ABSTRACT

BARRETT, MARTIN. Mechanisms for Change: Intercollegiate Athletics, Sustainability, and Network Governance. (Under the direction of Dr. Kyle S. Bunds and Dr. Jonathan M. Casper).

While intercollegiate athletics represents the high profile ‘front porch’ of university campuses, athletic programs are often, at best, loosely coupled with the goals and values of the university writ large. Therefore, as university departments, athletic programs enjoy a relative sense of autonomy, both financially and strategically, which further complicates the already difficult task of executing core strategy in the decentralized context of higher education. Thanks in large part to the American College and University Presidents’ Climate Commitment, many universities are now embracing sustainability as a core strategic principle, and are working toward a twofold responsibility whereby the university integrates sustainable operations as well as becoming a sustainability change agent. Recently, scholars have illustrated how athletic departments are engaged in collaborative processes to activate operations and facilities projects as well as campaign-based sustainability initiatives. In many ways, the pro-environmental efforts of athletic departments are part of the greening movement rippling through the sport industry more generally. However, athletic departments are leveraging the unique resources of the higher education system through the formation of cross-functional green teams or committees, which are an increasingly popular mechanism by which athletic programs engage in such collaborative processes.

This dissertation contributes to the current body of knowledge through further consideration of network governance, and its role in focusing the attention of athletic departments toward sustainability through reaffirming shared values, and facilitating collective learning. This was achieved by using a three-article format dissertation. First, a conceptual paper establishes the business sustainability journey within intercollegiate athletics, and
identifies distinct shifts in business logic active in guiding the field as a whole. The paper links extant work on business sustainability with the metatheoretical framework of institutional logics to consider how societal- and field-level logics are enabling and constraining the integration of sustainability across intercollegiate athletics. The emergent propositions discuss how business logics consistent with the fields of higher education and sport entertainment are simultaneously enabling athletic departments to recognize sustainability as value creation, and constraining such programs to an inside-out organizational perspective. Second, semi-structured interviews with sustainability office personnel were conducted to establish the role of formal, shared sustainability in forcing the attention of athletic departments toward sustainability through the affirmation of shared values. The results support the influence of shared sustainability governance, but only as a mechanism when used in concert with other, multidimensional change levers. Third, an organizational network analysis was used to develop an understanding of the role of quasi-formal network governance on promoting learning processes through information transmission and deliberation. The results of this final paper emphasize the importance of managing collaborative networks, and how, specifically, network governance provides a forum for deliberation and idea exchange.
Mechanisms for Change: Intercollegiate Athletics, Sustainability, and Network Governance

by
Martin Barrett

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APPROVED BY:

Kyle S. Bunds
Co-Chair of Advisory Committee

Jonathan M. Casper
Co-Chair of Advisory Committee

Michael B. Edwards

D. Scott Showalter

Gareth J. Jones
DEDICATION

This dissertation is dedicated to my Dad, Keith, who always saw the best in people and left such an immense impact on each and every person he came across.
BIOGRAPHY

Martin earned a bachelor’s degree in Sport Administration and a minor in Print Journalism from Edinboro University (Pa.) in 2004, and a master’s degree in the Sociology of Sport and Exercise at the University of Chester (England) in 2016. He worked as practitioner in sport and physical activity development in the United Kingdom between 2005 and 2016. During this time, he developed an interest in the power of sport to deliver positive social change, specifically in relation to societal outcomes such as education, employability, public health, and physical literacy. As Martin’s career progressed, he also became interested in how sport and non-sport organizations operationalize this power through strategic planning and coordination. This question inspired Martin to pursue a Doctor of Philosophy (Ph.D.) degree in the Department of Parks, Recreation and Tourism Management (PRTM) at North Carolina State University. At North Carolina State University, Martin studied the integration of environmental concern into the business practices of sport organizations, and developed a more comprehensive understanding of the organizational and institutional determinants of corporate social responsibility and sustainability. He graduated in July 2019 with a Ph.D. from PRTM, and graduate certificate in Marketing from the Poole College of Management. In the fall of 2019, Martin will begin his academic career as an assistant professor in sport management at Frostburg State University (Md.) in the Department of Kinesiology and Recreation.
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To my wife, Claire, you inspire me each and every day not only with your relentless work ethic, but also your unwavering support for me, and, more importantly, (the four of) us. You have given up so much to allow me to pursue this dream. And through all the hardship, we finally made it! “It’s all character building,’ you said. Well I think we have enough character to release our own Disney/Pixar movie. But scattered among the stress, anxiety, and exhaustion of the past three years were glimpses of fun, joy, and happiness, and you were at the very center of each and every one of those moments. Here’s to the next chapter. I love you! To my son, Mason, and daughter, Tabitha, it will be a long time until you truly understand what these three years at ‘NC Steak’ have all been about. You have grown up so much in the short time since we first arrived in the U.S., and I am proud of the kind, fun-loving, and affectionate little people you have become. But I must also thank you both for being my beacon of hope. You have kept me motivated when the odds were stacked against me.

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Finally, thank you to all those who contributed to my dissertation, either as research participants or critical friends. I sometimes find it hard to explain to people that my dissertation focuses on environmental sustainability, but that I don’t necessarily consider myself an environmentalist. But all of you who strive to use the platform of sport to conserve and preserve the natural environment are an inspiration. Keep doing what you do, and if my research can contribute in even just a small way I feel privileged to have aided your undying enthusiasm and commitment to the cause.
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A Brief History of Sustainability in Intercollegiate Athletics

Significant strides have been made in the integration of environmental concerns into intercollegiate athletics, which mirrors the evolution, and growing recognition, of the place of the natural environment more generally within the world of sport (McCullough, Pfahl, & Nguyen, 2016). Trendafilova, Pfahl, and Casper (2014) trace the roots of sustainability in intercollegiate athletics back to 1993, and the launch of the University of Tennessee’s ‘Good Sports Always Recycle’ program. By 2009, two thirds of athletic departments were placing a moderate or extensive emphasis on event and office recycling (Casper, Pfahl, & McSherry, 2012). Therefore, recycling is often the first step taken on environmental change pathways by athletic departments (Trendafilova et al.), and represents the lowest-hanging green fruit (Sanderson & Shaikh, 2017). Early recycling efforts also included proactive efforts to change the sustainable behaviors of fans. For example, a key element of the University of Florida’s ‘TailGator Green Team’ recycling program was the interface with fans from student and staff volunteers (Johnston & Newport, 2012). Accordingly, by 2009, almost half of athletic departments had involved students in similar green program initiatives at moderate or high levels, and a similar proportion had also implemented proactive recycling collections at events (Casper et al.).

