

Using Actor-Network-Theory as a Means of Exploring the Management of Community Development Networks.

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Abstract: This paper explores the use of Actor-Network-Theory (ANT) as a means of understanding the management of community development networks. This was undertaken through the application of ANT as a theoretical methodology to the case of 'Organisation A', a community development organisation operating in Ireland which has grown rapidly over the past 10 years and is embarking on a strategic review intended to examine all aspects of the organisation. The data collection methodology is qualitative and involved senior managers participating in semi-structured interviews. An analysis framework based on ANT was developed with the aim of understanding and articulating the management of this organisation as a complex network. The application of ANT is used to map the state of affairs of a network through the use of conceptual tools. Central to this is identifying key patterns of action as translations. These patterns are then used to explore how translations are negotiated through to completion. In the case of Organisation A, this highlights the management of operations in a network of varied stakeholders. A key output of this study was in identifying the centres of controversy, as areas where translations fail, and need to be further explored. Identifying these areas creates a map which can be used by stakeholders to further assess and develop the empirical state of the network.

Keywords: ANT, community development, community development networks, community development practice, community stakeholders, complex organisations.

1. Introduction

This paper discusses the use of Actor-Network-Theory (ANT) as a means of exploring the management of community development networks. As a theoretical methodology, ANT recognises the world as a collection of relative networks (Latour 2005). These networks are understood to be collections of actors who are connected together through their relations and associations with each other (Latour 2005; Law 1992). Through the application of ANT, the frames of reference of the actors involved can be used to explore and understand the functioning of a network. To investigate this, this paper discusses the exploration of Organisation A as an actor-network and assesses the application of ANT to the case. The case of Organisation A, a community development organisation operating in Ireland, is placed central to this study. The data collected and analysed from Organisation A was initially used for the purposes of a comprehensive master's thesis. The case of Organisation A is selected due to the complex nature of community development networks. The purpose of these networks can seem contradictory when defined as community-led, and yet are often confined by the regulations of institutions and authorities providing necessary funding. Applying an ANT framework to such a network creates an opportunity to unpack complexities and understand how the network functions.

2. Actor-Network-Theory as a theoretical methodology

ANT understands the world to be a collection of relative networks (Latour 2005). The term network is not to be taken in the traditional sense of networks (Latour 1996), but rather as series of interconnected heterogeneous actors. The resulting network is fluid and dependent on the continual reproduction of actions and relations to maintain a particular outcome. In this way, networks are temporary connections between actors working towards an overall aim or function (Law 2009; Law 1992). The theory was first developed as a means determining how the production of scientific knowledge can be attributed as being 'objective' (Michael 2016; Latour 1987). By focusing on the movement of work within a laboratory, patterns of action rendered visible the network which produced objective accreditation as an effect of the work undertaken (Latour 1987). This is visible through the traces left behind, such as an actor remembering a conversation, or having a physical product as the result of an interaction. By adopting ANT as a theoretical methodology, it is possible to use such traces to understand the functioning of a network.

To successfully apply ANT, certain tenets need to be adhered to. The first of these states that networks should be approached with no prior assumptions. As a product of the interactions between actors, it is the actors who must shape the network by disclosing information from their frames of reference. To adopt Latour's (2005)

analogy, exploring an actor-network begins as an artist would begin painting, by beginning at the centre of the network and working outwards, rather than choosing the frame first and then working inwards. This is significant in the field of community development where increasing complexity has resulted in an ambiguity in delineating the boundary of the field (Daly 2007; Lee 2003).

