Understanding sporting brands and entrepreneurship using netnography and social network analysis

Dr. **Alex Fenton,** University of Salford, UK, **e-mail: a.fenton@salford.ac.uk**

Head of the Disruptive Technology Research Cluster at Salford University, he has led on a digital wellbeing project called Fan Fit, creating smartphone apps for sports clubs and others to help the physical and mental wellbeing of fans. He has published in top international journals in the field of digital transformation and won a range of teaching and industry awards.

Dr. Keith D. Parry, University of Bournemouth, UK, e-mail:

kdparry@bournemouth.ac.uk

Deputy Head of Department in the Department of Sport and Event Management at Bournemouth University and an Adjunct Fellow of Western Sydney University. His research interests are based on the sociology of sport, with a focus on sports fandom, health and the spectator experience.

Dr. Wasim Ahmed, University of Newcastle, UK, e-mail: wasim.ahmed@ncl.ac.uk

Prof. Simon Chadwick, emlyon, France, e-mail: chadwick@em-lyon.com

Abstract

Social media offers a wealth of data to help inform and enlighten SMEs on a global scale. This study aims to demonstrate that data derived from social media networks can enhance entrepreneurship in SMEs, providing tools and guidance for entrepreneurs. We present a double case of two sporting SMEs and utilise a distinctive blend of quantitative data from social network analysis using NodeXL, followed by a qualitative analysis using Netnography to gather data. We propose that using social media data in this way can create new insights for social commerce in order for SMEs to better understand consumer interactions.

Keywords: Entrepreneurship, Social media, Interpretivism, Social network analysis, Twitter, sport, digital, netnography

1.1 Introduction

In a special issue on qualitative methods in entrepreneurship, Gartner & Birley, (2002) highlighted the lack of qualitative studies in this field. Chalmers & Shaw (2017) further highlighted that qualitative and mixed methods entrepreneurship research is still lacking. In this paper, we address these gaps and examine how a blend of social network analysis (SNA) and netnography research from social media can provide key insights for Small to Medium-Sized Enterprises (SMEs) in a complex social media environment. This paper demonstrates how and why these methods can be blended and identifies their relevance for SMEs and entrepreneurs who operate social media channels. We adopt and advocate an interdisciplinary mixed methods approach to identify structures and patterns in social media communications, providing a greater understanding of creative research methods available from social media data. Furthermore, this paper provides a roadmap for SMEs to become more entrepreneurial in the way they view, understand and engage with their market and data generated from social media.

Using a grounded theory approach, we focus on and learn from the data captured from social media to increase understanding in this field (Glaser & Strauss, 1967; Walsham, 2006). Leitch, Hill, & Harrison (2010, p.68) highlighted that for entrepreneurship research "the production of rich, in-depth knowledge requires researchers to adopt diverse ontological and epistemological positions". Furthermore, they highlighted the opportunity for interpretivist (non-positivist) research to create new knowledge.

In order to provide a practical example of these methods in action, we utilise a double case of two SMEs with engaged local and international social media followers. We adopt the British Government definition of SMEs: "any business with fewer than 250 employees" (Ward & Rhodes, 2014). The specific context for these SMEs is the sport industry, a sector characterised by the existence of large numbers of small enterprises, with a high proportion of sole trader or micro businesses, but which also makes a significant contribution to the economies of many countries (Bill & Rhoden, 2011). In the United Kingdom, at the turn of the century, it is claimed that over 99 per cent of sport and leisure business were SMEs (Moore & Levermore, 2012). Analysing them facilitates a better understanding of entrepreneurship through the application of creative qualitative and mixed methods to capture modern-day entrepreneurship research challenges. This includes the internationalisation of followers enabled through social media networks and insights. Here, we use two Rugby League clubs as examples of SMEs who have active social media fanbases. Rugby League is generally not well explored in the existing literature and even less so with regards to social media and entrepreneurship (Filo, Lock, & Karg, 2015).

On this basis, we posit the following research question: How can data derived from social media networks enhance entrepreneurship in SMEs? Furthermore, we answer the following sub-questions:

- Who are the social media influencers within a specific group of sport fans?

- What does the network shape look like?

- How do SMEs interact with fans on social media?

We utilise SNA to answer the first two questions, producing insight using the NodeXL software to visualise the social media networks. Love & Andrew, (2012) highlight the importance of NodeXL and SNA as a lens of enquiry in research in this area. These initial questions and visualisations provide further focus for qualitative study, answering Gartner and Birley's (2002) question 'what is missing', we mix these methods and social media data to create further insight into networks and audiences – adding qualitative context to enhance quantitative analysis of entrepreneurial opportunity (Chalmers & Shaw, 2017). Netnography, founded by Kozinets (1997) is a portmanteau of the words ethnography and Inter(net) (Kozinets, 2020) and was developed specifically as a set of procedures and ethical standards to study the online interactions of people through participant observation and other methods. These guidelines are the key difference between other types of online ethnography, which are generally less defined in their approach (Næss, 2017).

Branthwaite and Patterson, (2011) highlighted that data from social media channels is a key source of information for studying complex human behaviour. We used digital SNA tools, therefore, to define the structure and form of the networks to find principles and meanings in the data and focussed on the use of tools to enhance our analysis. The immense volume of social media data, therefore, presents substantial opportunities for SMEs to map out and analyse these networks using new tools and techniques such as SNA and blending with qualitative methods (Fenton & Procter, 2019; Kozinets, 2015). Although this blending of methods is still emerging, Whelan et al. (2016) advocate for a multi-methods approach and identify netnography and network analysis as powerful partners. Indeed, Kozinets (2020)

suggests combining netnography with SNA, particularly to aid visualisation of large amounts of data and we explain and evaluate this combination of methods and their ability to provide greater insights into the marketplace in which SMEs reside.

2.1 Social media as a resource for SMEs

Social media networks have created unparalleled opportunities for SMEs, allowing them, for example, to create social interactions with staff, customers and other stakeholders, encourage electronic word of mouth (eWOM), build competitive advantage, and enhance strategic competence (Ahmad, Ahmad, & Abu Bakar, 2018; Ndiege, 2019). Such technologies are relatively inexpensive (Abu Bakar, Ahmad, & Ahmad, 2019) and have been widely adopted by entrepreneurial companies and organisations to drive business growth (Li, Su, Zhang, & Mao, 2018; Mumi et al., 2017), to the extent that they have been described as an indispensable part of entrepreneurship activities (Park, Sung, & Im, 2017). Yet they are also revolutionising the business landscape, and traditional marketing communication models in particular (Datta, Sahaym, & Brooks, 2018), with SME entrepreneurs required to be agile and responsive in their online engagement with consumers, particularly when faced with disruptive incidents (Ndiege, 2019).

Online, interactive environments, such as those offered by social media platforms have become the most common meeting place for consumers, where information is exchanged and content created (Chan, et al. 2013; Parganas, Anagnostopoulos, & Chadwick, 2015). Increasingly, social media influences consumer views and attitudes and so businesses have invested time and money to engage with them in these environments. As such, it has been shown that the performance of SMEs can be boosted by effective engagement with social media (Eggers et al., 2017) as customers 'reward' those businesses with active social media presences through positive WOM and an increased knowledge of the organisation (Ndiege,

2019). However, the use of social media by SMEs remains an under researched area and the specific characteristics and challenges of social media in this context is not understood well (Abu Bakar et al., 2019; Ahmad et al., 2018).

Crucially, social media breaks down traditional communication models, removing the reliance on traditional media gatekeepers who have previously controlled information flows (Bro & Wallberg, 2014). As the traditional hierarchy and monopoly of media production and dissemination are dissolved (Yan, et al., 2018), everyday citizens, stakeholders and businesses are empowered to move beyond consumption and to produce their own content via Web 2.0 technologies (Harris & Rae, 2009). Indeed, Parganas, Anagnostopoulos and Chadwick (2015) state that social media has profoundly impacted the way that companies communicate and connect with their customers. Businesses are now able to convey specific messages to large audiences in a cheap and timely manner with the authors listing the benefits of social media to organisations as including conveying tangible and intangible features to their audiences, promoting their products or services, dealing with complaints, and remaining in touch with their customers. On a wider level, social media can be used to create communities around brands and organisations, achieve behavioural change, and conduct market research (Campos, Anagnostopoulos, & Chadwick, 2013). Due to their interactive nature, social media platforms represent a cost-effective, timely medium for both the delivery and collection of information and for gaining feedback (Filo et al., 2015). These platforms can be used to gain insights into and knowledge of the large number of communities that are interacting in these spaces and which make up the stakeholder groups of organisations while measurement of social media data can quantify financial and relational contributions of expenditure in this area (Agostino & Sidorova, 2016). As such, social media can be used as a knowledge management tool by SMEs to stimulate growth and develop entrepreneurial capabilities (Crammond et al., 2018).

