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What is the role of mapping for citizen-led planning in London ?

An investigation on the network of London actors involved in mapping or planning and concerned by this question.

Planning and mapping are tightly connected practices (Corner 1999). On the one hand maps are tools for planners, where they use and reinterpret maps usually produced by others for urban analysis. On the other hand maps are one of the essential products of planners work, where they design the final master plan or a series of maps translating their planning vision.

A key reference for this study will be *The Agency of Mapping: Speculation, Critique and Invention* (Corner, 1999). James Corner, who is both a practitioner in landscape architecture and urban design as well as a theorist and professor, defines in it key concepts to describe how mapping can operate in the contemporary practice of urban design and planning. [see part 1]

This PhD research wishes to continue the exploration of this seminal paper on questions of the role of mapping for urban design and planning in the context of three specific considerations :

- the significant evolution of the digital environment since Corner's paper was published, considering in particular the emergence of collaborative Web 2.0 and concepts of big data and smart cities (Batty, 2013). [see part 2]
- the participatory approach in planning that is more and more experimented by planners and promoted by academic literature, despite it still needs to be investigated to address multiple challenging questions and the relative lack of evidence of widespread success (Beebejaun, 2017). [see part 3]
- and finally regarding the specific case study of London, at both neighbourhood and metropolitan scales. This offers a great diversity of actors engaged with the questions of this study, that is London cartographic users and/or producers, interfering with planning issues, and in particular those interested in citizen-led perspectives [see diagrams n°1 and 3]. These actors will be accessed through direct collaborations (several are already underway), participation in collective workshops and seminars and/or semi-structured interviews. These different forms of meeting as well as the study of their published works will provide the main data source of the PhD research. [see part 4 and diagram n°4]

Diagrams attached :

- 1- Some of the London actors concerned by the question.
- 2- Towards a grounded theory of *civic mapping*, a definition with 4 parameters.
- 3- Towards a London Citizen Atlas, several mapping approaches to explore.
- 4- Mapping the London cartographic milieu related to metropolitan citizen-led planning: actors, data, visualisations, tools/techniques and concepts. Semi-structured interviews to collect the data.

1. Contemporary planning and mapping are tightly connected practices

A part of the literature review will look at other works that address the Corner's question. However this paper already offers **six fundamental concepts** that this research will reuse.

First, Corner mentions a structural difference previously highlighted by Gilles Deleuze and Felix Guattari (1987) : **a map is not a tracing**, "(...) the map is entirely oriented toward an experimentation in contact with the real (...) It fosters connections between fields (...) The map has to do with performance, whereas the tracing always involves an *alleged competence*." Tracing might operate on space. But urban spaces are more complex than simple 3D geometries, they are also defined by events, time, uses and users. "And, it is here, in this complex and shifty '**milieu**', that *maps*, not *plans*, achieve a new instrumental significance."

From there he explores four ways in which new practices of mapping are emerging in contemporary design and planning, which he terms as: '**drift**' (a kind of counter exploration from bottom and not above), '**layering**' (a way to create multidimensional complexity by overlaying different intentions or projects), '**game-board**' (using series of maps to test different scenarios "playing a certain thematic condition") and finally '**rhizome**' (tracing being figured by the hierarchical figure of the tree, mapping at the contrary "allows for a plurality of readings, uses and effects"). Rhizome in particular challenges the classic authoritative zoning plan or master plan, providing through the map "an infinite series of connections, switches, relays and circuits for activating matter and information".

He concludes his very inspiring article showing how mapping can be a tool to challenge the dominant orthodoxy in planning : " Analytical research through mapping enables the designer to construct an argument, to embed it within the dominant practices of a rational culture, and ultimately to turn those practices towards more productive and collective ends."

2. Recent evolutions in cartography.

Cartographic actors, data and tools are more and more numerous, diverse and unstable.

Debates on Smart City and the future of mapping.

In the last 2 decades cartographic tools have evolved considerably, as well as the diversity and quantity of cartographic data accessible :

- The rapid development of smart phones these last 15 years has stimulated the miniaturisation of different sensors now available for quite cheap prices (2013, Haklay). In particular GPS technology, quite rare and expensive before 2000, allows now to capture very easily geographic coordinates (2013, Haklay). It results that "more and more data are being collected" and "much if not most of what we now call big data is produced automatically, routinely, and by various forms of sensors" (2013, Batty)
- Web 2.0¹ development since approximately 2005 (2013, Batty) has widely opened accessibility to mapping information (2013, Haklay), allowing in particular collaborative mapping online (2014 Atzmanstorfer). In parallel it has increased exponentially the volume of data exchanged through social networks (ITU, 2017)
- In parallel GIS² software that allow to operate spatial analysis and design maps by combining different datasets are now open to non-specialists thanks to very efficient open source software as QGIS or free applications online easy to use (2014 Atzmanstorfer)