Secondly, a 'flat ontology' must be adopted. This recognises relations between actors as being organised in flat *lengths* of associations (Latour 2005; Law 1992), rather than around different levels or depths. Importantly, this perspective rejects the analytical distinction between the macro- and the micro-social (Latour 1996; Law 1992). In the community development field, this distinction is strongly prevalent as the dichotomy between 'top-down' institutions and 'bottom-up', or grassroots, community groups (McDonagh 2017; Daly 2007). For example, Organisation A is a community-led organisation but is restricted by the regulations of institutions which provide them with necessary funding and supports. It would therefore prove difficult to determine a suitable 'level' to analyse the organisation from. As a series of flat lengths of associations, an "empirical grasp" (Latour 2005: 251) can be reclaimed.

Finally, ANT does not make any distinction between humans and non-humans. Instead, all actors are understood to have no inherent qualities. These are instead produced as a relational effect of the network, and therefore, the distinction between human and non-human actants is of little analytical importance (Law 2009: 147). This creates the opportunity to objectively trace together the intricate patterns of action which enable a network to "simultaneously embrace a multitude of objects" (Strum and Latour 1987: 790). When applying ANT to a study, an actor is "any entity that more or less successfully defines and builds a world filled by other entities with histories, identities, and interrelationships of their own" (Callon 1990: 140). In this way, an actor can be both a collective or an individual. In the case of Organisation A, the organisation itself is recognised and functions as an actor, and yet it is also made up of a collective of human and non-human actors.

3. Applying Actor-Network-Theory

The distinction of ANT as a theoretical methodology is significant. Rather than a social theory, it is a "disparate family of material semiotic tools" (Law 2009: 145). As such, ANT is used as a 'conceptual toolkit'. The value of this is in the capacity of ANT to explore the current state of affairs of Organisation A as an actor-network. This emphasises the importance of ANT as a theoretical methodology instead of simply a theoretical lens. In other terms, the actual 'doing', or carrying out, of ANT lies in its application and practice. To describe this further, the application of ANT to Organisation A happened in two phases: the deconstruction of Organisation A, and the reassembly of the actor-network.

During the first phase, semi-structured interviews were conducted with senior managers and directors from Organisation A. This sample was selected due to their positions as mediators within the organisation. The initial interviews allowed for participants to describe the network from their own frame of reference prior to scientific explanations (Kvale 1996). Follow-up discussions introduced the participants to ANT in order to integrate a reflexive lens on the operations and functioning of Organisation A. The content from these interviews was then written up as descriptions. Within ANT, descriptions are observations made regarding the relations between actors in a network (Latour 2005). Similar to Latour's belief that network exploration should 'follow the actors' (2005), Geertz (1973) has previously questioned how, without such descriptions, someone can speak on the behalf of the subjects of their study, especially if they cannot speak to them directly. Therefore, the descriptions present a collective frame of reference, rather than an 'abstract identity' (Geertz 1973: 24) of the organisation.

The second phase was to create an actor-network 'map'. This focuses on the everyday actions, activities and behaviours of actors (Nimmo 2011: 113). After identifying the primary actors, the next step is to identify the main patterns of action, conceptualised as a translation. A translation is what makes an actor-network fluid by mobilising actions through a network (Callon 1986; Michael 2016). A successful translation passes through four moments: problematisation, interessement, enrolment and mobilisation (Callon 1986):

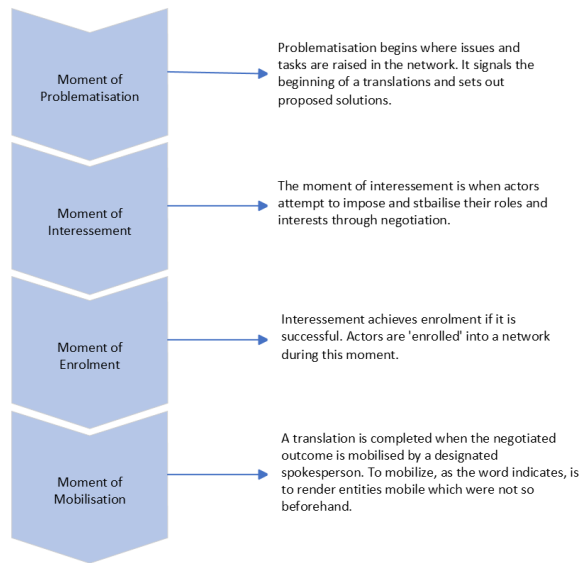


Figure 1: Callon’s Four Moments of Translation (1986).

