



International Journal of Technology Transfer and Commercialisation

ISSN online: 1741-5284 - ISSN print: 1470-6075

<https://www.inderscience.com/ijttc>

Understanding sporting brands and entrepreneurship using netnography and social network analysis

Alex Fenton, Keith D. Parry, Wasim Ahmed, Simon Chadwick

DOI: [10.1504/IJTTC.2023.10054827](https://doi.org/10.1504/IJTTC.2023.10054827)

Article History:

Received:	30 November 2020
Last revised:	20 May 2021
Accepted:	28 September 2021
Published online:	21 March 2023

Understanding sporting brands and entrepreneurship using netnography and social network analysis

Alex Fenton*

University of Salford,
Maxwell Building, Salford, M5-4WT, UK
Email: a.fenton@salford.ac.uk
*Corresponding author

Keith D. Parry

Bournemouth University,
Talbot Campus,
Fern Barrow, Poole, Dorset, BH12-5BB, UK
Email: kdparry@bournemouth.ac.uk

Wasim Ahmed

University of Newcastle,
5 Barrack Rd., Newcastle upon Tyne, NE1-4SE, UK
Email: wasim.ahmed@ncl.ac.uk

Simon Chadwick

Emlyon Business School,
23 Av. Guy de Collongue, 69130 Ecully, France
Email: 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; SNA; Twitter; sport; digital; netnography.

Reference to this paper should be made as follows: Fenton, A., Parry, K.D., Ahmed, W. and Chadwick, S. (2023) 'Understanding sporting brands and entrepreneurship using netnography and social network analysis', *Int. J. Technology Transfer and Commercialisation*, Vol. 20, No. 1, pp.141–162.

Biographical notes: Alex Fenton is the 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.

Keith D. Parry is the 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.

Wasim Ahmed is a Senior Lecturer in Digital Business. His research and teaching interests include digital business, digital sport and digital health. He has previously worked at the University of Sheffield, Newcastle University, and Northumbria University.

Simon Chadwick is a Global Professor of Eurasian Sport at the Emlyon Business School, based in Paris. He is also the Director of the School's Centre for Eurasian Sport, based in Shanghai. His work focuses on the geopolitical economy of sport.

1 Introduction

In a special issue on qualitative methods in entrepreneurship, Gartner and Birley (2002) highlighted the lack of qualitative studies in this field. Chalmers and Shaw (2017) further highlighted that qualitative and mixed method 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 and Strauss, 1967; Walsham, 2006). Leitch et al. (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 study 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 and 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 and Rhoden, 2011). In the UK, at the turn of the century, it is claimed that over 99% of sport and

leisure business were SMEs (Moore and 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 fan bases. Rugby league is generally not well explored in the existing literature and even less so with regards to social media and entrepreneurship (Filo et al., 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 and 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 and Shaw, 2017). Netnography, founded by Professor Robert Kozinets is a portmanteau of the words (inter)net and (eth)nography (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 and 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 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 et al., 2018; Ndiege, 2019). Such technologies are relatively inexpensive (Abu Bakar et al., 2019) and have been widely adopted by entrepreneurial companies and organisations to drive business growth (Li et al., 2018; Mumi et al., 2017), to the extent that they have been described as an indispensable part of entrepreneurship activities (Park et al., 2017). Yet they are also revolutionising the business landscape, and traditional marketing communication models in particular (Datta et al., 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 et al., 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 eWOM 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 and 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 and Rae, 2009). Indeed, Parganas et al. (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 et al., 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 and 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).

2.1 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, p.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. Social media influencers (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 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 et al., 2018). To investigate the influence of social media accounts and the networks that have been formed online between various users, 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 additional 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 and 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 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 generalisable (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.

3.1 Social network analysis

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 et al., 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 and 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 et al., 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 six-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 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.

3.2 *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 and Lahav, 2019), entrepreneurship of young start-up creators (Lima et al., 2014), and social media brand communities for sporting SMEs (Fenton and Proctor, 2019; Fenton et al., 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 (see Healy and McDonagh, 2013; Meng et al., 2015; Fenton and Proctor, 2019 for examples). Filo et al. (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.