As a result, cartographic activities that were concentrated until recently within a few disciplines and actors (government institutions, corporate companies and some important universities) ([reference to be found](#)) opened widely to a large number of new disciplines and actors. Nowadays **activists, communities, small practitioners, researchers, journalists, small business and almost every citizen** has the capacity to collect data and create or analyse maps. In addition to this new accessibility to mapping tools, important parts of the data collected by public administrations, as well as a few private data, is now open freely to anyone. This is particularly true in UK which is ranked number one in the world for its leadership in open data by the Open Data Barometer (2017)

In parallel to this democratisation of mapping capacity, has emerged the concept of Smart City thanks to "aggressive strategy developed by information technologies giants such as IBM or CISCO" (Roche, 2014) or Siemens (Greenfield, 2013). These companies define it as a city largely monitored that can be adapted

1. Web 2.0, the second stage of development of the Internet, is characterized especially by the change from static web pages to user-generated content and the growth of social media.

2. A geographic information system (or GIS) is a system designed to capture, store, manipulate, analyse, manage, and present spatial or geographical data.

in real time to deal with more efficiently different issues such as energy, water, climate, transportation, waste or crime (Mattern, 2014 ; Greenfield 2013). It is supported by a triptych : powerful algorithms able to process the flow of big data captured by an extended and disseminated network of sensors (Batty, 2013). This vision has been criticised according to different angles. A first critic consists to condemn the simplistic positivist beliefs in technology that support this vision and to mock the pretentious rhetoric (Greenfield 2013). Dan McQuillan is more frightened by the perspective and see in the concept an hegemonic threat on urban spaces from corporate. Therefore citizens should collectively engage in a counter-mapping process to oppose alternative preferred visions (2017). Finally, other authors are less radically critic as long as citizens can openly participate to the Smart City processes, by being part of the data collection being able to scrutinise the algorithms and having platforms to share knowledge and run collaborative actions. They insist on the condition that citizens must be trained to develop spatial and technical skills to allow them to participate (Saunders and Baeck 2015 ; Roche 2014).

Our research question on the role of mapping for citizen-led planning will obviously interfere with these controversies on Smart City. And it is expected that the specific London case study will bring some evidence to address some of the stimulating questions raised by these ongoing debates.

3. Citizen approach in urban planning and design ; towards a grounded theory of ‘civic mapping’

There is a historic movement of urban designers, planners and urban thinkers who wish to integrate more participation, cooperation and inclusion in city making processes. They make this call for social justice and democratic reasons, but also insist that planning is much more efficient when based on citizen participation and concerned with everyday life practices and grass-roots data. (Davidoff, 1961; Jacobs 1961 ; Arnstein 1965 ; Lefebvre 1967 ; Healey 1997 ; Forester 1999 ; Campbell 2011 ; Brenner 2015 ; Beeb-beejaun, 2017).

Mapping being central in planning activity as we said in introduction, practitioners concerned with issues of citizen-led planning have set up specific mapping processes to involve citizens participation or to collect fine data on their everyday life practices. Several methods have been or are experimented but we think it is possible to qualify these different processes according to four types of citizens involvement. Before detailing this, it is necessary to precise that this typology has been somewhat inspired by another one defined by Muki Haklay to identify “levels of participation and engagement in Citizen Science projects” (2013). It goes from level 1 ‘Crowdsourcing’ (citizen as sensors), to levels 2 ‘Distributed Intelligence’ (Citizens as basic interpreters), then level 3 ‘Participatory science’ (Participation in problem definition) and finally to level 4 ‘Extreme Citizen Science’ where citizens collaborate fully to the research project, at the same level that professional scientists.

There is no direct filiation between Haklay’s typology and the one that this PhD research would like to establish, although there are several intersections between them :

Local citizen data : *data collected thanks to citizens’ fine knowledge of their neighbourhood.*

Several authors have demonstrated how everyday life practices should be one of the main planning target (Lefebvre, 1967 ; Jacobs, 1961 ; Madanipour, 2014). Therefore using grass-root citizens’ knowledge becomes essential for planning (Lynch, 1961 ; Healey, 1997). Although this approach is still quite marginal in conventional planning, collaborative mapping experiments to collect this type of data are not rare at local scale in the history of planning of the last 40 years at least (Hamdi, 1997 ; Hall, 2012 ; Cohen, 2017). However it is more difficult to find references on metropolitan scale experiments, except a few rare examples such as a very interesting one led in Helsinki from 2013 to 2015 to design the city master plan (Kahila-Tani, 2016).