2.2 Social Media influencers

For many SMEs, an understanding of social media networks allows them to improve their service offerings and develop deeper relationships with their stakeholder groups and customers (Wyllie et al., 2016). Significantly, analysis of social networks allows influential actors to be identified. In one of the earlier studies into influencers, Leavitt *et al.* (2009: 5) define influence on Twitter as "the potential of an action of a user to initiate a further action by another user" and identify four measurable features that constitute influence; replies, retweets, mentions, and the number of followers. SMIs act as a third-party endorser, shaping attitudes via their use of social media (Freberg, et al., 2011). Consequently, a variety of methods have been employed to detect social media influencers (SMIs), such as identifying users whose tweets result in many retweets and increase the size of the social network (Qasem et al., 2016), although Freberg *et al*. (2011) caution against placing greater importance on quantity rather than quality of online influence.

Smaller organisations are often unaware of the structure and composition of their online networks and fail to recognise key influencers (Eggers et al., 2017). The factors that affect the diffusion of knowledge through social media networks need to be better understood (Havakhor, Soror, & Sabherwal, 2018). To investigate the influence of social media accounts and the networks that have been formed online between various users, social network analysis (SNA) has been employed by a number of scholars (see Hambrick and Pegoraro, 2014; Naraine and Parent, 2016; Hambrick, 2017). Moreover, Meng et al. (2015) argue that addition work is needed to understand the responses to organisational social media posts and the resultant interactions and activity that is generated.

Adopting social media can be challenging if SMEs do not have the resources to efficiently and effectively manage or interpret social media accounts (Abu Bakar et al., 2019; Eggers et

al., 2017) as a vast amount of data is generated. Yet, while organisations may lack the ability

or the skills to be entrepreneurial and entrepreneurial resources to be successful (Eggers et

al., 2017), they can develop these (Kyndt & Baert, 2015). They can learn from social

interactions within their communication networks, identifying opportunities, which will allow

an organisation to plan future interactions and develop creative strategies (Blanchard, 2013).

Therefore, we support the development of SMEs by evaluating tools and opportunities for

them to identify structures and patterns in social media communications; enabling them to

become more entrepreneurial in the way they understand and engage with their markets. This

paper posits an alternative use of social media in an entrepreneurial context aside from its use

in marketing, which is where the majority of the limited existing literature is located (Mumi

et al., 2017). In order to explore the blend of creative methods, we utilise data from two

SMEs from the sport market sector with substantial social media followings.

3.1 Methodology

Given the uniqueness of this area we chose to adopt an inductive approach using grounded

theory so that we were not bounded by one particular theory or idea. We therefore derived

theory from the concepts and categories used by the social actors themselves, with data

systematically gathered and analysed as advocated by Strauss and Corbin (1990). Such an

approach develops a theory that is precise and rigorous, capable of replication and

generalizable (Neuman, 2011). Grounded theory has previously been used in

entrepreneurship research with Hlady-Rispal and Jouison-Laffitte (2014) identifying thirteen

papers that have used this approach between 2007 and 2012 in three leading

entrepreneurship-related journals.

3.2 Social Network Analysis (SNA)

SNA provides the tools to study the interactions and relationships between social organisations, stakeholders and everyday citizens along with the patterns and implications of these interactions and relationships (Bolíbar, 2016; Monaghan, Lavelle, & Gunnigle, 2017). It places importance on the structures of relationships between these actors in social life rather than the characteristics of the individual actors in isolation (Wäsche, et al., 2017), which in this case shifts emphasis from the entrepreneurs to the collective around them. It is particularly useful for providing a global overview of social relations and the significance of particular actors (Dobson, et al., 2013) and has been increasingly adopted to understand the relationships and patterns between and within organisations, making it of use to both academics and practitioners (Monaghan et al., 2017). The data generates insights into where and how to intervene in order to improve business outcomes (Parnell & Robinson, 2018).

Betweenness centrality, which is based on graph theory, was utilised in order to identify influential Twitter accounts. In the context of social media research, betweenness centrality can be utilised to detect which user-accounts will lie on the shortest paths when taking into account other users (Raghavan Unnithan, Kannan, & Jathavedan, 2014). The output consists of raw numbers associated with each account, which can be utilised to develop a ranking and greater understanding of influential users and networks. A key aspect of betweenness centrality is that it does not determine influence by the number of followers a user has, but rather, identifies users that have the strongest connections to other influential users. For instance, a user with only 100 followers can be ranked highly by the betweenness centrality metric if their followers are influential and bridge networks.

SNA allows SMEs to identify the network shape of their social media accounts in relation to their competitors to understand differences in reach, areas they can improve on or identify

strengths. Looking at influential users, co-words, hashtags, and websites also provides similar intelligence to that of network shapes as it highlights high-visibility hashtags used by a particular SME.

Our work builds upon existing theories around social network shapes and structures such as the 6-types of Twitter network (Smith *et al*, 2014). Brands may be interested in transitioning from certain network shapes and structures to other more desirable shapes. There may be undesirable and/or low probability transitions in network shapes that organisations can make. However, there are also a number of transitions, which are likely to have a high probability and are detailed here and further in our discussion. One potential transition is to move from an out-hub support network to a broadcast network and this would involve the publishing of new content and/or material, which would likely to be retweeted. Transitioning from a broadcast network to an out-hub and support network would involve increasing the reply rate to users and/or replying to multiple users within tweets. A brand cluster group based on isolates could transition into a community by building connections and increasing retention. A unified tight crowd can be converted into a community cluster by drawing in new participants into the network.

3.3 Netnography

Netnography, a branch of ethnography, was developed in the 1990s specifically as a set of procedures and ethical standards to study online interactions between users via participant observation and a variety of other methods (Kozinets, 2015; 2020). As netnography uses Internet communications as a primary source of data, it is ideally suited to explore how SMEs interact with fans on social media. Although it originated in the fields of business and marketing, it is now popular in many areas of study (Morais et al., 2020). It has previously been used to study online marketing of SMEs (Roth-Cohen & Lahav, 2019), entrepreneurship

of young start-up creators (Lima, Namaxi & Fabiani, 2014), and social media brand communities for sporting SMEs (Fenton & Proctor, 2019; Fenton, Keegan & Parry, 2021). We now extend its use to sporting brands and entrepreneurship.

Kozinets (2015; 2020) provides valuable guidance and a framework for conducting netnography that was used in this study as the example. There have been a wide range of qualitative social media studies using content or non-participant social media analysis (Filo et al., 2015), but fewer studies utilise participant observation and netnography (Healy and McDonagh, 2013; Meng, Stavros and Westberg, 2015; Fenton and Procter, 2019 for examples). Filo, Lock and Karg (2015, p.177) highlight the opportunity to blend netnography and SNA to further explore social media communities to create new insights. They note, "mixed method approaches could also provide a more holistic understanding of social media". Furthermore, Kozinets (2020) emphasises the potential for integrating SNA and netnography in order to visualise social media data and frame individuals and networks for further study. In addition, he highlights that SNA can be used as a primary analytic method to understand a large social media dataset and understand more about the network properties as part of a netnography and research findings (Kozinets, 2020, P.350). SNA can answer such questions as, what is the network shape, who are the key influencers and who is talking to who, which is valuable to aid understanding of How and Why questions through netnography.

