# Mapping Exhibition Networks:
# Current Histories of Biennales (Group 6)

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# Brief abstract

This project surveys exhibition networks, by focusing on biennials of contemporary art. Our data corpus, extracted from diverse online sources and archives, includes information on exhibition makers (artists, curatorial teams, institutions, galleries and funding bodies...), discourses (curatorial statements, press reviews...), and exhibited objects (art works, installations...). On the basis of this data, we use network analysis and visualization, as well as discourse analysis in order to explore entangled histories of biennials and to delve into broader issues of connectivity in the art world. Our latest focus concerns the circulations of artists between the so-called 'biennials of the South' and western European and north American venues from the end of the Cold War to the present.

# Current research questions

**South-North connections: artists' mobility and exhibition networks around the Havana Biennial**

While there has been a great deal of speculation about the empowering or disempowering dynamics of contemporary art *biennials*[1], the specific function and impact of this exhibition format and its impressive geographical expansion since the 1990s have not yet been studied in a comprehensive manner. Literature on the "biennial phenomenon" has been growing in the past years (Bydler, 2004; Gardner/Green, 2016; Kompatsiaris, 2017), but it tends to privilege individual cases and focus mainly on curatorial practices and discourses —or the discrepancies between discourses and practices. Concrete empirical studies regarding involved actors and issues of connectivity or research into the biennial's intrinsic materialities and media hierarchies, or the correlation between media and discourses are still rare.

Perennial exhibitions of contemporary art represent a realm in which peer-to-peer recognition and co-optation count most —peers including artists, curators and other kind of mediators. We could argue with Pierre Bourdieu that they constitute a sub-field of "restricted production" within the global art field (Bourdieu, 1992). Nevertheless, we still know very little about the conditions of entry into this sub-field and the criteria of selection applied. Although the deeply interconnected nature of art worlds is commonly acknowledged, research into internationally active artistic and curatorial networks has not yet been systematically pursued. To contribute in this direction, we propose a data-driven approach and adopt the tools of network analysis and digital art history. We consider perennial exhibitions as events that are immersed into the global flow of the art world

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[1] The term *biennial* is conventionally used in order to metonymically describe any kind of recurring exhibitions regardless of the periodicity rhythm (biennials, triennials, quadrennials, etc.).

and involve specific temporalities, practices of space, materialities and types of discourse. These events can be drawn as networks within broader spatial and temporal connectivities.

In our current research, we explore the circulation of artists between the so-called "biennials of the South" and venues in western Europe and North America during the post-Cold War era. This topic has not yet been addressed in current literature, while the histories of the "biennials of the South" represent a particularly understudied field within the broader scholarship on biennials (Gardner/Green, 2013, 2016, p. 81-110). The category "biennials of the South", used both as a geographical and a cultural-historical attribute, has taken on counter-hegemonic connotations particularly in postcolonial discourse, being often exchangeable with that of "Biennials of Resistance" (Hoskote, 2010). The term calls for a thorough critical assessment, that we cannot undertake here. For the time being we adopt a working definition, that describes "biennials of the South" or "southern" biennials as the periodical exhibitions that have been created outside western European and north American centers from the end of the World War II to the end of the Cold War and were primordially intended to present local and/or regional art. Within this in no way homogenous ensemble, one could further distinguish between at least two main sub-categories: on the one hand, the venues that also presented art from the West and sought to  bring local artists and publics in contact with what was considered  by local elites as the most progressive art of the time, adhering thus, at least in the initial phase of their history, to an hegemonic understanding of western modernity. A good example here is the Bienal de São Paulo created in 1951. The second sub-category, which mainly interests our current research, concerns the exhibitions which programmatically excluded artists from the "First" and "Second World", to adopt the categories of the period, engaging instead in the promotion of local and regional art production, which, according to the creators of these events, was severely suffering on visibility, institutional recognition and access to the global art market. Unlike the exhibitions of the first type, this second group of venues originated to counter the cultural imperialism of the West and, through their often-extensive discursive production, postulated the co-existence of multiple regional modernities, unhinging the canonical stature of the western experience. The Havana Biennial founded in 1983 is perhaps the most prominent case in point. Its first iteration in 1984 presented artists mainly from Cuba; the second one, in 1986, opened up to participants from the whole Latin America, while the third iteration (1989) expanded its scope to Africa and Asia (particularly the non-aligned countries). From the third iteration onwards, artists from the diaspora, active mainly in western centers, were also increasingly invited to participate. Since the late 1980s the Havana biennial was widely recognized as the most significant venue of the kind in the so-called Global South.