It is also of interest to take into account what happens when a translation fails. Where different frames of reality “rub up against one another” (Law 2009: 144) a centre of controversy, as an area of shared uncertainty (Venturini 2010; Latour 2005; Dolwick 2009), is created. These areas can cause disruption by altering the state of beliefs and “the identity and characteristics of the implicated actors” (Callon 1986: 73). Identifying any centres of controversy and examining what devices and techniques were used in their construction can therefore further help to understand the functioning of the network.

3.1 Organisation A as an actor-network

The translations below are derived from the dominant patterns evident in Organisation A’s actor-network. These patterns depict a representative outline of the successful actions carried out. The reproduction of these patterns of action contributes towards Organisation A’s overall goal of developing communities. In order to detail this more clearly, the translations have been laid out according to each moment of translation.

Table 1: Actions which begin the moments of problematisation.

Translation A	Translation B	Translation C	Translation D
Issues and tasks are raised by directors of the board	Community groups approach Organisation A 1) For financial support 2) For support during crises events	Programme referrals are assigned from government institutions	Individuals come to Organisation A for support

Problematiation begins where issues and tasks are raised within the network. Importantly, this is only done with a preconceived solution in mind. This solution involves establishing relations with other actors to realise a potential resolution by creating a “system of alliances” (Callon 1986: 61). As is evident in table 1, each of the translations begins with an external entity raising a task or issue with Organisation A as the provider of a potential solution. Identifying moments of problematisation in a translation reveal what type of issues and tasks are most commonly being undertaken by the network and who they are being raised by.

Table 2: Interesement devices as described in the collected data.

Translation A	Translation B	Translation C	Translation D
<ul style="list-style-type: none"> Meetings Phone calls Information documents Presentations 	<ul style="list-style-type: none"> Funding guidelines Meetings Community events Phone calls 	<ul style="list-style-type: none"> Programme guidelines and regulations Computer recording systems Phone calls Emails 	<ul style="list-style-type: none"> Relations with stakeholders Meetings Community events Computer recording systems

Translation A	Translation B	Translation C	Translation D
	<ul style="list-style-type: none"> Information documents Community relations Staff experiences 	<ul style="list-style-type: none"> Relations with stakeholders Evaluation reports 	

The moment of interestment, when the identity and roles of actors are realised within an alliance, is supported by the use of interestment devices. These devices are anything which is used to negotiate particular interests and roles during this moment. They do so through the displacement of opposing, or competitive interests (Callon 1986). In the Organisation A actor-network, there was evidence of a varied range of devices being used (Table 2). More specifically, these devices were used to negotiate translations by informing frameworks and by creating relational spaces between actors.

Frameworks are used to give the impression of a clear and precise boundary (Callon 1989). Actors within Organisation A implement particular frameworks to aid the enrolment of other actors by appealing to a particular frame of reference. So much so, that the translations reveal particular frameworks which are consistently used by actors within the network. Notably, the community development practitioner frames professional knowledge in a manner that can be negotiated into the existing community knowledge base as 'common sense' (Gilchrist 2019). They must relate information so that it can be sustained by the social reality of any actors involved (Eversole 2010; Fussell 1996). Acknowledging that these multiple and varied frameworks are simultaneously and consistently being enacted sheds light on the seeming complexities of the network. From this, the "informal, fragmented [and] ad hoc" (Neville 2016: 731) practice of community development can instead be appreciated as the use of sophisticated and layered frameworks by actors.

