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Eliciting data on social relationships: The use of hand-drawn network maps in tracing the perception of digitally mediated social ties

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Abstract: The emergence of online social networking platforms established a new way of identifying ourselves as being related to other individuals. Previous research has looked at the impact these 'networking' applications have on individuals' everyday lives. Nonetheless, obtaining convincing data on how individuals assess the quality of digitally mediated social relationships has often been perceived challenging. Drawing on a methodological framework rooted in a social network analysis approach, this paper traces the suitability of hand-drawn network maps for eliciting data on how individuals give meaning to digitally mediated social relationships by comparing it to traditional tools used in social network analysis. The results show that using hand-drawn network maps in this particular context provides respondents with a more tangible resource to recall data on digitally mediated social relationships. In particular, this methodological approach elicits substantial data on abstract thematic areas that are typically difficult to recall using standardised techniques.

Keywords: graphic elicitation, social network research, online social networking platforms, arts-based research, mixed-methods social networks research

Introduction

Understanding the relevance of personal networks and the social relationships that sustain these networks plays a pivotal role in many areas of the social sciences and beyond. As such, the use of social network analysis (SNA) and a number of methodological tools that have emerged from the field of SNA have proven to be efficient tools regarding the structural analysis of these networks (e.g. Wellman & Berkovitz, 1988; Burt, 1984; Granovetter, 1973). Particularly in the field of researching personal networks (i.e. ego networks), the use of the name-generating technique (e.g. Crossley et al., 2015; Hogan et al., 2007; Kadushin, 2004; Lin, 1999) has become a widely used approach in eliciting data on personal social networks. As the name suggests, the name generator technique aims to identify individuals who are part of a person's network by prompting individuals to establish a representation of their network by recalling their names. Typically, responses are enacted via a trigger question, such as "Who are the people you would ask, if had an important decision to make" (Burt, 1984), which is used to facilitate their recollection of members of their network.

Wellman & Wortley (1990) have used this approach to understand how members of a community in downtown Toronto maintain social relationships to each other and how these social ties are perceived as meaningful in terms of social support provided to these members. Similarly, Bott (1957), often credited as the founder of ego-centred social network analysis, has used this technique in eliciting data on family relationships and the roles family members take on in a kinship related context. Conceptually rooted in Moreno's (1934) sociogram (i.e. the visual representation of social links that sustain a person's social network) the use of network maps has become a widely used diagrammatic tool, which aids achieving an analytic understanding of patterns of social interaction and has proven to be useful for understanding community structures (e.g. Wellman & Berkovitz, 1988; Barnes, 1954), the dynamics of historical networks (Padgett & Ansell, 1993) or social interaction in developing areas to aid epidemic research for example (e.g. Christakis & Fowler, 2007, 2011). Thus, the name generating tool and SNA in general enable researchers to access data on the relationships that individuals in a specific social setting maintain with other individuals via social interaction. Specifically, these tools facilitate the mapping of personal networks and are useful in eliciting

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data together with the interviewee (e.g. Domínguez & Hollstein, 2014; Lin, 1999; Burt, 1984).

The name generator technique is useful for researching a variety of aspects on the relevance of social relationships; for example, the impact of social capital resources on career development. Incidentally, social capital research is often used to explain how relationships (particularly those that are experienced as positive) bring about many benefits. Contrary to this notion, the relevance of negative ties is often neglected, even though they play an equally central role in explaining relationship-related phenomena such as job attainment and job satisfaction in organizational contexts (e.g. Labianca & Brass, 2006). Being aware of the relevance of negative ties, I would like to stress that this research does not focus on the relevance of these ties. My approach to the name generator did not pre-define the specific quality of the ties in question; rather, I left it up to the respondents to evaluate which types of social ties they deemed relevant in the given context.

SNA is also increasingly used to research online social networking platforms and how their use impacts individuals' networks. Ellison et al. (2007), for example, have looked at college students' Facebook use to understand access to social capital within an established online social network by drawing on respondents' survey data. Elsewhere, Haythornthwaite (1996), has traced information exchange facilitated by online social networking platforms by means of social network analysis. To investigate the social relations sustained via online social networking platforms, studies have used network visualisations of online social networks via data mining strategies combined with associated software (e.g. Gruzd et al., 2011, Kumar et al., 2010). Similarly, drawing on network analysis software, Smith et al. (2009) have analysed patterns of social interaction using network data from Facebook.

In general, online social networking platforms such as Facebook have been perceived as an ostensibly useful tool to expand and maintain social ties. Despite the fact that SNA tools have been widely applied to investigate various aspects of social relatedness, I argue that digitally mediated social relations add a multiplicity of dimensions to our predominant conceptual understanding of the nature of social relatedness. In this regard, Willson (2006) has argued that online forms of social interaction require a new understanding of an "extended and disembodied sociality" (p. 49). Similarly, new forms of facilitating communication via these via digital platforms impact the dynamics of relationships building resulting in a new bandwidth of perceived social connectedness (Baym, 2010; Haythornthwaite, 2002).

Consequently, Wittel (2001) claims that digitally mediated forms of interaction trigger a new narrative that is based on a network sociality that "consists of fleeting and transient, yet iterative social relations" (p. 52). Nonetheless, effectively characterising how online sociality is lived in practice and to what extent digitally mediated social ties add to this proclaimed bandwidth of traditional forms of social relations is yet to be discovered. As such, Wittel (2001) suggests "not to focus on networks themselves, but on the making of networks" (p. 52) to identify "what kind of sociality is at stake in the information age" (ibid.).