3.4 Data Collection

We selected two SMEs as follows:

> SME A – Salford Red Devils Rugby League Football Club, based in Salford, UK
> (@salforddevils)

SME B – Toronto Wolfpack Rugby League Football Club, based in Toronto, Canada (@towolfpack)

These rugby league clubs are classed as SMEs based on the aforementioned British Government definition (organisations up to 250 employees) and also on the basis of their "entity size, turnover and organisational characteristics (resource constraints, short-termism, informality and ownership mentality)" (Moore and Levermore, 2012, p. 197). As sports clubs, they do, however, have a greater number of stakeholders including fans, workers and volunteers, shareholders (in some cases), sponsors, their local community, public administrations, broadcasters, and other media organisation (Mendizabal, San-Jose & Garcia-Merino, 2020). We selected these SMEs because of the familiarity and access to the staff and customers from the research team and also because of the amount of engaged social media followers (McCarthy, et al., 2014). Both SMEs are active on social media channels and look to amplify and increase revenue through entrepreneurial activities whilst enhancing the communities in which they are situated. The findings explore some of these overlaps including @Towolfpack's launch of new products and @salforddevils assisting disadvantaged members of the local community that had experienced hate crimes. The unpredictable nature of social media also means that problems and online arguments can surface, which also become associated with brands (Fenton, Keegan & Parry, 2021). There is future scope for studies which explore the entrepreneurial activities of SMEs and how these are enhanced through social media.

We followed Kozinets' (2020) recommendations for choosing the field sites for our study. The SMEs and social media channels selected were therefore relevant to the study, active, interactive, substantial, heterogeneous and data-rich at the time of study. One member of the research team commenced a SNA study on this data and another member commenced

participant observation at the same time in parallel and following the standards of netnography.

We collected data for both SMEs on Twitter using NodeXL for a period of 45 days (April 28th to June 11th) sampling from 4 time points between April 2019 and June 2019. NodeXL has been utilised in a wide variety of fields and is an established tool for social media data analysis, amassing over 7,000 academic citations (Ahmed & Lugovic, 2019). NodeXL, examines the connections between users and uncovers the overall structure of the social media network using an SNA approach. Data was retrieved from Twitter using the keywords 'SalfordDevils' OR 'Salford Devils' (these keywords would also retrieve tweets mentioning the 'Salford Red Devils') and 'TOwolfpack' OR 'Toronto Wolfpack'. The first keyword for both comprises the username of the Twitter accounts, ensuring that these mentions were analysed. In parallel to our SNA data capture, one member of the research team participated in the Twitter communities.

Netnography, like all ethnographical work, often features some level of participant observation and human interpretation. Kozinets (2020, p.250) acknowledges that netnography is about online participation and observation and in this study we adopted his strategy of 'social engagement'. This is one of five levels of suggested participation strategy and is the closest to what is meant by participation in a traditional ethnography. This involved interaction with the people within the communities and openly exchanging ideas. Although it is possible to conduct a netnography without this type of social engagement, we opted for active participation as we found that this was the most effective way to study this community and obtain the richest data (Kozinets, 2015).

A key aspect of netnography which differentiates it from other digital ethnographies is its standards of entrée, ethics, observation and data analysis (Kozinets, 2015). The ethical

standards of netnography require the researchers to be open and honest about their research and position as researcher, including the Dr. title, the researcher's name and University affiliation and research interests in his social media biography. It is apparent, therefore, that he is a researcher and in any interactions, this is made clear to people. Our University ethical standards and that of netnography required us to anonymise data used. We also sought permission to use any direct quotes used by individuals in the study.

The research team also connected with staff and marketing teams of both SMEs to discuss the study and openly share ideas (Kozinets, 2020). This included social media interactions, email, telephone and face to face meetings in Salford and Toronto. These discussions with social media marketing staff in particular helped enhance our understanding of the social media networks and consumer behaviour. We also followed the approach of digital netnography by utilising digital tools and blending this with the participant observations to create further insight (Fenton & Procter, 2019). For example, SNA highlights particular insights or influencers, which were then framed for further analysis through netnography (Kozinets, 2015).

From 28th April to July 22nd 2019, we captured a participant observation diary to highlight key moments in order to understand how consumers interact with both SMEs on social media. It is also notable that the authors presented a workshop at the Social Media and Society Conference 2019 in Toronto as part of this study. The team presented to academics and industry professionals the blended techniques of SNA and netnography and then allowed the audience to interact with the tools to give their interpretation of SNA visualisations and feedback on this study. This research paper is therefore the culmination of this work.

4.1 Results of Social Network Analysis

Figure 1 shows SME A's Twitter community over the period, 18th-28th April 2019. The network graph is composed of round dots, which represent Twitter users with larger sized nodes indicating higher influence (as measured by betweenness centrality). Twitter users are then grouped by cluster (using the Clauset-Newman-Moore cluster algorithm) and are given a unique colour based on the cluster they are based in. Lines between]users represent connections, such as mentions including retweets. Denser groups indicate stronger connections between users in the form of mentions and retweets. The graph is laid out in NodeXL using the Harel-Koren Fast Multiscale layout algorithm. Within our network graphs, from right to left the largest groups appear first and the smallest groups appear towards the end. Smaller groups indicate smaller discussions between Twitter users and can be composed only of a few tweets.

INSERT FIGURE 1 HERE

SME A's largest group in the network was identified as a large broadcast network, which contains the most users. A broadcast network is where a Twitter account is widely repeated (via retweets) by many audience members. The broadcast network shape appears consistently over different months indicating that SME A's tweets are consistently retweeted. Using this analysis, SME A could identify which types of content are regularly retweeted in order produce similar tweets or new tweets on the topics of interest to their Twitter community.

In addition to a broadcast network, there are a number of smaller groups indicating a community, when there are multiple groups of users who are conversing about different topics, has formed around different topics related to the SME. We produced further network graphs over a 45-day time period and found the same network shape across this time. SNA can be used to examine the different discussions taking place in each of the different groups.

This is because each group is a cluster of Twitter users based on the connections between users such as a reply, mention or retweet of a user. This finding is important from a brand management perspective as it allows SME A to gather the situational awareness of their brand on Twitter and identify different discussions that take place around it. SNA is particularly useful as it allows SMEs to identify users at the centre of different groups of users having different conversations. This is important because users towards the centre will hold more influence in the network. Traditional social media monitoring tools may only provide overall metrics whereas NodeXL provides overall metrics alongside group metrics. By having this information, it is possible to influence the discussion and the shape of the network by targeting influential users in their respective groups. From a commercial perspective, this information can also be utilised as intelligence, as the analysis will pick up positive and negative touch points that consumers may have with an SME. Figure 2 below shows SME B's Twitter community over the period of observation.

INSERT FIGURE 2 HERE

The network visualization for SME B shows that typically the largest group in the network is a broadcast network, which contains the SME account and where Twitter users are retweeting the account. SME B's Twitter account receives similar engagement on Twitter to SME A but has a smaller network size overall. In this example, there are many more mentions of the SME A Twitter account as well as the keyword 'Salford Devils' originating from other brands, players, and the media which do not occur as frequently with SME B's account. However, a similarity between the two cases is that SME B also has a community network shape (Smith, et al., 2014) as users tend to tweet about different topics, suggesting that SMEs of this type have a community network shape and structure. Having engaged communities around an SME brand can increase loyalty, overall awareness and can lead to better products

(such as merchandise, licensed products – as we discuss for SME B below, or the actual gameday offering) through listening to views from the community. We again produced further network graphs over a 45-day time period and found the same network shape across this time.

As with SME A, SME B could also utilise this information as intelligence as it has highlighted the overall discussions taking place as well as specific groups conversing about it. SNA will also allow SME B to monitor any negatively related to the brand and the size of the relative group sharing the negatively. Furthermore, by producing this type of analysis it would be possible to identify whether groups sharing negative content were growing larger or reducing in size.