Engaging and inclusive : *the mapping processes incentive citizens engagement and in particular hard to reach groups.*

In Helsinki, probably because the participation was only online, the participants were not completely representative of the city’s population but it could have been more balanced with additional public workshops as the author suggests it (Kahila-Tani, 2016). Diversifying the participation in collaborative mapping processes is a difficult challenge and for this reason some practitioners promoting collaborative mapping make their best to set up inclusive processes, being digital or physical (Cohen, 2017 ; Fonty, 2017)

Awareness and empowerment : *the produced maps make citizens aware of specific issues and are a media to share knowledge. These maps can also be used to provide evidence in favour of the community in case of conflicts with local authorities or developers.*

Participatory mapping allows citizens to practice and learn about maps, data and urban issues (Allen, 2015 ; Fonty, 2017), which is helpful to gain in *spatial literacy* (Roche, 2014), as it is demonstrated through the following example in Eastern hills of Bogotá. Being threatened by eviction because planning authority had decided to classify their area as highly risked to flood, the community started to precisely map these risks and share knowledge on local grass-root techniques used to prevent them. This empowerment in knowledge allowed them to have a more balanced discussion with the authorities, opposing a citizens' map versus a bureaucratic top-down map. (Allen, 2015).

Take Action : *the produced maps are tools to take action in community-led processes.*

The resulting map of unreleased spatial knowledge delivered through the unusual expertise of grass-root citizens makes visible potential unexpected positive interactions between places, groups and community proposals. (Hamdi, 1997 ; Corner, 1999 ; Secchi-Viganó, 2014)

The map can then be a *game board* (Corner, 1999) for organising a series of projects that serve the community, defining tactics and cooperations (Alevizou & ali, 2014). It is not a master plan but an essential base map for taking collective action and support a community-led plan.

These four types of citizen involvement in mapping is a first step for a grounded theory of citizen approach in mapping [see also diagram n°2]. The PhD research will be the opportunity to bring more evidence and connections to other academic papers to support or adapt this first typology. In the rest of the paper we will use the terminologies '**civic mapping**' and '**civic mapper**' to refer to this definition.

4. What methodology to apprehend the metropolitan scale ?

The mind boggles when regarding at the metropolitan scale the question of the role of mapping for citizen-led planning. Even if we reduce the investigation to a specific case study, here London, the landscape of metropolitan cartography related to planning issues seems so extended and complex that we don't really know from where to start. Indeed as we remarked it in part 2, cartographic actors, data and tools are so numerous, diverse and unstable that it appears very difficult to decipher this complex **shifty milieu** and its interactions with planning issues and citizen-led planning in particular.

But what if Corner's 'rhizomatic mappings' approach to explore the *shifty urban space milieu* would also work for the London cartographic milieu ? Mapping the mappers, their data, tools and products ? At first look it might appeared strangely circular but in fact practicing mapping should be an efficient way to question the agency of mapping and to test Corner's theory. Moreover, he is not the only one to see in mapping a useful method to decipher complex milieus or questions.

Mapping is indeed the methodological approach proposed by the philosopher, anthropologist and sociologist Bruno Latour to decode complex *scientific controversies* (2005). His approach has been later declined for other disciplinary areas such as design and architecture in Manchester School of Architecture (MSA, 2009-2012).

It is also a comparable method that André Corboz, historian of arts, architecture and planning, proposes in *Learn to decode the urban nebula* (1994) : " [...] the supposed chaos of the outskirts, so the hypercity, is rather an order difficult to guess. To achieve this, we must first learn more, component by component, the circumstances that led to the present state, and also carry out the typo-morphological inventory of the various elements of the hypercity. "

Finally, a similar method is also used in *Spatial Agency : others ways of doing architecture* (Schneider, T. & Till, J., 2011) which offers a collective portrait of an alternative practice of architecture and urban design based on an extended database of approximately 150 actors. In parallel to the book, a website has been created as a tool to navigate through these actors following connections based on shared motivations, tools and fields of practice. For each actor there is a map of these connections.

We will consider these different methodological hypotheses and start to '**map**' the **nebula of London cartographic actors, data, visualisations, tools and concepts** concerned by our question. We expect it is possible to make emerge from this mapping useful key concepts, typologies, communities of actors and elements of answer to our research question.

