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The Prosumption Networks of Twitter Users Following the Premier League's Support for #BlackLivesMatter and the #WhiteLivesMatter Response

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ABSTRACT

Though still of concern, racist abuse within the UK's football (soccer) stadiums has declined. However, with the increasing significance of digital leisure in people's lives, there is now a large amount of abuse related to football that is expressed through social media. Digital communities provide both the means of consuming leisure (watching football) and "talking" about it with whoever will "listen." Here we examine the social architecture of networks on Twitter as they emerged in response to two incidents in 2020. To do this, we adopt Social Network Analysis to reveal the prosumption networks that form around key "users." Our article offers empirical insights into racial digital leisure, addresses what action is needed from sporting organizations and media platforms, and suggests avenues for future research.

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Introduction

Racism¹ in football (soccer) is well documented from accounts of lived experience (Kopczyk & Walker-Khan, n.d.; Moran, 2000) and public displays, either from people in the stands or from users on social media platforms (McGregor, 2021; Russell, 2021). In the United Kingdom (UK), more outrage has focused on incidents "over there" in other countries, like Spain, Russia and Bulgaria (McNulty, 2019), rather than here in the UK. This downplaying of home grown expressions of racism reflects a very narrow understanding of racism, overlooking differential treatment and a lack of opportunity to assume positions of responsibility in clubs and leagues, never mind the casual racism encountered daily by people in the UK. As the internet continues to shift people's sense of time and space—reframing their leisure (Pang, 2021)—English football is currently grappling with online racism.

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Even before the Covid-19 pandemic threw greater emphasis on digital technologies as a leisure environment (Bond et al., 2021; Lashua et al., 2021) and emptied stadia, it had become clear that racists were taking to social media to voice their abuse (MacInnes, 2019). For example, a recent survey by the Professional Footballers' Association, of 44 high-profile footballers, is noteworthy here as they reported that 43% of Premier League players had "experienced targeted and explicitly racist abuse on public Twitter" in the six weeks of the Premier League's Project Restart (PFA, 2020, p. 1). This online racism experienced by premier league players results from fans, spectators and observers engaging in online community communications, or what Spracklen (2015) calls "digital leisure."² Furthermore, as people (or groups, or organizations) engage in this digital leisure space relatively freely and unaccountably, this can lead to hate, abuse and mistreatment of others (Kavanagh et al., 2016).

Our focus here is on Twitter (now rebranded as X), where users (people, groups or organizations) publicly engage in dialogue/conversations, which are prosumed. By this we mean that users are both producers and consumers of information and content (Bond et al., 2021, 2023) which becomes material for others to consume and re-produce—or presume. Thus, when the topic of conversation centers on racist sentiment, Twitter can become an "amplifier and manufacturer of racist discourse" or what Matamoros-Fernández (2017, p. 930) calls "platformed racism."

Our study coincided with the global outcry following the murder of George Floyd by Minneapolis police in May 2020, which sparked the #BlackLivesMatter movement. When Premier League matches resumed after the COVID-19 break, the league responded to pressure from club captains and the Professional Footballers' Association by showing solidarity against racism (Sky Sports, 2020). Players' names on shirts were replaced with "Black Lives Matter" for 12 matches, and teams began "taking a knee" before games (The Guardian, 2020). Despite some fan booing, a PFA report later showed overwhelming player support for continuing this gesture, though there was a backlash from far-right groups, including under the slogan "White Lives Matter" (BBC, 2020). The "White Lives Matter" slogan represents a racist response to the Black Lives Matter movement originating in the United States of America, whose focus is "dedicated to promotion of the white race..." (SPLC, n.d.). The #WhiteLivesMatter slogan and its meaning were adopted by the British Patriotic Alternative Group, who are considered to be "...a white nationalist group who engage in street level activity against a number of themes including anti-immigration, anti-LGBT+ and anti-multiculturalism issues" by the National Police Coordination Center (NPCC) in the UK (NPCC, 2023, p. 6.) and described as "Britain's largest far-right white supremacist movement" (Kendix, 2023).

Our contribution is two-fold. First, we provide insight into how conversations about race in UK football are structured, specifically within the Twitter platform. Second, we frame racism on digital platforms as prosumed digital leisure networks, blending theories of leisure, networks and presumption to offer a broader theoretical basis to study digital leisure.

Digital leisure, presumption and networks

Except for a small minority, modern society is increasingly digital (Lupton, 2014), creating digital communities through technological advancements, specifically Web 2.0

(Castells, 2011, 2015). Commonly, Web 2.0 refers to applications that share a user-generated production function as users become active producers (Lai & To, 2015; Orenge-Rogla & Chalmeta, 2016). For example, popular Web 2.0 applications like Twitter, Facebook (now Meta), Instagram, Snapchat, Tik Tok, Pinterest, among many others, all require users to produce content for others to consume, otherwise they have no product offering. Therefore, Web 2.0 applications rely on a user becoming *producer* as well as *consumer*, mostly occurring simultaneously, which (Ritzer & Jurgenson, 2010) term *prosumption*. This *prosumption*, creates networks of information controlled by users' interactions (Constantinides & Fountain, 2008; Goodchild, 2007).

These user interactions mostly reflect users' digital leisure supported by Web 2.0 applications. As Schmalz et al. (2015, p. 20) observe, "social media sites (SMS) have burgeoned into a popular leisure pursuit with millions of users worldwide." This virtual leisure space allows new, entirely different forms of computer-aided social interaction, affording ease of access as well as the potential to assume new, personalities or identities (Matijasevic-Obradovic, 2014; Vakhitova & Reynald, 2014). However, rather than being separate alternate spaces, the digital leisure space is an extension of the physical intertwined with the virtual world (Kavanagh et al., 2016). Like the physical world, leisure tastes, preferences and experiences in digital communities are developed through micro-interactions. The difference of course being that the interactions in digital communities are mediated through computers.

Still, the micro-interactions in both worlds are an outcome of and an antecedent to actors' networks. That is, the micro-interactions one engages with create a larger network of interactions, which in turn leads to further micro-interactions within the larger network (outcome). Conceptually, Granovetter (1985, 2005) termed this "embeddedness," relating to how social structures (networks) impact economic action and behavior (interactions). Therefore, networks underpin the digital communities and the *prosumption* they are built on (Bond et al., 2021, 2023).

Racialized digital leisure

Prosumed digital communities also provide an exemplar of the ambivalence in the concept of leisure as: "on the one hand it relates to freedom, but on the other it is also a term... that signifies permission or licence" (Blackshaw, 2010, p. 4). Essentially, people choose how to use their time within a regulated environment. Unfortunately, the freedom provided by digital spaces allows some people to voice their racist abuse (MacInnes, 2019). Using digital leisure space to engage in racist rhetoric forms platformed racism whereby digital platforms amplify and manufacture the rhetoric (Matamoros-Fernández, 2017). The notion of platformed racism is rooted in *prosumption* since the rhetoric is initially *prosumed* in the digital leisure space manufacturing the rhetoric (Bond et al., 2021, 2023). In turn, the rhetoric also becomes embedded within the networks of networks, meaning the sentiment becomes amplified as it becomes (temporally at least) the norm (Granovetter, 1985, 2005). For example, when analyzing the prominence of racism within fans' notice boards (Cleland, 2014) concluded that expressions of racism in this part of people's leisure lives were "unlikely to change for the foreseeable future" (p. 329). Similarly, within online fans' forums (Kilvington et al., 2022) found that most users condemned racist incidents and behavior

but had a limited appreciation of what constitutes racism, which limited their ability to recognize it. Similarly, Black et al. (2024) found Twitter became an online communication space that promoted alt-right and far-right agendas while focussing on UEFA European Championships in 2020.