In terms of reducing energy use, most early efforts took a distinct focus on efficient lighting. In 2009, moderate or extensive use of compact fluorescents (75.5 percent), occupancy sensors (72.6 percent), LEDs (67.1 percent), and daylight sensors (67.1 percent) were prevalent across intercollegiate athletics (Casper et al., 2012). Beyond lighting schemes, athletic departments also became active in energy conservation. As an example, the University of Colorado Boulder between 2002 and 2007 implemented an energy conservation program to cut
energy consumption by 30 percent per square foot (NRDC, 2013). Universities also began promoting their sustainable endeavors more broadly with fans. A men’s basketball game at the University of Kansas was used to highlight the environmental initiatives of the university in an effort to raise awareness about environmental issues (Pfahl & Ott, 2010). Thus, the field witnessed the emergence of green games, which offer athletic departments the opportunity to educate related stakeholders, especially students, about environmental issues and efforts to address them in a unique manner (Casper, Pfahl, & McCullough, 2014). And while green games typically vary in content and conduct of messaging (Casper et al.), and are often a temporary, one-off form of programming (McCullough & Kellison, 2016), the events themselves and the associated messages are empirically proven to encourage pro-environmental game day behaviors (Casper et al.), and at-home behaviors (Casper, McCullough, & Pfahl, 2019).

In 2013, the Natural Resources Defense Council (NRDC) published the Collegiate Game Changers report in 2013, and identified the most prevalent sustainability initiatives including recycling programs, energy-efficient practices, environmentally preferable purchasing, and onsite solar energy production systems (NRDC, 2013). Additionally, the report evidences a move by athletic departments toward a more holistic waste management approach (e.g., zero waste), rather than strictly recycling. Zero waste efforts require the aggregation of multiple material practices, including the mix of recycling and composting, bin guards and signage, simplification of the supply chain, and outreach and public awareness (Hottle, Bilec, Brown, & Landis, 2015; Costella, McGarvey, & Birisci, 2017). In the context of sport stadia, zero waste refers to diverting 90 percent or more of disposed materials (NRDC). The 90 percent benchmark recognizes the inevitable presence of uncontrollable wastes, which might appear from visiting teams, shipments, and fan-generated rogue materials (Johnston & Newport, 2012). The United
The Environmental Protection Agency’s Game Day Challenge embraces this more holistic waste management approach. For example, in 2012, the Game Day Recycling Challenge winner was Ohio State University with a top single-game diversion rate of 98.2 percent (NRDC).

The Collegiate Game Changers report also highlights efforts made by athletic departments to conserve water, with low-flow water fixtures, low-flow or waterless urinals, and water supply and demand audits identified as three prominent practices (NRDC, 2013). The University of Washington’s renovation of Husky Stadium in 2013 integrated low-flow plumbing fixtures, dual-flush toilets and native landscaping to reduce water use of the facility by 40 percent (HOK, n.d.). The stadium also received Salmon Safe certification through the Pacific Rivers Council in recognition of how the renovation project used two large retention ponds to filter all waste water before entering Lake Washington (HOK). In addition, green buildings also emerged during this period as a prominent area of interest for athletic departments. Perhaps the most salient example of green building standards is that of the United States Green Building Council’s (USGBC) Leadership in Energy and Environmental Design (LEED) program. The proceeding groundswell of green athletic facilities began in 2009 when the University of Minnesota’s TCF Bank Stadium became the first intercollegiate athletics football facility to achieve LEED certification (Buente, 2015). Then, in 2011, the University of North Texas’ Apogee Stadium became the first football facility to earn LEED Platinum certification, the highest level of certification (Buente). More recently, in 2017, the University of Colorado Boulder achieved LEED Platinum certification for three athletics facilities (University of Colorado Boulder, 2017), and, in 2018, the Los Angeles chapter of the USGBC made an award to UCLA recognition of the Wasserman Football Center and Mo Ostin Basketball Center obtaining LEED Platinum certification (Perillo, 2018).
Student-athletes are also part of the intercollegiate athletics sustainability journey. The 
*Collegiate Game Changers* report discloses a select number of student-athlete sustainability 
efforts, including a Green Athletics Team Certification at Yale University, and a student-athlete 
Eco-Reps project at the University of Pennsylvania (NRDC, 2013). More recently, in 2016, 100 
student-athletes, including the entire football team, from the University of North Carolina at 
Chapel Hill assisted in a community service activity with the local Habitat for Humanity project 
(Habitat for Humanity, n.d.). Moreover, in 2018, and in honor of Arbor Day, the University of 
Louisville’s women’s soccer team assisted in the planting and donation of trees near Lynn 
Stadium (Ray, 2018).

Intercollegiate athletics continues to unearth new ground behind a number of pioneering 
universities and athletic programs. Perhaps none more so than the University of Colorado 
Boulder who, in May 2019, signed the United Nations Sports for Climate Action Framework, 
and, in doing so, became the first athletic department in the United States to join these efforts 
(University of Colorado Boulder, 2019). In addition, universities are increasingly being 
recognized by pro-sustainability organizations such as the Green Sports Alliance (GSA). For 
example, in June 2019, the GSA awarded North Carolina State University and the University of 
North Texas the Environmental Innovators of the Year award for their respective zero waste 
programs (Martin, 2019).