3.3 *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 et al., 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 et al., 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 four 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 and 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 universities' 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

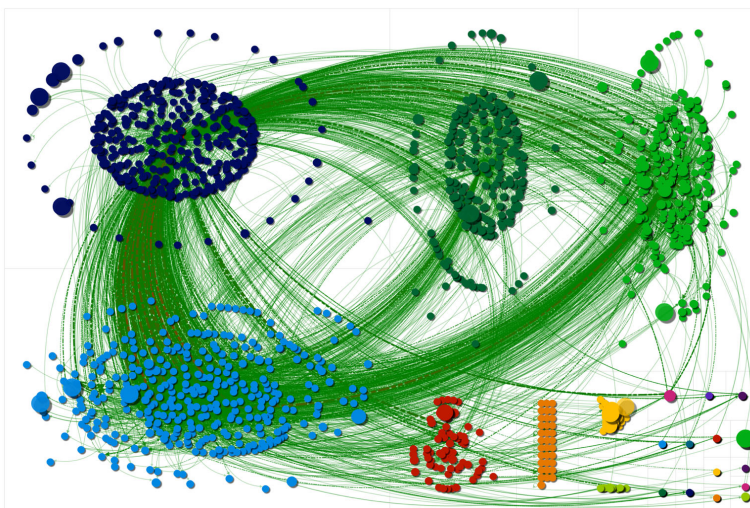
the approach of digital netnography by utilising digital tools and blending this with the participant observations to create further insight (Fenton and Procter, 2019). For example, SNA highlights particular insights or influencers, which were then framed for further analysis through netnography (Kozinets, 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. This was part of the method and process, this paper was not presented at all at the conference. 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 Results of SNA

Figure 1 shows SME A's Twitter community over the period, 18th to 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.

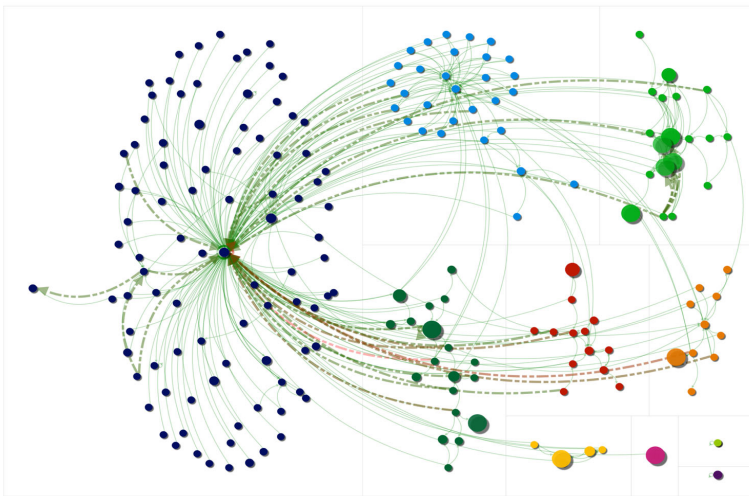
Figure 1 SME A Twitter community over the period 18th April to 28th April (see online version for colours)



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 to 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 that a community, when there are multiple groups of users who are conversing about different topics, have 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 shows SME B's Twitter community over the period of observation.

Figure 2 SME B Twitter community over the period 19 April (see online version for colours)



The network visualisation 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.

4.1 Findings for influential Twitter users

Tables 1 and 2 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 1,591,858.107, 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 three accounts all had a score of 70,000 or over, whereas users 4 and 5 had scores of under 45,000. 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. For SME B, 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.

Table 1 Influential users for SME A

<i>Rank</i>	<i>Twitter account</i>	<i>Twitter bio</i>	<i>Betweenness centrality score</i>
1	@salforddevils	Salford Red Devils official Twitter page – offering you the latest news and behind the scenes action from around the club. #TogetherStronger	1,591,858.107
2	wolvesrl	No Bio	103,888.882
3	@wiganwarriorsrl	Official Wigan Warriors RL Twitter account. 2018 Super League Champions, 22 × League Champions, 19 × Challenge Cup Winners, 4 × World Club Champions ☆☆☆	71,385.294
4	superleague	The Official Betfred Super League Twitter account. 2019 Super League Grand Final Tickets http://bit.ly/2HHiq5M	42,749.009
5	jackohastings	JH31. Salford Red Devils	39,764.073

Table 2 Influential users for SME B

<i>Rank</i>	<i>Twitter account</i>	<i>Twitter bio</i>	<i>Betweenness centrality score</i>
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	33,837.005
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 and Toronto Wolfpack Passion for fitness and ball hockey. Eat well, move more, stress less, love more. THIS IS OUR HOUSE!	751.405

Tables 3 and 4 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.