In this paper, we investigate whether there are “communities without propinquity” where people congregate in their leisure time within social media (Calhoun, 1998)³ to manufacture and amplify racist rhetoric. In our case, these are online spaces where people connect with others who share similar interests and hold similar values, although they are physically distanced from each other. Following Daniels (2013, p 701) these communities are imagined, but an “important venue for creating racial meanings.” Consequently, we see social media sites as digital leisure spaces, where racist meaning is created through conversations stemming from the physical world.

To examine these spaces, we conducted social network analyses of two incidents: 1) responses to the English Premier League’s position on Black Lives Matter and 2) the White Lives Matter response to the Premier League’s Black Lives Matter position. Our concern was to answer the following research questions:

RQ1: How are the user networks involving the #BlackLivesMatter and the #WhiteLivesMatter incidents structured on Twitter?

RQ2: Which users were most influential within the #BlackLivesMatter and the #WhiteLivesMatter incidents on Twitter?

Methods and data

Following previous research analyzing Twitter conversations, we employed social network analysis (SNA) to analyze the overall structure of the incidents as well as identify structurally influential users. For example, Yan et al. (2018) used SNA to analyze student-athlete activism on Twitter, and Yan et al. (2019) used SNA to analyze Twitter conversations of the UEFA Champions League Final. Naraine and Parent (2016) analyzed Twitter conversation networks using SNA to identify central users for two American sports organizations, Hambrick (2012) analyzed information spread on Twitter for two cycling races using SNA. Bond et al. (2021, 2023) also used SNA, as a way to identify and measure presumption value in Twitter networks instead of the more common influence metrics of likes, followers and retweets. We extend this growing body of work by employing SNA to examine key elements of presumption and identify the structure of racialized conversations within Twitter networks related to sports. Using the two aforementioned key moments from 2020 specifically pertaining to racial discrimination, we used SNA to help us understand how racialized conversations around English football are structured on Twitter. Importantly, SNA allows us to analyze both the overall structure of, and influential users within, Twitter conversations, thereby helping to answer our research questions. Data were gathered and analyzed using NodeXL (Smith et al., 2010) and Gephi software (Bastian et al., 2009)⁴.

In our analysis of Twitter networks, users (@user1...@user(n)) are what social network analysts refer to as “vertices” or “nodes” (V), and the communications representing

ties connecting users (relational ties) are what are referred to as “edges” (E) in SNA. Together, nodes (V) and edges (E) form a graph (G), often written as $G=(V,E)$. Therefore, a network is created by nodes interacting with one another. These interactions (or relational ties) can take different forms:

- i. “Follows” – @User1 follows @User2;
- ii. “Followed” – @User2 follows @User1;
- iii. “RepliesTo” – @User1 responds to a message posted by @User2;
- iv. “Mentions” – @User1 creates a message containing but not starting with @User2;
- v. “Retweet” – @User1 publicly re-shares the post of @User2 for their own followers;
- vi. “Like” – @User1 likes @User2’s post, publicly displaying their appreciation.

A “Tweet” is a message created by @User1 that does not mention another user, but this can be “ReTweeted” or “Liked” by other Users. Therefore, connections (edges) are directional meaning that, for example, just because @User1 likes @User2’s post, it does not imply a relational tie between @User2 and @User1. In SNA language this is often written as $E_{ij} \in \{0,1\}$, with $E_{ij} = 1$ when there is a connection (like, retweet or reply) between nodes i and j , and $E_{ij} = 0$ where a connection does not exist. For our purposes, we are interested in the transactional interactions of “likes” or “retweets” between users.

Overall structure

To understand the overall structure and answer RQ1, we applied the modularity algorithm of Blondel et al. (2008) since it performs well with large networks and is relatively less computationally heavy. In cases of high modularity the overall structure comprises smaller, densely connected communities (or modules) with sparse connections to other communities. Based on Granovetter’s (1985, 2005) embeddedness theory, racialized rhetoric would be amplified more within dense communities than sparse, loosely connected ones. Additionally, densely connected communities are a result of higher levels of presumption, reflecting, in our case, the manufacturing of racialized rhetoric within digital leisure.

Himmelboim et al. (2017) proposed different typologies of Twitter networks, as shown in Figure 1. In the common hub-and-spoke star-shaped structure, only a few nodes, often “experts,” take a central position (Park & Thelwall, 2008; Wang et al., 2010; Welser et al., 2007). Depending on the direction of the connection, this can be classified as either “broadcast” (many nodes pointing to one or few) or “support” (one node pointing to many), the former often representing traditional media processes (Himmelboim et al., 2017). However, the hub-and-spoke structure is not dense and cohesive, as there is little connection between nodes, and it offers little embedded presumption and has little ability to manufacture or amplify racist rhetoric. In contrast, divided or unified structures provide the most embedded presumption since they both have high density, which leads to embeddedness within the network (Coleman, 1990; Granovetter, 1973). The difference between the two is that divided structures are highly clustered, whereas unified structures are not. Thus, large modularity demonstrates a

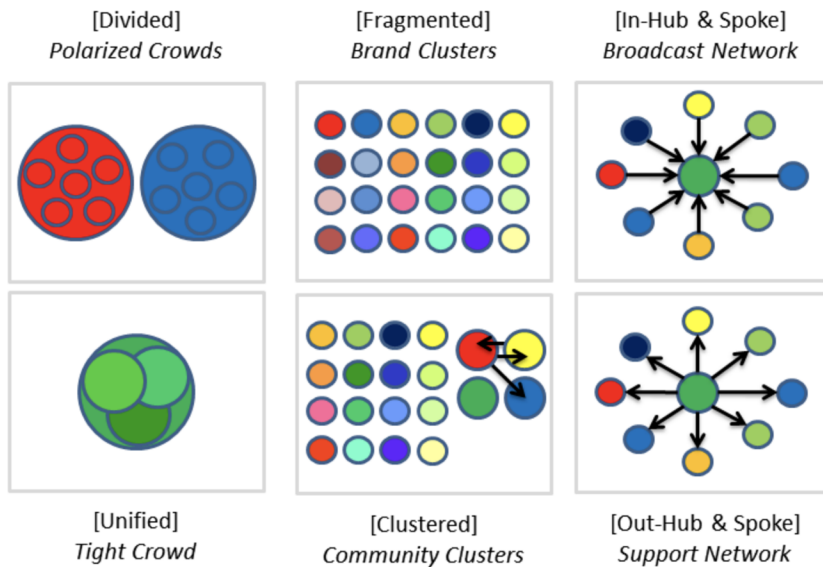


Figure 1. Six types of Twitter social media networks.
 Source: Smith et al. (n.d.) based on Himelboim et al. (2017).

divided structure that provides more likelihood of racialized rhetoric becoming embedded within people's digital leisure space.