**Barriers to Sustainability Integration in Intercollegiate Athletics**

Sustainability decision-making within athletic departments is highly differentiated 
between institutions. At the Division III level, sustainability decision-making is a function of the 
Athletic Director (Casper & Pfahl, 2015), whereas, at the Division I level, decision-making 
occurs, predominantly, through Associate Athletic Directors (Casper et al., 2012). Further still,
the lack of university mandates for sustainability integration means that an athletic department’s commitment to sustainability is often dependent on whether the decision-maker’s level of commitment (Pfahl, Casper, Trendafilova, McCullough & Nguyen, 2015). Additionally, Casper et al. suggest a significant disconnect exists between the athletic departments and university administration in relation to environmental issues. To this end, Pfahl et al. suggest this disconnect may arise a result of differences in culture where the athletic department are not necessarily held to the same sustainable expectations as the campus writ large.

For many sport managers addressing sustainability issues is neither part of their job description nor area of personal expertise (Pfahl et al., 2015), which means “attempts to address organizationally-related environmental strategies have the potential to fall short of goals and/or expectations” (Pfahl, 2010, p. 39). Accordingly, Casper et al. (2012) suggest “athletics department personnel might be aware or want to prioritize environmental efforts, but actual implementation is inconsistent due to a lack of knowledge about what to actually do to become more environmentally sustainable” (p. 20).

Cost has also likely proven a barrier to sustainability integration within intercollegiate athletics. Budget pressures make justifying up-front sustainability investments problematic, which, in turn, plays into an overly cautious approach to sustainability by athletic department personnel (Jin, Mao, Zhang, & Walker, 2011; Pfahl et al., 2015; Pfahl & Ott, 2010). Even win-win sustainability opportunities (i.e., cost reduction and brand enhancement) “require a commitment of resources, which might be difficult for athletics department personnel to find (Casper et al., 2012, p. 21). Yet, cost as a barrier is interwoven within how decision-makers perceive the return on investment of sustainability integration. For example, in 2009, when athletic department staff were asked about their views concerning initiatives and the bottom line,
33 percent felt environmental initiatives were negative to the bottom line, while 27 percent thought there would be no effect, with only four percent feeling they would improve the bottom line. (Casper et al.).

Navigating the Loosely Coupled Context of Higher Education

While some researchers suggest how intercollegiate athletics works toward different goals than the university (Johnston & Newport, 2012) within a different financial model (Duderstadt, 2009), athletics and academia do co-exist, albeit as ‘strange bedfellows,’ on university campuses (Clotfelter, 2011). Yet, universities in the United States are subject to an ever-changing landscape. For example, higher education faces a number of common challenges and problems, such as reduced funding, low capacity of universities to accommodate the increasing number of students, access and equity, academic freedom, privatization, increased accountability, globalization and internationalized networking, and diversification (Vidovich & Currie, 2011). In response, universities in developed countries enjoy considerable freedom to determine their own policies and priorities in a wide range of their activities (OECD, 2003). As a result, executing core strategy in universities is a complex matter, as different constituents demand different services and create competing priorities (Krizek, Newport, White, & Townsend, 2011). Specifically, Krizek and colleagues liken universities to “multi-headed monsters, each with unique recipes for success” (p. 28). Universities, therefore, are complex systems, and include a large number of elements with many interactions between those elements (Flood & Jackson, 1991).

General systems theory emphasizes that systems are organized, composed of interdependent components, and in some form of relationship (Kast & Rosenzweig, 1972). Furthermore, the elements of a system can be concepts, such as a language; objects, such as a
machine; and/or subjects, such as a group of people (van Gigch, 1978). Kast and Rosenzweig claim the utilization of the systems approach gained traction with organization and management scholars in the 1960s, and credit Scott (1961) for capturing this movement, which is based on the premise that the only way to study organization is to study it as a system and look at it as an integrated whole. On the other hand, Skyttner (2001) claims the roots of the systems approach, where organizations are considered as open systems, is a product of contingency theory and the dominant management school of thought during the 1970s. Nevertheless, the emergence of a systems theory of organizations stems from the limitations of the mechanistic view of man, which posits humans as predictable, reliable and efficient cogs in the industrial machinery (Skyttner). As is the case for universities, in reality, organizations are rarely rational, tidy, or efficient structures (Weick, 1976), which calls for a theoretical lens that captures the unique nature of organizations as complex, heterogeneous systems.

Ultimately, “complex problems involve richly interconnected sets of ‘parts’ and the relationships between the parts can be more important than the nature of the parts themselves” (Jackson, 2007, p. 1). Furthermore, any location in an organization contains interdependent elements that vary in the number and strength of their interdependencies (Orton & Weick, 1990). Moreover, these interdependent elements represent shared variables, which influence the degree of interaction, or coupling, between specific locations within an organization or broader systems (Glassman, 1973). In other words, coupling refers to “the degree to which events within one part of a system are felt by other parts of that system” (Bossert, Dwyer, Rowan, & Lee, 1982, p. 245). Orton and Weick suggest organizations can be tightly coupled (i.e., where they demonstrate responsiveness without distinctiveness), decoupled (i.e., where they demonstrate distinctiveness without responsiveness), or loosely coupled (i.e., where they demonstrate distinctiveness and
responsiveness simultaneously). To this end, Weick (1976) presents educational organizations as loosely coupled exemplars.

Therefore, the greening movement rippling through intercollegiate athletics, in many ways, defies the complexities of relationship management and strategic environmental planning that exist on university campuses (Casper et al., 012). In fact, Casper et al. found a majority (72 percent) of Division I programs felt that his or her university was highly or very highly prioritizing sustainability initiatives, which Casper and Pfahl (2015) reified at the Division III level (63 percent). A number of external factors are potentially influencing the prioritization of sustainability within the greening movement in intercollegiate athletics. Namely, the pervasiveness of athletics sustainability is indicative of the high public profile and deep seeded interest in intercollegiate sport (Casper et al., 2014). In addition, advances in athletics sustainability is a by-product of the corporatized status of the NCAA and its member institutions who are imitating the normative, socially responsible behavior of businesses in other corporate settings (Trendafilova et al., 2014). Advances in green building designs and high efficiency appliances means environmental efforts also present opportunities for revenue generation through cost reduction and efficiencies (Pfahl & Ott, 2010), which creates an economic motive and business case for progressing such endeavors. Still, these external factors do not account for what is happening internal to the organization, and, more specifically the ways in which athletic departments are operationalizing these expectations and opportunities.