4.2 Findings for Influential Twitter Users

Tables 1 and 2 below highlight influential Twitter users for both SMEs, based on data retrieved in April 2019. We measure influence by calculating the betweenness centrality metric (outlined above). The precise scores will differ across different networks that are measured. The scores are interpreted by comparing the scores to one another and developing a ranking of Twitter users. Table 1 displays the most influential Twitter users ranked by the betweenness centrality metric, which is calculated by taking into account all users in the network and has no upper or low bound. We can see that influential users consisted of SME A's own Twitter account which had a betweenness centrality score of 1591858.107, which was considerably higher than other users within the network and highlights the power that SME A's account exerts over the network. This was then followed by that of a user account which appears to have deleted their account and has been taken over by a new user, Wigan Warriors, the official Super League Twitter account and Jackson Hastings who was at the time of study, a very popular player (employee) for the SME. The rightmost column,

containing the raw betweenness centrality scores, helps identify the level of influence between different users and it highlights how the top 3 accounts all had a score of 70,000 or over, whereas users 4 and 5 had scores of under 45,000 or under. This information may be useful, for instance, when selecting certain social media influencers to approach for influencer-based marketing. It can help rank and identify Twitter users who are fans and have a considerable influence over an SME's Twitter network. The official Twitter account of this SME is again classed as the most influential user, which is because most users will be tagging the official Twitter account in their tweets. However, this is then followed by a podcaster-fan of the organisation, a fan, and a sports journalist. The betweenness centrality scores highlight that the Twitter account of SME B had a considerably higher level of influence with a score of over 33,000 compared to the remaining accounts, which had scores below 815.

INSERT TABLES 1 and 2 HERE

Table 3 and 4 below highlight the most frequently used hashtags based on data retrieved in April 2019 and this was calculated using NodeXL. The most popular hashtag utilised by SME A was entitled '#togetherstronger', which is frequently utilised within promotional Tweets by the club, consumers and partners. The remaining hashtags were based on specific games and are publicised by broadcasters in the lead up to matches. The most frequently utilised hashtag for SME B was 'defendtheden' which was used in promotional tweets. Identifying hashtags alongside their occurrences allows SMEs to engage with the wider community that these hashtags generate and identify conversations that they may not have been aware of. Once identified, they could be incorporated into the SME's social media strategy.

INSERT TABLES 3 and 4 HERE

4.3 Results of Netnography

Within our period of study, there were several incidents on Twitter that helped us to further understand the marketplace and how consumers are interacting with SMEs. The incidents were identified through following the online traces of the SMEs (Kozinets, 2020) via ongoing NodeXL capture, as noted above. A collection of connections between users resulted in a series of clusters around discussions that were typically related to an initial Twitter post and indicated significant incidents. As an example, the figure below demonstrates the use of SNA to identify a significant social media incident for SME B, which was subsequently investigated through netnography as outlined by Kozinets' concept of framing incidents and individuals online traces for further study.

INSERT FIGURE 3 HERE

Netnography undertaken in this period demonstrates how SMEs can use social media to gain feedback from their stakeholders that SNA alone would not provide (Filo, Lock, & Karg, 2015). Given the significant role that social media now plays in generating eWOM (Ahmad et al., 2018), two incidents have been selected as examples of 1) the use of social media to disseminate content, with the SMEs taking on the role of influencers and 2) using social media to engage with their networks in order to respond to disruptive incidents resulting from 'customer' feedback/criticism. In our case, the disruption stemmed from two racism-related incidents that the SMEs were involved in during the period of study.

4.4 Launch of new products

Licensed products now form a lucrative source of revenue for SMEs in the sport industry with annual retail sales worth billions of dollars (Papadimitriou & Apostolopoulou, 2018). As social media influencers, SMEs often use their brands and following on social media to

promote new products. The first incident of note relates to a new Cannabidol (CBD) licensed product released by SME B. Since 2018, Toronto has been one of the few cities where cannabis use is legal, and this post created considerable and immediate reaction from people all around the world and especially from Canada and the UK. The replies to this post demonstrated that the reception to this product launch was positive, with consumers praising the organisation for this business initiative and CBD for its health benefits. Consumers also asked when it would be available in the UK. As noted earlier, social media allows SMEs to communicate their values and to introduce new products to a market (Mumi et al., 2017), but SME B further capitalised on their transatlantic position to launch products and used social media to promote and get real-time instantaneous feedback from consumers globally. Their transatlantic nature also allowed SME B to position themselves as an innovative organisation because, although licensed products can generate significant income and increase brand loyalty (Papadimitriou & Apostolopoulou, 2018), the nature of this product would be unique for a UK (and global) market. The performance of SME B may be boosted through this engagement with social media as the product launch generated positive word of mouth and an increased knowledge of the organisation (Ndiege, 2019).

INSERT FIGURE 4 HERE

4.5 Disruptive Incidents

As noted above, consumers' views and attitudes are shaped by social media and SMEs can influence consumer perceptions positively through its effective use. However, being entrepreneurial also involves being agile and responding to any negative social media commentary, identifying potential threats in addition to opportunities for the SME (Blanchard, 2013). On 06 June 2019, Swinton Lions' (an English rugby league club) player Jose Kenga posted the following message on Twitter copying in both his own club, SME B

and the RFL (Rugby Football League) – the governing body of rugby league in England. As he notes, the owner of SME B, David Argyle was involved with this incident.

INSERT FIGURE 5 HERE

Responses to this post were swift but divided, as is often the case with online reactions to incidents of racism (Cleland, Parry, & Radford, 2019). They included defending Argyle and calling the incident a 'careless mistake' and a reaction to this and other consumers saying that it was 'fundamentally racist'. Others call for SME B to quit the league completely and cease operating. However, through its effective engagement with Titter, SME B recognised Kenga as a key influencer and was able to identify this potential crisis and respond in an approriate and timely manner, lessening the potential severity of the incident. The owner responded publicly through SME B's official Twitter account and subsequently sacked himself as chairman and chief executive (Guardian, 2019). This incident also highlights the need for SMEs to be aware of the SMIs who may not be present in their networks and the potential for these individuals to create both positive and negative perceptions (Freberg et al., 2011).

INSERT FIGURE 6 HERE

SME A was also involved in discussions relating to racism in the period of study and these stories have been covered and discussed by consumers on Twitter. In this case, a Salford resident and his son were racially abused with the words 'no blacks' sprayed on their home (Halliday, 2019). When this story broke in the national press, SME A publicly invited the victims to be their guests of honour, using Twitter to publicise this show of solidarity with them. Again, the reaction from consumers was instantaneous with many responding that it was a wonderful gesture and that true Salfordfordians welcome and support them. The #TogetherStronger hashtag was used in many cases by club and consumers and feels particularly pertinent here in support of this father and son. The words 'community' and

'family' were used by consumers in response to this incident. SME A's use of social media allowed them to highlight their positive response, which traditional media gatekeepers may not have deemed newsworthy (Bro & Wallberg, 2014). Their statements and engagement with their community then has the potential to achieve behavioural change (Campos, Anagnostopoulos, & Chadwick, 2013) and certainly enhances the SME's reputation.

INSERT FIGURE 7 HERE

5.0 Concluding Observations

On the basis of our findings, we maintain our assertation that a strong and clear understanding of social media, netnography and SNA can play an important role in illuminating, facilitating and enabling small business development and entrepreneurship. At one level, this triumvirate is a source of information that can bring greater insights into the operating environment, markets and customer groupings with which small businesses are engaged. This may aid decision making, improve efficiency and effectiveness, serve as the basis for building competitive advantage, and enhance strategic competence. At another level, the triumvirate implies an opportunity for intending small business owners. We believe there is considerable commercial value in the collection, analysis and dissemination of qualitative social media data, which suggests an opportunity for start-ups and further business development in this domain of activity.

In answering our primary research question, the findings from this study demonstrate how data drawn from social media can assist small business in making sense of and bringing clarity to a disruptive, complex and sometimes bewildering operating environment (Abu Bakar et al., 2019; Eggers et al., 2017). In particular, we highlight how data drawn from Twitter contributes to understanding the size, shape and nature of social media networks, the communications that take place within them and the key influencers – vital information that

many SMEs lack (Eggers et al., 2017). It is especially pertinent to point out that networks of communication appear in different forms, each of which have important implications for entrepreneurs and decision makers. For instance, we have observed here how broadcast networks were evident among the social media networks of the two SMEs employed by the study.

Broadcast networks are characterised by a central node communicating with a network, and that network subsequently sub-dividing into smaller communities of users who then continue a discussion beyond initial social media postings. For a small business, this raises all manner of issues, from how to create and transmit communications through to how post-communication relationships with social media users and consumers should be managed (Ndiege, 2019). In observing the nature of networks, we have also highlighted here the importance of several phenomena, including engagement, influence and community. Indeed, their importance resonates with the three sub-questions posed at the start of the study.