For most of the identified actors, we will map from specific works they engaged in citizen-led mapping and/or planning six fields of their practice [see diagram n°4]. These actors will be accessed through direct collaborations (which several are already engaged), common participation to workshops and seminars or semi-structured interviews. We will mostly focus on actors with a civic agenda operating at neighbourhood or metropolitan scales. But we will also look at essential metropolitan actors with no specific civic agenda such as CASA, the Greater London Authority or a few planning practices operating at this scale. These different forms of meeting as well as the study of their published works will constitute the main data source of the PhD research [see graphic n°1 and 3 of the actors identified so far].

While collecting and classifying the data according to our main fields [diagram n°4] and other sub-fields that will be defined during the collection process³, we will start mapping it and try to find repetitions, connections and patterns as Corner suggests : How can we analyse the overall network of actors ? Can we define a typology of visualisations and interfaces ? Are there any recurrent tools and techniques or visualisations types ? Is there any strategic data regularly mentioned but missing because inaccessible, dirty or messy ? Can the four 'civic mapping' types of civic involvement defined in part 3 or Corner's ones be used to describe actors' mapping practices ? Do other key concepts emerge ?

We will use for this analysis data visualisation processes related to Cluster Analysis, Idea Networking, Concept Maps or Social Network Analysis. Kumu.io is an online freeware that allows to create such visual analysis. The research will be the opportunity to acquire a better knowledge on qualitative data visualisations concepts and methods as well as software as Kumu, R or others.⁴

In addition to this approach that will allow to apprehend the research question at metropolitan scale, two local case studies will be looked in more detail to thoroughly explore the question at a neighbourhood level. Collaborations have already been engaged with South Kilburn and Tottenham through justMap to work on their communities planning vision⁵. These experiences will be the opportunity to collect evidence on the role of mapping for citizen-led planning and keep on building a grounded theory of civic mapping. It will also be a pretext to look at planning documents overarching the work of these communities : official master plans applied on their neighbourhoods, Council Local Plans (here Brent and Haringey) and finally the London Plan. And in each case, a particular attention will be addressed to the maps of these documents, and the related mappers, data and tools.

The methodology is clearly comprised in the field of participatory action research, where distinctions between *observers* and *informers* are quite blurred and where the research work can potentially influence the research object or actors (Latour, 2005). Despite many interests this participatory approach contains also various pitfalls to which we will try to pay attention as much as possible.⁶

6. programme to be detailed

- literature review
- network, cluster and concepts mappings
- interviews
- local case studies

3. Bruno Latour (2005) warns on the danger of a priori classifications that can avoid the researcher to detect things he is not ready to see. For this reason classification has to be open and flexible and assumes its imperfections. It is just a tool to progress in the analysis and if it doesn't work anymore there is no problem to adjust it or even change it for another one ([references?](#))

4. What is a PhD by design ? Could the design of these maps as well as the design of mapping workshops be the design part of this PhD ?

5. justMap is an open source mapping initiative to practice mapping for community-led planning in London. I participated to its creation in March 2016 and I am actively engaged to promote the initiative and experiment different forms of mapping with some London communities and coalitions involved in planning. <http://justplace-london.blogspot.co.uk/>

6. Engaged urbanist and research activist : how to deal with these different hats ? (find references in Campkin, B., (2016). Engaged urbanism : Cities and methodologies.)

Exploring a community of which the researcher is a specific actor (implication in justMap, Just Space and other activist groups) and which he wants to influence the development (find references in Latour, B., (2005). Reassembling the social.)

7. deliverable and contribution

In addition to some answers to our initial question, we can expect different other contributions :

- a grounded theory of local *civic mapping* (defined as mapping processes for citizen-led local planning).
- a guide for London communities who wish to engage in *civic mapping* practice.
- evidence from the London case study to inform debates on smart city : controlled and corporate driven or open and citizen-led.
- evidence from London local case studies on the interest of participatory planning and 'civic mapping'
- a portrait of *civic mappers and planners* in London and some propositions to enforce links and collaborations within these communities.
- a collection of London civic maps to prefigure a possible London Citizen Atlas
- some elements to contribute to metropolitan citizen-led planning grounded theory