**How Might Governance Be the Answer?**

According to Shattock (2002), institutions “work best when governance is seen as a partnership between the corporate and the collegial approaches, and where a sense of common purpose informs the balance of the relationship” (p. 243). The barriers that intercollegiate
athletics face in integrating sustainability and the decentralized nature of higher education necessitate athletic departments to collaborate with other university departments and constituents, as well as external stakeholders and agencies who share sustainability as a common purpose. Often, and without a direct mandate from a higher administrative power, collaborative relationships develop through outreach from sustainability office personnel to the athletic department (Pfahl et al., 2015). Such collaborative efforts are particularly effective in developing sustainability initiatives focusing on public external events (e.g., tailgate and facility/stadium recycling) (Pfahl et al.).

Athletic department involvement in ‘green teams’ represent an extension of the collaborative efforts between sustainability office and athletic department personnel by providing a forum to focus exclusively on athletics-related issues. Specifically, Pfahl’s (2010) framework for action and sustainable environmental performance in sport and recreation organizations suggests the charge of green teams, or internal sustainability teams, is to develop and conduct operational changes, organizational policies, and daily/strategic practices. However, the scope and remit of these groups show considerable variation. For example, of the two institutions involved in environmental committees in the Pfahl and colleagues (2015) study, one is involved in a working group that “makes recommendations that are then filtered up to the athletics administration” (p. 40) and the other a higher-level council consisting 20 to 25 campus units. Such variation is likely pervasive across the higher education sector. Casper et al. (2012) found 41 percent of Division I institutions to have athletic department representation on campus-wide sustainability teams, while Casper and Pfahl (2015) found 28 percent of Division III institutions with similar involvement.
Provan and Kenis (2008) describe three forms of network governance: participant-governed networks, lead organization-governed networks, and the Network Administrative Organization. Participant-governed networks is the simplest and most common form of participant governance whereby the network members themselves provide governance. Furthermore, participant-governed networks exist on a formal-informal continuum. At the informal end, governance is accomplished through the ongoing, uncoordinated efforts of network members, which is consistent with athletic departments collaborating with other university departments, campus constituents, and external agencies on a project-by-project basis. Provan and Kenis also suggest that at the more formal end, governance is accomplished through regular meetings of designated organizational representatives, which draws similarities with the establishment and implementation of athletics green teams. In fact, green teams are focusing efforts and promoting shared sustainability values via unit-based shared governance, which is a system of participatory decision-making specifically tailored to an individual unit (O’May & Buchan, 1999).

McCullough, Kellison, and Wendling (2018) suggest the formation of green teams links athletic departments to broad sustainability goals of the university, and provides a medium through which university and athletic department personnel can work collaboratively toward mutual goals. In essence, green teams are active in blurring the boundaries between different departments and their assumed, primary functions. Accordingly, formal methods of participant governance, like green teams, offer a mechanism to compensate for the loosely coupled context of universities. According to Head (2008), network-governance approaches assume the presence of governance in networks is central to network learning and, in turn, quality of network
outcomes. Yet, an opportunity exists to better understand the role of governance as a mechanism for sustainable change within intercollegiate athletics.

**Dissertation Focus**

The purpose of this dissertation is twofold. First, this dissertation establishes the unique institutionalized context of intercollegiate athletics sustainability, and, in doing so, advocates for a more specialized, athletics-specific literature on sustainability, rather than sport sustainability more generally. Second, this dissertation further establishes the effectiveness of network governance as a change mechanism, which compensates for the unique institutional context of intercollegiate athletics and the decentralized structures of higher education. This twofold purpose is accomplished through an article-style dissertation whereby three papers independently and collectively contribute to the current body of knowledge regarding intercollegiate athletics sustainability.

The first paper builds a conceptual framework that understands the business sustainability journey within intercollegiate athletics, and identifies distinct shifts in business logic active in guiding the field as a whole. The paper links extant work on business sustainability with the metatheoretical framework of institutional logics, and, more specifically, Thornton, Ocasio, and Lounsbury’s (2012) symbolic representations of field-level logics. In addition, the first paper rationalizes the current location of the field within this journey by considering how societal- and field-level logics are enabling and constraining the integration of sustainability across intercollegiate athletics. This conceptual paper draws extensively from published academic articles and practitioner reports, which grounds the paper’s propositions in the actions of athletic programs and the practitioners implementing such action.
The second paper studies experiences of athletic department involvement in formal shared governance systems where the charge is to create and establish campus-wide policies, objectives, and targets as well as provide the main decision-making function for sustainability on university campuses (Velazquez, Munguia, Platt, & Taddei, 2006). The paper establishes the role of shared governance involvement in forcing the attention of athletic departments toward sustainability. Semi-structured interviews with university representatives with coordinating responsibility for shared sustainability governance yield exclusively qualitative data, analyzed through a multi-step coding process. The two primary research questions for the third paper are:

**RQ2.1:** How are universities forcing the attention of athletic departments toward sustainability through engagement in shared sustainability governance?

**RQ2.2:** How is athletic department engagement in shared sustainability governance compensating for loosely coupling with the university writ large?

The third paper continues the focus on network governance, but studies an athletics sustainability collaborative network that includes quasi-formal governance through an athletics sustainability team (or green team), and, therefore, a unit-based governance model. The paper establishes the influence of the athletics sustainability team as a compensatory coupling mechanism where the intention is to foster learning throughout the network. This second paper employs a social-relational approach through network analysis methods, and yields both whole and node-level network measures. The overarching research question for the third paper is:

**RQ 3.1:** To what extent does an athletics sustainability network governance team facilitate collective learning across an athletics sustainability collaborative network?