In terms of influence, the small businesses which served as the focal point for this study were in themselves influencers, though it is the other nodes within their networks that are striking. The importance of customers is inevitably important, though the way in which customers create their own clusters of conversations on social media, a common feature of broadcast networks, was striking. This indicates that whilst small businesses may instigate social media conversations, they are often perpetuated and sustained by customers themselves (Campos, Anagnostopoulos, & Chadwick, 2013). This suggests some interesting opportunities for further research, including around notions of communications and social media among brand fans, brand advocates and, possibly, consumer tribes as well.

At the heart of these networks and communities are, nevertheless, the central concepts of people, engagement and influence. In both cases, we determine from our study that both

appear to be cognitive and behavioural in nature. Whilst it was not within the scope of this study to examine engagement and influence in detail, clearly both are central to the creation of network shape and the movement of information around networks. Engagement can be superficial, manifest simply in terms of reading a post. However, it becomes more complex when liking a post, sharing it, adding comments or acting upon information contained within posts made on social media. For small businesses, it seems vital that an understanding of this cognitive and behavioural process is achieved. As such, we recommend that further such research in this field be undertaken. In broad terms, what engages, how engagement takes place, and how businesses should craft engaging social media content appear to be especially pertinent. Similarly, issues arise around influence, that is: from where influence originates, what constitutes influence (both in terms of people and content), how influence manifest itself, and how businesses can build influence are key considerations for small enterprises but also for researchers seeking further opportunities in this field.

It is within this context that we note the importance of qualitative and quantitative social media analysis to enhance SME online interactions. We suggest that this places a particular onus upon small businesses to approach social media content generation both creatively and strategically.

As noted, engagement with the two SMEs was driven by two issues: disruptive incidents and the launch of new products. Future research is necessary if the two are to be confirmed as common drivers of communication, network shape, engagement and influence. We therefore welcome the replication and extension of our work, especially in the area of typology development (which would enable the identification of different types of response to social media post). Our identification of disruptive incidents raises some important issues for SMEs, entrepreneurs and researchers in the field. In particular, we highlight the need for further

understanding to be developed of what constitutes disruption, from where it emanates, how it transmits itself through networks, and what consequences it has. In the context of the analysis presented here, we note how social media can enable the more timely and effective management of disruptive incidents. However, we nevertheless acknowledge that social networks may also be a source of disruption, especially when users and those who are engaged are the source of it. This poses some potentially significant challenges, suggesting a need for more in-depth analyses of such phenomena in the future.

We have also identified here the contribution that social media can play in product launches as an important communication tool through which content can be disseminated. It is worth reiterating though that a strong understanding of engagement and influence are vital in ensuring the reach and effectiveness of posts pertaining to launches. Similarly, we also reiterate the importance of, for instance, advocacy in the context of new product launches.

We conclude that as social media has rapidly become an important tool for sports brands and researchers, there is an increasing need to understand the opportunities and pitfalls associated with them. The blend of SNA and netnography therefore provides a rich source of data and framework for analysis of this wealth of data. This study identifies that when small businesses communicate using social media; different shaped networks emerge from these communications. Each of these shapes reveals something about how those who engage with social media posts engage with and influence one another. It is within a network and its shape that vital data is located; hence, by monitoring and reporting on networks, influential users can be identified, key events highlighted and important issues illuminated through social media data.

6.0 Bibliography

Abu Bakar, A. R., Ahmad, S. Z., & Ahmad, N. (2019). SME social media use: A study of

predictive factors in the United Arab Emirates. *Global Business and Organizational Excellence*, *38*(5), 53–68.

Agostino, D., & Sidorova, Y. (2016). A performance measurement system to quantify the contribution of social media: new requirements for metrics and methods. *Measuring Business Excellence*, *20*(2), 38–51.

Ahmad, S. Z., Ahmad, N., & Abu Bakar, A. R. (2018). Reflections of entrepreneurs of small and medium-sized enterprises concerning the adoption of social media and its impact on performance outcomes: Evidence from the UAE. *Telematics and Informatics*, *35*(1), 6–17.

Ahmed, W., & Lugovic, S. (2019). Social media analytics: analysis and visualisation of news diffusion using NodeXL. *Online Information Review*, *43*(1), 149–160.

Alfoqahaa, S. (2018). Critical success factors of small and medium-sized enterprises in Palestine. *Journal of Research in Marketing and Entrepreneurship*, *20*(2), 170–188.

Anagnostopoulos, C., Parganas, P., Fenton, A., & Chadwick, S. (2018). Branding in Pictures : Using Instagram as a Brand Management Tool in Professional Team Sport Organisations. *European Sport Management Quartely*, *0*(0), 1–46.

Andersson, S. (2000). Internalization of Firm From Entreprenurial View.

Bill, K., & Rhoden, C. (2011). Business support in sport: Strategy or serendipity? *Journal of Small Business and Enterprise Development*, *18*(4), 821–832.

Blanchard, K. (2013). Entrepreneurial Characteristics in SMEs: A Rural, Remote Rural, and Urban Perspective of Lincolnshire Businesses . *Strategic Change*, *22*(3-4), 191–201.

Bolíbar, M. (2016). Macro, meso, micro: broadening the 'social' of social network analysis with a mixed methods approach. *Quality & Quantity*, *50*(5), 2217–2236.

Branthwaite, A., & Patterson, S. (2011). The power of qualitative research in the era of social media. *Qualitative Market Research: An International Journal*, *14*(4), 430–440.

Bro, P., & Wallberg, F. (2014). Digital Gatekeeping: News media versus social media. *Digital Journalism*, *2*(3), 446–454.

Campos, C. J., Anagnostopoulos, C., & Chadwick, S. (2013). Assessing the integration of Twitter into the strategic operations of sporting organisations: the case of national governing bodies for sports in England. *Choregia*, *9*(1), 43–66.

Castela, B. M. S., Ferreira, F. A. F., Ferreira, J. J. M., & Marques, C. S. E. (2018). Assessing the innovation capability of small- and medium-sized enterprises using a non-parametric and integrative approach. *Management Decision*, *56*(6), 1365–1383.

Cavusgil, S. T., & Knight, G. (2015). The born global firm: An entrepreneurial and capabilities perspective on early and rapid internationalization. *Journal of International Business Studies*, *46*(1), 3–16.

Chalmers, D. M., & Shaw, E. (2017). The endogenous construction of entrepreneurial contexts: A practice-based perspective. *International Small Business Journal: Researching Entrepreneurship*, *35*(1), 19–39.

Chan, R. C. H., Chu, S. K. W., Lee, C. W. Y., Chan, B. K. T., & Leung, C. K. (2013). Knowledge Management using Social Media: A Comparative Study between Blogs and Facebook. *Proceedings of the ASIST Annual Meeting*, *50*(1), 1–9.

Cleland, J., Parry, K., & Radford, D. (2019). "Perhaps She Only Had a Banana Available to Throw": Habitus, Racial Prejudice, and Whiteness on Australian Football League Message Boards. *Sociology of Sport Journal*, 1–9.

Crammond, R., Omeihe, K. O., Murray, A., & Ledger, K. (2018). Managing knowledge through social media: Modelling an entrepreneurial approach for Scottish SMEs and beyond. *Baltic Journal of Management*, *13*(3), 303–328.

Datta, A. (Avi), Sahaym, A., & Brooks, S. (2018). Unpacking the Antecedents of Crowdfunding Campaign's Success: The Effects of Social Media and Innovation

Orientation. *Journal of Small Business Management*, *00*(00), 1–27.

Dobson, S., Breslin, D., Suckley, L., Barton, R., & Rodriguez, L. (2013). Small firm survival

and innovation: An evolutionary approach. *International Journal of Entrepreneurship*

and Innovation, *14*(2), 69–80.

Eggers, F., Hatak, I., Kraus, S., & Niemand, T. (2017). Technologies That Support Marketing

and Market Development in SMEs—Evidence from Social Networks. *Journal of Small*

Business Management, *55*(2), 270–302.

Eshima, Y., & Anderson, B. S. (2017). Firm Growth, Adaptive Capability and

Entrepreneurial Orientation. *Strategic Management Journal*, *38*, 770–779.

