

A state of the graph at the Second European Conference on Social Networks (Paris)

« Egos » and « alters », « centrality » and « homophily », “ERGMs” and “R packages”: the EUSN 2016, Second European Conference on Social Networks, was a gathering of social and computer scientists fluent in the rich lexicon of Social Network Analysis (SNA). Hosted in the Science Po Paris premises, the 4 day meeting was focused not on a region, a period, or a phenomenon, but rather on a cluster of methods forming a self-avowed “new paradigm” for social sciences. As challenging as it is to identify a common thread to such a broad event (15 workshops, 32 panels and 2 keynotes), the clearest denominator of the conference’s content was probably the fertile notion of “tie”, that is also at the very core of network theory. How to measure and visualize the ties between individuals, what meaning and affordance can they provide, and more fundamentally what generates and sustains them? This conference, among a series of other similar events blossoming in European academia and particularly in France¹, is additional testimony to the topicality of SNA.

Some characteristics of the cohort of over 250 scholars participating to the conference are worth pointing out to highlight the traits of SNA as a contemporary research field. First and foremost, the multidisciplinary was striking. While SNA is a child of quantitative sociology, notably acknowledged throughout the conference by the recurring references to the tutelary figures of the Harvard group (namely Harrison White and his disciples), the presenters were nonetheless engaged in the academic fields of history, geography, economy, political science or computer science. But contrary to many other multidisciplinary platforms that encounter the Babel confusions, it was remarkable how SNA jargon served in this instance as a shared set of references for scholars of apparently different backgrounds and expectations. Yet, this does not automatically imply transdisciplinarity and fluid circulation of research practices and agendas, as discussed further on.

A second outstanding feature was a sense of internationality, allowed by the universalistic promise and seemingly “non-situatedness” of SNA theoretical framework. However, locating the cities of the participants’ main academic affiliation, the following map brings nuance to this promise by visualizing the contours of the internationality convened by the conference.

