

# **Mapping the location, type & level of participation of BTR groups within thematic ecosystems**

## **The idea**

The research aims to develop a methodology to map and analyse data from below the radar (BTR) groups based on the online platforms where they are likely to develop / coordinate their activity. We introduce co-link analysis as a way to map new BTR groups that are thematically related. Therefore, categories are only defined to select an initial set of organizations on these platforms that will serve as 'seeds' to discover new organizations.

On the one hand, the data collected through this analysis will be used to inform further social network analysis that will show the interactions of the different clusters of thematically related organizations on each platform. On the other hand, social network analysis and participation analysis will be performed for each group to show the intensity of its overall online activity and to detect key contributors both in terms of their structural position on the network and the intensity of their contributions.

## **How does our proposal address the challenges described?**

While directories<sup>1</sup> provide data about organisations, they don't provide data on the level and type of participation in those organisations nor is the data regularly updated on these<sup>2</sup>. Furthermore, while research on the voluntary sector<sup>3</sup> provides analysis of the activity and impact of groups at a geographic/thematic level, they don't provide analysis at an individual group level.

By using social networking / crowd funding platforms as primary data sources, we can identify the location, level and type of participation of BTR groups / projects at an individual group level. Due to the nature of these platforms, content and interactions can be regularly updated, meaning the data collected will be up to date and the analysis can be regularly updated.

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<sup>1</sup> Such as Charity Commission, or at a local level directories from CVS, community action networks or local authority databases of community groups , as well as at a thematic level, for example, for the "collaborative economy" sector directories

<sup>2</sup> At best, annually

<sup>3</sup> The Civil Society Almanac, The National Survey of Charities and Social Enterprises and the Third Sector Research Centre

## **What impact will it have?**

By visualising the relationships between BTR groups / projects that are thematically related, we will **identify key actors who can help make links between existing and new groups**. Moreover, visualising the structural position of contributors and intensity of participation within each organisation, will **help these organisations to understand how they can better support and motivate their members**.

The map displaying the location and information of the BTR groups / projects will **enable stakeholders to identify BTR groups in their geographical area**. The interactive website will enable BTR groups to access the above resources. The data scraped and produced from this project will also **enable researchers to use these data to conduct their own analyses**.

## **Methodology**

The methods the project will develop and use are described below.

### **1. Category detection**

Drawing on previous research from the TSRC and other research programs on below the radar organisations, a set of categories based on the purpose of these organisations will be identified. An example of such categories could be:

- Community and participation building
- Service delivery
- Building sustainable alternatives
- Advocacy
- Community representation
- Common-interest communities

Guided by our own criteria, the categories above will be used to select, a set of BTR groups for each of the platforms.

## 2. Identifying relevant platforms

Platforms will be selected based on the following criteria:

- **Popularity criteria:** What platforms are likely to be broadly used by BTR groups in order to reach their targeted audiences?
- **Usability criteria:** What specific actions & types of information are allowed by these platforms that make them appropriate to meet the needs of BTR groups?
- **Timeliness criteria.** What useful knowledge on BTR groups can be drawn from aggregating, cross-matching & analysing data collected from these platforms?

As an instance of the kind of platform that would meet those criteria we have pre-selected **Facebook**<sup>4</sup>, although a more systematic selection will be performed for the actual research. Within the Facebook ecosystem, Facebook Groups provide a suitable environment for BTR groups to coordinate and develop their activity. Another instance of such platforms are **crowd funding platforms**, which provide a simple way to raise funding for projects of groups ‘under the funding radar’ or ‘capacity building radar’.

## 3. Mapping BTR groups through co-link analysis and filtering out results

Co-link analysis is a method implemented within the Issue Crawler<sup>5</sup> tool, developed by the Digital Methods Initiative<sup>6</sup>, to demarcate hyperlink networks in a distinctive way. Issue Crawler deploys the method of co-link analysis in order to undercut the authority effects to which citation and network analysis are vulnerable: “**instead of assigning value to the overall number of links that sources receive, co-link analysis seeks to locate ‘topical clusters’ of sources, by identifying co-links in a thematic neighbourhood**, or as we call them ‘issue networks’.”<sup>7</sup>

We intend to **adapt co-link analysis to the purposes of this project**. As starting point, we will select for each platform one group / project within the UK that falls within each of the

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<sup>4</sup> We believe that a huge number of BTR groups are likely to be on Facebook because it allows groups to reach a wide audience without the need of dealing with the complexity & means required to create and maintain a website. It has 24m Britons logging into the social network daily [www.theguardian.com/news/datablog/2014/feb/04/facebook-in-numbers-statistics](http://www.theguardian.com/news/datablog/2014/feb/04/facebook-in-numbers-statistics)

<sup>5</sup> <https://wiki.issuecrawler.net/bin/view/Issuecrawler/WebHome>

<sup>6</sup> <https://wiki.digitalmethods.net/>

<sup>7</sup> [http://research.gold.ac.uk/7773/1/Marres\\_redistribution\\_of\\_methods.pdf](http://research.gold.ac.uk/7773/1/Marres_redistribution_of_methods.pdf)

above categories. Using our Facebook example, we will write a script that captures for each group selected the links to its members' individual profiles and from these personal profiles, the links to all the other groups in which they participate. From all the links returned, it will only keep those groups in which at least two members of the initial group participate. Key members from former iterations will also be used in subsequent iterations.

**Our assumption here is that it is likely that two groups are thematically related if at least two people have shown interest in both of them.** Thus, the resulting set of links is expected to represent an ecosystem of BTR groups which are thematically related. Crowd funding platforms present a similar data structure, with funders participating in one or more projects. Co-link analysis will not only be used as a collection method of groups / projects, data from this analysis will also be saved to inform network visualisations.

From the total list of groups / projects (links) obtained, we will write a script that compares their names against the names of those included in Third Sector databases<sup>8</sup> in order to keep only those groups / projects that remain unofficial, and thus, can be considered BTR. Likewise, we will remove those groups whose geographical location is either undefined or different to the UK.

#### **4. Analysing and visualising the results**

**Social network analysis and visualisation of all groups / projects by platform:** We will write a script that captures the relations between groups / projects based on their common contributors (being either members or funders) for each platform. The resulting data will be used to create a social network visualisation for each of the platforms. Each group / project will be represented as a node of the network and the edges will represent common contributions to both groups / projects. Nodes that belong to the same thematic hub resulting from the co-link analysis will be coloured alike, what can give an idea of the type activity that characterise them.

**Plotting groups / projects on a UK map:** All groups / projects from every platform will be displayed on the map. The geographical location of the groups / will be scraped from their sites.

**Data of each individual project / group:** We will analyse and visualise the data of a sample of the organisations in case we cannot automatize this process.

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<sup>8</sup> Such as the Charity Commission.

- **Social network analysis and visualisations:** Relations between members' individual profiles can be captured in Facebook. These visualisations can provide meaningful insights: the density of the network as a whole or who are the central members on the group.
- **Analysis of participation:** Firstly, we will decide on actions relevant to each specific platform, being either posts, events created, amounts of money contributed, comments and so on. By aggregating the number of times that an action is performed on the platform, it is possible to measure who are the most active contributors or the intensity of the group / project activity. These counts will be displayed for each project.

We will create a website that will bring together all these components in an interactive way. Data will also be made publicly available on the website for further research in an appropriate format. Scalable models and longitudinal analysis of the data could be implemented in the future based on this methodology.