Provan and Kenis (2008) argue “most research on organizational networks can be broadly characterized by two basic approaches: the ‘network analytical’ approach and the ‘network as a
form of governance’ approach” (p. 232). And while the second paper follows the network as a form of governance approach, and the third paper follows the network analytical approach, together they avoid the pitfalls and limitations of both approaches and tell a more compelling and contextual story. Moreover, consideration of the aggregate insight from the second and third papers is discussed within the dissertation’s concluding chapter.
References


CHAPTER 2: SUSTAINABILITY AND THE INSTITUTIONALIZED CONTEXT OF INTERCOLLEGIATE ATHLETICS

This paper is under review in Journal of Issues in Intercollegiate Athletics:


Abstract

Despite the growing recognition of the interdependence between sport and the environment, a deep commitment to sustainability across the field of intercollegiate athletics remains evasive. The purpose of this paper is to articulate a conceptual model of how intercollegiate athletics engages in sustainability practices, and also speculate as to why athletic departments approach sustainability in such ways. To do so, the paper draws from the metatheoretical framework of institutional logics and conceptually from the notion of business sustainability. Accordingly, the paper suggests that the intercollegiate athletics sustainability journey involves two shifts in business logic, which involves, first, the field recognizing sustainability as value creation, and, second, the field progressing to an outside-in organizational perspective. A contextualization of published literature and reports suggests intercollegiate athletics has made the initial shift, but not the latter. Moreover, the paper argues that both higher-order societal logics, from the state and market, converge with and through the external logics of the higher education system and sport industry to moderate the business sustainability journey of athletic departments. The paper identifies linkages between intercollegiate athletics sustainability and other salient institutional logics as well as important implications arising from them.

Keywords: athletics, sustainability, institutional logics, journey, assimilation
Introduction

Sport is not immune to the responsibility of protecting the environment (Mallen, Stevens, & Adams, 2011), rather “sport is a part of life and life is inclusive of the environment, not separate from it” (Pfahl, 2013). Taking environmental action through sport is an important step towards realizing this responsibility and improving the impact of sport on the environment (Casper & Pfahl, 2015). As a result, a sport-specific environmental sustainability movement, known anecdotally as ‘greening the playing fields’ (MacMillan, 2016), is rippling through all facets of the sport industry. These environmental efforts embody a twofold responsibility: addressing the impact of team operations and changing the sustainable behaviors of fans (McCullough & Kellison, 2016; Schmidt, 2006). Previous empirical work evidences the pervasiveness of environmental efforts within professional sport (Blankenbuehler & Kunz, 2014; Chard & Mallen, 2013; Ciletti, Lanasa, Ramos, Luchs, & Lou, 2010; Francis, Norris, & Brinkmann, 2017; Mallen, Chard, & Sime, 2013; Trendafilova, Babiak, & Heinze, 2013), the golf industry (Millington & Wilson, 2016; Minoli & Smith, 2011; Wheeler & Nauright, 2006), and the Olympic Games (Hayes & Karamichas, 2012; Karamichas, 2013; Miller, 2017; Mol, 2010; Ross & Leopkay, 2017). McCullough, Pfahl, and Nguyen (2016) claim sport organizations move through waves of increasingly sophisticated and purposeful environmental efforts, and Casper and Pfahl suggest that “the inclusion of environmental issues into all aspects of organizational operations will eventually become routine and part of the fabric of sport business” (p. 11).

Big-time college athletics represents a major player in the world of sports, particularly within the context of the United States (Sanderson & Shaikh, 2017). Research suggests intercollegiate athletics is also part of the sport greening movement. In fact, the Natural
Resource Defense Council’s (NRDC) *Collegiate Game Changers* report claims intercollegiate athletics makes a highly visible commitment to greener practices (NRDC, 2013). At the highest level of intercollegiate athletics competition, this green commitment includes office and stadium recycling initiatives, lighting schemes, use of green cleaning supplies, environmentally preferable purchasing practices, and the installation of low-flow bathroom appliances (Casper, Pfahl, & McSherry, 2012), as well as the provision and promotion of alternative transportation, energy audits and management systems, and green building certification (NRDC). These material practices exist in a resource environment where intercollegiate athletics and academia co-exist as ‘strange bedfellows’ within the higher education system (Clotfelter, 2011). However, Casper et al. suggest a significant disconnect exists between the athletic departments and university administration in relation to environmental issues. Rather, Trendafilova, Pfahl, and Casper (2013) suggest the corporatized status of the National Collegiate Athletic Association (NCAA) and its member institutions are imitating the normative, socially responsible behavior of businesses in other corporate settings.

Businesses are increasingly recognizing the opportunity to create sustainable value, which is when a company creates value that is positive for its shareholders and its stakeholders (Laszlo, 2008). However, embedding the principles of sustainability throughout an organization is no quick fix (Ehrenfeld, 2004). As such, businesses often undertake incremental change processes in the pursuit of sustainable value. An institutional logics perspective, as a metatheoretical framework within institutional theory, analyzes the interrelationships among institutions, individuals, and organizations in social systems (Thornton, Ocasio, & Lounsbury, 2012, p. 2). Within field-level institutional logics, the collective behavior of groups of related organizations exhibit agency and structure through an interplay between higher-order societal
logics (i.e., of the market and state) and external logics (i.e., of other related fields) (Thornton et al.). If, as Trendafilova and colleagues (2013) suggest, athletic departments are imitating the socially responsible behavior of businesses in other corporate settings, we should see a critical mass of athletics programs integrating sustainability as core practice. However, intercollegiate athletics faces a number of barriers to sustainability implementation including differentiated decision making (Casper et al., 2012; Casper & Pfahl, 2015; Pfahl, Casper, Trendafilova, McCullough, & Nguyen, 2015), lack of knowledge (Casper et al., 2012), and cost (Jin, Mao, Zhang, & Walker, 2011; Pfahl et al., 2015; Pfahl & Ott, 2010). There is a need to better understand these barriers, and how business sustainability permeates the complex institutional context of elite-level intercollegiate athletics. Most notably, there is an opportunity to conceptualize how the sustainability logic within intercollegiate athletics is enabled and constrained in its imitation of sustainability practices in other corporate settings through the interplay of societal and external logics.