¹ <http://arshs.hypotheses.org/78>

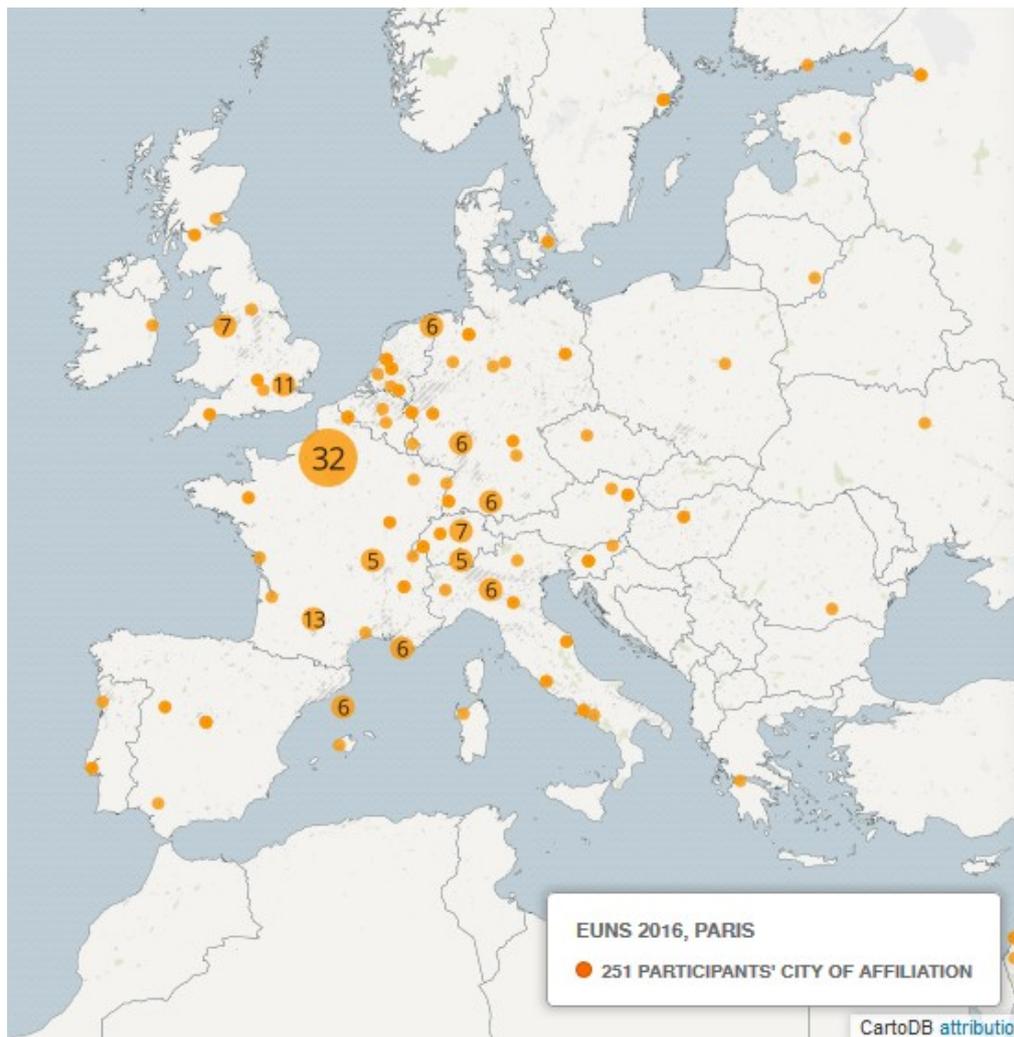


Illustration1: Geography of an academic field

It is to be noted that the above map is focused on Europe to match the scale implied by the conference title. This excludes a dozen participants affiliated to institutions based in the USA and Australia, and a couple in Peru and India. That being said, the “Global South” was clearly the “missing link” in an unapologetically western network. More specifically, the geography of the gathering echoes that of the Manchester-Milan Axis, suggesting that if SNA is an emerging paradigm, it is indeed emerging from the locus of power and well-endowed institutions. This is corroborated by the strong occurrence of economic themes. A basic query in the conference’s 321 page book of abstracts shows “business”, “trade” and “entrepreneur” total over 320 instances, while the critical studies tryptic “class”, “race”, “gender” and their synonyms don’t stack up to 50.

This admittedly simplistic description leads nonetheless to a significant question for the field: to what extent is the SNA a toolbox for critical thinking? Albeit a minority, some participants did indeed delve into issues of inequality, integration or social change based on SNA methodology. A most remarkable example was the keynote speech of Miranda Lubbers and José Luis Molina, from Barcelona, who addressed “livelihood strategies of immigrants” and “survival strategies of the poor” using a combination of ethnographic method and multilevel network analysis applied to “unbounded social groups”, a clever

formulation in the framework of SNA and an invitation to expand the domain of the field (the bonds of the unbounded?). Other participants working on knowledge circulation evoked the potentialities of linking participatory methodologies such as network mapping to support empowerment processes or conflict resolution.

Notwithstanding the prevailing hierarchy of scientific geography, Eastern and Southern Europe presence was all but anecdotal, validating the scientometric study of Michel Grossetti, Béatrice Milard *et al.* whose work describe a deconcentration process within global scientific production². Those scholars, affiliated to the University of Toulouse– again an outstanding counter-example of the previously described pattern–, were also vocal participants during the conference. On that note, it would be interesting to compare their interpretation of large-scale multidisciplinary databases to a reflective outlook on their own field of research and positionality within it.

Despite those cases, initial experiences combining panel themes and city of affiliation were inconclusive regarding the field’s geographical “division of labor”. However, from an outsider’s perspective, the conference displayed a least 3 distinctly identifiable sub-groups within the SNA field: a “technical” group, interested in the tools to process and describe data; an “empirical” group, applying SNA as a heuristic mean to produce new information on diverse social fields; and finally a “reflective” group, more interested in the way data is produced and in the sense that can be made of that.

Prior to the recent surge of SNA, the steep learning curve of going through collecting data and processing algorithms made it an exclusive practice. Arguably, network analysis has now become more accessible. However, the EUSN was proof that the SNA “black box” (Latour, 1999) remains wide open to accommodate technical innovations and updates on both the vision and the tools of network analysis. This was demonstrated by the workshops on various programming languages, functions and libraries used for computing large-scale data sets. The porousness of the boundary between research and engineering was a remarkable feature in these “cliques” of the conference. Vladimir Batagelj, a mathematician holding a workshop on network visualization with D3.js, is also the developer of Pajek, a popular program for network analysis and visualization. Jean-Daniel Fekete, leading computer scientist of the Aviz research team (INRIA), gave an insightful keynote speech on cognition and research visualization for exploring data. Among the innovations he put forward, the NodeTrix, a hybrid representation combining node-link diagram and adjacency matrix for avoiding the cluttered graphs of globally sparse but locally dense networks. Graphs are central to SNA, to the point it almost became a compulsory exercise, even when other representations, such as maps, could prove to be more useful. Jean-Daniel Fekete cleverly pointed out such representations are not just meant for communicating, but also for exploring. According to him, descriptive statistics and visualization are both differently useful for making sense out of data. This heuristic dimension of graph visualization could explain the little attention given to the semiology of graphics (for instance the recurring omission of graph legends, a revealing bad habit indeed).