Measuring influential individual users

To identify influential individuals and answer RQ2, we used three prestige network measures to assess the influence of individual users: betweenness, domain prestige, and proximity prestige. Betweenness centrality is an indicator of prestige, referring to the extent to which any particular user is involved in the shortest path (geodesic distance) between two unconnected users. It provides a measure of how important that user is to the indirect links between all other users. Thus, a user's betweenness centrality demonstrates how important they are for information flow throughout the network, in this instance, the racialized rhetoric.

Since embeddedness is also about the connections of connections (Granovetter, 1985), domain prestige is also calculated. This measure reflects the proportion of nodes interacting directly or indirectly with node v (Lin, 1999; Wasserman & Faust, 2009). Domain prestige also captures any indirect influence gained from further presumption from unconnected nodes to node v . This measure is also normalized to fall between 0 and 1, reflecting the proportion of the network that points toward node v , whether directly or indirectly.

To account for Burt's (1992) position that connecting unconnected nodes provides an advantage, in this case influence over the racialized rhetoric, proximity prestige was calculated. Proximity prestige takes the domain prestige for node v and divides it by the average geodesic distance of a node's connections to identify its importance in creating proximity for other nodes (Zhao et al., 2015). Again, between 0 and 1,

the higher proximity prestige shows node v has an influential position created by the direct presumption of others.

Much of our analysis is concerned with the structure of the networks, and influential users. In furtherance of that we have taken our lead from the principles of situational ethics advocated by the British Sociological Association (BSA) “that can allow for discretion, flexibility, and innovation” (British Sociological Association, n.d., p. 3). On the one hand, posts on Twitter are very much in the public realm, which is why so many politicians use them so enthusiastically, and in examining Twitter posts we are not disclosing personal information or intruding on private exchanges. On the other hand, the BSA is keen that research should treat the material gathered from social media with the respect that would be afforded to other research participants. Advice from Papademas & the International Visual Sociology Association (2009) suggests:

Confidentiality is not required with respect to observations in public places, activities conducted in public, or other settings where no rules of privacy are provided by law or custom. Similarly, confidentiality is not required in the case of information available from public records. (p.254)

Our way through this sensitive area has been to name those who clearly make it their business to communicate their views to a wider public while anonymising those who may simply be offering a comment in their leisure time.

Findings

Incident 1: the Premier league’s response to Black Lives Matter

When matches resumed after the first UK anti-virus lockdown and in response police murder of George Floyd, Premier League players wore “Black Lives Matter” on the back of their shirts in place of their surnames and took a knee before the start of games⁵. This provided an opportunity to observe the resultant Twitter conversation centering on the Black Lives Matter support within UK football. We scraped 35,060 interactions between 16,497 Twitter users, between 17 June 2020 and 26 June 2020 using the search string, “Black Lives Matter” OR “BLM” AND “Premier League” OR “EPL” with NodeXL Pro software.

The overall structure

Figure 2 shows the overall structure of presumption among Twitter users triggered by the Premier League’s response to the Black Lives Matter movement. The colors represent the different “communities” that are identified through the modularity analysis. Light grey nodes represent those not in the main community structures.

The overall structure has pockets of centralized communities with a somewhat decentralized core, which shows these communities tend to center around individual users: @premierleague, @bleacherreport, @bbradley_mans, @darrenplymouth, @ukchange, @leaveeuofficial, @naahwoke. However, except for communities centered on the @premierleague and the @bleacherreport, there is considerable interaction between

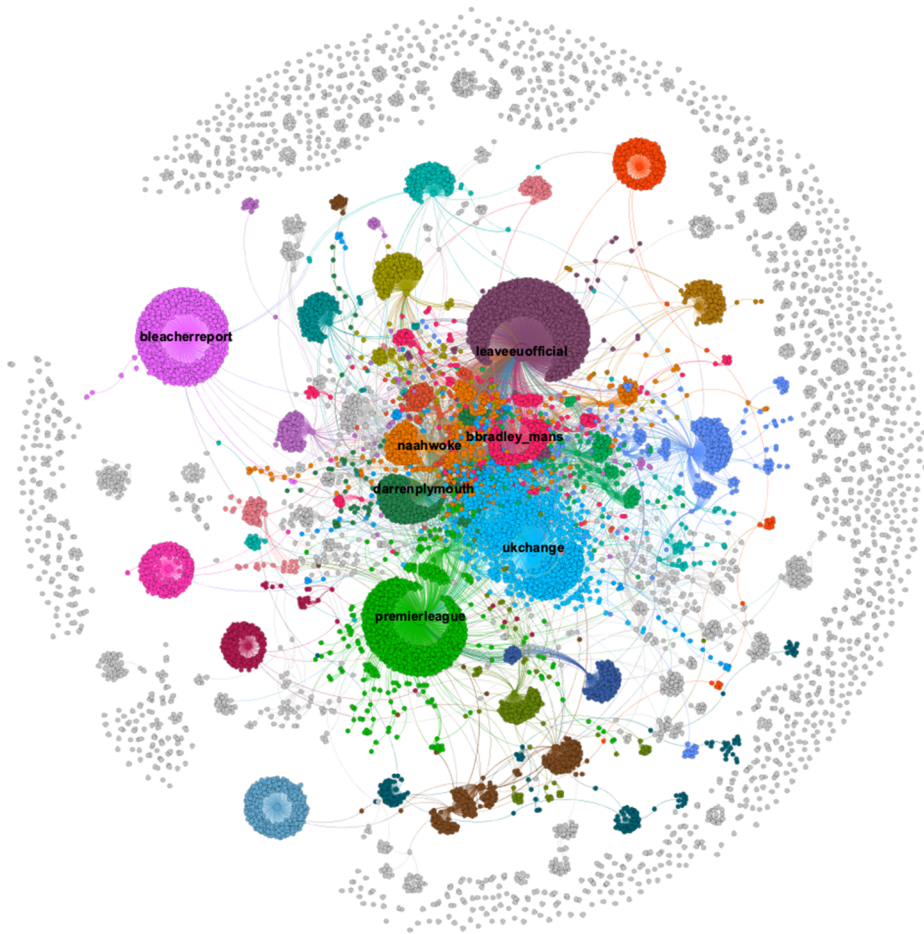


Figure 2. Network of tweets relating to the Premier League and BLM.

the communities, creating a decentralized core, which suggests users presume content across communities. Therefore, this shows a structure similar to the *broadcast hub-and-spoke*, with elements of a *unified* structure given the decentralized core (Himmelboim et al., 2017).

