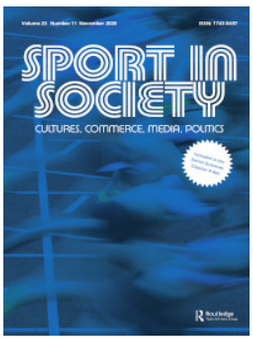

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Thinking outside the 'box': a discussion of sports fans, teams, and the environment in the context of COVID-19

Brandon Mastromartino[a], Walker J. Ross[b], Henry Wear[c] and Michael L. Naraine[d]

[a]Department of Applied Physiology and Wellness, Southern Methodist University, Dallas, TX, USA; [b]Barney Barnett School of Business and Free Enterprise, Florida Southern College, Lakeland, FL, USA; [c]School of Journalism and Communication, University of Oregon, Eugene, OR, USA; [d]Department of Sport Management, Brock University, St. Catharines, ON, Canada

ABSTRACT

In this paper, we examine the implications of sport stadiums closures during the COVID-19 global pandemic. The paper looks at the impact of sport stadium closures from three perspectives: The individual fan, the sport organization, and societal implications, with specific consideration to the environment. Previous literature was reviewed in order to highlight the areas in which the sport industry will need to focus their attention to in the coming months and provide theoretical background for academics looking to identify unique research opportunities. With an understanding of the implications of sport stadium closures to the sport world and beyond, academics and practitioners can work to solve the problems that lie ahead during and after the COVID-19 crisis.

KEYWORDS

COVID-19; fan community; sport fans; sport ecology; sport management

Introduction

For many brands, a physical space, such as a stadium exists as a core brand association. These associations characterize all the products a brand has and where consumers have the strongest associations (Keller, Heckler, and Houston 1998). These physical spaces can also showcase a brand by positioning it in a specific way in order to create meaning and benefits for consumers (Hollenbeck, Peters, and Zinkhan 2008). Infamous facilities such as Lambeau Field, Fenway Park, and Madison Square Garden carry meaning beyond just being a location where sporting events take place. In Chicago Magazine, legendary sport executive Bill Veeck described the meaning of Wrigley Field for Chicago Cubs fans: 'The bleachers aren't just concrete and steel, cheap seats, and concession stands; they're a state of mind, a way of life, the best of summer' (Veeck 1984). Sport stadiums are at the core of many sport brand's identity and brand strategies. However, with the COVID-19 global health pandemic, sport facilities all over the world have been forced to close their gates to fans for the foreseeable future, limiting the ways in which a sport organization can interact with their consumers to provide exceptional experiences, and foster a sense of community. In a time of such

CONTACT Brandon Mastromartino bmastromartino@smu.edu
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uncertainty, and without previous experience to draw upon, sport practitioners and academics must consider the implications of a new sport landscape.

In this spirit, the purpose of this paper is to discuss the sport industry without the prospects of the sport stadium in light of COVID-19. With this knowledge, sport practitioners can draw on existing foundations as they adjust marketing strategies to continue fan and organizational development through the pandemic and the resulting 'new normal'. Additionally, this treatise enables sport researchers to identify gaps in the extant literature in which to continue to build upon the present theoretical understanding of sport fans in light of the pandemic. To achieve this purpose, we organize our discussion through three different perspectives: The individual fan, the sport organization, and external, societal implications, with a delineated focus to the environment.

The individual fan

Aside from creating the association between stadium and brand, the physical space also functions to create an atmosphere that is conducive to fans forming a group identity. Facility size, structural design, age, atmosphere, and other idiosyncratic features all provide an opportunity for identity formation (Underwood, Bond, and Baer 2001). Moreover, as Wakefield and Sloan (1995) documented, a stadium's characteristics can directly impact whether spectator's consider a sporting event to be enjoyable, as well as their intentions to return in the future. In that same work, the authors acknowledged that while strong team loyalty affects attendance, stadium design and services also directly influence the spectator's desire to stay and attend more games in the future. Therefore, factors such as crowding, food service, quality, fan behaviour control, stadium parking, and stadium cleanliness, can improve fan attendance regardless of how successful a team is when it comes to on-field performance. Wakefield and Sloan also concluded that, for teams in small markets, stadium factors critical elements within their control. Factors such as market size, competitors, and team performance are out of the purview of sport marketers, and organizations sometimes may not have direct involvement with stadia builds and designs. However, what sport marketers do have control over is the in-stadium experience and ensuring that fans receive a value proposition that keeps them loyal to the brand.