The second sub-group, although less concerned with the latest sophistications of statistical models, are the users of these tools and technologies. A majority of the

² Michel Grossetti, Denis Eckert, Laurent Jégou, Marion Maisonobe, Yves Gingras et Vincent Larivière, 2013, « La diversification des espaces de production du savoir », CERISCOPE Puissance

participants were pursuing what Pierre Mercklé, a member of the scientific committee, called a “statistical Eldorado”³. Indeed, the scale of the empirical tasks still awaiting SNA was quite mesmerizing, as suggested by the variety of objects and sources used by the participants. These were not merely of the contemporary, but also in historical or archeological fields of investigations, as suggested by the panel organize by Claire Lemercier, Tom Brughmans (*et al.*). Some of the most impressive data sets were those describing globalization through social networks: academic citations (Marion Maisonobe), or global shipping flows (César Ducruet), amounted to a fascinating descriptive geography of evolving city hierarchies. SNA was also used to support political studies: following career paths leading to power (Franziska Keller), measuring power through network centrality (Manuel Fischer), etc. Other presentations stunned not by their conclusions but by the capabilities of big data. For instance, Claude Grasland and Robin Lamarche-Perrin (ANR Corpus Géomédia) developed a protocol to measure the visibility of territorial units through a textual analysis of newspaper RSS flows. Occasionally, the empirical work provided by this sub-group conveyed a sense of magic, network analysis unravelling the world’s mechanisms. Other times, the presentations gave the impression of an unnecessarily complicated device that functions poorly compared to “basic”, “low-tech” qualitative research. Worse, SNA sometimes appeared as a potentially dangerous paradigm if it was to become a dominant and exclusive analytical framework. A typical instance of these shortcomings was a presentation on international migration by Luca De Benedictis, who began stating the “lack of any reliable data” on the subject, but, regardless, still proceeded to visualizations, drawing nonetheless very interesting conclusions on the determinants of global migration flows, but based on “flawed” data. Another disappointment regarding the conference as a whole was the limited space allocated to ethical implications of SNA (only 1 instance for “ethics” in the book of abstracts) despite big data playing a major part in the new popularity of SNA methodologies, and also despite it causing major concern for future democracies⁴.

This statistical Eldorado was sometimes tainted by positivism and an enduring trust in the tools. It was therefore refreshing that a third and last group of scholars looked at SNA in a more reflective manner. This was done in several ways. Some scholars were looking at the very foundations of networks and their essential components. For instance, Nathalie Chauvac asked how collectives actually emerge, beyond what she coined the “cafeteria effect”. Cornelia Reyes Acosta asked what defines the strength of a social tie, introducing the idea of a “mimicry tie” used by weaker but crafty nodes. Others interrogated the standardization of data collection methods (narration method, egocentric name generator, contact diary method, net-mapping, etc.) and tools such as VennMaker. Tom Toepfer accounted for the negotiations that occur during data-collection interviews, insisting on the importance of stimulus wording and follow up questions. Louise Ryan and Paula Tubaro concurred, explaining how visualizing a network is different from speaking about a network. They then emphasized sociograms was a language not everyone was fluent in.