Influential users

Calculating the measure of betweenness gave us an indication of users' importance in relation to information flow through the network. The betweenness scores show the summed geodesic distance in which the user is involved, so a high number demonstrates the user is important within the structure. Unsurprisingly, [Table 1](#) shows the Premier League is the most influential in terms of betweenness as this is the organization at the center of the conversation. However, rather less expected is the users with high influence within the network, like @leaveuofficial, @darrenplymouth and @naahwoke, all exhibit what we consider right-wing or racist rhetoric within their user accounts. For example, the biography of @leaveuofficial has the title, "Continuing the fight for

Table 1. Top 20 influential users based on betweenness centrality (Premier League and BLM network).

User	In-degree	Out-degree	Betweenness centrality
premierleague	1203	1	48839313.011
leaveeuofficial	1709	1	33729856.779
ukchange	1055	0	21438898.728
bleacherreport	812	1	17336817.427
skynews	324	4	15632437.458
darrenplymouth	694	2	12510619.466
bbradley_mans	637	1	11145528.079
naahwoke	554	3	8994453.658
independent	142	3	8981069.026
melissareddy_	114	2	7659333.009
goley_harar	0	13	7312208.672
sportfire4fan	0	9	7183195.067
mich8lee	322	1	7003327.000
shawng927	255	1	5527648.630
blaiklockbp	276	1	5100740.558
prisonplanet	268	1	4971452.121
blaqbonez	224	1	4929074.782
skysportspl	164	1	4633055.593

the 17.4m” (referring to the Brexit vote) with an image of a flexed bicep. This account used football as a vehicle to challenge the anti-racism BLM movement, tweeting:

The Premier League has demanded all teams players wear shirts with “Black Lives Matter” written on them alongside the BLM logo. The irony of the fervently capitalistic Premier League promoting an organisation which wants to abolish capitalism is something clearly lost on them.

The Tweet was accompanied by a photograph of players and officials taking a knee, overprinted with: “KICK POLITICS OUT OF FOOTBALL. BLM OBJECTIVES: Abolish the Police; Smash capitalism; Close all prisons.” The headline of course parodies the original slogan of Kick It Out: “Let’s Kick Racism Out of Football.”

The user @naahwoke’s public biography on the platform contains:

Ubergammon.

Never apologise to the Wokists. Never kneel.

Stand up and have some self-respect.

“One word of truth outweighs the world.” – Solzhenitsyn

While this user did not tweet specifically within our dataset (they retweeted a tweet from other users), they had a high level of influence. Their biography clearly shows a negative response to the #BlackLivesMatter response within UK Football “Never kneel. Stand up and have some self-respect” and they also shared a petition from the @ukchange account campaigning against the Premier League’s response.

The user account @darrenplymouth is less overtly against the BLM movement, though their updated biography reads: “Chemist | British [Flag of United Kingdom] – 2021, the year where ignorance serves evil.”⁶ This user tweeted:

Do you support the premier league promoting Black Lives Matter on the back of footballer’s shirts?

Absolutely not. A total disgrace and a cave in to threats from a neo-Marxist mob. What's the problem with All Lives Matter? I will never watch Premier League!

This promulgates the common, but possibly sometimes deliberate, misunderstanding of the phrase, “Black Lives Matter.” While this tweet was subsequently deleted from this user’s account, the presumed interactions in response remain, supporting their rhetoric against anti-racism action and the lasting implications of presumption within online spaces. One user responded: “The Premier League should ditch BLM now before they lose too much of their precious money/supporters to fund their newly woke players.” Another wrote in response: “@SkySportsPL @SkySportsNews @premierleague is this what you support through allowing #BLM on backs of shirts?”

While other influential users are traditional news outlets such as @independent (The Independent newspaper) and @skysportspl, a member of parliament appears in a central position. Conservative MP, Ben Bradley (user @bradley_mans), is critical of the BLM movement and the Premier League’s response, claiming it is divisive and not helpful.

This incident also produced support hub-and-spoke structures around two users with no in-degree but a higher out-degree. This means that both users @sportfire4fan and @goley_harar are engaging with others’ conversations rather than others engaging in their conversations, so while they have high betweenness scores (interacting with many), they are not leading the conversation.

The prestige scores in Table 2 reinforce the right-wing user prominence and influence. @leaveeuofficial, @ukchange, @bradley_mans, @darrenplymouth and @naahwoke are critics of the Premier League’s support for the BLM movement, and all have high domain and prestige scores, thus central to the conversations. As there is little difference between domain and proximity prestige scores, most of the influence comes from direct interaction, or direct presumption.

It is clear that the Premier League’s response to BLM is entangled in the politicization of sport and wider issues of nationalism in England as well as populist politics such as those surrounding Brexit.

Incident 2: White Lives Matter Banner

On 22 June 2020, a fan of Burnley FC chartered a plane to fly over the Etihad Stadium trailing a banner that read “White Lives Matter, Burnley” at the beginning

Table 2. Top 10 users based on domain and proximity prestige (Premier League and BLM network).

User	Domain prestige	User	Proximity prestige
leaveeuofficial	0.151	leaveeuofficial	0.125
ukchange	0.139	ukchange	0.093
premierleague	0.110	premierleague	0.091
blaiklockbp	0.075	bleacherreport	0.061
imasurvivor66	0.074	darrenplymouth	0.052
bleacherreport	0.061	bbradley_mans	0.050
bbradley_mans	0.059	blaiklockbp	0.042
darrenplymouth	0.057	naahwoke	0.041
naahwoke	0.050	imasurvivor66	0.036
chris_kammy	0.031	mich8lee	0.024

of the game between Manchester City and Burnley. This was widely interpreted as indicative of a position that seeks to excuse racism as a defence of cultural identity (new or neo racism) and as a protest against the actions taken by footballing authorities and clubs in support of Black Lives Matter. Therefore, we scraped 1,494 interactions between 1,382 Twitter users on 22 June 2020, using the search string, “White Lives Matter” OR “WLM” AND “Premier League” OR “EPL” with NodeXL Pro software.

The overall structure. Figure 3 visualizes the overall structure of users’ presumption of the “White Lives Matter” banner incident within English football. The colors represent the different “communities” that are identified through the modularity analysis. Light grey nodes represent those not in the main community structures.