But, what does that look like in practice? The in-stadium experience is often defined by the amenities in the 'sportscape' (Wakefield, Blodgett, and Sloan 1996). For instance, having adequate washrooms, accessible seating, and an appropriate number of food vendors are important features. Cleanliness is also an important feature; attendees can be taken aback by dirty, untidy concourses and areas within a stadium. A fast and consistent Wi-Fi network are also important in the modern era, allowing fans to interact with one another (Naraine et al. 2020). But, providing a clean venue, sufficient number of hot dog vendors, or facilitating internet access does not necessarily equate to a strong sense of group affiliation and identity. For Underwood, Bond, and Baer (2001), configuring facilities to provide intimacy, or even play-up on nostalgic feelings can yield the commitment and unique proposition that fans seek and can share with one another. Underscoring this sentiment is the notion that fan loyalty can be manipulated beyond wins and losses, indicative of how meaningful sport faciliteis are to members of the fan community. However, as noted, with the prospect of indefinite stadium closures during the COVID-19 pandemic, understanding how an

individual engages in their fandom outside the stadium is vital for sport organizations and researchers.

Virtual spaces

In addition to the physical space, virtual spaces achieve similar benefits for sports fans as the ones they receive from attending games in person (Mastromartino and Zhang 2020; Naraine 2019). Communicating with other fans, especially through online means, allows fans from all over the world to engage in everyday discussions about their favorite sports team. More recently, social media has changed the way in which communication is done on the internet, making it a place that is participatory and conversational (Jenkins 2006; Weinberg 2009). Differing from traditional communication methods and media outlets, social media allows for connection, communication, and collaboration to occur between users on a larger scale (Bradley 2010; Williams and Chinn 2010). By following and 'liking' a brand via social media, fans can affirm their membership in the community and act on their identity as a fan (Hollenbeck and Kaikati 2012). Sport fans who engage in communication with other fans online have been found to be the more highly identified fans of a team and more engaged in the fan community than fans who do not participate in online communication (Gibbons and Dixon 2010; Millward 2008; Phua 2010). As well, it's been noted that the longer one senses membership in a virtual community, the more social capital they gain (Mathwick, Wiertz, and De Ruyter 2008).

According to McWilliam (2000), there are four factors for successful online fan communities. Firstly, a forum for exchange must be built on a set of common interests. For instance, fans of niche sports may have difficulties finding others in their geographic locale with the same affinity for the lesser-known sport, but may be able to locate others in online spaces (Mastromartino et al. 2020). Second, online communities must have a sense of place with codes and acceptable behaviours. Although the internet is an open forum, cohesive fan communities have expectations of fellow members and, over time, a certain code of conduct becomes part of the culture whether explicit or assumed. Third is the development of congenial and stimulating dialogues leading to relationships based on trust. Over time, individuals who are part of online communities develop relationships with other users, which result in relationships that exist outside the fan community and in physical spaces. This works to strengthen their ties and sense of belonging to that community (Mastromartino et al. 2019). Lastly, successful online communities require encouragement for active participation by more than an exclusive few. Online communities are places where individuals can have their voices heard in ways that cannot be achieved with traditional media.