Our main objective currently is to explore to what extent biennials of the South allowed for the creation of sustainable regional art ecosystems (even after the collapse of the world order related to the Cold War era), intensifying South to South connections but also attracting artists from the North Atlantic regions. To what extent did they also function as springboards that facilitated the inclusion of artists from the South in western art institutions and *networks of visibility*, from which they remained until then excluded?

For the purposes of this analysis we will prioritize the Havana Biennial, which is being increasingly discussed as an alternative founding moment in the history of perennial exhibitions of contemporary art, as opposed to the prototype significance attributed to the Venice Biennale (Niemojewski, 2010; Marchart, 2014). Using the Cuban venue as a case study, we will identify the artists that were first introduced in this context and have subsequently been presented at major perennial exhibitions of the Western art world, such as the Venice Biennale and Documenta. The case of Venice biennial, which includes both a central international exhibition by an invited curator and national participations in the state pavilions, presents an augmented heuristic value: one the one hand, it allows us to explore whether participation in the regional platform of Cuba expedited the consecration of artists within their respective national artistic fields (in case they were exhibited in national pavilions); on the other, it allows us to assess the extent to which the *passage* from Havana assured them a symbolic capital that facilitated their circulation within international art networks (in case that the artists were selected for the central exhibition). We will analyze the shape, function and patterns of connectivity in the drawn networks, taking into account the intermediary steps of selected artists' trajectories and the role of curators in artists' mobility. Approaching biennials through the trajectories of their actors, we seek to reassess the extolled inclusivity and openness of biennial culture starting in the 1990s against the arbitrary, self-regulating connectivity of the art world that often subverts explicit or implicit politics of representation.

- What are the modalities of artists' circulation across southern and northern biennials? Can we detect *typical* artist's trajectories and patterns of circulation?

- Is mobility observed in both directions? Were artists who participated first in Documenta and/or Venice biennials subsequently presented in Habana? What does this tell us about art world connectivity and modes of circulation?

- Which are the "intermediary" steps between a participation in Havana Biennale and a participation in Documenta and/or Venice biennial.

- What is the role of curators in the circulation of artists?

# Technical/computational tasks

## Data sources and data structure

Artfacts.net collects and makes available primary art market and exhibition data, artists CVs and information about artworks. We gathered information about exhibitions histories and biographical data regarding individual artists from this source. Provided information about the exhibitions concerns the date and title of the event, the exhibition type (solo or group exhibition), the institution

in which it was hosted (museums, art centres, biennials, studios, galleries, studios, etc.) as well as its geographical location. This combination of data allows us to draw and describe the exhibition trajectories of artists, that is, chains of art events that occurred in different type of institutions around the world and different points in time. For comprehension purposes, we refer to this data collection as the *Artfacts dataset*.