The overall structure conforms to the *broadcast hub-and-spoke* model as communities seem to develop around single potentially influential users (Himmelboim et al., 2017). This is shown by these users having high in-degree measures and low out-degree measures, demonstrating a traditional one-to-many media broadcast system. However, given there are multiple, somewhat separate, communities, this also reflects a unified structure since these communities involve dense interconnection between users within

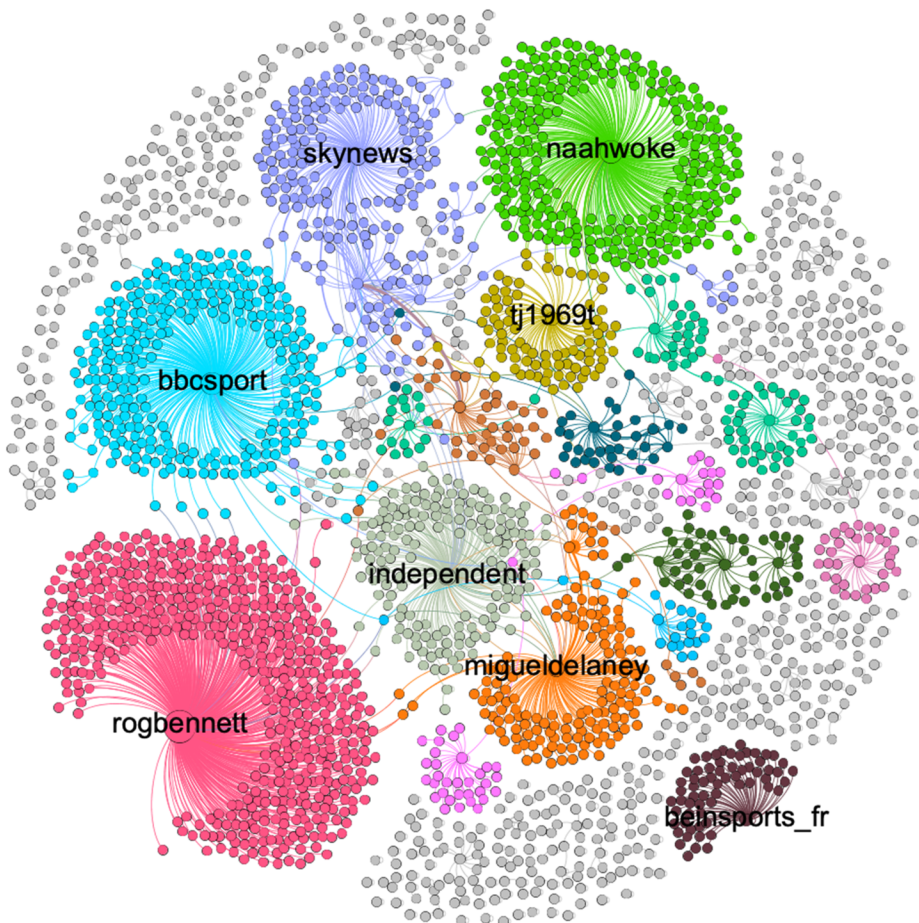


Figure 3. Network of tweets about white lives matter banner.

the community (Himelboim et al., 2017). Here, content is driven by a few users, and is then prosumed by other contacted users creating densely connected discussion and rhetoric.

Figure 3 shows communities generally formed around “experts” in the form of popular media outlets and journalists such as “rogbenett,” “skynews,” “bbcspot,” “independent,” “migueldeaney” and “talksport.” However, two communities formed around two openly right-wing users, sharing, commenting and opposing anti-racism movements. Users “naahwoke” and “tj1969t” consistently share far-right content. Interestingly, user @naahwoke, was also identified as an influential user concerning the “Black Lives Matter” incident, albeit on a smaller scale.

User @naahWoke in relation to this incident, wrote the following Tweet:

BLACK PRIVILEGE: The ability to break every law in the country and still remain the victim...

and retweeted this from @EscapeEUSlavery,

England was a much more peaceful country before:

- *Mass immigration*
- *Multiculturalism*
- *Diversity*
- *Refugees*
- *Asylum seekers*
- *Cultural Marxism*
- *Political Correctness*
- *Muslim Council of Britain*
- *Momentum*
- *Black Lives Matter*

Similarly, user @tj1969t who has a public Twitter biography which reads:

Abhor political deceit. Despise insincere politicians. Witnessed decline of MSM. Voted Brexit. Lived through EU shambles. Against globalization. World traveller.

Their recent tweets showed a predisposition against the anti-racism movement, for example:

Enough. I've had enough. If they want to play with race, that's fine. I'm WHITE. I'll shop WHITE. I'll employ WHITE. I'll vote WHITE. I'll welcome everything WHITE. If this has a negative impact on people of colour, they'll have to deal with it, because I've had enough.

and:

Burnley Football Club don't like a White Lives Matter banner, but they're delighted to accept money from WHITE season ticket holders.

The first example was in response to a BBC report on a campaign to put more pounds into Black-owned businesses, and the second was concerning a statement from Burnley FC explaining why they disassociated themselves from the White Lives

Table 3. Top 10 influential users based on betweenness (white lives matter' network).

User	Betweenness
rogbennett	2013525.419
naahwoke	1638507.579
skynews	1601572.223
bbcspport	1373271.258
independent	1135253.429
stirlingblue1	1046381.662
rhyso93	778506.765
migueldelaney	615044.810
tj1969t	467975.178
lemonwhisper	372495.705

Table 4. Top 10 users based on domain and proximity prestige (white lives matter network).

User	Domain prestige	User	Proximity prestige
rogbennett	0.195	rogbennett	0.195
independent	0.119	naahwoke	0.113
migueldelaney	0.119	bbcspport	0.110
indyfootball	0.119	independent	0.079
naahwoke	0.113	migueldelaney	0.076
bbcspport	0.110	skynews	0.057
skynews	0.064	indyfootball	0.050
tj1969t	0.029	tj1969t	0.029
burnleyofficial	0.029	beinsports_fr	0.023
beinsports_fr	0.023	burnleyofficial	0.019

Matter stunt. These users are central to their discussion communities through the presumption of their right-wing resistance to anti-racism, influencing the rhetoric within them.

Influential users. The journalist @RogBennet is the most central within this conversation with the highest betweenness score. As it is the summated score of the shortest paths for unconnected nodes to pass information, this suggests the network structure is contingent on the presumption of @RogBennet's content. Much like @RogBennet most of the other highly influential nodes in Table 3 are expected since they are news outlets or journalists reporting the story. However, the two aforementioned far-right users @naahwoke, and @tj1969t also have high betweenness scores, demonstrating their influence in spreading far-right (racist) rhetoric *via* digital presumption. It can, therefore, be seen that in this network, individual users can be as influential as mainstream media outlets⁷.

Similarly, when accounting for influence (prestige) through domain and proximity prestige measures (direct plus indirect interactions, and direct only interactions, respectively) individual users "naahwoke" and "tj1969t" remain in influential positions, using English football to voice and promote far-right opposition to anti-racism (see Table 4). This confirms that individual users beyond the mainstream media can hold considerable influence in a digital leisure space. Identifying such users and conversations is integral to dismantling harmful racial rhetoric and preventing its spread. However, as this analysis is static, focusing on a snapshot of time, we do not know how these virtual communities of interest developed and for how long. Moreover, being sanguine, we should note that if these users did not exist, others might replace them.