Indeed, once these factors are considered, online groups can work towards facilitating connection across time and space, and strengthen fan identity and community overall (Crawford 2004). For instance, Norman (2014) explored the social characteristics of an online community of hockey fans. There, he found that for members of that particular online community, it functioned more as an online 'sports bar' where individuals would drop in and out but there were a core group of 'regulars'. While COVID-19 has also called the sports bar experience, social media sites can facilitate that same experience accordingly. Platforms like Facebook, Instagram, and Twitter can be incredibly pertinent for fans seeking communities to interact. Twitter, in particular, has been known to facilitate and strengthen

fan groups online (Naraine, Pegoraro, and Wear 2019). These platforms also create a direct link to their supporting teams and leagues, not just other fans. Naraine (2019) documented this specific phenomenon, exploring the various fan segments who follow sport organizations via social media. Later, Naraine and his colleagues (2019)s also revealed fans are following competing teams social links, underscoring the notion that fan communities in digital spaces are also strengthened by rivalry and exhibiting tribalism. While social media is a popular form of fan community maintenance and development, there are additional virtual activities that offer similar results. Some examples include online gambling (Stadder and Naraine 2020), interactive television such as iTV in the United Kingdom (Bennett 2008), and mobile technology content (Boyle 2004). However, most of the nonsocial media communities that maintain fandom online are largely user generated, such as fanzines, podcasts, or fantasy leagues (Davis and Duncan 2006). Nevertheless, these activities show that it is still possible for fans to congregate and build community outside of sport facilities.

The sport organization

While fans can seek to maintain their own connections to sport in this COVID-19 era, sport organizations can also harness their brand power. There is little doubt that as the sport industry has matured, the competition for the sport consumer has intensified (Baker, McDonald, and Funk 2016). To establish a competitive advantage, sport organizations have begun to consider their collection of players, coaches, managers, and staff as elements forming a unique, singular brand that can be managed accordingly (Ross 2006). This has brought forth an understanding that emphasizes the importance of brand associations to team and consumer outcomes. Along this vein, researchers have previously examined the pivotal role of brand associations to sport organizations, particularly in relation to team identity (Wear and Heere 2019), team loyalty (Kunkel, Funk, and King 2014), overall team brand equity (Bauer, Stokburger-Sauer, and Exler 2008; Ross 2006), league brand equity (Kunkel, Funk, and Lock 2017) and fan behaviour (Wear et al. 2018).

A key outcome of having a strong unique brand is the creation of *community*. As mentioned previously, when individuals become identified with an organization, they begin to feel less as if they are an individual consumer, and more like a collective group. Whereas fans engaging in activities with other fans spurs groups of fan communities, groups whose point of attachment to specific brands are known as just that: brand communities (Grant, Heere, and Dickson 2011). That is to say, decentralized groups of fans who share the same allegiance can be considered fan communities, but brand communities are simply those where there is a direct connection to the team or organization, a more centralized approach. Through these brand communities, consumers begin to feel empowered, and feel as if they are members within the overall organization (Katz and Heere 2015). This feeling of empowerment holds financial implications for the organization, often leading to greater financial return (Hedlund 2014; Heere et al. 2011; Yoshida, Heere, and Gordon 2015). In addition to a range of consumer relationships, brand communities are characterized by a set of group created practices in which consumers engage in through their membership to the community (Schau, Muñiz, and Arnould 2009). These practices have been categorized as being part of four distinct themes: social networking, impression management, community engagement, and brand use (Schau, Muñiz, and Arnould 2009). Brands that are able to facilitate the creation of

communities (in lieu of just letting fans create them on their own) and also work with consumers towards establishing these practices are able to create engaged and empowered consumers that are easier to retain (Hedlund 2014; Schau, Muñiz, and Arnould 2009; Yoshida, Heere, and Gordon 2015).

There has been a considerable line of research examining community from the lens of brand community emphasizing the communal aspect of a sport team's brand and how those associations enhance identification (e.g. Grant, Heere, and Dickson 2011; Heere et al. 2011; Katz and Heere 2013, 2015; Wear and Heere 2019; Woolf, Heere, and Walker 2013). Much of that association between organization and fan has occurred inside the stadium, and the role of the stadium to drive team identification and consumer loyalty has been noted previously (e.g. Brakus, Schmitt, and Zarantonello 2009; Lee, Heere, and Chung 2013; Uhrich and Benkenstein 2012). However, social spaces outside the stadium such as sports bars and watch parties facilitated by the brand have become more prominent places to amplify team identification (Collins et al., 2016). These team-driven social environments provide opportunities for individuals to interact with and engage with one another (Sywers 2005; Warner and Dixon 2011; Yoshida, Heere, and Gordon 2015). The resulting ritualized behaviours have been a key contributor to sense of community, team identification, attendance and merchandise consumption (Drenten et al 2009; McDonald and Karg 2014). While COVID-19 ostensibly restricts attendance consumption, the sense of belonging and team identification can continue to spur merchandise sales, and increased viewership of team-driven events and engagement activities, such as documentaries, past games, and memorable moments (e.g. championship victories and parades), leading to enhanced licensing and partnership agreements.