Our first task in view of our current research questions described above was to create a subset of the Artfacts dataset containing artists that have participated in the various iterations of the Habana Biennial and have also been included in the Venice Biennial and/or the Documenta. For the sake of clarity, we will refer to it as the *Artfacts subset*. By doing so, we noticed that data on several iterations of the Havana biennial, namely the first (1984) and the third one (1989) were not present in the Artfacts dataset. In order to amend this problem of missing data we turned to a different source, deriving from the realm of art historical scholarship. We used the data provided in Rojas Stelo's PhD dissertation on the history and impact of the Havana Biennale (Rojas Stelo, 2009). In the Appendix of the dissertation the author supplies a list of the artists that have participated in the different iterations of the biennial from 1984 to 2006. The nationality of the artists (and sometimes the country in which they are active when differing from their country of origin) as well as the date of participation in the event (iteration) are given. This record, particularly valuable and easy to sparse, also presents some missing data when compared to the official catalogues of the biennial. Instead of immediately rectifying these flaws, we decided to leave this correcting operation for later and keep advancing on the design of the research tools. For ease of comprehension, we name this data collection, that includes the participating artists in all iterations of the biennial from 1984 to 2006 the *Havana dataset*.

The third and last data source we make use of is the ULAN (Union List of Artist Names) provided by the Getty Foundation. Like other Getty repositories, the ULAN has been developed for cataloguing and retrieval purposes. Its aim is to provide researchers with an authoritative directory of artists that is validated by the research community. The ULAN gives access to biographical information about artists, different orthographical variations of their names, their birth and death dates, the art movements to which they contributed, the media used, the region of activity of the artist and, eventually, the institutional sources that certified the mentioned information. Note that no information on the exhibition history of the artists is provided in this source. ULAN data is accessible in the form of Linked Open Data (LOD). We decided to use this repository for two main reasons: first, in order to control our dataset based on institutionally recognized information across academia (and cultural institutions) and second, in order to fill in missing data in our dataset (more specifically regarding the place of birth, activity and nationality).

## Data reconciliation

In order to be able to use the information contained in these three sources, it was necessary to perform different integration steps. By integration, we hear the manual association of facts from

one dataset to the other. In a more technical sense, integration refers to the detection of correspondent data items across different datasets or sources.

As shown in the Data preparation and reconciliation workflow, our primary intention was to perform, in parallel, the reconciliation of the Havana dataset with the ULAN and the reconciliation of the Artfacts dataset with the ULAN. Because of the lack of control that we face (in terms of both data collection and quality), reconciling the two datasets to ULAN prior to using them was a way for us to gain some kind of stability. Technically speaking, the parallel reconciliation of the Havana dataset and Artfacts dataset meant that each artist present in each database would receive a unique ULAN identifier. Then, the joining of the Havana and Artfacts dataset would only require that we compare the ULAN identifiers of the artists of each database.

We split the Havana dataset in multiple csv files, each representing a different iteration and distributed these files across the team members, in order to start reconciling data using Open Refine. Open Refine is a data manipulation software that makes various cleaning and sorting tasks easy thanks to its friendly user interface. One major feature of Open Refine is its reconciliation function that allows users to reconcile a home-made dataset with data collections like Wikidata or the different Getty repositories.

Two major concerns arose from these reconciliations (cf. Figure 1.a). The first one regards the particularly low amount of Havana artists (that is, artists presented in the various Havana iterations) that we were able to reconcile with the ULAN. Only 20% of the artists from the second iteration and 17,5% of the artists from the third iteration of the Havana Biennial (1986) had an entry in ULAN. This made clear to us that our comparison of the Havana and Artfacts datasets could not rely solely on the ULAN identifiers. The second question that came up was related to the uncertainty that the scholars face when choosing whether or not an artist should be reconciled with one of the ULAN proposed entries. Though the reconciliation is sometimes straight forward and doesn't leave room for doubt, in some cases, for example when names of artists are not exactly the same but still close to one another by having the same birth year, the choice relies on the judgement as well as the prior knowledge of the scholar. In fact, we noticed that it is actually tempting to go in favour of the reconciliation in order to hide the flaws of the initial dataset. Eventually, the ULAN, in our study, did not help us to gain more control over our data but on the contrary, added uncertainty due to the subjective nature of human choices. Thus, by trying to reconcile the Havana and Artfacts datasets, we did not resolve the problem of lack of control over data quality and representativity, but we did, in fact, introduce yet another layer of uncertainty and subjectivity in the manipulation of our data. In this process, our intention toward data preparation changed.