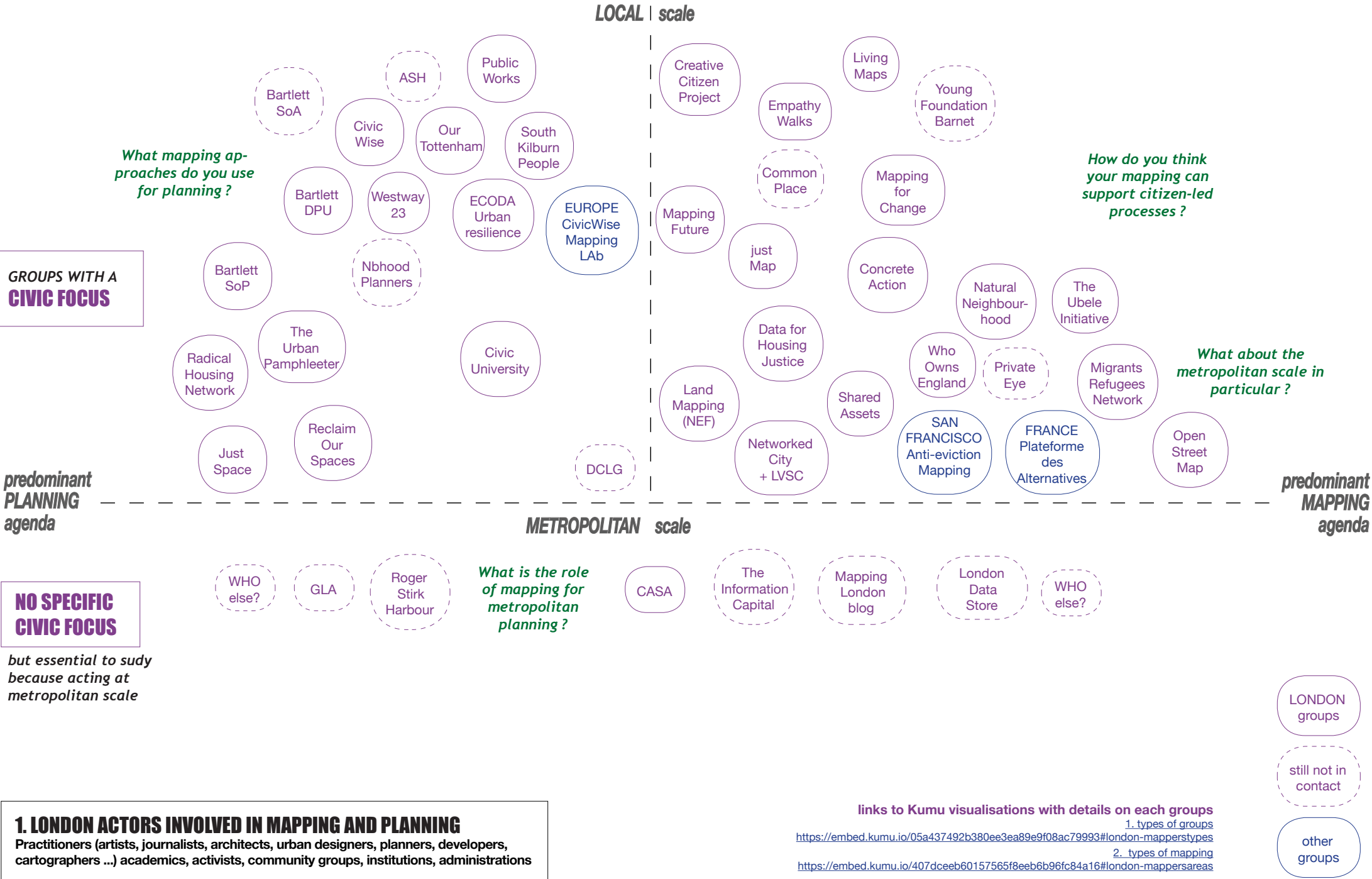
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What is the role of mapping for citizen-led planning in London ?

Questions to ask to some of the London involved actors.

PhD research, Nicolas Fonty, May 2017



2. Towards a grounded theory of 'civic mapping', a definition around 4 types of citizens' involvement.

- Cohen P., (2017) Our Kind of Town
- Fonty N., (2017) Occupy#PublicSpaces ; a tested mapping method for more inclusion in planning processes.
- Kahila-Tani M., (2016) Let the Citizens Map. Public Participation GIS as a Planning Support System
- Roche, S. (2014). GIS I: Why does a smart city need to be spatially enabled?

Engaging + Inclusive

must be
attractive
+ pedagogical
through workshops

- Lynch, K. (1960). The image of the city
- Kahila-Tani M., (2016) Let the Citizens Map. Public Participation GIS as a Planning Support System
- Haklay, M., 2013, Citizen Science and Volunteered Geographic Information ; overview and typology of participation.