Fenton, A., & Procter, C. (2019). Studying social media communities : blending methods

with netnography. *SAGE Research Methods Cases*. Retrieved from

http://usir.salford.ac.uk/47958/

Fenton, A., Keegan, B. J., & Parry, K. D. (2021). Understanding Sporting Social Media

Brand Communities, Place and Social Capital: A Netnography of Football

Fans. *Communication & Sport*. https://doi.org/10.1177/2167479520986149.

Filo, K., Lock, D., & Karg, A. (2015). Sport and social media research: A review. *Sport*

Management Review, *18*(2), 166–181.

Freberg, K., Graham, K., McGaughey, K., & Freberg, L. A. (2011). Who are the social media

influencers? A study of public perceptions of personality. *Public Relations Review*,

37(1), 90–92.

Gartner, W. B., & Birley, S. (2002). Introduction to the special issue on qualitative methods

in entrepreneurship research. *Journal of Business Venturing*, *17*(5), 387–395.

Glaser, B. G., & Strauss, A. L. (1967). *The Discovery of Grounded Theory: Strategies for*

Qualitative Research. *Aldine* (Vol. 1).

Guardian. (2019, June). Toronto owner David Argyle stands down from roles after racism

row. *Guardian*.

Halliday, J. (2019, February 18). Salford man targeted with racist graffiti "overwhelmed" by support. *Guardian*. Retrieved from https://www.theguardian.com/uk-news/2019/feb/18/salford-dad-jackson-yamba-targeted-with-racist-graffiti-overwhelmed-by-support

Hambrick, M. E. (2017). Sport communication research: A social network analysis. *Sport Management Review*, *20*(2), 170–183.

Hambrick, M. E., & Pegoraro, A. (2014). Social Sochi: using social network analysis to investigate electronic word-of-mouth transmitted through social media communities. *International Journal of Sport Management and Marketing*, *15*(3/4), 120–140.

Harris, L., & Rae, A. (2009). Social networks: The future of marketing for small business. *Journal of Business Strategy*, *30*(5), 24–31.

Havakhor, T., Soror, A. A., & Sabherwal, R. (2018). Diffusion of knowledge in social media networks: effects of reputation mechanisms and distribution of knowledge roles. *Information Systems Journal*, *28*(1), 104–141.

Healy, J. C., & McDonagh, P. (2013). Consumer roles in brand culture and value co-creation in virtual communities. *Journal of Business Research*, *66*(9), 1528–1540.

Hlady-Rispal, M., & Jouison-Laffitte, E. (2014). Qualitative research methods and epistemological frameworks: A review of publication trends in entrepreneurship. *Journal of Small Business Management*, *52*(4), 594–614.

Kozinets, R. (2020). *Netnography: The Essential Guide to Qualitative Social Media Research* (3rd ed.). London: SAGE Publications.

Kozinets, R. V. (2015). *Netnography Redefined* (2nd ed.). Los Angeles: SAGE Publications.

Kyndt, E., & Baert, H. (2015). Entrepreneurial competencies: Assessment and predictive value for entrepreneurship. *Journal of Vocational Behavior*, *90*, 13–25.

Leavitt, A., Burchard, E., Fisher, D., Gilbert, S., Ecology, W., & Pub, P. (2009). The Influentials: New Approaches for Analyzing Influence on Twitter. *Web Ecology*, *04*(September), 1–18.

Leitch, C. M., Hill, F. M., & Harrison, R. T. (2010). The philosophy and practice of interpretivist research in entrepreneurship: Quality, validation, and trust. *Organizational Research Methods*, *13*(1), 67–84.

Li, L., Su, F., Zhang, W., & Mao, J. Y. (2018). Digital transformation by SME entrepreneurs: A capability perspective. *Information Systems Journal*, *28*(6), 1129–1157.

Lima, M. C., Namaci, L., & Fabiani, T. (2014). A netnographic study of entrepreneurial traits: evaluating classic typologies using the crowdsourcing algorithm of an online community. *Independent Journal of Management & Production, 5*(3), 693-709.

Love, A., & Andrew, D. P. S. (2012). The intersection of sport management and sociology of sport research: A social network perspective. *Sport Management Review*, *15*(2), 244–256.

McCarthy, J., Rowley, J., Ashworth, C. J., & Pioch, E. (2014). Managing brand presence through social media: the case of UK football clubs. *Internet Research*, *24*(2), 181–204.

Mendizabal, X., San-Jose, L., & Garcia-Merino, J. D. (2020). Understanding and mapping stakeholders of sport clubs: particularities. *Sport, Business and Management: An International Journal, 10*(3), 359-378.

Meng, M. D., Stavros, C., Westberg, K., & Westberg, K. (2015). Engaging fans through social media: implications for team identification. *Sport, Business and Management: An International Journal*, *5*(3), 199–217.

Monaghan, S., Lavelle, J., & Gunnigle, P. (2017). Mapping networks: Exploring the utility of social network analysis in management research and practice. *Journal of Business Research*, *76*, 136–144.

Moore, N., & Levermore, R. (2012). English professional football clubs: Can business parameters of small and medium-sized enterprises be applied? *Sport, Business and Management: An International Journal*, *2*(3), 196–209.

Morais, G. M., Santos, V. F., & Gonçalves, C. A. (2020). Netnography: Origins, Foundations, Evolution and Axiological and Methodological Developments and Trends. *The Qualitative Report*, *25*(2), 441-455.

Mort, G. S., Weerawardena, J., & Liesch, P. (2012). Advancing entrepreneurial marketing: Evidence from born global firms. *European Journal of Marketing*, *46*(3–4), 542–561.

Mumi, A., Ciuchta, M., & Yang, Y. (2017). the Influences of Social Media on Entrepreneurial Process: the Theoretical Understanding From Effectuation Theory. *United States Association for Small Business and Entrepreneurship*, 309–340.

Næss, H. E. (2017). Authenticity matters: A digital ethnography of FIA World Rally Championship fan forums. *Sport Management Review*, *20*(1), 105–113.

Naraine, M. L., & Parent, M. M. (2016). Illuminating Centralized Users in the Social Media Ego Network of Two National Sport Organizations. *Journal of Sport Management*, *30*(6), 689–701.

Ndiege, J. R. A. (2019). Social media technology for the strategic positioning of small and medium-sized enterprises: Empirical evidence from Kenya. *Electronic Journal of Information Systems in Developing Countries*, *85*(2), 1–12.

Neck, H. M., & Greene, P. G. (2011). Entrepreneurship Education: Known Worlds and New Frontiers. *Journal of Small Business Management*, *49*(1), 55–70.

Neuman, W. L. (2011). *Social Research Methods: Qualitative and Quantitative Approaches*. Pearson.

Papadimitriou, D., & Apostolopoulou, A. (2018). Capturing the meanings of sport licensed products. *Journal of Marketing Communications*, *24*(5), 433–449.

Parganas, P., Anagnostopoulos, C., & Chadwick, S. (2015). "You'll never tweet alone": Managing sports brands through social media. *Journal of Brand Management*, *22*(7), 551–568.

Park, J. Y., Sung, C. S., & Im, I. (2017). Does social media use influence entrepreneurial opportunity? A review of its moderating role. *Sustainability (Switzerland)*, *9*(9), 1–17.

Parnell, J. M., & Robinson, J. C. (2018). Social network analysis: Presenting an underused method for nursing research. *Journal of Advanced Nursing*, *74*(6), 1310–1318.

Parveen, F., Jaafar, N. I., & Ainin, S. (2016). Social media's impact on organizational performance and entrepreneurial orientation in organizations. *Management Decision*, *54*(9), 2208–2234.

Pérez-Luño, A., Saparito, P., & Gopalakrishnan, S. (2016). Small and Medium-Sized Enterprise's Entrepreneurial versus Market Orientation and the Creation of Tacit Knowledge. *Journal of Small Business Management*, *54*(1), 262–278.

Raghavan Unnithan, S. K., Kannan, B., & Jathavedan, M. (2014). Betweenness Centrality in Some Classes of Graphs. *International Journal of Combinatorics*, *2014*, 1–12.

Roth-Cohen, O., & Lahav, T. (2019). Going undercover: Online domestic tourism marketing communication in closed and open Facebook groups. *Journal of Vacation Marketing*, *25*(3), 349–362.