In focusing on these opportunities, the study includes two steps. First, a conceptualization of the emergent shifts in business logic relating to the intercollegiate athletics sustainability journey is proposed. Second, the location of intercollegiate athletics as a field within this journey is discussed in relation to the interplay between societal and external logics, which are supported by six propositions. The result is a more comprehensive understanding of the nested, cross-level factors influencing the integration of environmental concern into intercollegiate athletics. Finally, the paper concludes with a particular focus on future research implications.
Conceptual Framework

Business Sustainability

In neoclassical economics, which is the dominant paradigm in the world’s markets, the “primary goal of organizations is to maximize shareholder value” (Stubbs & Cocklin, 2008, p. 105). However, capitalism underwent a re-definition in the 1990s as an agent capable of meeting the world’s needs, and, in turn, “sustainability suddenly emerged as something that was compatible with profits and something that could enhance value” (Bergquist, 2017, p. 20).

Moreover, Laszlo and Zhexembayeva (2011) identify three contemporary business trends that are collectively redefining competitive advantage: declining resources, radical transparency, and increasing expectations. The authors suggest that together these trends are becoming a “major market force that is redefining the way companies compete” (p. 6), which purposefully moves markets beyond the shareholder view of value creation. As a result, sustainability is now a key consideration within business strategy with over 90 percent of CEOs stating sustainability is important to their company’s success (Hoffman, 2018).

In turn, businesses are recognizing the opportunity sustainability presents to create sustainable value, which is when a company creates value that is positive for its shareholders and its stakeholders (Laszlo, 2008). To symbolize this win-win scenario, Laszlo and Zhexembayeva (2011) describe how companies develop their product packaging in a way that harnesses the environment (i.e., recyclable, reusable, biodegradable, etc.), while simultaneously meeting the needs of customers (i.e., right-sizing their products) and reducing costs (i.e., saving energy and materials in the production process). Furthermore, the authors suggest that the optimal business model is to “provide environmental and social benefits without requiring customers to pay more or accept worse quality in return” (p. 45). Porter and Kramer (2011) refer to creating shared
value as a response to the dominant, outdated approach by business to create value, which focuses on short-term financial performance. Moreover, the authors suggest companies can create value by reconceiving products and markets, redefining productivity in the value chain, and enabling local cluster development (i.e., the success of geographic concentrations of firms).

However, to create sustainable value or shared value, businesses need to develop their approach in practice. Multiple ways to conceptualize the business sustainability journey exist. For example, Dyllick and Muff (2016) apply a simple input-process-output model to help differentiate between beginning, intermediate, and advanced levels of business sustainability. In Dyllick and Muff’s model it is not until businesses reach the advanced stage (what the authors refer to as Business Sustainability 3.0) that they are practicing true sustainability, which is where businesses approach their purpose by first considering the sustainability needs of society. Specifically, the outside-in perspective focuses on knowledge and resources that reside outside the firm (Saeed, Yousafza, Paladino, & De Luca, 2015). Alternatively, Porter and Kramer (2011) suggest, “the purpose of the corporation must be redefined as creating shared value, not just profit per se” (p. 4), which represents an advance in business sustainability beyond corporate social responsibility, and notions of philanthropy and citizenship.

McCullough, Pfahl, and Nguyen (2015) consider the interplay between the environment and sport, and conceptualize the sustainability journey of sport organizations as representative of three waves or states where progress and regress is possible. In the first wave, the authors claim sport personnel begin to take action through often reactionary activities with little or no overall connectivity to broader strategic planning processes. The second wave is characteristic of significant growth as developments in knowledge in known areas and awareness in new and different areas facilitate the implementation and measurement of more advanced activities.
Finally, in wave three, “strategic planning for environmental issues becomes more integrated with broader strategic planning” (p. 15).

In many ways, wave three of McCullough and colleagues’ (2015) conceptual framework bares similarities with Dyllick and Muff’s (2016) Business Sustainability 3.0 and Porter and Kramer’s (2011) concept of creating shared value. In other words, these more advanced stages of the sustainability journey represent the optimal and aspirational approach. Laszlo and Zhexembayeva (2011) offer another conceptualization by suggesting that in order to generate sustainable value, sustainability must become embedded, which is where a company transforms its core business activities and makes sustainability everyone’s job, rather than merely adapting existing practices and implementing sustainability as a ‘bolt-on.’ More specifically, the authors put forward six value creation strategies: reducing energy, waste, materials; differentiating products; entering new markets; protecting and enhancing brand, influencing industry standards; and radical innovation.

**Reducing Energy, Waste, Materials.** At the heart of the reducing energy, waste and materials as a strategic response is the notion that environmental and social harm is a sign of inefficiencies, and companies can alleviate this by cutting the quantity and intensity of energy, waste and materials (Laszlo & Zhexembayeva, 2011). Therefore, and particularly within the environmental realm, not only can sustainability reduce harm as its underlying purpose, which is consistent with the Green Paradigm (Rao & Hol, 2005; Zhu, Sarkis, & Lai, 2008); but companies can utilize sustainability to maximize profits through cost reduction, which is representative of the Lean Paradigm (Carvalho, Duarte, & Cruz Machado, 2011). Dües, Tan, and Lim (2013) would argue that the two paradigms are not mutually exclusive, and rather lean implementation facilitates green implementation. As a result, there exists significant overlap between the Lean and Green
Paradigms in that business practices motivated by economic value are likely to generate environmental value (e.g., retro-fitting buildings with efficient lighting reduces costs over the long-term while simultaneously reducing demand on energy sources). The moral, Laszlo and Zhexembayeva argue, is sustainability is an eco-efficiency engine.

**Differentiating Products.** Laszlo and Zhexembayeva (2011) suggest environmental and social attributes are a way to differentiate products and services. As a result, environmental and social attributes become market-oriented points of difference. Moreover, the authors suggest companies can consider sustainability as an additional factor within the performance mix, which affords them the opportunity to use sustainability as a positioning tool. These assumptions are predicated on the idea that consumers care, and, in the United States, Matten and Moon (2008) claim there to be a strong ethic of stewardship and ‘giving back’ to society. For example, 76 percent of consumers would refuse to purchase a company’s product or services upon learning that it supported an issue contrary to their beliefs (Cone Communications, 2017). Additionally, Laszlo and Zhexembayeva claim consumers must be willing to pay for the not-so-hidden attributes of sustainability, and consumers in the United States appear willing to pay more for environment-friendly products (GfK, 2017). As such, sustainability represents an opportune product differentiator within competitive markets.