In light of the need to trace how digital sociality manifests in day-to-day interaction via online social networking platforms, there is a need to revisit traditional existing SNA tools in terms of their capacity to respond to this complexity and deliver accurate data on the nature of social connectedness in the digital age. To achieve clearer insight into this realm, I propose to expand traditional techniques used to investigate the relationships in a social network by adopting an arts-based research technique, which I call free network drawing. This technique takes a completely unstructured approach towards eliciting data on social relationships on the part of the interviewee: Instead of providing a conceptual framework for data elicitation as would be used in name generating approaches, here, since there is no methodological constraint, the process of eliciting data is completely open. In light of the complexity that digitally mediated communication practices have introduced to individuals' practices in forming social relationships, the conceptual assumptions underlying the layout of traditional social network analysis tools places the interviewer at risk of constraining the interviewee within simplistic terms when describing their digitally mediated social relationships. Interviewees might be urged to report on their social relationships by reference to traditional ways of memorising relationships, i.e. via the name and/or (social) positions of a person, even though this sort of reference might not apply to digitally mediated social ties. In this case, I speculate that using traditional tools of social network analysis might obfuscate more data than they actually reveal.

This assumption resonates with existing claims that to an extent the name generator is an inherently biased methodological approach insofar as it relies heavily on individuals' interpretations of trigger question and problems related to 'recall bias' (e.g. Bailey & Marsden, 1999; Marin, 2004). While it would be inappropriate to say that traditional SNA tools are irrelevant in eliciting data on digitally mediated social ties, the difficulty I experienced

with the name generator showed that existing typologies of social ties are insufficient. Consequently, I envisioned that an unstructured approach would "allow the construction of typologies or processes and the development of new theoretical models" (Molina et al., 2014, p. 307). Data obtained from the drawings created will lend themselves to being integrated or triangulated with existing typologies, which could serve as a complementary method to existing SNA techniques in future research.

Consequently, the point that I will make throughout this paper is that both the traditional name generator approach as well as automatized software assisted techniques in capturing social network data fail to deliver information as to how individuals experience being socially related to others via using online social networking platforms. To this end, I will (a) showcase examples of both traditional network maps and hand-drawn network maps that I have established together with professionals from the creative industries and (b) discuss their potential in yielding verbal data on the perceived significance of digitally mediated social ties. To achieve this, I first present network maps that interviewees have produced via the name generator technique, to then focus on the challenges that interviewees experienced while using this tool when commenting on digitally mediated social ties as part of their network. I will then move on to present examples of hand drawn network maps, which I have produced with the same interviewees to illustrate how this technique produced a much richer picture.

Digitally mediated social connectivity: A new impetus for social network analysis

Identifying a suitable methodology for empirical research is often a challenge, since no method is ever going to be perfect. Nonetheless, tracing digitally mediated social relationships has been particularly challenging, not only because of its relative novelty in social science research, but also because of the sheer complexity of digitally mediated social connectedness that is still puzzling, particularly in terms of how to approach it conceptually. Ultimately though, it is plausible to tackle digitally mediated social relations drawing on social network analysis. After all, social relations are conceptualised as a prime empirical phenomenon in social network analysis, since it looks at social networks as the "finite set [...] of actors and the relation or relations defined on them" (Wasserman & Faust, 1994, p. 20).

The name generator requires individuals to identify names of individuals who they think play an important role in their social network in accordance with the researcher. In practice, the named individuals and relations (also referred to as 'nodes' and 'ties') are placed into a diagram, which is a descriptive way of devising a personal network by "representing the formal properties of social configurations [...] with individuals represented by 'points' and their social relationships to one another by 'lines'" (Scott, 2012, p. 5). An effective way to establish this sociogram is achieved via a participant-aided network sociogram (cf. Hogan et al. 2007), where participants interactively collaborate with the researcher by identifying names step-by-step. This process is typically prompted by a "trigger question", for example "List persons with whom you discuss important matters" (Burt, 1992), which is meant to aid participants' recall.

Subsequently, the named individuals are often also organised into specific groups of social contacts, according to their importance in view of a specific circumstance or their relative emotional closeness. This technique, often referred to as hierarchical mapping (Antonucci & Janevich, 2001; Antonucci, 1986; Kahn & Antonucci, 1980) enables the respondent to indicate emotional closeness and/or their relative importance of social ties. The crucial point is that with the name generator technique, elicitation of data on the individuals' relationship to other individuals in the network is a sequential process of analysis. As such, respondents are asked to identify the relation they maintain with mentioned individuals as an additional property of their social networks (Wald, 2014). As we shall see in the following, this can lead to difficulties when researching forms of social relatedness that deviate from its traditional conceptual understanding.

In the present case, I have used the name generator with creative professionals, particularly in photography and fine art. My aim was to identify in what way social relationships, both on- and offline were perceived relevant by those respondents in view of their professional work practice, notably regarding providing support, access to information, help to boost visibility, etc. For this purpose, I followed a slightly altered approach to the standard hierarchical mapping technique and I labelled the concentric circles in regards to the perceived importance of the named social ties. Thus, the concentric circle closest to the person in the middle indicated the "most important" social ties, whereas the outermost circle indicated "less important" social ties. Accordingly, identifying associated social relationships, I asked the following trigger question:

"Who are the people that you consider to be important for your success as a creative professional?"