3 Pierre Mercklé, 2011, *La sociologie des réseaux sociaux* (Paris : La Découverte) : 128

4 Cathy O'Neil, forthcoming, *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy* (Crown): 272

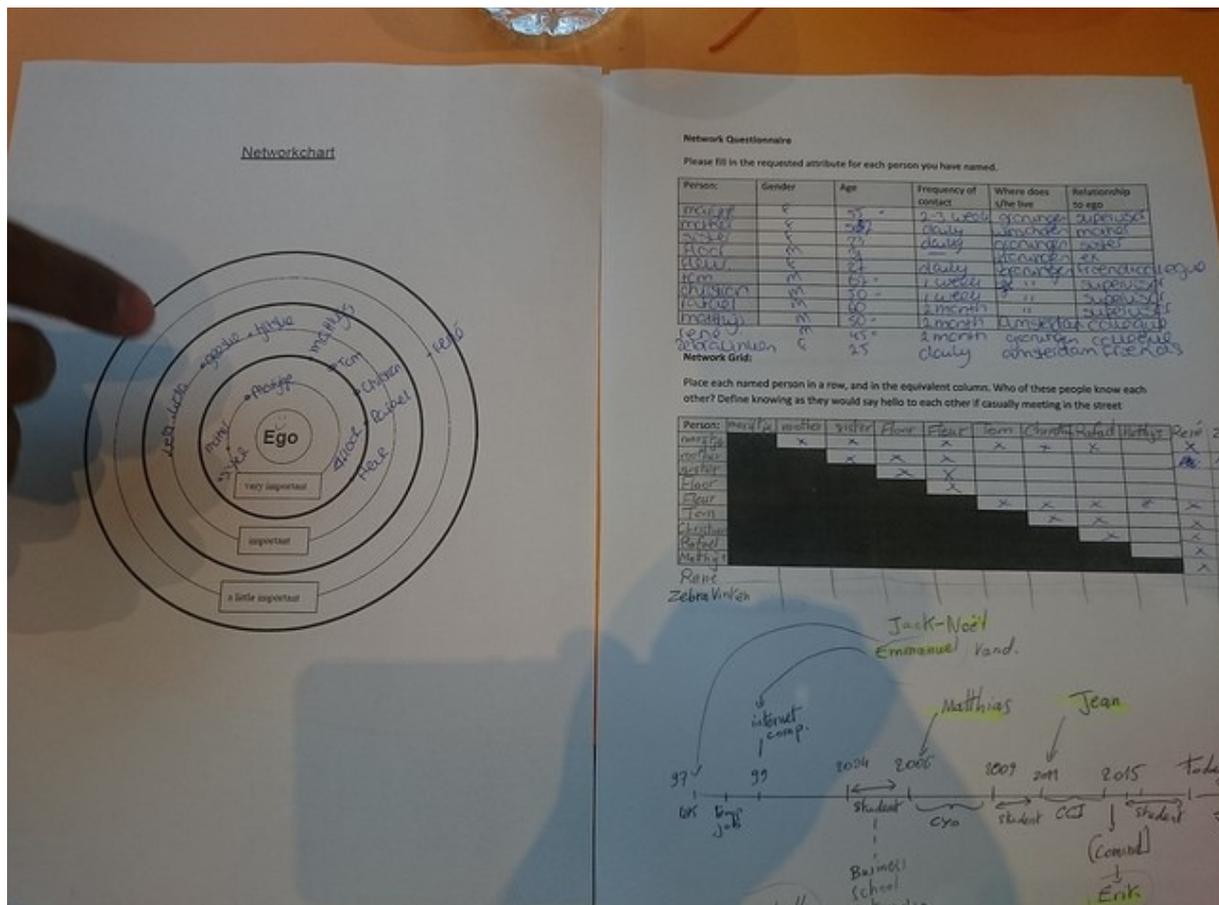


Illustration 2: A network chart produced during one of the workshops and discussed during coffee break

Tools are far from being neutral in the sense that they shape the data. In qualitative approaches, this statement may sound commonplace and echo, for instance, the 1970's debates surrounding mental maps. This opening of SNA to qualitative methods may appear overdue and marginal in the context of the conference, yet it clearly offers promising perspectives. Alongside Jan Fuhse, one of the advocates for mixing qualitative-interpretive and quantitative-explanatory methods, Stefan Bernhard and Andreas Herz suggested there could be a qualitative use SNA.

Putting these different outlooks on social networks was one of the conference's achievements. We could assume these three cliques (technical, empirical and reflective sub-groups) are complementary and all have a stake in interacting and collaborating together. However, reflecting on Nathalie Chauvac's warning on the cafeteria effect (or lack thereof), one may ponder whether such large-scale gatherings facilitate cross-field collaborations, or rather encourage homophily. A discussion with a prominent participant of the "reflective" sub-group showed he had no intention of even attempting to use his data quantitatively: for him this would not make any sense. Symmetrically, when someone asked Jean-Daniel Fekete whether he had given any thought to developing visualizations for data collection, the question was swept aside: his interest was in observing your data, rather than collecting it.

About the author: Olivier Marcel is a geographer working on the interactions between space and emancipation in globalizing cities. His fieldwork is based on biographical surveys that combine qualitative and quantitative methodologies and develop a pragmatic approach to the concepts of mobility, network and scale.