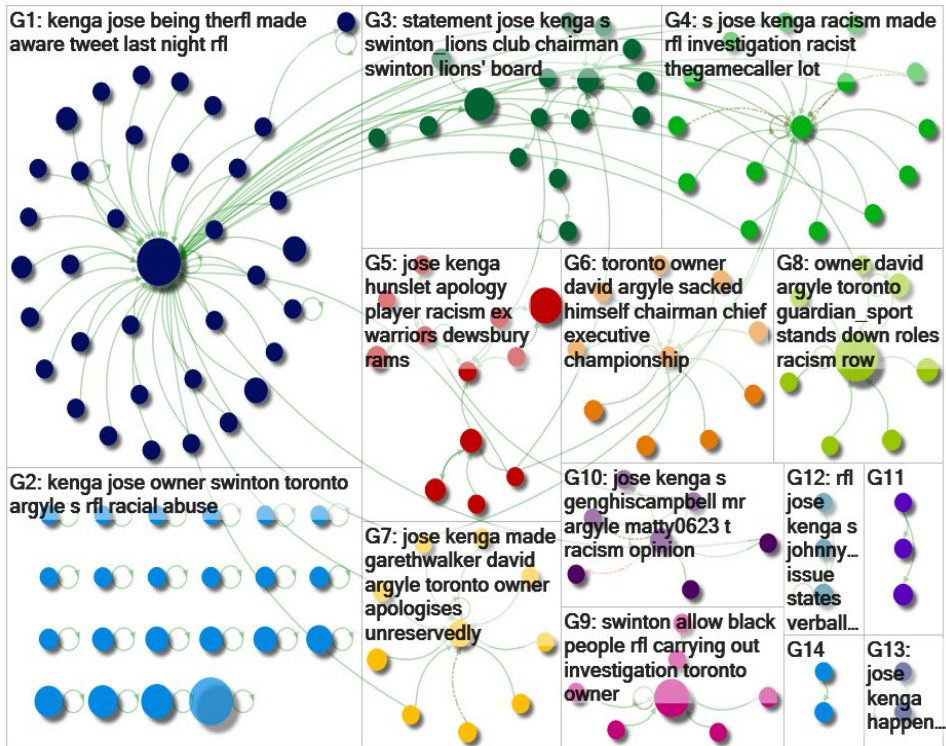
Table 3 Top hashtags SME A

Top hashtags	Number of times used
togetherstronger	170
slwarsal	93
salsalwig	53
slionsal	53
newbeginnings	28

Table 4 Top hashtags SME B

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

Figure 3 NodeXL diagram showing the Twitter conversations relating to SME B (see online version for colours)



4.2 *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, Figure 3 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.

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 et al., 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
- 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.

4.3 *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 and 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 Cannabidiol (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 and 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).

4.4 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 6th 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 Rugby Football League (RFL) – the governing body of rugby league in England. As he notes, the owner of SME B, David Argyle was involved with this incident.

Figure 4 Tweet from SME B (see online version for colours)



Figure 5 Tweet from Swinton Lions player Jose Kenga (see online version for colours)



Figure 6 Tweet from SME B (see online version for colours)



Figure 7 Tweet from SME A (see online version for colours)



Responses to this post were swift but divided, as is often the case with online reactions to incidents of racism (Cleland et al., 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 Twitter, SME B recognised Kenga as a key influencer and was able to identify this potential crisis and respond in an appropriate 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).

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 Salfordians welcome and support them. The #TogetherStronger hashtag was used in many cases by the 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 and Wallberg, 2014). Their statements and engagement with their community then has the potential to achieve behavioural change (Campos et al., 2013) and certainly enhances the SME’s reputation.

5 Concluding observations

On the basis of our findings, we maintain our assertion 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 information 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 businesses 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 has 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 et al., 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.