Following the name generator procedure, I aimed to get access to information regarding the perceived importance of the social relations to other individuals after having identified relevant individuals. Also, I asked respondents to group indicated social contacts into different groups, according to social affiliation, so for example specific groups of friends, acquaintances, etc. The grouping of resources into categories was intended to enable interviewees to speak more concretely about how and in what context they perceived specific social ties as important for their creative work practice and to gain a systematic overview of the resources that were perceived as relevant here. The figure below shows a network map that I produced together with Fiona, a London based photographer, who specialises in contemporary photography. Besides being a talented artist, Fiona is also an adept user of online social networking platforms, specifically Facebook and Twitter.

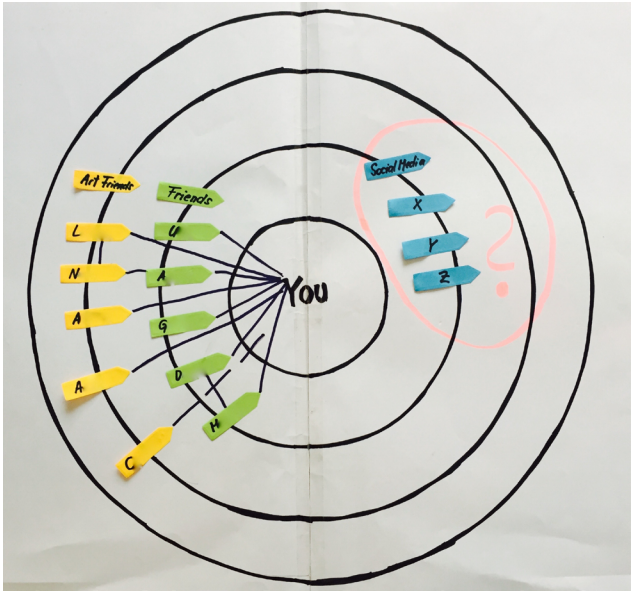

Figure 1: Name generator map Fiona

A look at the map shows that primarily three groups of social contacts were of interest here: friends, "art friends", i.e. fellow artists and creative individuals as well as social media contacts. Notably, the trigger question did not imply any specific categories of social contacts. Initially, Fiona listed names of all individuals that came to mind when prompted to recall important social contacts in reference to her practice as a creative professional. Subsequently, she grouped those friends into two categories, "friends" and "art friends". These categories indicate that the respondent made a clear distinction between "friends", whom she identified as long standing personal friends, mostly from her native country, and "art friends". In contrast to "friends", the category "art friends" addressed all individuals the respondent met in the context of her arts practice (including friends from, for example, art events or exhibitions). This already marks a clear distinction regarding the respondents' perception of the relevance of particular groups of social contacts in view of being relevant as a resource in the context of her emerging career. Lastly, the respondent decided to include one separate category labelled "social media", which notably did not include specific names. Although the respondent did not initially think of this category, upon further prompting during the interview, the respondent added this category to signal that her engagement with other individuals on social media were key social contacts in her arts practice. Even though it is plausible to assume that some individuals of other categories fall partially or equally into this category, it was important to the respondent to create this separate category as a placeholder for individuals who followed her on Twitter or were fleeting acquaintances befriended on Facebook. The fact that she did not further specify the names of individuals prompted me to switch to an alternative method for eliciting narrative data on these social ties, which I specify below.

In the case of "friends" and "art friends", it was relatively easy for Fiona to talk to me about the relationship she had to these individuals, describing in detail the quality of these relations following in what way they were important for her arts practice, primarily by providing emotional support and mentoring as well as giving access to information that seemed relevant. Quite surprisingly, things turned out more complicated for social contacts on social media: Not only did Fiona find it impossible to identify individuals she connected to via Facebook and Twitter, which is indicated by labelling them as "x, y and z", but it was also challenging to identify how and why digitally mediated social ties were important in terms of her career. More precisely, whereas Fiona claimed that contacts on social media played a crucial role in her day-to-day work practice, the name generator seemed not to provide a suitable framework to speak about these relations. Thus, the contacts labelled "x, y and z" remained a placeholder, as apparently the rationale of identifying names in order to enable respondents to elaborate on relationships was more of a hindrance than a facilitator in the case of digitally mediated social ties.

Mission unaccomplished – The intricacies of eliciting data on digitally mediated social ties through social network analysis

Although this result seemed puzzling at the start, Fiona's comment elaborating on the challenges of naming digitally mediated social ties puts things in a different light.

> *"I have at the moment 719 followers on Twitter and the only thing I can do is put X, Y and Z to represent them all because, to be honest with you, I interact with those people but because they are not close in any way, shape or form, I don't even remember their names. So I have 719 strangers on Facebook ... sorry, on Twitter who are supporting my art, send me some comments but I'm completely detached from them and [...] I really cannot tell you their names. [...] And it's quite... it may sound quite weird but they are important only in a way that they are not even faces. [...] I don't consider them individuals.*

Essentially, it seems that in Fiona's perception, the quality of social connectedness via online social networking platforms seem to be strikingly different as compared to a more traditional conception of social relationships illustrated by describing them as either not "real" or not "human". Acknowledging the fact that Fiona speaks of social ties maintained via Facebook or Twitter as not being considered 'individuals' evoked concerns on my part as to whether asking interviewees to list specific social ties – specifically those online – and arrange them within a diagram to display an image of their personal social network was even a suitable choice within the context of my research aim. Nonetheless, these relations, even though perceived as "unreal", seem to play a significant role in creating a sense of cohesion between herself and other individuals involved in this process. However, she suggests that these relations apparently go beyond the scope of the conceptual layout of the network map as a tool for eliciting data on digitally mediated ties. Or, in other words: Digitally mediated social ties just do not seem to fit the box.