Discussion

Above all, we are reminded that leisure remains an important lens through which to view, question, debate and understand the world. (Lashua et al., 2021, p. 10)

This paper aimed to understand how the digital leisure space was structured around two incidents: the responses to the English Premier League's position on Black Lives Matter and the White Lives Matter response to the Premier League's. The results have shown how, through the networked presumption of far-right rhetoric, content and users can gain structural influence in the digital leisure space (Bond et al., 2021, 2023). In particular, our results show how, even on an open platform like Twitter, the structure of both incidents generally conforms to the traditional "broadcast" hub-and-spoke communication structure, where many users cluster around an individual or a small group of central users (Park & Thelwall, 2008; Wang et al., 2010; Welser et al., 2007). Through the presumption of racist or far-right rhetoric from these central users, these particular incidents created a racialized communication platform similar to those Kilvington et al. (2022) found within online football message boards. Consequently, this finding demonstrates the manufacturing of platformed racism discussed by Matamoros-Fernández (2017), whereby Twitter (now X), can become an "amplifier and manufacturer of racist discourse" (p. 930).

Seemingly, the Premier League became a legitimate enemy, allowing far-right users to feel comfortable expressing their racist views, empirically demonstrating the "permission or licence" users feel in digital leisure spaces to freely express their views, even racially motivated rhetoric (Blackshaw, 2010, p.4). This may be explained by digital platforms offering a leisure space granting users the potential to assume new or true unrestricted personalities or identities (Matijasevic-Obradovic, 2014; Vakhitova & Reynald, 2014).

Instead of relying on the standard neoclassical economic popularity metrics, we followed Bond et al. (2021, 2023), who used social network analysis to analyze community structures and measure structural influence through position within the conversation network. The community detection showed distinct digital leisure communities, with the largest communities centering on identifiably far-right user accounts. The examples we examined demonstrate how football can often be used to propel far-right narratives that are driven through networks and presumed digital leisure, much like Cleland (2014) and Kilvington et al. (2022) have shown within message boards.

By identifying users at the heart of racialized posts, social network analysis has assisted in dissecting these presumed Twitter conversations. The central significance of just a few lynchpins may suggest that what we have labeled "communities" (albeit without propinquity) are not true; indeed, they may only be transitory. Although the users may share a common interest, they lack significant interaction with others in the "community"; they are very different from groups of fans meeting regularly in the pub on match days. Yes, there is democracy of access, but the echo chambers we have identified are insufficient to form a community. This rather supports Calhoun's (1998, p. 374) contention that "relationships forged with the aid of electronic technology may do more to foster 'categorical identities' than they do dense, multiplex, and systematic networks of relationships." As Calhoun asserts, in these multi-user domains:

...use remains mainly an entertainment-expressive activity, [where] commitment levels are low, and even intense participation is episodic. Few specifically interpersonal relationships – dyads, triads, small sub-groups – complement dispersed participation in the loose-knit whole. (p. 380)

This lack of interpersonal relationships is well illustrated in [Figures 1 and 2](#). This creates denser structures around influential users, who can then lead the narrative and norms which become embedded in the echo chamber (Granovetter, 1985, 2005, 2017).

However, just as all locations in a geographical community assume a social meaning, so too do the positions of users in these digital leisure spaces. Even the briefest of communications is interpreted in light of how it is positioned vis-à-vis other tweets. Calhoun warns that in this world of “abstract categories” where direct relationships are few and far between, identities are presumed, based largely on stereotypes.

Although we have not conducted a formal semiotic analysis, our work has clearly shown that while there is much “casual racism” (Cleland and Cashmore, 2014) what is published in the Twitter-sphere cannot simply be attributed to “accidental racists”. Anything but; it is used quite intentionally to hurt and to promote an agenda. Recent high-profile cases in which elite footballers have been racially abused for events/incidents on the field of play have presumably been targeted by people who follow the game (we decline to call them fans or supporters). However, users like @naahwoke and @tj1969t, who attract so much attention, may not be people who follow football, but simply see football as a convenient vehicle for disseminating their racist views to a wider audience. Just as far-right groups targeted football stadiums as potential recruiting grounds in the 1970s and 1980s (Thomas, 2011), so they are using social media now (Hope Not Hate, 2021).

Conclusions

This investigation has contributed to redressing the dearth of research exploring the use of social media sites as a digital leisure time activity, bemoaned by Schmalz et al. (2015). Against a background of growing racial abuse on social media around football and tardiness on the part of footballing authorities and media platforms in dealing with it, we have demonstrated how social network analysis can be used to examine racism in the social architecture of the virtual world where an increasing amount of people’s leisure time is spent. Following Awan and Zempi (2015) we chose to examine what we correctly, as it turned out, identified as two incidents directly related to anti-racism moments in 2020. We have demonstrated how conversations are structured through presumption, creating virtual communities of users, and the graphic representations have aided this. As with other forms of leisure, people here tend to associate with people of like mind, given there is little intercommunity connection. This reinforcing of each other’s opinion, giving repeated endorsement, appears to make real the imagined.

We acknowledge that as an exploratory study, this has its limitations. Firstly, the incident selection; other researchers may have chosen others. Secondly, the data collection was conducted at the time of the incident, gathering data regularly over time would allow more analysis to assess how structures develop and decay over time. Lastly,

we only reviewed profiles of influential nodes, not all profiles. We also acknowledge that there is something about the nature of Twitter that is likely to produce broadcast networks. In contrast, other social media may, by their very construction, foster denser networks with clustered structures more akin to “real world” leisure groupings. However, this investigation has illustrated how social network analysis can be used to understand the social architecture of exchanges conducted through social media. Our analysis has shown the dominance of the hub-and-spoke communication model in such circumstances and highlighted how those with established standing/recognition are well placed strategically to have their views heard. Our research to date has also suggested some avenues for future research. One of these will be for us to follow the rise and fall of these conversational communities to assess their decay rate. Another is to incorporate a mixed-method approach and use in-depth qualitative analysis to offer a more critical semiotic interpretation of the tweets that are the ties between users within such social networks. This will help to identify the covert racial discourse that was a concern to Love and Hughey (2015) and which might escape AI algorithms even if social media companies are successfully pressured into being more vigilant. Indeed, the extent to which the racist and far-right rhetoric—explicitly to covertly—within these communication communities is present only through the digital platform X and not in their physical world is an interesting challenge for future research to address.

Notes

1. We take racism here to include “cultural racism” (othering on the basis of culture and ethnicity rather than presumed genetic characteristics) and “new racism” (presented as defending what is ours rather than attacking others).
2. See also the special issue of *Leisure Sciences* on digital leisure: 2018, 40(4).
3. In this he was revisiting the work of Melvin Webber (1963).
4. NodeXL is one of the leading software packages for collecting, analysing and visualising social media relational data, while Gephi is the leading freely available open-source software for visualising and analysing network data.
5. Though the Guardian noted that this was an initiative that originated not within the Premier League itself but with club captains and the Professional Footballers’ Association: <https://www.theguardian.com/football/2020/jun/11/premier-league-shirts-to-show-support-for-black-lives-matter-and-nhs-minute-silence-coronavirus>
6. During the course of writing this paper it was updated again to read, “Chemist | Teacher | [British Flag of United Kingdom] Independent Councillor Candidate #Peverell. I have NO allegiance to anyone or any party except the people of #Plymouth. #GameOn”.
7. We do not know whether “naahwoke” is an individual, multiple people or an organisation.