References

- Abu Bakar, A.R., Ahmad, S.Z. and Ahmad, N. (2019) 'SME social media use: a study of predictive factors in the United Arab Emirates', *Global Business and Organizational Excellence*, Vol. 38, No. 5, pp.53–68.
- Agostino, D. and Sidorova, Y. (2016) 'A performance measurement system to quantify the contribution of social media: new requirements for metrics and methods', *Measuring Business Excellence*, Vol. 20, No. 2, pp.38–51.
- Ahmad, S.Z., Ahmad, N. and 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*, Vol. 35, No. 1, pp.6–17.
- Ahmed, W. and Lugovic, S. (2019) 'Social media analytics: analysis and visualisation of news diffusion using NodeXL', *Online Information Review*, Vol. 43, No. 1, pp.149–160.
- Bill, K. and Rhoden, C. (2011) 'Business support in sport: strategy or serendipity?', *Journal of Small Business and Enterprise Development*, Vol. 18, No. 4, pp.821–832.
- Blanchard, K. (2013) 'Entrepreneurial characteristics in SMEs: a rural, remote rural, and urban perspective of Lincolnshire businesses', *Strategic Change*, Vol. 22, Nos. 3-4, pp.191–201.
- Bolíbar, M. (2016) 'Macro, meso, micro: broadening the 'social' of social network analysis with a mixed methods approach', *Quality & Quantity*, Vol. 50, No. 5, pp.2217–2236.
- Branthwaite, A. and Patterson, S. (2011) 'The power of qualitative research in the era of social media', *Qualitative Market Research: An International Journal*, Vol. 14, No. 4, pp.430–440.
- Bro, P. and Wallberg, F. (2014) 'Digital gatekeeping: news media versus social media', *Digital Journalism*, Vol. 2, No. 3, pp.446–454.
- Campos, C.J., Anagnostopoulos, C. and 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*, Vol. 9, No. 1, pp.43–66.
- Chalmers, D.M. and Shaw, E. (2017) 'The endogenous construction of entrepreneurial contexts: a practice-based perspective', *International Small Business Journal: Researching Entrepreneurship*, Vol. 35, No. 1, pp.19–39.

- Chan, R.C.H., Chu, S.K.W., Lee, C.W.Y., Chan, B.K.T. and Leung, C.K. (2013) 'Knowledge management using social media: a comparative study between blogs and Facebook', *Proceedings of the ASIST Annual Meeting*, Vol. 50, No. 1, pp.1–9.
- Cleland, J., Parry, K. and 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*, Vol. 36, No. 4, pp.330–338.
- Crammond, R., Omeihe, K.O., Murray, A. and Ledger, K. (2018) 'Managing knowledge through social media: Modelling an entrepreneurial approach for Scottish SMEs and beyond', *Baltic Journal of Management*, Vol. 13, No. 3, pp.303–328.
- Datta, A., Sahaym, A. and Brooks, S. (2018) 'Unpacking the antecedents of crowdfunding campaign's success: the effects of social media and innovation orientation', *Journal of Small Business Management*, Vol. 57, No. 2, pp.1–27.
- Dobson, S., Breslin, D., Suckley, L., Barton, R. and Rodriguez, L. (2013) 'Small firm survival and innovation: an evolutionary approach', *International Journal of Entrepreneurship and Innovation*, Vol. 14, No. 2, pp.69–80.
- Eggers, F., Hatak, I., Kraus, S. and Niemand, T. (2017) 'Technologies that support marketing and market development in SMEs – evidence from social networks', *Journal of Small Business Management*, Vol. 55, No. 2, pp.270–302.
- Fenton, A. and Procter, C. (2019) 'Studying social media communities: blending methods with netnography', *SAGE Research Methods Cases* [online] <http://usir.salford.ac.uk/47958/> (accessed 14 April 2021).
- Fenton, A., Keegan, B.J. and Parry, K.D. (2021) 'Understanding sporting social media brand communities, place and social capital: a netnography of football fans', *Communication & Sport* [online] <https://doi.org/10.1177/2167479520986149>.
- Filo, K., Lock, D. and Karg, A. (2015) 'Sport and social media research: a review', *Sport Management Review*, Vol. 18, No. 2, pp.166–181.
- Freberg, K., Graham, K., McGaughey, K. and Freberg, L.A. (2011) 'Who are the social media influencers? A study of public perceptions of personality', *Public Relations Review*, Vol. 37, No. 1, pp.90–92.
- Gartner, W.B. and Birley, S. (2002) 'Introduction to the special issue on qualitative methods in entrepreneurship research', *Journal of Business Venturing*, Vol. 17, No. 5, pp.387–395.
- Glaser, B.G. and Strauss, A.L. (1967) *The Discovery of Grounded Theory: Strategies for Qualitative Research*, Aldine, Vol. 1.
- Guardian (2019) 'Toronto owner David Argyle stands down from roles after racism row', *Guardian*, June.
- Halliday, J. (2019) 'Salford man targeted with racist graffiti 'overwhelmed' by support', *Guardian*, 18 February [online] <https://www.theguardian.com/uk-news/2019/feb/18/salford-dad-jackson-yamba-targeted-with-racist-graffiti-overwhelmed-by-support> (accessed 14 April 2021).
- Hambrick, M.E. (2017) 'Sport communication research: a social network analysis', *Sport Management Review*, Vol. 20, No. 2, pp.170–183.
- Hambrick, M.E. and 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*, Vol. 15, Nos. 3/4, pp.120–140.
- Harris, L. and Rae, A. (2009) 'Social networks: the future of marketing for small business', *Journal of Business Strategy*, Vol. 30, No. 5, pp.24–31.
- Havakhor, T., Soror, A.A. and Sabherwal, R. (2018) 'Diffusion of knowledge in social media networks: effects of reputation mechanisms and distribution of knowledge roles', *Information Systems Journal*, Vol. 28, No. 1, pp.104–141.
- Healy, J.C. and McDonagh, P. (2013) 'Consumer roles in brand culture and value co-creation in virtual communities', *Journal of Business Research*, Vol. 66, No. 9, pp.1528–1540.