In my view, Fiona's way of describing digitally mediated social ties as "not real" points to a much more fundamental issue regarding the actual nature of these ties. What apparently seems to be the case here is that, instead of these social ties being "unreal", they actually seem to be dealt with on a different level in terms of how those ties are being anchored in the memory of respondents.

Therefore, the cognitive process that individuals undergo while eliciting data on social ties through the use of network maps resonates with what in cognitive psychology is called "anchoring" or "focusing"; here it is used to evaluate how individual's reasoning and decision-making is affected in response to the provision of a cognitive anchor, a sort of aid that focuses decision-making or reasoning around a provided trigger (e.g. Tversky & Kahnemann, 1974). The name generator technique uses quite a similar approach in terms of the cognitive process that underlies this technique, by prompting the individual to think of a "name" in order to elucidate information on social ties. Thus, interviewees are prompted to focus on specific individuals by using the name of a specific person as a cognitive anchor. Given the fact that cognitive anchors always prompt the occurrence of a bias in individuals' recalling information, it may be assumed that providing such an anchor in social network analysis may lead individuals to think of their social relationships in a way that intentionally instructs them to focus on only those relationships which they can relate to via the specific name of a person. I argue that focussing on the 'name' as a cognitive aid might be unsuitable when it comes to reproducing knowledge on social connections that are digitally mediated. This assumption echoes theoretical claims that conceptualise digitally mediated social relations as epitomising the liquid modern social setting (e.g. Bauman, 2003). Thereby, I suggest that tackling those ties empirically requires a more nuanced methodological approach that resonates with the individuals' capacity to recognise and process digitally mediated social relations from a different standpoint.

Back to square one – Using hand-drawn network maps to elicit data on digitally mediated social ties

Despite the fact that SNA tools have been widely applied to investigate various aspects of social relatedness, I argue that digitally mediated social relations add a multiplicity of dimensions to our predominant conceptual understanding of the nature of social relatedness. In this regard, Willson (2006) has argued that online forms of social interaction require a new understanding of an "extended and disembodied sociality" (p. 49). Similarly, new forms of facilitating communication via these via digital platforms impact the dynamics of relationship building resulting in a new bandwidth of perceived social connectedness (Baym, 2010; Haythornthwaite, 2002). Consequently, Wittel (2001) claims that digitally mediated forms of interaction trigger a new narrative

of sociality that "consists of fleeting and transient, yet iterative social relations" (p. 52). Nonetheless, characterising digitally mediated sociality in practice and the extent to which digitally mediated social ties add to the bandwidth of traditional forms of social relations is yet to be discovered.

My respondents' earlier comment on the difficulty to talk about these seemingly abstract relationship that are built in the online space reaffirms the need to approach digitally mediated social ties from a different conceptual angle. In terms of methodology, I argue that accessing digitally mediated social ties requires drawing away the focus on manifest cues such as names and providing a more flexible approach. Theoretically, the struggle that respondents' experience with traditional methods emerges from the cognitive process that is triggered in eliciting data. More precisely, I argue that the rigid framework that tools such as the name generator provide forces respondents to think around social relationships in a predefined way, i.e. identifying concrete individuals to whom a social relationship can exist.

In light of the need to trace how digital sociality manifests in day-to-day interaction via online social networking platforms, I identified a need to revisit traditional SNA tools in terms of their capacity to respond to this complexity and deliver accurate data on the nature of social connectedness in the digital age. To achieve clearer insight, I propose to expand traditional techniques used to investigate the relationships in a social network by adopting an arts-based research technique, which I call free network drawing. This technique takes a completely unstructured approach towards eliciting data on social relationships on the part of the interviewee: Instead of providing a conceptual framework for data elicitation as would be used in name generating approaches, here the process of eliciting data is left completely open. This is important, as investigating the nature of digitally mediated social relations may require eliminating any sort of bias entirely in order to elicit new data.

These "structural constraints" that are often associated with standardised techniques in social network analysis have been previously highlighted (McCarty et al., 2007), however they have received little attention in view of eliciting data on digitally mediated social ties. Nonetheless, a number of studies have addressed challenges that may arise when using traditional SNA techniques. For example, the extent to which network visualisations actually enable respondents to provide an effective framework for eliciting verbal data on the actual characteristics of the achieved depiction of a network is questionable (Heath et al., 2009). Responses elicited by typical name generator trigger questions vary according to topic and cultural context (Bearman & Parigi, 2004). Consequently, I assumed that using a more open, creative approach might be more suitable to enable interviewees to enlighten my understanding of digital social connectedness via "communicating more holistically, and through metaphors, [...] enhance empathic understanding, capture the ineffable, and help us pay attention to reality in different ways" (Weber, 2008). The aim of such an approach was thus in line with my experience that the structural constraints embedded in traditional network visualization techniques were too limiting to think outside of the box and counteracted a more holistic understanding of social connectedness.

In social science research, the use of freestyle network visualisations have received relatively little attention (e.g. Coates, 1985), even though there have been some attempts recently to incorporate such techniques into the realm of personal social network studies (e.g. Ryan et al., 2014; Domínguez and Hollstein, 2014). Such unstructured visualisation techniques are meant to graphically elicit data which might be difficult to verbalise with a standardized interview technique (Crilly et al., 2006), simply because the subject at stake might be problematic to embrace cognitively and/or perceived as abstract. Given its capacity in enhancing dialogue on abstract matters, such techniques have a long tradition in clinical psychology or developmental psychology (Bagnoli, 2009), where graphic data elicitation methods that involve drawing or some other sort of creative expression have been applied successfully to understand children's stages of cognitive development, for example, or to facilitate individuals' emotional needs in a therapeutic context (Silver & Ellison, 1995). Furthermore, such forms of methodological enquiry have also been appreciated as empowering interviewees "to reveal what is hidden in the inner mechanisms and the taken for granted (Knowles & Sweetman, 2004, p. 7).