The challenge for sport organizations in the current global health pandemic remains trying to ensure the sense of belonging and team identification persists without the anchor of a stadium. However, sport organizations are accustomed to the task of trying to build a brand community with the odds not in their favour. For instance, Wear and Heere (2019) documented how a brand-new sport franchise was able to build brand community. In the context of COVID-19, the onus for sport organizations is to identify those virtual and social distant environments to engage their brand communities and/or, in cases where sport organizations are resuming play despite the pandemic, to develop branding strategies in empty stadia that can still connect to fans outside the gates.

One such strategy that sport teams and organizations were using effectively prior to the pandemic was engaging and fostering brand communities using their social media platforms (Goh, Heng, and Lin 2013). As documented above, social media has provided a platform for fans to engage with other fans, as well as follow teams, leagues, and athletes. However, social also provides the conditions for teams themselves to drive content that can be consumed by fans, in addition to sponsors, media, and other stakeholders (Naraine and Parent 2016). The presence of sport organizations in the social sphere is not a new phenomenon (Filo, Lock, and Karg 2015; Taks et al. 2020) Consequently, this presence has enabled influencers or brand ambassadors to emerge within those digital brand communities (e.g. Naraine, Wear, and Whitburn 2019; Pegoraro, Scott, and Burch 2017; Yan et al. 2019). Those ambassadors can steer or introduce new concepts and ideas to the rest of the community, such as music interests, business, and lifestyle (e.g. food, fashion) topics (Naraine 2019). Additionally, because there are multiple brands, both sport and non-sport focused, which exist in the social sphere, it is difficult for fans to maintain their focus and

actively pursue content driven pushed out by teams; it is very plausible given the nature of social media that a fan follows multiple favorite teams just to receive results, updates, and promotional contest information that are popular content pieces online (Pegoraro, Scott, and Burch 2017). Thus, while social affords teams with an opportunity to shift their brand community online, there is the potential for message loss or 'noise', as Stavros et al. (2014) coined.

Due to the temporary stop of most live sporting events around the world many sports teams, leagues, and media organizations are dealing with a shortage of content and experiences to create engagement opportunities with audiences. This is unfortunately at the same time that most individuals have extra leisure time and have subsequently increased their television, web, and streaming usage (Alexander 2020). Teams and leagues throughout the world have relied on several approaches to deal with content shortages, and make sure they continue to engage with their audiences in a way that resonates and attempts to build upon their existing pre-pandemic strategies, goals, and objectives. Two notable approaches to media content by sport organizations have been the use of 1) historical game replays, highlights, or interviews and 2) live *replacement* esports events. In the absence of live sport events, sport networks (e.g. ESPN, Fox Sports, and NBC Sports), as well as sport organizational media platforms (e.g. Portland Trail Blazers social channels, NBA web and livestream platforms) have largely relied on content derived from replays, highlights, or docuseries based on past or historical sport events (Ryan 2020). While the impact of nostalgia on sport consumer behaviour has been discussed in previous research (Fairley 2003; Slavich, Dwyer, and Hungenberg 2019), the impact that nostalgic-based media may have on an individual and the sense of community they have with fellow fans has not. On one side, replaying former moments of glory for the brand can mobilize new generations to appreciate those moments and stimulate the community in that respect. Conversely, new generations may also be also be deterred by their inability to feel belonging as they were not fans during those periods (whether because they did not follow the team, or perhaps they were not even alive). Historical games can also potentially lead to community fatigue, where fans of the brand are starved for new, fresh content, with an unknown outcome, one of the key tenets of sport; with nostalgic replays, fans already know what will happen are may not have the same attachment to these activities. Further, nostalgic-based activities are normally communicated during times of ongoing sports seasons or active off seasons, scenarios where there would exist a great deal of certainty that sport live events would return soon, an unknown lingering from COVID-19. Thus, there exists a lack of clear evidence to what impact replays and nostalgic content may have for sport organizations attempting to maintain their brand communities.