In order to deal with these concerns, it was decided to reconcile the Havana and Artfacts datasets directly, without using the ULAN as a bridge between the two. The ULAN was not completely left aside but its role was reduced to a means of enriching our dataset for cross validation purposes

(cf Figure 1.b). The direct comparison of the two datasets was performed via an automatic detection of potentially similar artists in those datasets. To do so, we performed a string comparison of the names of the artists. To produce the best possible result, all the compared chains of character were processed in order to remove upper cases, accents and punctuation characters. The idea then was to automatically find direct matches between the two datasets in order not to spend too much time on a manual reconciliation which would produce uncertain results anyway. Again, this decision was made in favour of not blocking the design phase of our tools, allowing us to keep producing research questions about the object of our study as well as formulating criticism of the research practices in the digital realm.

## Primary findings and further steps in data preparation

As mentioned above, the reconciliation of the Havana dataset and the Artfacts subset containing the artists that have exhibited to the Havana and the Venice Biennial and/or the Documenta was performed via an automatic detection of the artists shared in these datasets. The result of a direct comparison (by direct comparison we hear the perfect equality between two names once normalized) gives 216 artists that appear both in the Havana dataset and the Artfacts subset. A reconciliation of these 216 artists with the ULAN showed that only 153 of them had an entry in the Getty's repository, allowing us to cross validate our data for 70% of the studied cases. The bar chart (fig. 2) is a first attempt to display the divergence of information resulting from the reconciliation of the three sources we make use of. More precisely, it shows the number of individuals categorized in one nationality or another depending on where the data comes from.

We have been able to use our newly created dataset to plot various kinds of visualizations that help us both control the data quality through displaying sources' differences, as well as developing more precise hypotheses and notions in the scope of our research question. Nevertheless, we believe that in order to build stronger arguments out of our data, the constructed dataset may be improved by including artists that did not participate neither in the Venice Biennial nor in the Documenta. By including these artists, it will be possible for us to compare, at every step of our analysis, two groups, the first group in which we are interested (*test group*) in and a *control group*, in order to identity which characteristics that emerge from our analysis are interpretatively significant. For example, if a classification of artists' trajectories results in communities in which the individuals of both groups are present, we might consider that the characteristics used in the classification process are not discriminative enough and cannot be considered as determining factors capable to affect an artist's trajectory. Thus, our dataset might largely be enhanced by removing Step 1 from our data reconciliation workflow: in other words, we need to also consider the *Havana artists* contained in the Artfacts dataset who didn't participate in the Venice biennial or the Documenta. By removing the first step of our reconciliation workflow, our dataset would grow from 216 to 1463 artists, distributed in the *test group* (that is, the 216 artists that were preseted in the Havana and either in the Venice Biennial or the Documenta) and the *control group* (that is, the 1247 artists that participated in La Havana but neither in the Venice Biennial nor Documenta).

Eventually, this readjustment of the dataset will permit us to apply this compared approach to multiple cases, all centered on the Havana Biennial artists: the scope of our analysis could thus be expanded to the circulation of artists between the Havana Biennial and any other institution, allowing us to explore both South-South and South-North connections.

## Methodologies: Social sequence and network analysis

In the scope of our current research question, we have decided to first draw on the artists' trajectories and use social sequence analysis (SSA) in parallel with graph analysis. Several reasons account for this choice. The first one relies on the theoretical ambitions of sequence analysis. According Ritschard and Studer, the goals of SSA are to (a) provide a comprehensible overall picture of sets of individual categorical sequences, (b) discover characteristics of a set of sequence, (c) identify possible atypical or deviant individual trajectories and (d), to compare trajectory patterns among groups (Ritschard/Studer, 2018). Therefore, rather than focusing on biennials networks, sequence analysis provides tools to trace artists individually rather than taken as whole. An artist's trajectory is a sequence of events that occurred during the professional life of an artist. Since the events we deal with here concern only exhibitions, we may also speak of exhibition trajectories. If a network —or graph— can mathematically be defined as $G = (V, E)$ where V is a set of vertices or nodes and E is a set of couples $(x, y)$ where x is different from $y$ and $x$ and y are in $V$; a sequence can be defined as a special kind of network $G = (V, E)$ where V is an ordered list of $n$ vertices and
$E = \{(v_i, v_{i+1}) \mid (v_i, v_{i+1}) \in V \land i = 1, 2, ..., n\}$.