Drawing on so-called projective techniques, allows research participants to organize the presented data in a way that is meaningful to them in terms of expressing their personal view and understanding (cf. Allen, 1958). In network research, Emmel & Clark (2009) used such a free network visualisation technique to engage interviewees in a dialogue around the social processes and social dynamics that build and sustain communities and neighbourhood networks. The key feature of this method is that, unlike traditional forms of visualisation of network maps, here it is completely up to the participant to come up with ideas in regards to how to structure the visualisation of their personal network instead of bringing a template to the field (Molina et al., 2014).

In practice, I asked respondents to produce a drawing of their personal network on a blank sheet of A3 paper. In order to facilitate the drawing and also for purposes of freedom of artistic expression, I brought a variety of material with me to the field: sticky notes in different shapes and colours, a variety of colours pencils, highlighters in different colours and markers (Emmel, 2008). At this point, it may be relevant to mention that using this approach with interviewees who are either trained and/or active creative professionals worked exceptionally well, presumably because it is part of their daily activity to create something "from scratch" without been given any particular orders or instructions. This was probably also the reason why all my interviewees approached this task with considerable ease. On the contrary, many of them actually expressed enjoyment while carrying out the exercise and found it interesting to be prompted to think about their social relationships using their creativity. Similar to the name generator approach, I asked respondents a trigger question, namely *"Who are the people that you consider to be important for your success as a creative professional?"* to facilitate the drawing of the network maps. The only difference here was that respondents could start drawing whatever social relation, individual or social group that came to mind first instead of enacting names of social ties.

The network map above (Fig. 2) is drawn by Fiona, the same respondent with whom I initially prepared the name generator map (Fig. 1). I observed that Fiona included several distinct sections as being part of her network, including one section under which she subsumed all those individuals she considered part of her artistic circle of friends (i.e. "Art friends"), another section including established friendships with individuals from her home country (i.e. "Friends"). Most importantly, Fiona devoted a big part of her drawing to describe her social activities on Facebook and Twitter, which are connected to her activity on Kickstarter, a popular crowd-funding platform. To specify these social media contacts, Fiona used various ellipses/circles to indicate her activity on each of the mentioned platforms (Fig. 2): a larger ellipse representing Kickstarter, a popular crowd funding platform, and two smaller circles representing Facebook and Twitter. Around each of these three circles, Fiona added various smaller circles or "dots" as she called them to visually refer to various individuals she is connected to via mentioned platforms. These dots are a representation of individuals who are either part of friends on Facebook or followers on

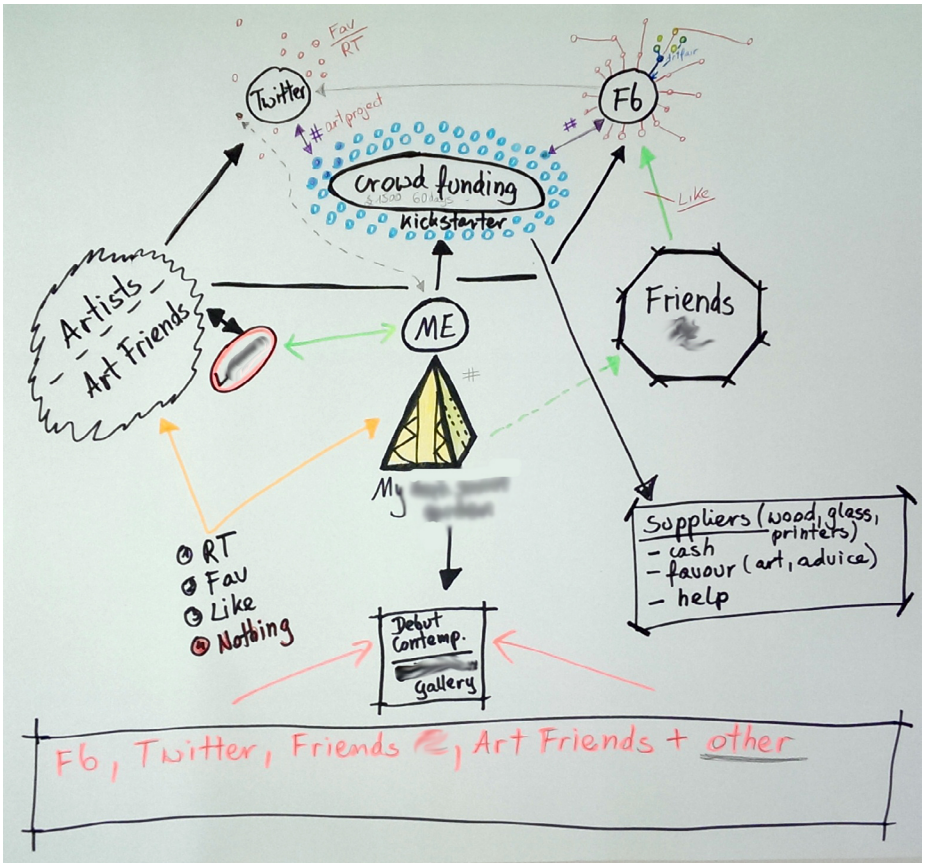

Figure 2: Hand-drawn network map by Fiona

Twitter or other individuals who are screening Kickstarter and thus show an interest to potentially support her artwork.