Take Action connects

places, groups and
projects that matters
**base map for
collective action**

RHIZOME + GAME BOARD



Local Citizen Data

is a bottom-up collection of
**informations, comments
and aspirations**

on the neighbourhood
DRIFT

- Lynch, K. (1984), The Immature Arts of City Design
- Hamdi N. (1997), Action planning for cities : a guide to community practice
- Secchi, B. and Viganó, P. (2013). Habiter le Grand-Paris and Arc-en-Seine survey
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- McQuillan D., (2017). Counter Mapping the Smart City

Awareness + Empowerment

is a media for
sharing knowledge
or **makes visible**
what matters or what is wrong
LAYERING

- Allen, A., (2015). Can participatory mapping activate spatial and political practices?
- Fonty N., (2017) Maps, metropolis and urban design / Cartographic Tools for London Community-led Metropolitan Analysis, Design and Planning
- Mc Elroy, (2017) Anti-eviction Mapping in SFBA

Seminal paper on the role of mapping for urban design and planning

- Corner, J. (1999), The Agency of Mapping: Speculation, Critique and Invention

Important texts on citizen-led planning

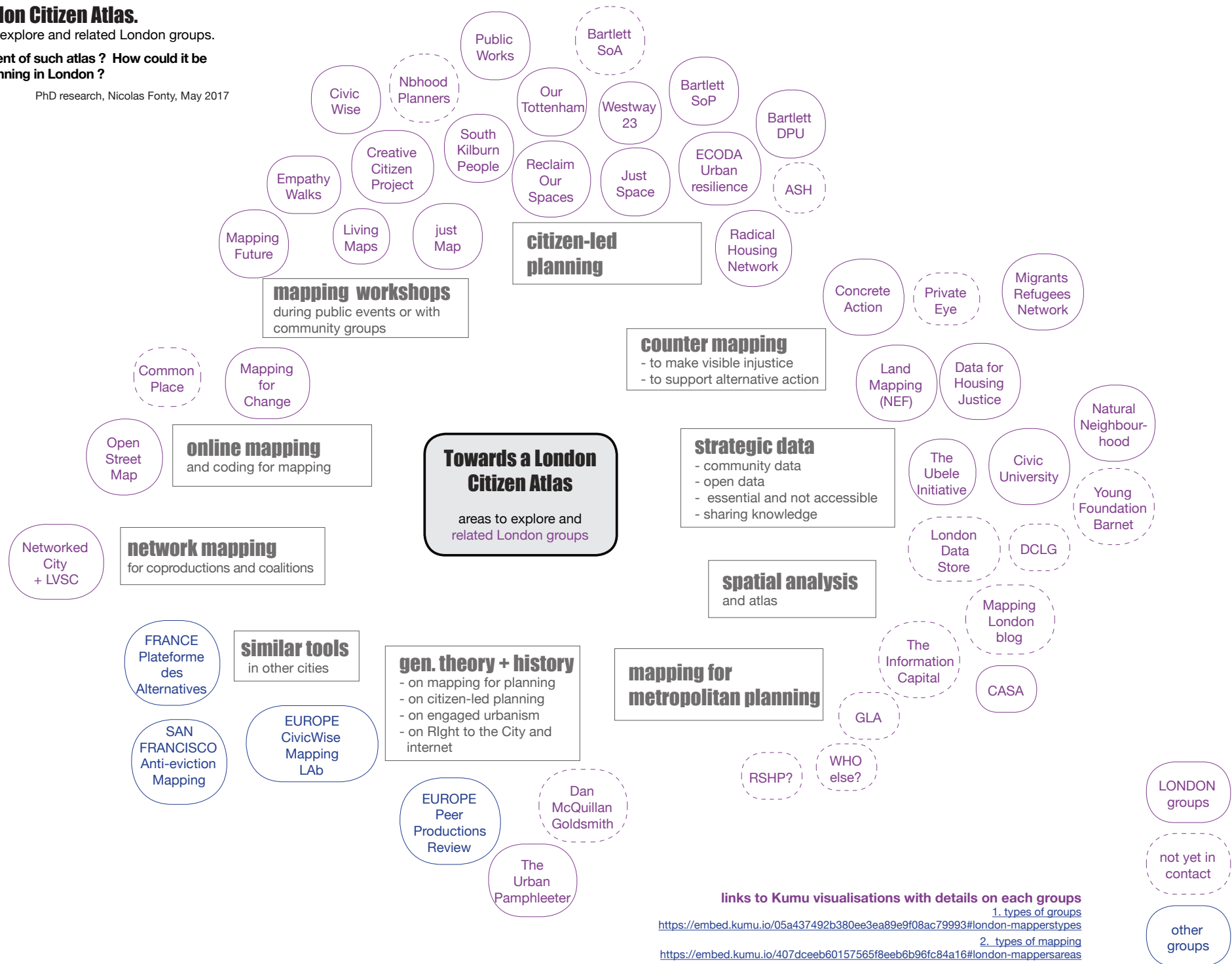
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- Brenner N., (2015). Is "Tactical Urbanism" an Alternative to Neoliberal Urbanism?
- Beebejaun Y. (2016). The Participatory City

3- Towards a London Citizen Atlas.