Smith, M. A., Shneiderman, B., Rainie, L., & Himelboim, I. (2014). Mapping Twitter Topic Networks: From Polarized Crowds to Community Clusters.

Staniewski, M. W., & Awruk, K. (2018). Questionnaire of entrepreneurial success — Report on the initial stage of method construction. *Journal of Business Research*, *88*(November 2017), 437–442.

Strauss, A. L., & Corbin, J. M. (1990). *Basics of qualitative research: grounded theory procedures and techniques*. Sage Publications.

Tedmanson, D., Verduyn, K., Essers, C., & Gartner, W. B. (2012). Critical perspectives in entrepreneurship research. *Organization*, *19*(5), 531–541.

Upson, J. W., Damaraju, N. L., Anderson, J. R., & Barney, J. B. (2017). Strategic networks of discovery and creation entrepreneurs. *European Management Journal*, *35*(2), 198–210.

Valliere, D. (2019). Refining national culture and entrepreneurship: the role of subcultural variation. *Journal of Global Entrepreneurship Research*, *9*(1).

Walsham, G. (2006). Doing interpretive research. *European Journal of Information Systems*, *15*(3), 320–330.

Ward, M., & Rhodes, C. (2014). Small Businesses and the UK Economy. *House of Commons Library*, 1–8. Retrieved from http://www.myveryownblog.co.uk/wp-content/uploads/2015/01/sme_stats_2014.pdf

Wäsche, H., Dickson, G., Woll, A., & Brandes, U. (2017). Social network analysis in sport research: an emerging paradigm. *European Journal for Sport and Society*, *14*(2), 138–165.

Whelan, E., Teigland, R., Vaast, E., & Butler, B. (2016). Expanding the horizons of digital social networks: Mixing big trace datasets with qualitative approaches. *Information and Organization, 26*(1), 1-12.

Wyllie, J., Lucas, B., Carlson, J., Kitchens, B., Kozary, B., & Zaki, M. (2016). An Examination of Not-For-Profit Stakeholder Networks for Relationship Management: A Small-Scale Analysis on Social Media. *PLOS ONE*, *11*(10), e0163914.

Yan, G., Watanabe, N. M., Shapiro, S. L., Naraine, M. L., & Hull, K. (2018). Unfolding the Twitter scene of the 2017 UEFA Champions League Final: social media networks and power dynamics. *European Sport Management Quarterly*, *0*(0), 1–18.

Zahra, S. A. (2008). Being entrepreneurial and market driven: implications for company performance. *Journal of Strategy and Management*, *1*(2), 125–142
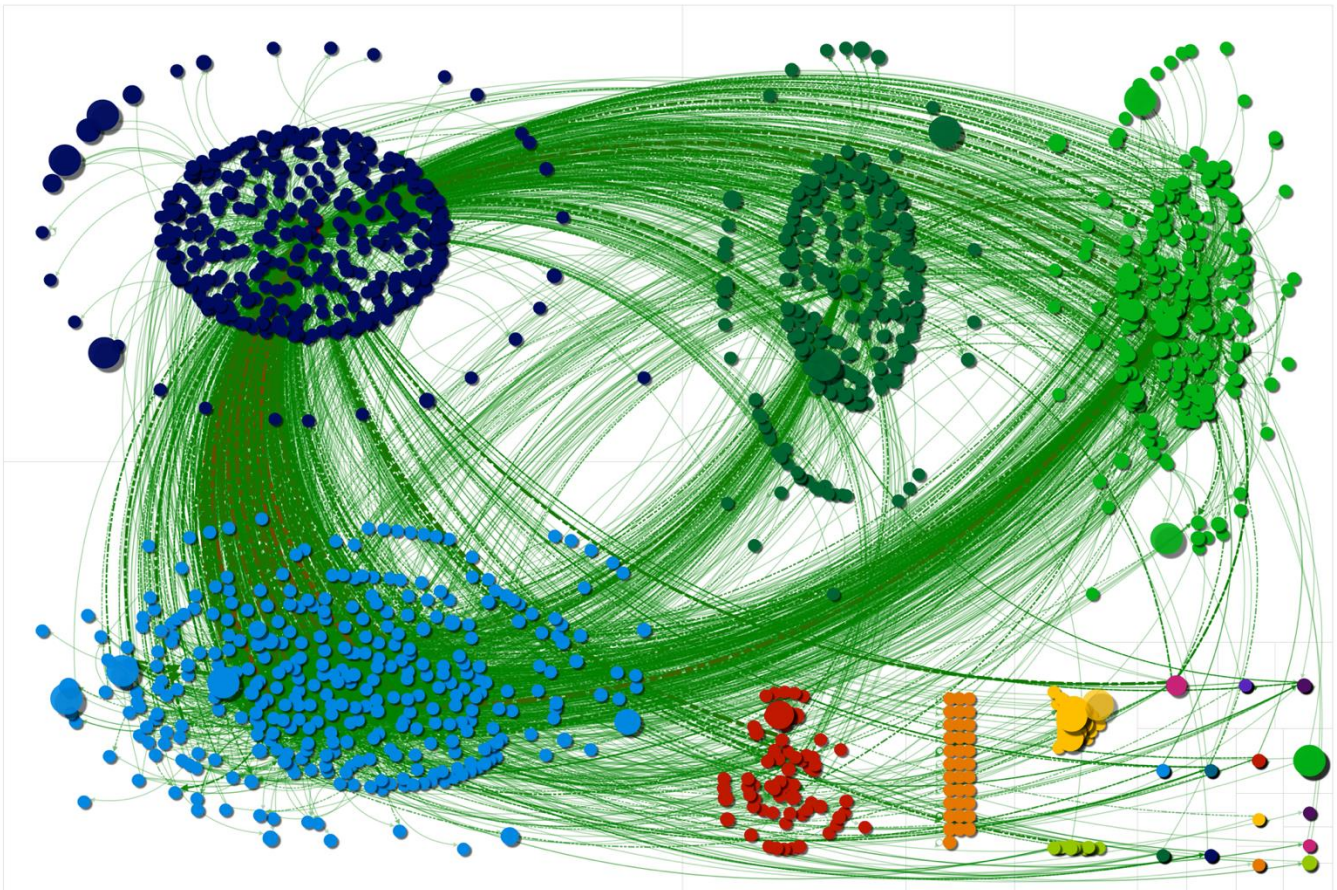
Figure 1 - SME A Twitter community over the period 18th April to 28th April
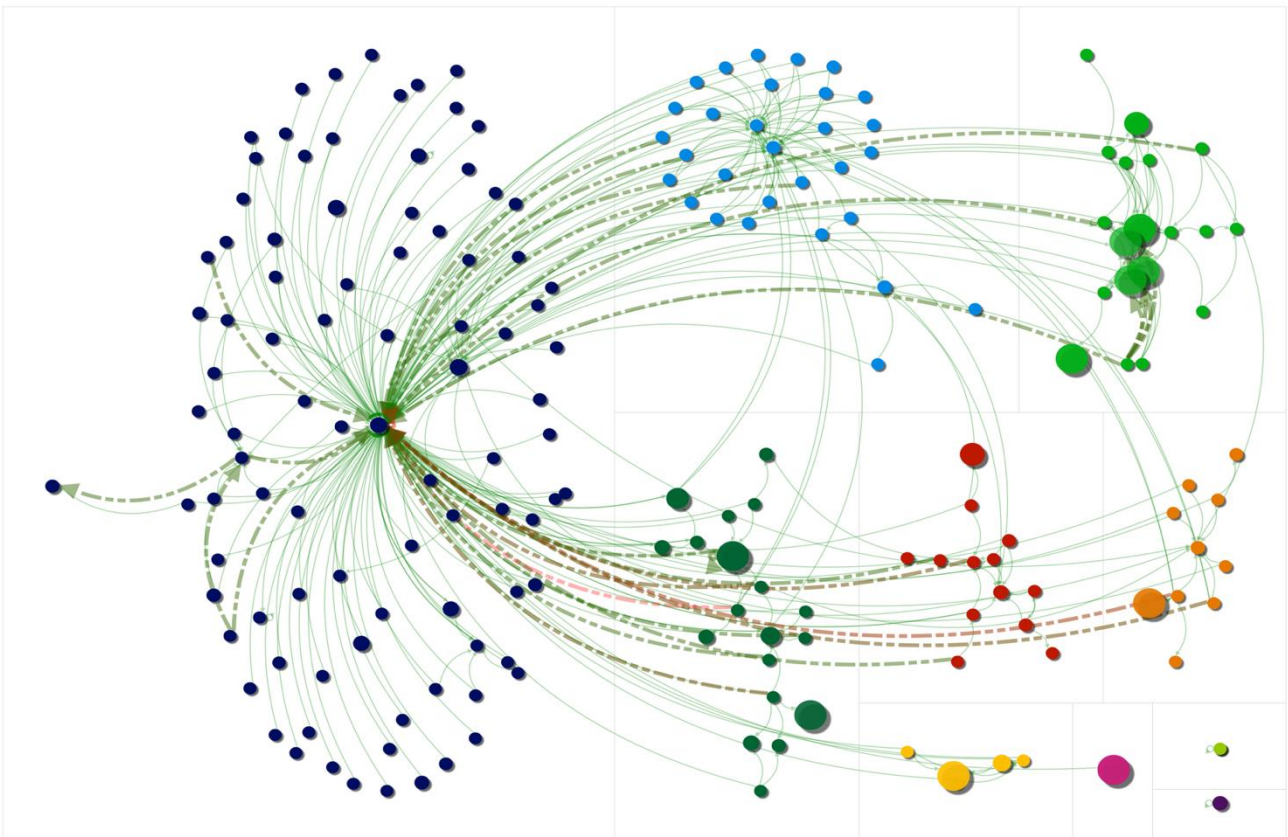