Interestingly, using an unstructured approach, Fiona delivered a wealth of information further specifying her perception of digitally mediated social ties (Fig. 3). Specifically, she gave concrete information as to how she perceived Twitter and Facebook nurturing two different sets of relationships:

Fiona: *"Unlike Facebook, where everybody is already somehow connected to you, Twitter, for example, is an open world [...] anyone interested in anything can connect to you, because you can use hashtags. Let's say I am posting something about my latest art project, so in this case let's say "hashtag art project" and in the moment I'm posting on Twitter within that time people around the world are looking for something. [...] they will read it look at the link if they like what they see they can favourite it they can retweet it or they can follow me, but this is very random, you never know who, you never know how sometimes and I get followers, which are not connected at all [...] so it's like a big, you know, universe of people just drifting there."*

Essentially, capitalising on the unstructured nature of this approach, Fiona highlighted two very important aspects of digitally mediated social connectedness: First, she addressed the differences in the nature of social ties that different platforms seem to facilitate. To her, Facebook seemed like a closed environment, where usually existing friends and friends of those friends connect to one another, while Twitter, in her view, represents an "open world" that enables individuals to connect to previously unknown others. Second, Fiona points to the specificities of Twitter, i.e. hashtags and associated features such as the "favourite" and "retweet", which in her view facilitates the creation of social contacts and illustrates her own strategies in creating a network online.

I present a second network map, produced by Lilie, a young photography student at the University of the Arts London (Fig. 4). She came up with different categories of social connections first, such as "people I know from school/university/etc.", "people from my previous job" or "people on social media". While Lilie was drawing, I frequently took the initiative to intervene and asked her to elaborate on specific sections of the drawing. For example, when Lilie used a specific colour, I asked whether this colour was meant to signal something specific, such as emotional closeness or a specific context within which they found this person to come in as relevant or important. In particular, I was keen on Lilie's elaboration regarding the "bubbles", which she called "social media bubbles" which symbolised the large number of individuals to whom she was connected on a number of social media platforms, particularly Facebook, Twitter and Instagram.

Lilie: *"Like, in itself, those are almost, like, bubbles [...] that's almost like, I guess, like a trigger for more. When I think of Facebook, no one concrete really springs to mind. I guess I think around those people more in terms of what's currently happening. [...] say, this week a photography exhibition is coming up .... and then instantly the people that I'm having it with and organisers, etc. come up in mind. I guess, kind of, like a scroll bar and then everyone going past really quickly in my mind [...] and then thinking*

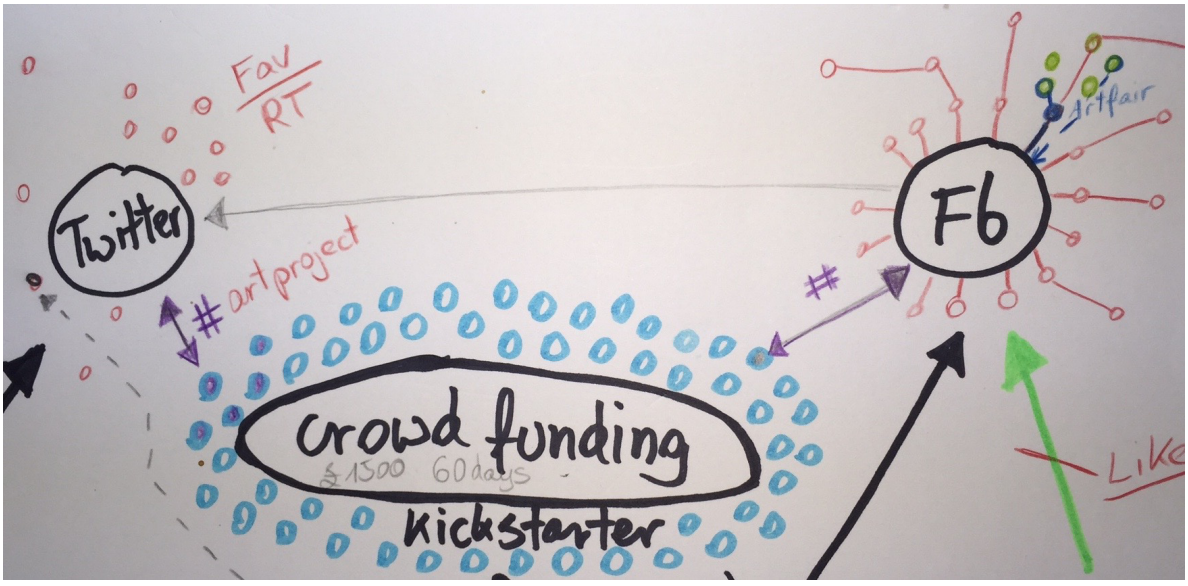

Figure 3: Digitally mediated social ties Fiona

around this exhibition, instantly all these different, kind of, connections come out."

Interpreting Lilie's statement provides another important clue in terms of how digitally mediated social ties are being processed by individuals. It seemed that Lilie is thinking around specific moments in her life, i.e. activities that are coming up in practice as a photographer and only then she remembers social contacts that seem significant in relation to these events. Therefore, social contacts on social media assume significance only in correlation with a specific trigger event, whereas others remain hidden at that specific moment in time. Interestingly, this resonates with theoretical claims that describe digitally mediated social ties as "fleeting and transient, yet iterative social relations" (Wittel, 2001, p. 52) that is "ephemeral but intense" (p. 71). As such, the point that Lilie makes, illustrates why digitally mediated social ties are perceived as fleeting yet meaningful, given the fact that meaning is assumed in a specific context, e.g. a life event, a moment in time, which is shifting over time.