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References

- Awan, I., & Zempi, I. (2015). 'I will Blow your face off'—Virtual and physical world anti-muslim hate crime. *British Journal of Criminology*, 57 (2), 362–380. <https://doi.org/10.1093/bjc/azv122>
- Bastian, M., Heymann, S., & Jacomy, M. (2009). *Gephi: An open source software for exploring and manipulating networks*. International AAAI Conference on Weblogs and Social Media. <https://gephi.org/users/publications/>
- BBC. (2020, December 18). Players 'overwhelmingly support' continuing to take a knee, says PFA after consultation. *BBC*. <https://www.bbc.co.uk/sport/football/55360210>
- Black, J., Fletcher, T., Doidge, M., Kearns, C., Kilvington, D., Liston, K., Lynn, T., Rosati, P., & Sinclair, G. (2024). "Let the tournament for the woke begin!": Euro 2020 and the reproduction of Cultural Marxist conspiracies in online criticisms of the "take the knee" protest. *Ethnic and Racial Studies*, 47(10), 2036–2059. <https://doi.org/10.1080/01419870.2023.2263069>
- Blackshaw, T. (2010). *Leisure*. Routledge.
- Blondel, V. D., Guillaume, J. L., Lambiotte, R., & Lefebvre, E. (2008). Fast unfolding of communities in large networks. *Journal of statistical mechanics: Theory and experiment*, 2008(10), P10008. <https://doi.org/10.1088/1742-5468/2008/10/P10008>
- Bond, A. J., Widdop, P., Cockayne, D., & Parnell, D. (2021). Prosumption, networks and value during a global pandemic: Lockdown leisure and COVID-19. *Leisure Sciences*, 43(1-2), 70–77. <https://doi.org/10.1080/01490400.2020.1773985>
- Bond, A. J., Widdop, P., Cockayne, D., & Parnell, D. (2023). Sport prosumer networks: Exploring prosumption value in Twitter conversations during COVID-19. *Managing Sport and Leisure*, 28(6), 732–748. <https://doi.org/10.1080/23750472.2021.1970615>
- British Sociological Association. (n.d). *Ethics guidelines and collated resources for digital research*. Retrieved November 13, 2021, from https://www.britisoc.co.uk/media/24309/bsa_statement_of_ethical_practice_annexe.pdf
- Burt, R. S. (1992). *Structural holes: The social structure of competition*. Harvard University Press.
- Calhoun, C. (1998). Community without propinquity revisited: Communications technology and the transformation of the urban public sphere. *Sociological Inquiry*, 68(3), 373–397. <https://doi.org/10.1111/j.1475-682X.1998.tb00474.x>
- Castells, M. (2011). *The rise of the network society* (Vol. 12). John Wiley & Sons.
- Castells, M. (2015). *Networks of outrage and hope: Social movements in the Internet age*. John Wiley & Sons.
- Cleland, J. (2014). Racism, football fans, and online message boards. *Journal of Sport and Social Issues*, 38(5), 415–431. <https://doi.org/10.1177/0193723513499922>
- Cleland, J., & Cashmore, E. (2014). Fans, racism and British football in the twenty-first century: The existence of a 'colour-blind' ideology. *Journal of ethnic and migration studies*, 40(4), 638–654. <https://doi.org/10.1080/1369183X.2013.777524>
- Coleman, J. S. (1990). *Foundations of social theory*. Belknap Press.
- Constantinides, E., & Fountain, S. J. (2008). Web 2.0: Conceptual foundations and marketing issues. *Journal of Direct, Data and Digital Marketing Practice*, 9(3), 231–244. <https://doi.org/10.1057/palgrave.ddmp.4350098>
- Daniels, J. (2013). Race and racism in Internet studies: A review and critique. *New Media & Society*, 15(5), 695–719. <https://doi.org/10.1177/1461444812462849>

- Goodchild, M. (2007). Citizens as voluntary sensors: Spatial data infrastructure in the World of Web 2.0. *International Journal of Spatial Data Infrastructures Research*, 2, 24–32.
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360–1380. <https://doi.org/10.1086/225469>
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481–510. <https://doi.org/10.1086/228311>
- Granovetter, M. (2005). The impact of social structure on economic outcomes. *Journal of Economic Perspectives*, 19(1), 33–50. <https://doi.org/10.1257/0895330053147958>
- Granovetter, M. (2017). *Society and economy: Framework and principles*. The Belknap Press of Harvard University Press.
- Hambrick, M. E. (2012). Six degrees of information: Using social network analysis to explore the spread of information within sport social networks. *International Journal of Sport Communication*, 5(1), 16–34. <https://doi.org/10.1123/ijsc.5.1.16>
- Himmelboim, I., Smith, M. A., Rainie, L., Shneiderman, B., & Espina, C. (2017). Classifying Twitter topic-networks using social network analysis. *Social Media + Society*, 3(1), 205630511769154. <https://doi.org/10.1177/2056305117691545>
- Hope Not Hate. (2021). *State of hate 2021: Backlash, conspiracies & confrontation*. <https://www.hopenothate.org.uk/research/state-of-hate-2021/>
- Kavanagh, E., Jones, I., & Sheppard-Marks, L. (2016). Towards typologies of virtual maltreatment: Sport, digital cultures & dark leisure. *Leisure Studies*, 35(6), 783–796. <https://doi.org/10.1080/02614367.2016.1216581>
- Kendix. (2023, December 9). Far-right activists on the march to fix your potholes and benches. *The Times*. <https://thetimes.com/uk/scotland/article/concerns-over-far-right-creeping-into-scottish-local-politics-rwp92mpdk>
- Kilvington, D., Hylton, K., Long, J., & Bond, A. (2022). Investigating online football forums: A critical examination of participants' responses to football related racism and Islamophobia. *Soccer & Society*, 23(8), 849–864. <https://doi.org/10.1080/14660970.2022.2109801>
- Kopczyk, K., Walker-Khan, M. (n.d.). *Racism in football: Our stories*. BBC Sport. Retrieved November 2, 2021, from <https://www.bbc.co.uk/sport/extra/5v1pvd8mr/Racism-in-football-our-stories>
- Lai, L. S. L., & To, W. M. (2015). Content analysis of social media: A grounded theory approach. *Journal of Electronic Commerce Research*, 16(2), 138–152.
- Lashua, B., Johnson, C. W., & Parry, D. C. (2021). Leisure in the time of coronavirus: A rapid response special issue. *Leisure Sciences*, 43(1–2), 6–11. <https://doi.org/10.1080/01490400.2020.1774827>
- Lin, N. (1999). Social networks and status attainment. *Annual Review of Sociology*, 25(1), 467–487. <https://doi.org/10.1146/annurev.soc.25.1.467>
- Love, A., & Hughey, M. W. (2015). Out of bounds? Racial discourse on college basketball message boards. *Ethnic and Racial Studies*, 38(6), 877–893. <https://doi.org/10.1080/01419870.2014.967257>
- Lupton, D. (2014). *Digital sociology*. Routledge.
- MacInnes, P. (2019, August 23). Twitter and racist abuse in football: How can it be tackled? *The Guardian*. <https://www.theguardian.com/football/2019/aug/23/twitter-racist-abuse-football-tackled>
- Matamoros-Fernández, A. (2017). Platformed racism: The mediation and circulation of an Australian race-based controversy on Twitter, Facebook and YouTube. *Information, Communication & Society*, 20(6), 930–946. <https://doi.org/10.1080/1369118X.2017.1293130>
- Matijasevic-Obradovic, J. (2014). The significance and modalities of internet abuse as the primary global communication computer networks in cyberspace. *Megatrend Revija*, 11(1), 279–298. <https://doi.org/10.5937/MegRev1401279M>
- McGregor, N. (2021, May 14). Football, racism & social media: “I laughed because I knew abuse was coming”—BBC Sport. *BBC Sport*. <https://www.bbc.co.uk/sport/football/57070587>
- McNulty, P. (2019, September 14). England stand tall on shameful night of racism in Bulgaria—BBC sport. *BBC Sport*. <https://www.bbc.co.uk/sport/football/50050410>
- Moran, R. (2000). Racism in football: A victim's perspective. *Soccer & Society*, 1(1), 190–200. <https://doi.org/10.1080/14660970008721258>