Closely aligned to this is the use of relational spaces. Here relational spaces are understood as events which are "practically mediated through media and communication technologies, as language-based systems of symbols and material practices" (Ek 2006: 54). Organisation A described three relational spaces frequently used; in-person events such as meetings and consultations, digital and virtual spaces and office spaces. When negotiating roles and interests during a translation, the use of relational spaces provides an opportunity to delimit the scope and context of a particular translation. The effective use of relational spaces can enhance the negotiation process through the provision of a space through which all necessary information can be gathered and mediated. Relational spaces offer the potential to assess the "situated knowledge of a physical ecosystem" (Eversole 2010: 5), which in this case is the working environment of Organisation A. Given the fixed geographic ties of Organisation A, this assessment allows for "constant revisions to our understanding of the immediate and changing world in which we live" (Gilchrist 2019: 61). Particularly when taking into account the overlapping crises recently faced by communities, there is a recognition that "community have become the watchworld of crises" (Meade 2020).

Table 3: Moments of Enrolment and Mobilisation

	Translation A	Translation B	Translation C	Translation D
Moments of Enrolment	A solution for the task or issue raised has been agreed upon	<ol style="list-style-type: none"> Access to funding has been successful Communities are provided with necessary support 	Participants successfully take up places on programmes	Individuals receive support from Organisation A
Moments of Mobilisation	Organisation A facilitate the resolution and become the spokesperson for all associated with the resolution.	Organisation A take on the role of spokesperson in advocating for the needs of the community group.	Organisation A fulfil the role of spokesperson for programme participants, as well as the programme producers.	Where a suitable resolution is found Organisation A take on the role as spokesperson for the individual.

Moments of enrolment are reached when the roles and interests of all actors involved have been negotiated and defined (Callon 1986). This moment can only be reached if the previous negotiations were successful. This is seamlessly followed by the moment of mobilisation, evident through the appointment of a spokesperson who enacts the agreed upon solution (Latour 2005). Interestingly, in the Organisation A actor-network each translation ends at the moment of mobilisation with Organisation A adopting the role as spokesperson. This position can be equated to that of a representative within the field of community development, especially where community development practitioners are labelled as catalysts for the development of local communities

(Henderson and Vercseg 2010; Toomey 2008). In the case of Organisation A, their negotiation into this position is purposeful as it is a position from where they can act as a central conduit for their network of stakeholders.

The above translations represent the most common patterns of action within the Organisation A actor-network. However, in the unpredictable and everchanging nature of community development (Meade 2020; Lee 2003) the completion of translations is not always a given. Where the above translations identify the components used to draw together the actor-network, the following controversies reveal what is hindering the successful functioning of the network (Neisser 2014). These controversies reveal the intricate and tightly interwoven nature of organising within a network. This demonstrates how, in place of compartmentalisation, reassembling the actor-network offers a means of depicting and exploring any tensions as they exist in the modern world (Cunha and Clegg 2019; Nimmo 2011).

3.2 Controversy A – The management of multiple representations

The first pattern of uncertainty evident is regarding the management of multiple representations. As a community development organisation, Organisation A takes on multiple, and sometimes contradictory roles and interests in order to represent their wide range of stakeholders. The actors of Organisation A facilitate “boundary-spanning co-operation, co-ordination and communication” (Gilchrist 2019: 55). The interests of Organisation A lie in their ability to build and maintain the conditions necessary for the successful completion of a translation. It is through this ability that they can place themselves in the position of spokesperson, and subsequently act as a representative for a hugely diverse range of stakeholders. However, this exposes a functional ambiguity (Shaw 2008).

Uncertainties arise over difficulties regarding the management of these representations, and the fact that they are continuous, overlap and can compete with each other. Conflicts of interest are evident when taking into account that Organisation A also act as a representative for other actors, such as funding bodies, government agencies and other development organisations. The appreciation of ANT also takes into account non-human actors such as office buildings, computers, cars and community halls. This is a prime example of how “modern management occurs in a net of fragmented, multiple contexts, through multitudes of kaleidoscopic movements” (Czarniawska 2008: 6). In a sense, it can be considered how Organisation A are in a position whereby they have to grant their members autonomy but also potentially constrain their freedoms by taking collective actions towards the overall development of local communities (Tortoriello *et al* 2012).