Notably, this statement challenges existing assumptions as to what in social network theory qualifies as a social relationship. Traditional social network analysis focuses on very specific aspects of networks to aid an empirical understanding of social relationships. White (2008), for example, often credited as one of the leading figures in the formation of modern social network analysis theory, often refers to more durable relations such as family, friends and other types of kin that are of interest here, rather than one-off, fleeting encounters, such as "when a person strikes up a pleasant chat with a stranger at a bus stop [which] does not necessarily constitute a relation." (White & Godart, 2007, p. 4). Drawing on Lilie's statement I argue that rather than dismissing these ephemeral types of social relations that digitally mediated social ties often represent, more emphasis has to be attached as to how and in what context individuals attach meaning to this specific realm of social connectedness.

One other thing that was particularly striking was

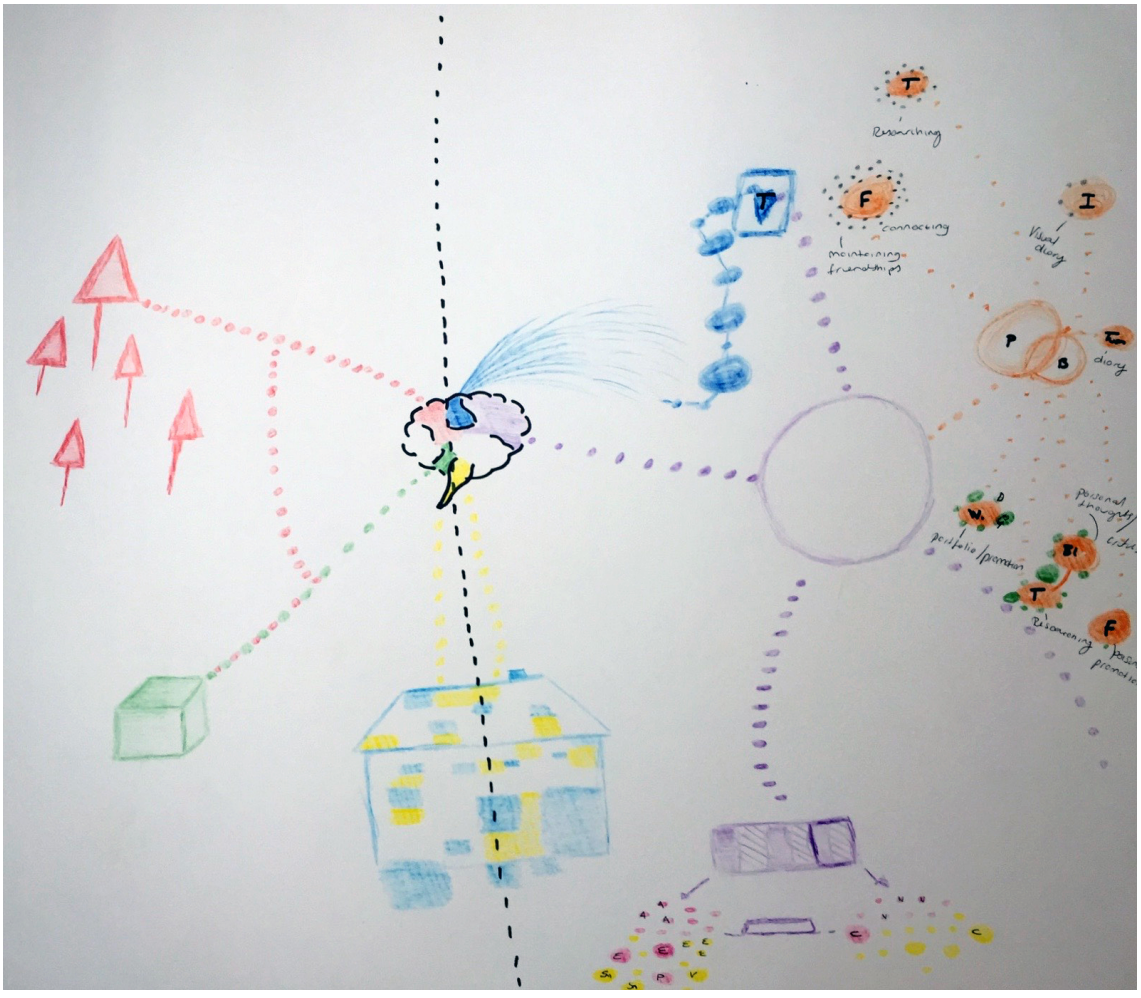

Figure 4: Hand-drawn network map Lilie

that the act of drawing triggered respondents' recall of anecdotes as in examples of how their use of online social networking platforms assumes meaning. For example, Lilie remembered one instance where she used Twitter to get in touch with an artist she was interested in working with, but did not have a chance to meet face-to-face.

Lilie: *"So this one time, I wanted to contact R. M. [an artist Lilie was curious to collaborate with], like, just to have a look at a book I was working on. So since I didn't have any email or didn't know him personally, I tweeted them, and then I got his... an email to contact him on. So that worked when the email didn't, so that was, kind of, for me, like, even though I had to email in the end, it was a way of actually getting a personal email to do what you needed to do."*

Further elaborating on this instance, I learned that Lilie used Twitter in specific circumstances, i.e. in absence of any other opportunity to create a connection with a person directly, but thought that an email would be too impersonal and might just end up being ignored by the person. As such, the drawing initiated a dynamic that helped Lilie remember specific moments in which online social networking platforms played a significant role, which allowed me to understand the circumstances in which Twitter assumed meaning. In addition, verbalising these particular experiences helped me understand respondents' reasoning in terms of what motivated them to use Twitter in order to capitalise on forms of digitally mediated social interaction.