Mapping approaches to explore and related London groups.

What would be the content of such atlas ? How could it be useful for citizen-led planning in London ?

PhD research, Nicolas Fonty, May 2017

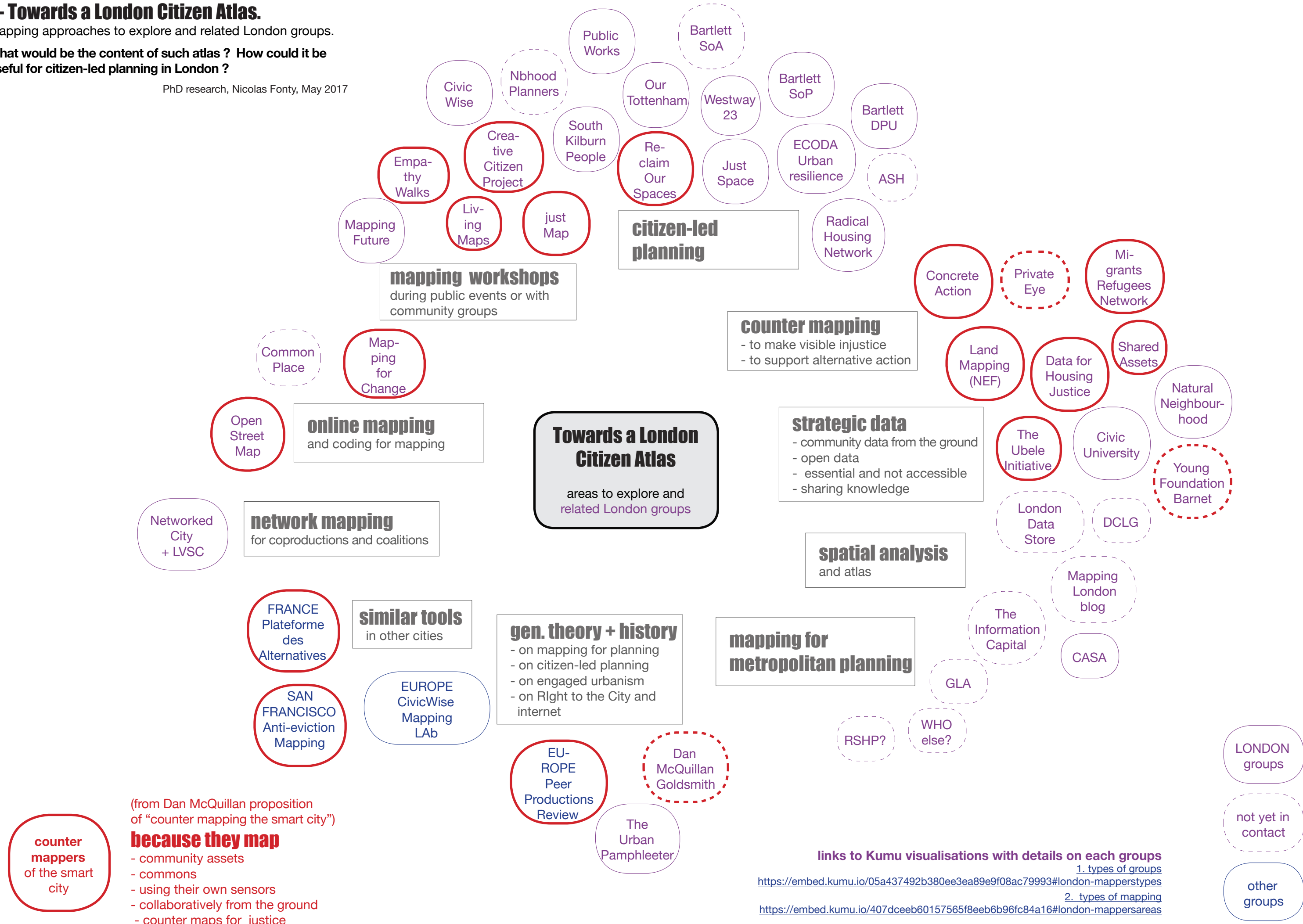


3- Towards a London Citizen Atlas.

