MAPPING NON-CONVENTIONAL, PARTICIPATORY DATA: SPACES OF ENERGY VULNERABILITY IN BARCELONA

Session details

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Timing: 11.15 – 13:00 and 14:00 – 15:00

Summary of session

Research concerned with energy poverty has become increasingly spatialized, part of a wider ambition to understand issues of energy though a geographical lens. Central to this growing field of energy geographies is a broad shift in geographical thought that has occurred over the last couple of decades, away from thinking about space as simply a container to something that is in fact relational and mutually constructed through interactions with the social (Massey, 1992).

Subsequently, there has been an increasing focus upon the democratisation of spatial data production and traditional Geographical Information Systems (GIS), with calls for GIS to reflect a 'multiplicity of geographical realities' (Dunn, 2007). Participatory GIS approaches have been central to this, methods that allow non-traditional user groups to gain access to GIS and to adapt it to fit their spatial knowledge, priorities, and needs. However, researchers interested in energy geographies or energy poverty have rarely engaged with these methodologies (with notable exceptions e.g. https://www.ejatlas.org/).

During the workshop we will do away with traditional types of GIS (points, lines and polygons!) focusing instead on participatory mapping approaches. The session will involve crowdsourcing information about spaces of energy vulnerability in the city of Barcelona, with help from local stakeholders. This information will be assembled in a participatory GIS mapping platform that allows for the collection of vague, spatial datasets. The workshop will allow us to reflect upon how we can apply participatory mapping methods in our own energy poverty research, whilst hopefully also generating a relatively unique spatial dataset!

Prerequisites: You do not need any technical knowledge of GIS, or to do any specific reading beforehand (although there is a list of suggested reading if you are interested). However, if you do have a laptop with you are encouraged to bring it along to the session.

Proposed activities

Stage 1: Introduction to participatory mapping
(approx. 15 mins)

The introductory slides will provide an overview of key concepts

- Why is geography/ spatial approach important in terms of energy poverty research?
- Issues with our current quantitative datasets – e.g. predetermined boundaries obscuring household vulnerabilities, limits about the type of data collected
- What is participatory mapping?
- Why is local knowledge important?

…. And a summary of the structure of the exercise

- Overview of exercise below
- Some examples: a single building (e.g. an energy advice service), a neighbourhood (e.g. an area-based retrofit scheme), the city as a whole (e.g. a city-wide energy policy)
- Encourage people to be creative, <u>not</u> an exact science
- Emphasis on the experimental approach of the session (not something that has been done before, so could go horribly wrong!)

Stage 2: Participatory mapping of energy vulnerabilities
(approx. 1 hour 10 mins)

The room will ideally be structured around four large tables, each with a theme:

1) Infrastructure – Housing stock, technology, networked infrastructure
2) Demographics – Age, tenure, ethnicity, health
3) Affordability – Income, energy price
4) Support networks – Energy cooperatives, energy advice centres, public services, retrofitting schemes

There will also be an additional table labelled 'other' which participants can add to if they feel the themes do not reflect something discussed. These are effectively like the thematic layers in a GIS which can be overlaid to understand more about the geographies of energy vulnerability in the city.

Each table will have at least one participant with local knowledge (ideally more!) who will lead discussions. The groups of participants will help add features to the map, engage in discussions, talk about and record similarities and differences between the national contexts they are familiar with (to be added on post-its around the maps). Groups of participants will move around in the opposite direction to stakeholders. This will go on for 2-3 iterations, depending on how quick groups work through the exercise *(20 mins per table).*

On the table will be a large map of the city, a prompt sheet relating to the theme, pens for drawing on the map, post-its for adding descriptions of attributes, and post-its for identifying wider links with other national contexts.

Stage 3: Reflecting on the mapping process
(approx. 20 mins)

We will then come together as a group and discuss some of the key findings and how useful the mapping exercise is.

- What were the key geographies that you identified in your groups?
- What do you find most easy/difficult to map? What is likely to be missing from your map?
- How do these related to different national contexts?
- Did you find the thematic separation useful, or was there overlap between the themes?
- How does the data generated differ from conventional Census dataset? (consider 'fuzziness')

At the end of the first session groups will be encouraged to add feedback to three flipchart boards: *the strengths of the approach, the weaknesses of the approach,* and *possible applications of the method.*

Stage 5: Digitising our discussions
(approx. 5 minute set up, 40 minutes mapping)

During the latter part of the workshop, we will use the Map-Me (Mapping Meanings) online Participatory GIS (PPGIS). Map-Me allows for the creation of online surveys for the collection of vague spatial data. Based upon a "spray and say" approach, Map-Me uses an 'airbrush'-style interface (the "Spraycan") to allow participant's to "spray-paint" on to a Google Map in order to answer vague spatial questions (e.g. "Where you think...?") without being required to enforce precise boundaries onto their data. This approach is designed to be more reflective of the way in which people think about the world.

After a 5 minute introduction to the tool, participants will visit the site in groups of 2-3: http://map-me.org/sites/energyV. The site will run through each of the themes (below) and participants will be able to "spray" onto areas of the city, and add comments, to reflect the discussions earlier in the day.

logged in as: caitlin.robinson@newcastle.ac.uk home logout

Map-Me Editor

Your demographic questions are:

Your map questions are:

- What spaces of energy vulnerability have you mapped in the city in relation to INFRASTRUCTURE?
  - Housing stock
  - Technologies
  - Networked infrastructure
  - Other
- What spaces of energy vulnerability have you mapped in the city in relation to DEMOGRAPHICS?
  - Age
  - Tenure
  - Ethnicity
  - Health
  - Other
- What spaces of energy vulnerability have you mapped in the city in relation to AFFORDABILITY?
  - Income
  - Energy price
  - Other
- What spaces of energy vulnerability have you mapped in the city in relation to SUPPORT NETWORKS?
  - Other
- What OTHER spaces of energy vulnerability have you mapped in the city?
  - Other

Your site will direct the user to *http://www.engager-energy.net/* once complete.

Thankyou!

Click here to view site.
Click here to edit the site.
Click here to return to your homepage.

Stage 6: Reflecting on the digitisation process

(approx. 10 minutes)

We will then come together as a group and discuss the Map-Me tool and its potential applications.

- *How useful was the tool?*
- *Did you find its 'fuzziness' useful or a hindrance?*
- *What did you find easy to represent, what was more complex?*
- *Was there much deliberation in your groups about the mapping process and how you represented different features?*

At the end of the second session groups will be encouraged to add further feedback to the three flipchart boards: *the strengths of the approach, the weaknesses of the approach,* and *possible applications of the method.*

Suggested reading

Broto, V. C., & Baker, L. (2018). Spatial adventures in energy studies: An introduction to the special issue. *Energy Research & Social Science*, *36*, 1-10.

Elwood, S. (2006). Critical issues in participatory GIS: Deconstructions, reconstructions, and new research directions. *Transactions in GIS*, *10*(5), 693-708.

Dunn, C. E. (2007). Participatory GIS—a people's GIS?. *Progress in human geography*, *31*(5), 616-637.