- Hlady-Rispal, M. and Jouison-Laffitte, E. (2014) 'Qualitative research methods and epistemological frameworks: a review of publication trends in entrepreneurship', *Journal of Small Business Management*, Vol. 52, No. 4, pp.594–614.
- Kozinets, R. (2020) *Netnography: The Essential Guide to Qualitative Social Media Research*, 3rd ed., SAGE Publications, London.
- Kozinets, R.V. (2015) *Netnography Redefined*, 2nd ed., SAGE Publications, Los Angeles.
- Kyndt, E. and Baert, H. (2015) 'Entrepreneurial competencies: assessment and predictive value for entrepreneurship', *Journal of Vocational Behavior*, Vol. 90, pp.13–25.
- Leavitt, A., Burchard, E., Fisher, D., Gilbert, S., Ecology, W. and Pub, P. (2009) 'The influential's: new approaches for analyzing influence on Twitter', *Web Ecology*, September, Vol. 4, No. 2, pp.1–18.
- Leitch, C.M., Hill, F.M. and Harrison, R.T. (2010) 'The philosophy and practice of interpretivist research in entrepreneurship: quality, validation, and trust', *Organizational Research Methods*, Vol. 13, No. 1, pp.67–84.
- Li, L., Su, F., Zhang, W. and Mao, J.Y. (2018) 'Digital transformation by SME entrepreneurs: a capability perspective', *Information Systems Journal*, Vol. 28, No. 6, pp.1129–1157.
- Lima, M.C., Namaci, L. and 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*, Vol. 5, No. 3, pp.693–709.
- Love, A. and Andrew, D.P.S. (2012) 'The intersection of sport management and sociology of sport research: a social network perspective', *Sport Management Review*, Vol. 15, No. 2, pp.244–256.
- McCarthy, J., Rowley, J., Ashworth, C.J. and Pioch, E. (2014) 'Managing brand presence through social media: the case of UK football clubs', *Internet Research*, Vol. 24, No. 2, pp.181–204.
- Mendizabal, X., San-Jose, L. and Garcia-Merino, J.D. (2020) 'Understanding and mapping stakeholders of sport clubs: particularities', *Sport, Business and Management: An International Journal*, Vol. 10, No. 3, pp.359–378.
- Meng, M.D., Stavros, C., Westberg, K. and Westberg, K. (2015) 'Engaging fans through social media: implications for team identification', *Sport, Business and Management: An International Journal*, Vol. 5, No. 3, pp.199–217.
- Monaghan, S., Lavelle, J. and 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. and 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*, Vol. 2, No. 3, pp.196–209.
- Morais, G.M., Santos, V.F. and Gonçalves, C.A. (2020) 'Netnography: origins, foundations, evolution and axiological and methodological developments and trends', *The Qualitative Report*, Vol. 25, No. 2, pp.441–455.
- Mumi, A., Ciuchta, M. and 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*, pp.309–340.
- Næss, H.E. (2017) 'Authenticity matters: a digital ethnography of FIA World Rally Championship fan forums', *Sport Management Review*, Vol. 20, No. 1, pp.105–113.
- Naraine, M.L. and Parent, M.M. (2016) 'Illuminating centralized users in the social media ego network of two national sport organizations', *Journal of Sport Management*, Vol. 30, No. 6, pp.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*, Vol. 85, No. 2, pp.1–12.