- 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. <https://doi.org/10.1123/jsm.2016-0067>
- NPCC. (2023). National public order—Public safety cultural nationalism thematic group assessment patriotic alternative (PA), January and February 2023. National Police Coordination Centre. https://www.npcc.police.uk/SysSiteAssets/media/downloads/publications/disclosure-logs/operations-coordination-committee/2023/324-2023-npocc-sib-patriotic-alternative-group-assessment-february-2023-final-1_redacted.pdf
- Orenga-Roglá, S., & Chalmeta, R. (2016). Social customer relationship management: Taking advantage of Web 2.0 and Big Data technologies. *SpringerPlus*, 5(1), 1462. <https://doi.org/10.1186/s40064-016-3128-y>
- Pang, B. (2021). Beyond hypervisibility and fear: British Chinese communities' leisure and health-related experiences in the time of coronavirus. *Leisure Sciences*, 43(1-2), 111–117. <https://doi.org/10.1080/01490400.2020.1773991>
- Papademas, D., & The International Visual Sociology Association. (2009). IVSA code of research ethics and guidelines. *Visual Studies*, 24(3), 250–257. <https://doi.org/10.1080/14725860903309187>
- Park, H. W., & Thelwall, M. (2008). Developing network indicators for ideological landscapes from the political blogosphere in South Korea. *Journal of Computer-Mediated Communication*, 13(4), 856–879. <https://doi.org/10.1111/j.1083-6101.2008.00422.x>
- PFA. (2020). *AI research study on online abuse*. <https://www.thepfa.com/news/2020/10/21/pfa-charity-ai-research-study>
- Ritzer, G., & Jurgenson, N. (2010). Production, consumption, prosumption: The nature of capitalism in the age of the digital “prosumer”. *Journal of Consumer Culture*, 10(1), 13–36. <https://doi.org/10.1177/1469540509354673>
- Russell, R. (2021, November 1). Crystal palace football player Wilfried Zaha urges Instagram to take action after “disgusting” racist abuse | UK News | Sky News. *Sky News*. <https://news.sky.com/story/crystal-palace-football-player-wilfried-zaha-urges-instagram-to-take-action-after-disgusting-racist-abuse-12456217>
- Schmalz, D. L., Colistra, C. M., & Evans, K. E. (2015). Social media sites as a means of coping with a threatened social identity. *Leisure Sciences*, 37(1), 20–38. <https://doi.org/10.1080/01490400.2014.935835>
- Sky Sports. (2020, December 18). PFA survey shows players wish to continue taking a knee despite some fans booing the anti-racism gesture. *Sky Sports*. <https://www.skysports.com/football/news/11095/12165892/pfa-survey-shows-players-wish-to-continue-taking-a-knee-despite-some-fans-booing-the-anti-racism-gesture>
- Smith, M., Ceni, A., Milic-Frayling, N., Shneiderman, B., Mendes Rodrigues, E., Leskovec, J., Dunne, C. (2010). NodeXL: A free and open network overview, discovery and exploration add-in for Excel 2007/2010/2013/2016. *Social Media Research Foundation*. <https://www.smrfoundation.org>
- SPLC. (n.d.). White lives matter. *Splcentre.org*. <https://www.splcenter.org/resources/extremist-files/white-lives-matter/>
- Spracklen, K. (2015). *Digital leisure, the Internet and popular culture: Communities and identities in a digital age*. Palgrave MacMillan.
- The Guardian. (2020, June 11). Premier League player names to be replaced on shirts by Black Lives Matter. *The Guardian*. Available at: <https://www.theguardian.com/football/2020/jun/11/premier-league-shirts-to-show-support-for-black-lives-matter-and-nhs-minute-silence-coronavirus>
- Thomas, P. (2011). Marching altogether? Football fans taking a stand against racism. In J. Long & K. Spracklen (Eds.), *Sport and challenges to racism* (pp. 185–198). Palgrave Macmillan.
- Vakhitova, Z. I., & Reynald, D. M. (2014). Australian internet users and guardianship against cyber abuse: An empirical analysis. *International Journal of Cyber Criminology*, 8(2), 156–171.
- Wang, X., Jiang, T., & Ma, F. (2010). Blog-supported scientific communication: An exploratory analysis based on social hyperlinks in a Chinese blog community. *Journal of Information Science*, 36(6), 690–704. <https://doi.org/10.1177/0165551510383189>

- Wasserman, S., & Faust, K. (2009). *Social network analysis: Methods and applications* (9th ed.). Cambridge University Press.
- Webber, M. M. (1963). Order in diversity: Community without propinquity. In L. Wirigo (Ed.), *Cities and space*. Baltimore: Johns Hopkins University Press.
- Welser, H. T., Gleave, E., Fisher, D., & Smith, M. (2007). Visualizing the signatures of social roles in online discussion groups. *Journal of Social Structure*, 8(2), 1–32.
- Yan, G., Pegoraro, A., & Watanabe, N. M. (2018). Student-Athletes' Organization of activism at the University of Missouri: Resource mobilization on Twitter. *Journal of Sport Management*, 32(1), 24–37. <https://doi.org/10.1123/jsm.2017-0031>
- Yan, G., Watanabe, N. M., Shapiro, S. L., Naraine, M. L., & Hull, K. (2019). Unfolding the Twitter scene of the 2017 UEFA Champions League Final: Social media networks and power dynamics. *European Sport Management Quarterly*, 19(4), 419–436. <https://doi.org/10.1080/16184742.2018.1517272>
- Zhao, Y., Yu, H., Zhang, W., Zhang, W., & Zhu, Z. (2015). A social network model with proximity prestige property. *Journal of Applied Analysis & Computation*, 5(2), 177–188. <https://doi.org/10.11948/2015016>