In essence, it seems the exercise of drawing allowed respondents to integrate socialising processes on Facebook and Twitter, which they shared with me in a narrative form as they worked on the drawing. In this sense, these network maps are a useful tool to facilitate insight into online *practices* that – due to their ephemeral nature – are often perceived as abstract and, therefore, easily neglected or forgotten. Thus, the advantage of hand-drawn network maps is that it provided respondents with a certain freedom to express their associations with digitally mediated social ties in whatever way they think is useful. As such, drawing seems to be effective in terms of eliminating conceptual blocks that other techniques such as the name generator may create. Or like Lilie put it: *"[...] when you are drawing you are just saying what it is. So I guess its like an easier process for the mind. [...] It can be quite daunting to be asked a question when you are not like interacting with anything, but when you are drawing and thinking of people on Facebook for example, then I could just think quite easily and then it made me just ... I guess, just be able to answer it straight away."*

Limitations and recommendations for future research

Introducing a new approach to trace social relationships in a digital environment naturally requires some discussion of the limitations inherent to the approach. In this specific case, the name generator did not elicit insightful data, given the fact that respondents found it difficult to engage with the network map as a means of talking about their experience using online social networking platforms. Consequently, the hand-drawn network maps seemed to be a better approach in terms of data elicitation. I was hesitant using a completely unstructured approach in the beginning, because I was uncertain whether respondents would accept this challenge. It is important to note that working with creative professionals may have enabled me to be more successful in applying this new approach because flexibility and openness to new creative techniques was pertinent to their profession. Applying this technique with respondents from other professional domains might evoke greater challenges as respondents might find it difficult to engage with a completely unstructured method and an implied lack of guidance.

An additional limitation of this new technique is that it might, under some circumstances, be difficult to harmonise unstructured approaches with existing techniques like the name generator. My research has shown that digitally mediated social ties often only assume relevance under very specific circumstances. On a practical level, I suggest that using the name generator approach in similar research settings requires researchers and respondents to shift the focus away from an actor-centric approach towards a situational approach. Therefore, I propose adapting corresponding trigger questions to capture social ties around specific activities and contexts instead of connecting trigger question to actor-specific attributes, such as names or positions. Obviously, this will result in a snapshot picture of the respondents' social networks; however, it will enable the researcher to understand the relevance of both traditional and digitally mediated social ties within a given context in more depth. Additionally, tracing the relevance of these ties over time would provide interesting insight into how these ties develop over time and whether they manifest as strong ties or remain weak alongside circumstances under which they disappear/reappear.

Finally, I acknowledge that this research was designed to reveal social ties fostered in the digital realm. The respondents mentioned in this paper were very familiar with online social networking practices

and their focus on these ties inherent to those practices was strongly emphasised throughout the fieldwork. Clearly, this resulted in a certain bias, which intentionally emphasised the relevance of digitally mediated social ties. The significance of traditional forms of social ties was not placed at the centre of attention in this context. In other contexts, focusing on traditional forms of social ties may be more useful.

Conclusions

This article described the advantages of using hand-drawn network maps in eliciting data on the significance of digitally mediated social ties, which I have used in my research with creative professionals across a number of disciplines. Unlike more traditional techniques, such as the name generator, this method allowed respondents to provide in-depth information regarding their perception of the nature of digitally mediated social ties, the relevance of this form of social interaction as part of their professional practice as well as information in terms of how and in what context these social ties assume meaning. In my research, respondents have particularly appreciated the introduction of a visual element as an aid to facilitate the process of eliciting data on digitally mediated social ties. Therefore, this technique allowed respondents to go beyond a structured, linear mode of thinking, which is often required in more traditional forms of data elicitation, and enabled them to verbalise associations and anecdotes which may be obliterated otherwise. As such, bringing a creative exercise to the field can prompt respondents to think 'outside the box' and provide information that does not conform to predefined schemes or standardised measures.

Providing a completely unstructured data elicitation technique requires the researcher to be completely open to unexpected answers and may in fact provide data that are not always easy to interpret. As such, I would like to note that unstructured methods of data elicitation are always a mutual effort; therefore respondents may need guidance throughout the exercise and frequent encouragement assuring them of the relevance of the data they are producing. Also, in my case, the drawings have been fundamental in terms of facilitating a dialogue between the respondent and myself, which was important to clarify the meaning behind specific aspects of the drawing and encouraged the participant to elaborate on some elements that seemed particularly insightful. Obviously, not everyone may be comfortable working with drawings and a completely unstructured approach. To this end, working with drawings together with creative professionals may have been particularly advantageous. Nonetheless, it may prove more challenging in other cases, where a more standardised approach may certainly be more productive.

Finally, providing limited structure for the drawings inevitably results in a wide variety of individual, very personal accounts of the same topic. The data that individuals produce emerges from their personal context at a very specific moment in time, so it may be challenging to draw comparisons among larger groups of respondents. And even though patterns may emerge, where respondents use a similar visual language, their interpretation of the drawings will always remain a very personal, unique narrative, informed by their specific circumstances and experiences. This technique draws its strength from achieving variety in verbal data instead of aiming at re-affirming pre-existing patterns. Therefore, unstructured techniques like the one presented in this paper can be useful specifically for research that aims to open up new perspectives and produce knowledge on a new phenomenon where relatively little is known, such as is the case for digitally mediated social relations.

Note: The name of the respondents whose work is featured in this article have been changed to a pseudonym in agreement with the research participant. All drawings have been edited, with names or other identifiers either removed or obliterated.

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