A secondary approach of sport networks, leagues, and teams has been the substitute of live sport events with *replacement* esports events – both streamed live and recorded. The term *replacement* in this sense represents the use of sport-based video game competitions that can be seen as like-for-like substitutes for live sport events. For example, the Major League Soccer (MLS) franchise Toronto FC has broadcast live eMLS competitions that mimic the previously scheduled events on their schedule that have been suspended given the current pandemic. In these events, representatives from the Toronto FC eMLS team compete against representatives from their regularly scheduled competitor's eMLS team in live video game contests of the popular soccer video game FIFA 20 produced by EA Sports. While the actual soccer taking place in these contests may be virtual, the players, stadium,

and even goal celebrations are exact replications of what fans would have viewed in stadium or on television, thus providing fans the most approximate replacement content for live sporting events. In some cases, this content has been produced and cast live to audiences around the world. The Formula 1 racing series appropriated the video game of the same name produced by Codemasters to virtually host grand prix events based on their real-life schedule. In other cases, content was pre-recorded and televised when it was convenient for the broadcaster, such as the NBA2K celebrity tournament which featured athletes, hip-hop stars, and media personalities vying for virtual basketball supremacy in NBA2K produced by 2 K Sports. However, while the viewership of professional gaming leagues has increased by upwards of 150% since the onset of many of the restrictions imposed from the pandemic, this viewership has largely centered on non-sport-based esports video game competitions like Fortnite, League of Legends, and Overwatch (Webster 2020). Further, while it is known that a majority of esports fans consider themselves fans of traditional sports, the reverse is less so with only a small minority of traditional sports fans having interest in esports (Newzoo 2019). Thus, while the increase in viewership of esports events is encouraging for the industry, it is less clear to what extent that esports events are acting as *replacements* for traditional sport fans in their search for live sport event content. Further, there is little evidence that these events are fostering and engaging sport team brand communities.

The current period of uncertainty when sport returns to its former scheme with fans attending venues live and associating with brands in a live, in-person capacity has forced many sport organizations to find new ways to engage with their communities. Studying these approaches, as well as tracking the changing attitudes and beliefs of individuals over the course of the current pandemic and its implication on the sport industry has the opportunity to provide unique insights regarding the nature of sport fandom, engagement and brand community. While the current suspension of most sport seasons has had negative ramifications on the industry as a whole, it simultaneously presents a unique opportunity for teams and leagues to find and create new strategies to effectively engage with individuals and continue to shape their attitudes and beliefs about the brand. Sport organizations have relied heavily upon on-field performance to drive impact for their brand (Wear et al. 2018), so the present situation provides the impetus to ween off this reliance and diversify how fans can associate with the brand moving forward. Findings generated from such an understanding hold implications for both sport practitioners and researchers as they both seek to further understand the unique influences that drive individuals to sport fandom and engagement.

The environment

While sport organizations reorganize and rethink their operations in the wake of the COVID-19 pandemic, there is also an opportunity to overhaul the typical fan experience and back-of-house procedures of the prevailing model of sport industry operations. Particular consideration should be given to the popular idea of 'reopening' competition via closed-door, limited attendance matches. These empty stadiums pose many challenges and opportunities from a business, community relations, and general fan engagement perspective, and while it is critical to consider these impacts, sport organizations should not overlook the many challenges and opportunities they face with respect to their

environmental impacts. Despite the strides that the sport industry continues to make in lessening its burden on the natural environment, there always remain areas where it could continue to improve its environmental performance. In this section, literature on the environmental impact of the sport industry will be reviewed, along with the environmental challenges and opportunities of empty stadiums in a sport industry that must coexist with COVID-19.