Social sequence analysis also gives us the possibility of including the time dimension in our analysis. Though graphs are a powerful tool to analyze connectivity, studying the evolution of dynamic systems remains a difficult task when relying on static networks. The ordered nature of sequences thus allows us to include time in our visualizations without having to draw multiple networks.

Our enquiry also relies on more traditional graph analysis in order to avoid some of the drawbacks of SSA. Two difficulties arise from analyzing sequences: the first comes from the fact that it is necessary to consider the individual trajectories as independent and this is a strong argument to make when analyzing a system that is highly interconnected. The second drawback lies in the difficulty of knowing whether or not the different tasks of SSA that can be performed (such as sequence clustering or prediction) give rise to patterns that are socially meaningful (Courgeau, 2018). Eventually, we hope that the improvements of the augmented dataset described above will help us avoid this last drawback of SSA.
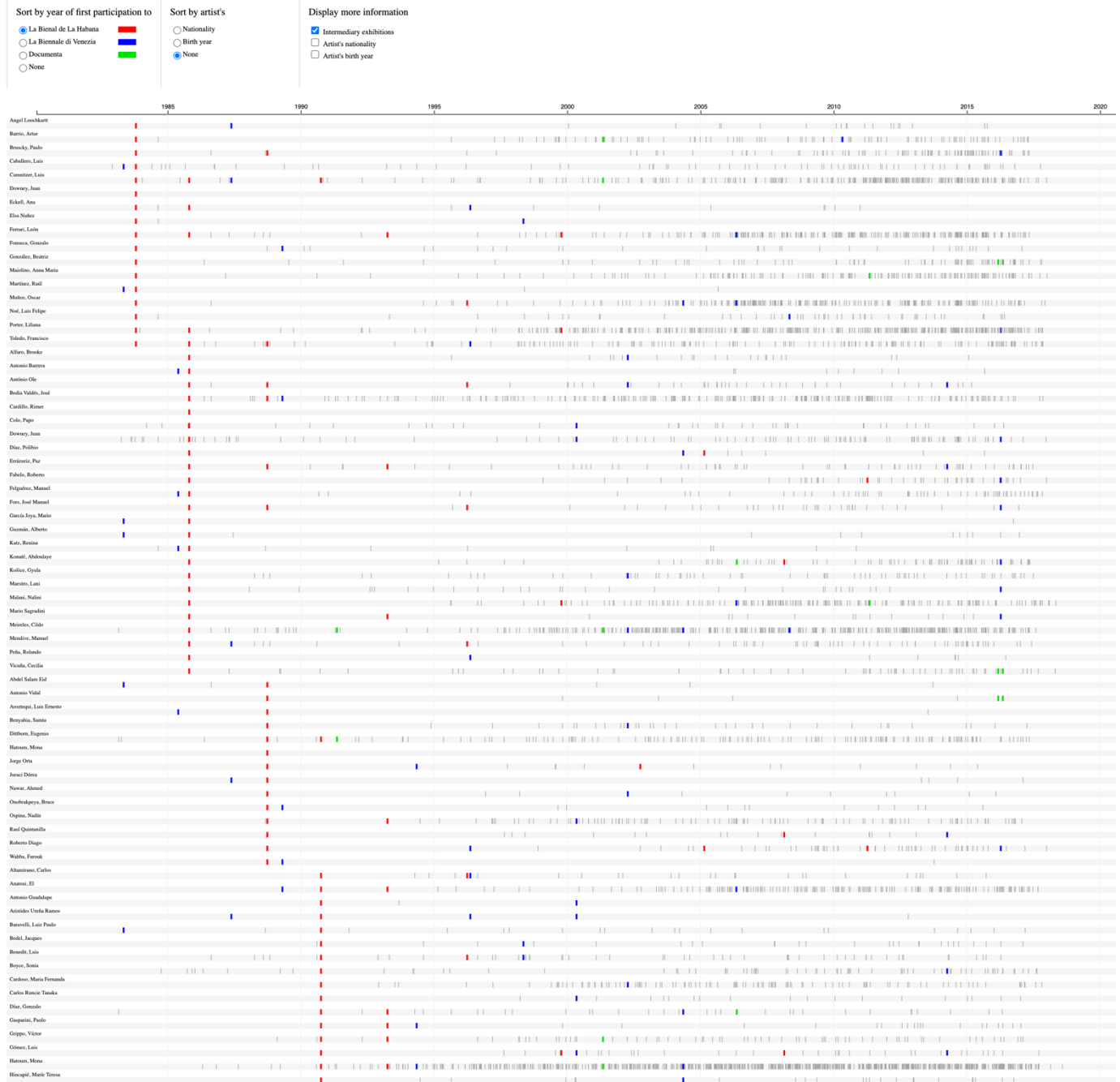
# Two examples of data visualization