**Entering New Markets.** Demands for sustainability solutions creates opportunities for companies to move into new markets whether that be for proactive or end-of-pipe products and services (Laszlo & Zhexembayeva, 2011). Laszlo and Zhexembayeva suggest companies enter new markets by either adapting existing know-how to new needs or through radical innovation. The conscious consumer market is worth $300 billion and constitutes more than 40 percent of United States consumers (Cohen & Munez, 2017). More specifically, Cohen and Munez claim
the lifestyles of health and sustainability segment is an emerging $10 billion market that seeks ethical, fair trade, and sustainably sourced footwear, apparel, equipment, accessories, and related services. Another substantial global market ripe for sustainability solutions centers on meeting the needs of the world’s poorest population, the base of the pyramid (Prahalad, 2005), which in 2008 was an estimated $5 trillion market (World Resources Institute, 2008). Yet, Haanaes and colleagues (2011) argue that smaller businesses who concentrate their resources on sustainability-driven strategies, due to their speed and flexibility, are among those most likely to benefit through sustainability-enabled access to new markets.

**Protecting and Enhancing Brand.** Laszlo and Zhexembayeva (2011) claim company brand name and corporate image in a multitude of sectors are increasingly based on perceived environmental and social performance. Effectively using sustainability strategically to protect and enhance brand can help the company to increase market value by drawing in talent, securing loyal customers, becoming a preferred supplier, and attracting investment (Laszlo, 2008). Laszlo and Zhexembayeva cite the work of Hand and Lev (2003) who claim a century ago tangible assets accounted for 70 percent of a company’s stock price, while nowadays intangible assets, like corporate image, account for over 70 percent of the value. Alternatively, companies can also lose significant market value by decoupling sustainability statements from practices, which generally is referred to as ‘CSR-washing’ (Pope & Wæraas, 2016), and specifically within the environmental realm as ‘green-washing’ (Laufer, 2003).

**Influencing Industry Standards.** Companies can also create sustainable value if they leverage their commitment to sustainability to try to shape government regulations or industry standards (Laszlo & Zhexembayeva, 2011). Given that governments supply much of the infrastructure and institutional framework that enable resource possession, transformation, and exchange (Pearce,
Dibble, & Klein, 2009), legislation and policy are likely key determinants of a corporation’s willingness to implement sustainable business practices. The political system in the United States provides greater scope for corporate discretion when compared with counterpart systems in Europe (Matten & Moon, 2008). Within the context of environmental policy, the discourse in the United States is characteristic of “an old-fashioned stand off between economy and environment” (Dryzek, Hunold, Schlosberg, Downes, & Hernes, 2002, p. 667) whereby environmental regulation is perceived as a threat to the economy. Such an ideology posits resource depletion and environmental degradation as necessities within an ever-expanding system of production (Obach, 2004). In response to a lack of intervention at the federal level, the private sector, as well as individual states, drive emergent environmental policy in the United States (Schlosberg & Rinfret, 2008). Ultimately, Laszlo and Zhexembayeva claim environmental regulations can create desirable barriers to entry (e.g., deterring low-cost imports from entering the market).

**Radical Innovation.** Reinhardt (2000) suggests that “by thinking creatively about the fundamental nature of their business, executives in certain firms have been able to find ways to reconfigure the whole system by which they create value and deliver it to customers” (p. 106). As an example, thought leadership around sustainability in the hospitality industry is simultaneously reducing cost and improving efficiency, drawing younger employees who are wanting to work with companies that make difference, enabling companies to benefit from government incentives including financial grants and tax write-offs, and enhancing brand image (Lawson, 2018). In essence, “looking at your business through the lens of sustainability can be a source of tremendous creativity, helping to fundamentally rethink the nature of your business”
Moreover, Laszlo and Zhexembayeva claim radical innovation is at the heart of the link between sustainability and profit.

Business sustainability is no ‘quick fix,’ and requires drastic action and deep-rooted change (Ehrenfeld, 2004). Therefore, the journey to business sustainability likely involves a number of distinct significant shifts in logic among key decision makers within any given organization or organizational field. Specifically, business logic refers to a set of business rules and thinking that operate each day to underpin an organizations’ identity, integrity, innovation, and intelligence (von Halle & Goldberg, 2009, p. 6). As such, the dominant logics within a field represent a means through which to establish how groups of related organizations make changes to their structure to achieve certain goals. Therefore, the paper proceeds under the assumption that sustainability becomes a determinant of business logics when understood as a central component of how businesses create value.

Field-Level Institutional Logics

Institutional logics, as a research theme within institutional theory, refer to “the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality” (Thornton & Ocasio, 1999, p. 804). Thornton, Ocasio, and Lounsbury (2012) claim the institutional logics perspective transforms institutional theory, and offer institutional logics as a “metatheoretical framework for analyzing the interrelationships among institutions, individuals, and organizations in social systems” (p. 2). Institutional logics become institutionalized and deinstitutionalized at various levels (e.g., societal, organizational, industry, and field) (Thornton & Ocasio, 2008). For example, Haveman and Rao (1997) studied how changes in institutional logics at the societal level influenced the
formation of industry-level organizational forms. Changes in institutional logics are also historically contingent as their development and importance differ over time (Thornton & Ocasio, 2008). As an example, Thornton and Ocasio (2008) suggest in modern societies the salient orders are corporations and states, whereas in earlier societies the most influential orders were family and religion.

Institutional logics were originally understood at the societal level where a number of distinct institutional orders exist, including markets, states, families, and religions (Friedland & Alford, 1991). Thornton (2004) suggests institutional logics also exist through corporations and professions, so at the industry or field level, and that these logics are shaped by the inter-institutional system. So, “viewing society as an inter-institutional system allows sources of heterogeneity and agency to be theorized and to be observed from the contradictions between the logics of different institutional orders” (Thornton & Ocasio, 2008, p. 104). More specifically, field-level logics retain a dual focus on symbols and practices while also emphasizing that “field-level institutional logics are shaped both by macro forces – societal-level logics and resource environments – and by field-level processes that link symbolic representations with organizing practices” (Thornton et al., 2012, p. 168). For example, Scott, Ruef, Mendel, and Caronna (2000) argue macro-institutional logics of the market and state, as well as field-level processes with the medical care profession, are active in shaping the health care field.