Figure 2 - SME B Twitter community over the period 19 April

Rank	Twitter account	Twitter bio	Betweeness Centrality Score
1	@salforddevils	Salford Red Devils official Twitter page - offering you the latest news and behind the scenes action from around the club. #TogetherStronger	1591858.107
2	wolvesrl	No Bio	103888.882
3	@wiganwarriorsrl	Official Wigan Warriors RL Twitter account. 2018 Super League Champions, 22 x League Champions, 19 x Challenge Cup Winners, 4 x World Club Champions ⭐⭐	71385.294
4	superleague	The Official Betfred Super League Twitter account. 2019 Super League Grand Final Tickets http://bit.ly/2HHiq5M	42749.009
5	jackohastings	JH31. Salford Red Devils.	39764.073

Table 1. Influential Users for SME A from

Rank	Twitter account	Twitter bio	Betweeness Centrality Score
1	@towolfpack	The world's first transatlantic professional sports team. We believe the world is a better place with more rugby balls in kids' hands. #HuntingSZN	33837.005
2	@thereelphild	Host of @2KleaguePodcast	Big Brother Canada 8 Houseguest	Podcaster	Sports Guy	Dad x2	Live in Toronto	You only live once, That's the motto. #errrday	814.271
3	@medavidmichael	Husband and Daddy #RunWithThePack🐺	753.154
4	@benmckennajpi	Sports Journalist at JPIMedia. Most work found in: @WakeExpress, PandCExpress, @yorkshirepost and @LeedsNews.	752.671
5	tfcleafnation	TFC, TFCII,TFC Academy,LIVERPOOL supporter & Toronto Wolfpack Passion for fitness & ball hockey. Eat well, move more, stress less, love more. THIS IS OUR HOUSE!	751.405

Table 2. Influential Users for SME B

Top hashtags	Number of times used
togetherstronger	170
slwarsal	93
slsalwig	53
sllonsal	53
newbeginnings	28

Table 3. Top hashtags SME A

Top hashtags	Number of times used
defendtheden	50
toronto	20
tfclive	6
rugbyleague	4
leafsforever	4

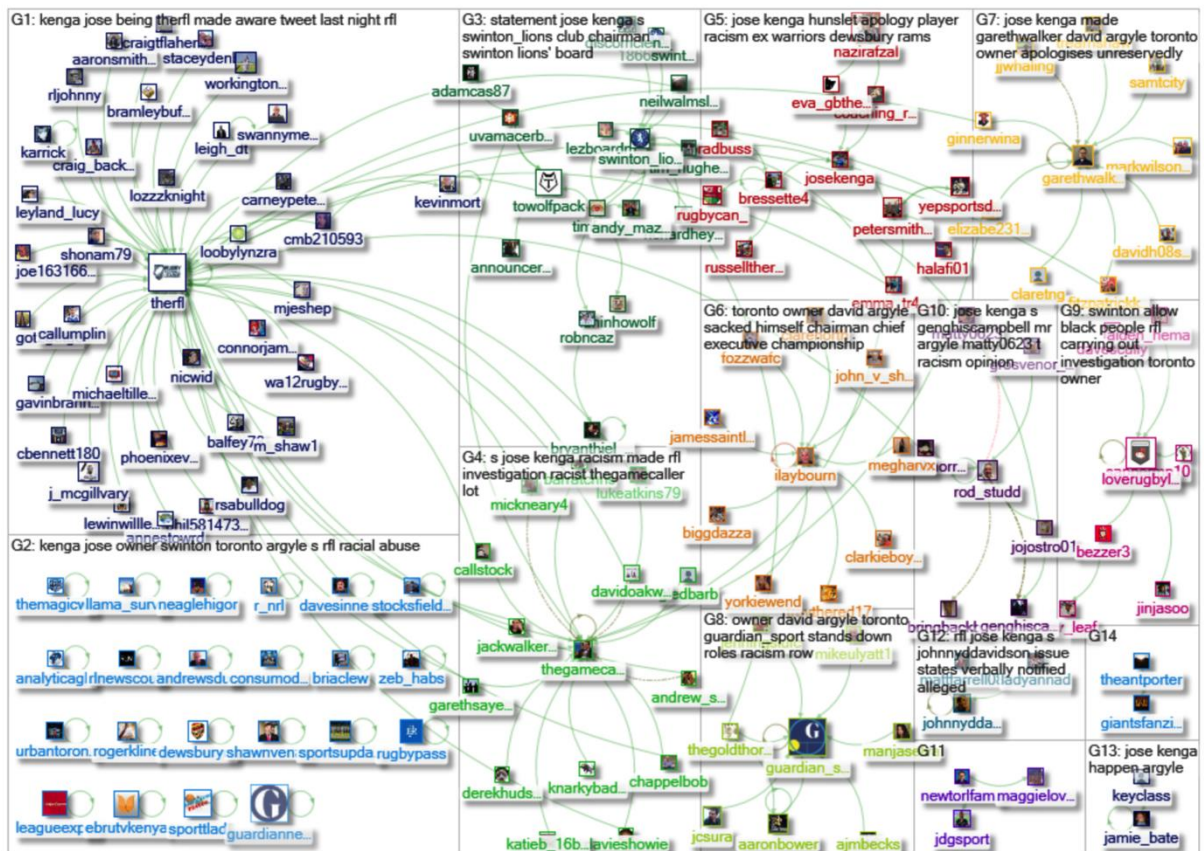**Table 4. Top hashtags SME B**

Fig 3 – NodeXL diagram showing the Twitter conversations relating to SME B

Fig 4 – Tweet from SME B

Fig 5 – Tweet from Swinton Lions player Jose Kenga

Toronto Wolfpack ✔ @TOwolfpack · Jun 7

Club Statement - David **Argyle**, Toronto **Wolfpack** Majority Owner.

> We take great pride in making Toronto an amazing experience for all travelling teams and their loyal fans. We try to make everyone feel comfortable and welcome.
>
> However, that day I fell short on delivering those standards. I take full responsibility and I want to unreservedly apologize to Jose, Swinton Lions, Toronto Wolfpack and our great fans for my comments.
>
> Since 2018 I have always maintained that Swinton Lions are the best touring fans we have ever hosted in Toronto, and I will do all I can to rebuild my relationship with the club, players, Jose and their fans.

💬 63   🔁 38   ♡ 102   ⬆

Fig 6 – Tweet from SME B

Salford Red Devils ✔
@SalfordDevils

🙌 Last night @JacksonYamba and his 10-year-old son David were our guests of honour and brought the match ball onto the field.

👏 We hope they enjoyed the welcome from the TRUE Salford community!

💪 We truly are #TogetherStronger!

Fig 7 – Tweet from SME A