Below, we shortly describe recently produced visualizations and provide a few observations taken from a preliminary analysis of our dataset.

1. **Timeline of artists' exhibition trajectories**



Timeline of artists' exhibitions

This web-based interactive graph displays the individual trajectories of the 216 artists of the dataset. Each line corresponds to an artist's trajectory, which is composed of various exhibitions in which they participated from 1980 to 2019. Each iteration of the three biennials we study are color coded: Havana (red); Venice (blue) and Documenta (green). *Intermediary* exhibitions are represented as gray vertical bars. Several sorting functions can be applied to help detect trajectory patterns: the first one sorts the artists' trajectories by the year of their first participation in a biennial (i.e. Venice, Document or Havana) at user's choice. Two other functions help us sort the artists by nationality or year of birth.

A first precious finding was that some artists of the first iteration of Havana Biennial had already beforehand participated in the Venice biennial. This first insight is helping us reassess our hypotheses. Nonetheless, it is true that for most of the artists in the dataset a participation in the Venice biennial or in Documenta came after their passage from Havana biennial. Also, the Documenta seems to be weakly related to participation in the Havana biennial compared to Venice biennial; about two thirds of the artists have never been presented at the Documenta. This pattern awaits careful study.

2. **Artists-Institutions network graph**
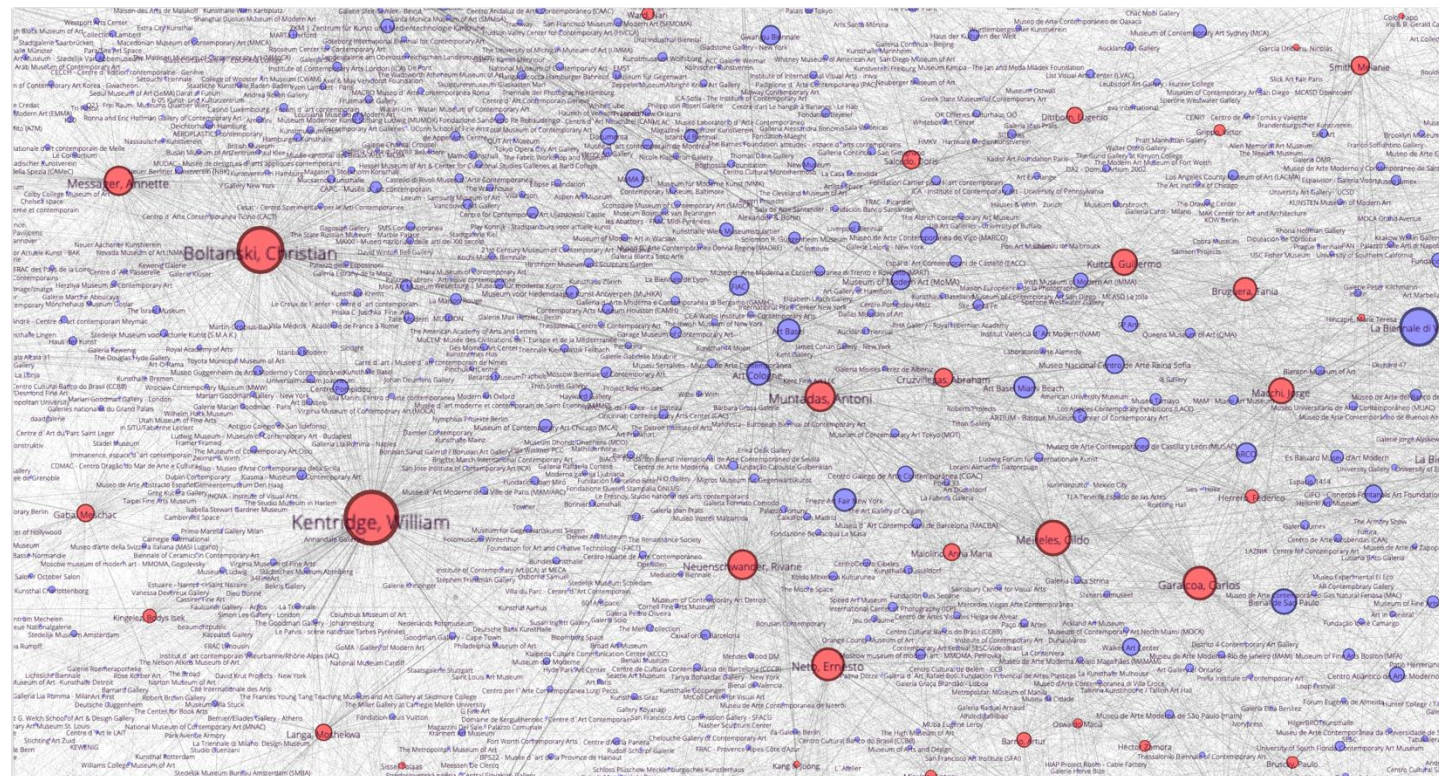


As the timeline is limited to tracing individual artist's trajectories and cannot show the broader connections between artists and institutions, we transformed this timeline into a network graph using Gephi. This graph includes two type of nodes: artists (red) and exhibitions/institutions (blue),

while the edges show the relation between these two types of nodes, that is, they stand for exhibition participations. Among the nodes with the highest degree of centrality are artists such as Christian Jankowsky, Mona Hatoum, Shirin Neshat, Christian Boltanski, Cildo Meireles, Antoni Muntadas, Ernesto Neto, Carlos Garaicoa etc. As for institutions, art fairs such as Art Basel, Frieze Art Fair New York, Art Cologne, ARCO (Madrid), FIAC (Paris), museums such as Museo Nacional Centro Reina Sofia, Museum of Modern Art (MoMA), ZKM and other perennials exhibitions such as Bienal do Sao Paolo, Gwangju Biennale, Bienal do Mercosul are among the most connected nodes, which could imply that they play a key role in the shaping of artists' trajectories. We can also observe that Documenta is again less present in this network, as it was the case in the timeline. Our further study will focus on patterns and modalities that may become apparent through such network graphs.

# Timetable

**June 2020-June 2021**

Summer 2020 Data analysis for the "Habana" research.
Fall/Winter 2020 submit an article and develop an extended topic such as "Southern" biennials.
Spring 2021 Data analysis for the second sub-topic.