- Neuman, W.L. (2011) *Social Research Methods: Qualitative and Quantitative Approaches*, Pearson, London.
- Papadimitriou, D. and Apostolopoulou, A. (2018) 'Capturing the meanings of sport licensed products', *Journal of Marketing Communications*, Vol. 24, No. 5, pp.433–449.
- Parganas, P., Anagnostopoulos, C. and Chadwick, S. (2015) 'You'll never tweet alone': managing sports brands through social media', *Journal of Brand Management*, Vol. 22, No. 7, pp.551–568.
- Park, J.Y., Sung, C.S. and Im, I. (2017) 'Does social media use influence entrepreneurial opportunity? A review of its moderating role', *Sustainability (Switzerland)*, Vol. 9, No. 9, pp.1–17.
- Parnell, J.M. and Robinson, J.C. (2018) 'Social network analysis: presenting an underused method for nursing research', *Journal of Advanced Nursing*, Vol. 74, No. 6, pp.1310–1318.
- Raghavan Unnithan, S.K., Kannan, B. and Jathavedan, M. (2014) 'Betweenness centrality in some classes of graphs', *International Journal of Combinatorics*, Vol. 2014, pp.1–12.
- Roth-Cohen, O. and Lahav, T. (2019) 'Going undercover: online domestic tourism marketing communication in closed and open Facebook groups', *Journal of Vacation Marketing*, Vol. 25, No. 3, pp.349–362.
- Smith, M.A., Shneiderman, B., Rainie, L. and Himelboim, I. (2014) *Mapping Twitter Topic Networks: From Polarized Crowds to Community Clusters*, Pew Research [online] <https://www.pewresearch.org/internet/2014/02/20/mapping-twitter-topic-networks-from-polarized-crowds-to-community-clusters/> (accessed 14 April 2021).
- Strauss, A.L. and Corbin, J.M. (1990) *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*, Sage Publications, London.
- Walsham, G. (2006) 'Doing interpretive research', *European Journal of Information Systems*, Vol. 15, No. 3, pp.320–330.
- Ward, M. and Rhodes, C. (2014) 'Small businesses and the UK economy', *House of Commons Library*, pp.1–8 [online] http://www.myveryownblog.co.uk/wp-content/uploads/2015/01/sme_stats_2014.pdf (accessed 14 April 2021).
- Wäsche, H., Dickson, G., Woll, A. and Brandes, U. (2017) 'Social network analysis in sport research: an emerging paradigm', *European Journal for Sport and Society*, Vol. 14, No. 2, pp.138–165.
- Whelan, E., Teigland, R., Vaast, E. and Butler, B. (2016) 'Expanding the horizons of digital social networks: mixing big trace datasets with qualitative approaches', *Information and Organization*, Vol. 26, No. 1, pp.1–12.
- Wyllie, J., Lucas, B., Carlson, J., Kitchens, B., Kozary, B. and Zaki, M. (2016) 'An examination of not-for-profit stakeholder networks for relationship management: a small-scale analysis on social media', *Plos ONE*, Vol. 11, No. 10, p.e0163914.
- Yan, G., Watanabe, N.M., Shapiro, S.L., Naraine, M.L. and Hull, K. (2018) 'Unfolding the Twitter scene of the 2017 UEFA Champions league final: social media networks and power dynamics', *European Sport Management Quarterly*, Vol. 19, No. 4, pp.419–436.