u kamenu – okamenjeno sećanje*. Belgrade: XX Vek, 2014.

Kazimirović, Vasa. “Bogdan Bogdanović: Umijesto strave opredijelo sam se za život”. *Vjesnik* July 3, 1966.

Klaić, Smiljan. “Natječaj za arhitektonsko-pjezažno-skulpturalno rješenje spomenpark u Sarajevu.” Čovjek i prostor: arhitektura, kiparstvo, slikarstvo i primijenjena umjetnost, no. 148 (July 1958): 5.

Kolacio, Zdenko. “‘Kova je naša.’ Opći jugoslavenski natječaj za uređenje spomen-prostora rudaru, Labin, 1980.” *Čovjek i postor: mjesečnik Saveza arhitekata Hrvatske*, no. 340–341(1981): 10–11.

Kolacio, Zdenko. “Rudaru i borcu”. *Vjesnik* June 23, 1981: 6.

Kolacio, Zdenko. “Spomenik na Makljenu. Osvrt na natječaj.” Čovjek i prostor: monthly for architecture, painting, sculpture, design and applied arts, no. 297 (1977): 12–13.

Lipstadt, Helene. *The Experimental Tradition: Essays on Competitions in Architecture*. Princeton Architectural Pr, 1989.

Ljubičić, Marina. *Kozara, spomenik slobode : Memorijalni muzej na Mrakovici*. Exhibition catalogue. Prijedor: Nacionalni park “Kozara”, 2016.

M.B. “Spomenik na Petrovoj gori 1976”. *Vjesnik* November 23, 1973.

Macura, Milorad. “Zapisi na marginama pravilnika o konkursima.” *Arhitektura – Urbanizam: časopis za arhitekturu, urbanizam, primenjenu umetnost i industrijsko oblikovanje*, no. 16 (1962): 51.

Malmberg, Catherine, ed. *The Politics of Design: Competitions for Public Projects*. Princeton, NJ: Policy Research Institute for the Region, 2006.

Marter, Joan. “The Ascendancy of Abstraction for Public Art: The Monument to the Unknown Political Prisoner Competition.” *Art Journal. Sculpture in Postwar Europe and America 1945–1959*, vol. 53, no. 4 (1994): 28–36.