Given these conflicts of interest, actors within Organisation A must be able to align their roles and interests within any translation they are involved in. In this position, actors continually have to reorganise in order to accommodate representations. This enables Organisation A the opportunity to displace any conflicting interests and enrol any variety of stakeholders within a single translation. They do this through employing the use of frameworks to communicate and enact particular ideologies. Organisation A were notably reliant on the use of metaphors, clarifying terms, and images as a way of moving between the known and the unknown (Nisbet 1969). As Turner describes, a collective of symbols and metaphors can have “core meanings linked analogically to the basic human problems of the epoch” (1974: 28). Therefore, these ideologies communicated throughout the network can be said to be reflective of the movement of the network as a complex entity. In the case of Organisation A, the idea of building the capacity of communities was most commonly embedded. Actors of the network used a metaphor, which can be traced back to Chinese philosopher Lao Tzu, which states that if you teach a man to fish you can feed him for a lifetime. Alongside this, Organisation A adopted the clarifying term of a ‘holistic approach’. This emphasised the shared perspective that a community is made up of individuals and that supporting individuals contributes towards supporting the community. As well as this, this framework is used to address any “spasms of adjustment” (Fussell 1996: 47) when aligning interests and roles towards the development of local communities.

3.3 Controversy B – The remit of community development work

The second controversy is regarding the ambiguous remit of community development work. The work and actions undertaken within the field of community development are varied and happen in accordance with events in the wider ecosystem of a network. As Shaw states, “community has always accommodated a range of related but contradictory meanings” (2013: 1), a sentiment which also extends to the practice of community development work. Organisation A actors are also restricted by the “need to undertake changes driven by the evolving demands of their own donors” (Laurett and Ferreira 2018: 881). This is highlighted by the fact that none of the patterns of translation originate within the organisational network and instead are primarily based on

responding to issues and tasks raised by other stakeholders. Therefore, although any subsequent negotiations work towards the general aim of developing local communities, there is little to no restrictions placed on what problems or issues can be raised.

The importance of Organisation A's function in the representation and mobilising of community development actions is highlighted here. For example, when local community groups seek out support, as in Translation B, they are establishing a relationship whereby Organisation A can further mobilise their interests as their representative along longer lengths of associations where they are not directly associated. The value of this ability to represent interests across networks is also perceived to be a necessity. Given the geographically bound nature of community networks, the initial interests of geographically fixed actors can be reduced or lost when moving up lengths of connections and associations. Community ecosystems of related actors are composed of intricate connections and embedded into 'place connections' (Cavaye and Ross 2019: 3). This also involves all aspects of the physical environment which are inherent to the working environment of Organisation A.

Boundary objects, which "straddle different networks (or social worlds)" (Michael 2016: 155), are placed so as to continually assess an actor-network. These actors act as the most direct connections to the working environment as the actors that are 'on the ground'. Relational spaces are commonly facilitated by boundary objects for the purposes of this assessment. For example, events which take place in community halls, or meetings in office buildings. Within the field of community development, this assessment presents itself as "the cultural presuppositions, values and meanings" (Eversole 2010: 5) that are carried through actions within the development process. The information gathered in these relational spaces are crucial to informing frameworks to be "understood and applied in new domains" (Tortoriello *et al* 2012: 1027). Therefore, where boundary objects have a stable presence within a network, it can be characterised as a self-organised web of mutually symbiotic relations (Gilchrist 2019; Daly 2007). In this way, where the individual translations in themselves are not enough to constitute community development, the output of the collective translations is what *becomes* community development. Therefore, the roles and interests of community practitioners are multiple and varied and defining them is a necessary part of each translation in order to embed the work into the wider actor-network.