Conceptualizing sport ecology

Understanding the relationship between sport and the natural environment is an area of increasing attention in sport management that has recently been termed 'sport ecology' (McCullough, Orr, and Kellison 2019). Over the past few decades, there has been considerable growth in scholarly activity dedicated to exploring this relationship between sport and the natural environment (Mallen 2018). Some of the major topics to have been explored include understanding motivations for sport organizations to adopt environmentally sustainable practices (e.g. Babiak and Trendafilova 2011; Walker et al. 2016), organizational perspectives on environmental sustainability (e.g. Pentifallo and VanWynsberghe 2012; Samuel and Stubbs 2013), consumer engagement in environmental sustainability practices (e.g. Casper, Pfahl, and McCullough 2014; Inoue and Kent 2012), and climate vulnerability of sport organizations (e.g. Dingle and Stewart 2018; Orr and Inoue 2019). However, it is important to first consider the opening statement from McCullough and colleagues (2019) that describes the relationship between sport and the natural environment as bi-directional, which means that sport has an impact on the natural environment while the natural environmental also has an impact on sport. This is an important point to understand as the typical behaviours of all sport industry stakeholders (e.g. athletes, front offices, media, fans, and sponsors) all require some form of environmental resources to operate and create byproducts that may be harmful to the environment. As an example, fans attending games may impact the natural environment through the consumption of water, gas, and paper products while creating byproducts such as emissions and wastes. From here, it has generally been understood that the sport industry ought to work towards decreasing its environmental impact ever since Cachay (1993) first posed the question: can sport continue to negatively impact its environment and still be played in the future?

In order to understand what decreasing the environmental burden of activities may be, some turn to the concept of sustainability: meeting the needs of today without compromising the needs of tomorrow (World Commission on Environment and Development 1987). This notion of sustainability is meant to encourage green adopters to decrease resource consumption, limit byproduct creation, and generally limit their environmental burden such that similar behaviours and practices may continue into the future. And, while this is a helpful definition, it is perhaps too generic for understanding environmental sustainability in sport: an events-based industry. For this, one can turn to Cavagnaro, Postma, and Neese (2012) for their idea that environmental sustainability in events (like sports) is present when the needs of all involved stakeholders are fulfilled at a net positive impact. Given this definition, it is important to see that in order to achieve a sustainable and environmentally responsible event, positive environmental outcomes must be achieved for fans, the local community, sponsors, and all other peoples impacted by the sport organization. These two

definitions collectively inform us that the environmental impact of sport is not limited to the venues of competition themselves, but rather are larger social issues that will impact even those who may not be sport fans and will last well into the future beyond the event itself. Thus, environmental impacts are important to consider as they are a piece of the larger social impact of the resumption of sport in empty stadiums that resulted from the COVID-19 pandemic. But, before proceeding to discuss what the literature would suggest about the potential environmental impacts of empty stadiums, it is important to first consider what those environmental impacts of sport actually are.

There are two major pieces of literature to consider on evaluating the environmental impact of sport events. The first comes from Mallen and colleagues (2010) proposed what is called the Sport Event Environmental Performance Measurement (SE-EPM), and the second comes from McCullough, Orr, and Watanabe (2019) which expands the understanding of the impact of sport on the environment to capture some of the externalities that impact the larger community, sponsors, suppliers, and the media in addition to the decrease in environmental impact that directly relates to team activities. The SE-EPM contains environmental operational performance measures that attempt to conceptualize the environmental impact of a sport event. These measures are broken into two groups of environmental inputs (e.g. oil, gas, electricity, water, raw materials, paper, chemicals, and food) and outputs (e.g. waste, emissions, water drainage, and pollution) (Mallen et al. 2010). Inputs are resources consumed in the production of the sport event while outputs are byproducts created as a result of the operation of the event. Regarding the externalities, one should consider the travel behavious of sponsors, suppliers, the media, and fans in addition to the consumptive behaviours of all of these groups involved in the production of the sport event (McCullough, Orr, and Watanabe 2019). We can utilize these two conceptualizations of the environmental impact of sport events to examine how resource consumption and byproduct creation will change with stadiums largely remaining empty during the COVID-19 outbreak.