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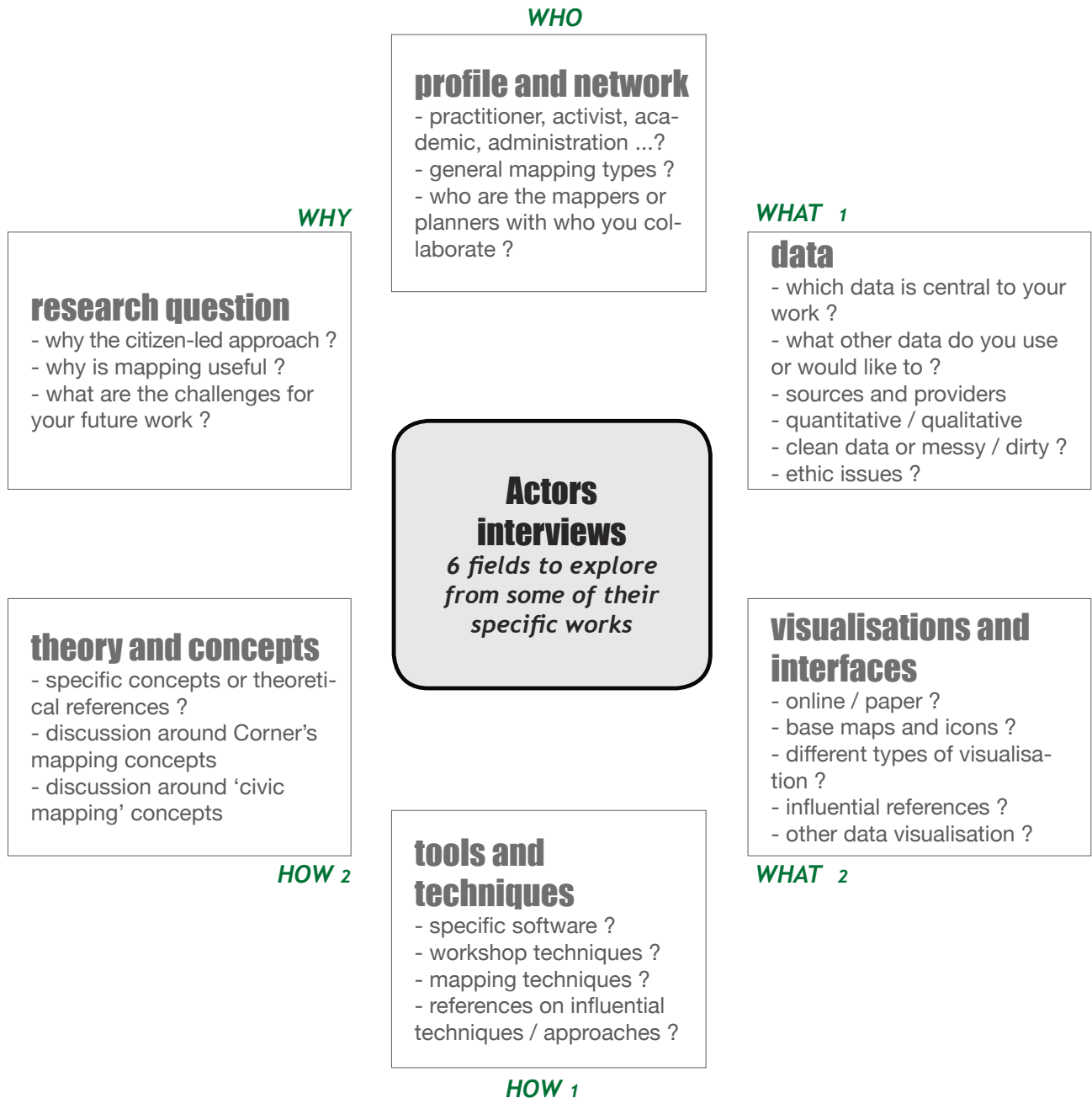
PhD research, Nicolas Fonty, May 2017



4- Mapping the London cartographic milieu related to citizen-led planning:

actors, data, visualisations, tools/techniques and concepts.

Semi-structured interviews to collect the data.



Important works that support the methodological approach

- Corner, J. (1999), The Agency of Mapping: Speculation, Critique and Invention
- Latour, B. (2005). Reassembling the social: An introduction to actor-network-theory.
- Awan, N., Schneider, Tatjana, & Till, Jeremy. (2011). Spatial agency : Other ways of doing architecture.
- Corboz, (1994) Learn to decode the urban nebula. (published in French, Apprendre à décoder la nébuleuse urbaine)