4. The benefits of applying Actor-Network-Theory

A key advantage of the actor-network map is the ability to understand the interconnected nature of a network rather than undertaking an analysis in isolated segments. By looking at the patterns of action and inaction uncovered, it is clear that there are areas of overlap, from negotiation devices which are enacted in multiple ways, to similar uncertainties which contribute to both centres of controversy. By following the actors' descriptions of their current state of affairs, it depicts the organic way in which networks function. This includes non-human actors that have "the potential to shape civil society" (Daly 2007: 162), and virtual spaces through which relations are increasingly being undertaken (Czarniawska 2008). As a result of this, the findings are directly related to the concerns and understandings of the actors. Their collectively constructed network is deconstructed and reconstructed "as a whole set of meanings and as a lived experience" (McDonagh 2017: 3) which they can recognise through their individual frames of reference (Latour 2005). Therefore, the resulting actor-network map has great potential to be used as a tool to highlight areas of empirical development within the network.

The use of ANT also has significant reflexive properties. The actors who participated in the series of interviews were integral in providing descriptions to build the actor-network. Importantly, the interviews became a process where there was "no distinction between the one who teaches and the one who learns" (Fussell 1996: 52). By introducing the participants to ANT and including them in the research process, the participants were given an opportunity to reflect on their own frames of reference without being restricted to the guidelines of, for example, a computer reporting system. Where the reflexive properties of ANT have been previously recognised within a research process (Sheehan 2011; Michael 2016), there is the potential to investigate the use of ANT as a reflexive tool for professional use within organisational assessment and evaluation processes.

5. Areas for further consideration

The analysis of a translation begins at the moment problematisation. However, there is little to no recognition of the issue or task prior to being raised with a corresponding solution. Therefore, issues and tasks are only taken into consideration where there are evidently active attempts being made within the actor-network. This asks the question of what actions and steps can be made in order to expand this reach to acknowledge the problems

not actively being addressed. In relation to crises events, this would assist in creating opportunities to prepare and plan, rather than only being able to take up action when there is an immediate reaction or solution is needed. Equally, there is an opportunity to further investigate the prioritisation and selection of tasks and issues translated as the displacement of translations against one another.

As well as this, an actor-network depicts the state of the network during the timeframe within which the data and descriptions are collected. Therefore, in order for ANT to be implemented as an effective tool for use by the actor-networks themselves, a method of being able to regularly implement ANT tools and frameworks would be required. However, this has potential impracticalities that need to be considered. In particular, the time required to carry out an application of ANT has resulted in the process being dubbed as a “*slowciology*” (Latour 2005: 122). The distinctiveness of what should be included and not included within a network is also up to the discretion of the analyst (Michael 2016). Therefore, while the process is necessary for the reform of the current knowledgebases in an actor-network, consideration would need to be given as to how ensure the process isn’t manipulated along the way.

6. Conclusion

This paper has demonstrated the use of ANT as a means of exploring the management of community development networks. This was carried out through the application of ANT to the case of Organisation A, a community development organisation in Ireland. ANT focuses on the associations created that establish heterogenous networks through which actions and translations move through (Latour 2005; Michael 2016). Adopting ANT as the theoretical methodology for this research project takes into consideration the continually shifting nature of networks (Latour 1999). The application of ANT requires adhering to the basic principles of ANT and the support of conceptual tools. In the case of Organisation A, the primary concepts used were to identify translations, as the main patterns of action within the network. Following this, two centres of controversy were also identified. Therefore, the findings enabled the most evident patterns of action and inaction in the Organisation A actor-network to be explored. As a result, the application of ANT demonstrated its ability to determine the nature of ambiguous networks. From this, there is potential for ANT frameworks to be further developed for implementation and practical use of ANT in the evaluation and assessment of actor-networks.

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