Environmental impact of empty stadiums

The pause in competition for many of the major sport leagues and the resumption of events without fans in attendance has possibly given the natural environment a chance to metaphorically breathe for a moment. For all of the daily resource consumption and byproduct creation as a result of sport events and other human activities, simply stopping these patterns of behaviour, even for a moment, is an opportunity for the natural environment to recuperate after human activity has worn down its natural defenses. Examples of this come from many areas outside of the sport world, including the decrease in nitrogen dioxide pollution over China during their COVID-19 quarantine period (NASA 2020) and the clearing of the water in the canals in Venice due to decreased boating traffic which led to the return of jellyfish (Locker 2020). The pause in sport industry activity contributes to this phenomenon as well. However, the resumption of competition without fans in attendance still allows for a decrease in the overall environmental impact of the sport industry, which will be explored in the following section as it relates to climate, the resource consumption and byproduct creation, as well as the opportunity to rethink the norms of operation.

Due to the bi-directional relationship between sport and the natural environment, one can infer that the environment, in the form of climate-related risks like natural disasters,

may occasionally threaten the sport industry's operations. Indeed, Orr (2020) has noted several risks of climate change to sports like baseball (e.g. increased heat, tropical weather, flooding) and cross-country skiing (e.g. shorter winters and rock slope failures). And, while these risks from Orr's (2020) research were projected for well into the future, the sport industry is already experiencing some of these climate-related threats. In 2019, an American football game between Florida State University and Boise State University had to be moved from Jacksonville, Florida to Tallahassee, Florida due to the threat of Hurricane Dorian (Caron 2019). Or, extreme heat causing delays to the start of summer-timed sport events and the necessity of hydration breaks to be scheduled into competition as was observed in a D.C. United match with the Portland Timbers of Major League Soccer (Goff 2016). While such risks are present for the athletes, there are also present for spectators who attend these competitions. The University of South Carolina regularly utilizes a heat management plan for keeping spectators safe from dehydration, heat exhaustion, and heat stroke while watching American football games (Gamecocksonline.com 2018). When it comes to playing matches in front of empty stadiums, there is less of a chance that climate-related risks will impact the event – not necessarily in that matches will not be moved due to storms or heat, but because fewer spectators are present who sport organizations must also accommodate in mitigating these risks. For these sport organizations that are resuming matches in front of empty seats, there is less of a risk of needing to plan for crowd control, safety, and last-minute event changes due to weather or climate risks. And, due to the decrease in crowd and climate-related risks, there is also a decrease in resource consumption and byproduct creation in order to hold these matches.

The concept of Life Cycle Assessment considers the environmental impact of a product from its conception until its ultimate disposal – factoring the various resources consumed and byproducts created during this process (McDonough and Braungart 2002). For matches played in empty stadiums, there is a significant decrease in the assessed impact of the life cycle of the event via decreased resource consumption and byproduct creation. For those leagues that are considering isolation of all stakeholders in a single location (e.g. the National Basketball Association is planning to finish their season with all qualifying teams staying in Orlando) or a reduction in regular-season matches, this will significantly decrease the environment impact of travel by cutting out the regular travel patterns of teams and therefore of fans, sponsors, suppliers, and media as well since they will be limited in attendance at these matches or unable to attend at all. This is significant because travel-related activities (e.g. especially travel via air and automobile) are significant consumers of gasoline, producers of air polluting emissions, and therefore major contributors to the carbon footprint of sport. Per the Intergovernmental Panel on Climate Change (IPCC), transportation accounts for fourteen percent of global greenhouse gas emissions (IPCC 2014). Dolf and Teehan (2015) calculated the carbon footprint of spectator travel to events and found two interesting findings. While air travel accounted for only four percent of spectator travel, it accounted for over half of the total carbon footprint of travel (Dolf and Teehan 2015). So, cutting out team travel in favor of a single location of matches will dramatically reduce the carbon footprint of sport. However, despite the fact that spectators individually have a smaller travel-related carbon footprint than the team, spectators as a whole account for a significant larger share of the carbon footprint of travel than teams (Dolf and Teehan 2015).

So, the elimination of spectator travel to events will be a major reduction to the overall environmental impact of these closed-door matches compared to the norm.

This decrease in travel is significant, but travel alone is not the only altered activity that will lead resource and byproduct reduction to be expected from empty stadiums. We can again consider the SE-EPM model from Mallen and colleagues (2010) and the externalties from McCullough, Orr, and Watanabe (2019) with respect to the environmental inputs and outputs necessary to the production of sport events. With no spectators in attendance, there will be reduced consumption of electricity, water, food, and single-use products that spectators rely upon during their stadium experience. As a result of the reduction of these resources, there will be less waste, water drainage, and emissions normally generated by spectators. Again, the elimination of spectators at events does lead to advantages for the reduction of the environmental impact of sport. However, there are some resources that will need to be consumed and byproducts created regardless of the circumstances. For example, lights will still be needed for visibility on the field, which requires energy consumption and leads to emissions creation. Or, fields of play still need to be maintained which requires water, gasoline for mowers, and chemicals for fertilizers and pesticides while leading to water drainage, emissions created, and sensitive materials disposal. Yet, overall, there will be a significant reduction in the carbon footprint and environmental impact of sport events with no spectators in attendance despite these activities that remain essential to the sport event.

Moving forward, while there will be a reduction in climate-related risks and consumptive behaviour by spectators, perhaps the best opportunity to improve the environmental impact of the sport industry will come from the opportunity sport organizations are given to rethink their normal operations as a result of the disruption from COVID-19. In a period fraught with social distancing and sanitation guidelines, it will be important to rethink spectator travel to events, how concessions are delivered, and issues of ingress and egress of spectators. For example, improving efficiency in spectator egress after events to avoid crowds and traffic jams will decrease some of the travel-related environmental impacts of sport events. Moreover, sport organizations will be attempting to educate their fans on behvaioural expectations for social distancing and hygiene in the hopes that it keeps spectators at their events safe. Casper, Pfahl, and McCullough (2014) have already shown that educational initiatives from sport organizations may impact fan environmental intentions and behvaiours. Thus, while sport organizations are leaning into educational initiatives on COVID-19, they may want to consider educational initiatives on the environmental impact of fan behvaiour and especially those environmental behvaiours that may impact public health. It will be an opportunity for sport organizations to lead by example and potentially alter the future behvaiours of their fans. Those long-term changes in the behvaiours of the fans they impact will lead to much larger impacts on the natural environment – hopefully to the benefit of the environment.

From the whole environmental perspective, there will be many impacts from the resumption of sport events and those events being held behind closed-doors. Risks to spectators of climate-related events will decrease during the closed-door period. The environmental impact of spectator behvaiours will be significantly reduced due to a decrease in the consumption of environmental resources and creation of environmental byproducts – most notably coming from the decrease in spectator travel. And, this will be a prime opportunity

for sport organizations to rethink the environmental impact of their operations and their environmental messaging to fans. Ultimately, we hope that the fight against COVID-19 will be short lived; however, the fight for the natural environment and the preservation of sport will be a long and challenging affair. One must hope that sport organizations will use this unique opportunity and their platform to push for better environmental outcomes.

Conclusions

The impact of the COVID-19 global pandemic is a growing and evolving topic in the sport industry. How sport organizations navigate this new and ever-changing landscape will depend on their understanding of the impact stadium closures have on the individual fan, the organizations themselves, and society at large, specifically the environment. This paper aimed to review those areas and bring together key literature in order to provide an outside the box examination of all the factors at play for sport organizations in the coming months. As we navigate these new challenges in the sport industry, extensive research should be conducted on the impact of COVID-19 from many angles. Future research on the impact of the global pandemic on the sport industry needs to be tackled from a wide variety of perspectives, including but not limited to business, sociology, sustainability, psychology, finance, and economics. This current work focuses on the broad considerations for sport organizations operating with closed stadiums and future research should work to narrow that focus and work to solve specific problems as they arise. Having a general understanding of these problems, as this paper highlighted, will allow practitioners and researchers to identify specific areas to continue to build upon.

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