In the context of sport, Skirstad and Chelladurai (2011) apply institutional logics to a multisports club in Norway, and describe how the club accommodates multiple, evolving institutional logics in the field (i.e., amateur, commercial, and professional logics), which is made possible through changes to the club’s governance structure. Additionally, Southall, Nagel, Amis, and Southall (2008) present the example of the NCAA men’s basketball tournament, and
how, through the involvement of a national television broadcaster, the representation of the tournament conformed to a dominant commercialized institutional logic, which usurped the more ‘ceremonial’ institutional logic of education.

So, field-level logics are both embedded in societal logics and subject to external logics (Thornton et al., 2012). Gumport (2000) provides an example of societal logics shaping the institutional field of higher education. Specifically, Gumport discusses notions of higher education as a social institution encumbered with “organized activity that maintains, reproduces, or adapts itself to implement values that have been widely held and firmly structured by the society” (p. 74). On the other hand, the author presents colleges and universities as “quasi-corporate entities producing a wide range of goods and services in a competitive marketplace” (p. 71). Ultimately, Gumport suggests these societal logics converge, with the market logics likely subsuming the social logics, which renders academic restructuring an institutional issue, rather than an organizational one.

As an alternative to macro-level societal logics, external logics are “developed in other institutional fields,” so at the meso level, and “act as building blocks for the formation of field-level institutional logics” (Thornton et al., 2012 p. 151). Furthermore, external logics are often imported through a process of adaptation, and the adaptations of material practices occurs through resource environments, which serve to enable and constrain such practices (Thornton et al.). The notion of resource environments represents how practices are embedded in economic systems, external competition and cooperation, as well as markets and governance structures (Thornton et al.).

In the context of sport and environmental sustainability, McCullough and Cunningham (2010) suggest the impetus to engage in green initiatives is a result of political, functional and
social pressures. The authors posit political (small p) pressures as both external and internal to the organization. Alternatively, functional pressures relate to matters of inefficiency, which, in turn, affect the performance of the organization. McCullough and Cunningham also argue that functional pressures arise as a result of market competition for scarce resources, and propose how green business practices could offset potential financial difficulties. Social pressures, on the other hand, relate to how traditionally held beliefs can be influenced by both the workplace and consumers. In essence, McCullough and Cunningham emphasize the importance of a number of societal and external logics to the green practices of sport organizations. However, the authors also suggest the ideals and values of top management moderate the effects of these societal and external logics on the adoption of green practices. Specifically, biases, affinities, and opposition are likely moderating the greening movement in sport.

The adaptation of more symbolic representations occurs through various levels of abstraction by embracing a linguistic analysis (Thornton et al., 2012). More specifically, Thornton et al. discuss the relevance of “language, embodied in theories, frames, and narratives, and embedded in vocabularies of practice” (p. 149). Theories represent the guiding principles and explanations for why and how institutional structures and practices should operate, but are not necessarily coupled with organizing practices. For example, practitioners can choose to adopt, partially adopt or resist theories. In an example of tight coupling, Rao, Monin, and Durand (2003) discuss how elite chefs fully embrace the theories of nouvelle cuisine. Alternatively, in an example of loose coupling, Thornton and colleagues present the case of government-developed shareholder theory and the partial adoption by practitioners. Finally, in a de-coupled example, Nigam and Ocasio (2010) reflect on how the community of care model, as a theory promoted by the American Hospital Association, failed to be adopted in practice.
Dyllick and Muff (2016) propose two main processes guiding business sustainability – the inside-out and outside-in organizational perspectives. An inside-out perspective is where businesses start by adapting their existing practices, which is akin to a resource-based view where the task of management is to improve and exploit scarce, inimitable, and valuable resources within the organization (Makadok, 2002). Moreover, the inside-out organizational perspective aims to reduce the environmental impact of existing products or services (Hart & Dowell, 2011). Alternatively, the outside-in perspective is where businesses approach their purpose by first considering the needs of society (Dyllick & Muff). As a result, the outside-in perspective focuses on knowledge and resources that reside outside the firm (Saeed, Yousafza, Paladino, & De Luca, 2015). An outside-in perspective is synonymous with Laszlo and Zhexembayeva’s (2011) notion of embedded sustainability, which is where a company transforms its core business activities and makes sustainability everyone’s job, rather than merely adapting existing practices and implementing sustainability as a bolt-on. Furthermore, the authors suggest the outside-in perspective is representative of true sustainability. Similarly, Laszlo and Zhexembayeva claim their final value-creating response, radical innovation, touches on the nature of change as a key enabler of the embedded approach. Accordingly, the inside-out and outside-in organizational perspectives represent the two dominant theories of business sustainability.

While theories are mostly abstract, Thornton et al. (2012) posit frames as more concrete. Specifically, frames link individual interpretation of events and perceptual processes, which, in turn, facilitates meaning and sense-making (Goffman, 1974). In the context of sustainability, frames link practices to dominant perceptions of the reasons why businesses engage in such efforts. Laszlo and Zhexembayeva (2011) claim businesses progress in their perceptions of
sustainability from: sustainability as an added cost or value destruction, sustainability as risk mitigation or value destruction avoidance, and sustainability as value creation. Furthermore, Laszlo and Zhexembayeva suggest once a field progresses to recognizing the value creating potential of sustainability, this enables businesses therein to leverage strategic responses to create sustainable value. Ultimately, these three perceptions create three dominant frames for business sustainability.

Narratives provide even more specificity of meaning to practices within an institutional field, and provide a crucial link between material practices and symbolic constructions by organizing events and human actions into a whole (Thornton et al., 2012). Such a practice-based approach is consistent with the notion that the “creation of new practices and variations in existing ones are central to the emergence of and change in institutional logics” (Thornton et al., p. 149). Similarly, vocabularies of practice link sematic representations and practices, and do so by guiding attention, decision making and mobilization, while also providing member of social groups with a sense of collective identity (Thornton et al.).

Finally, multiple institutional logics develop at the level of institutional fields (Thornton et al., 2012), and these logics are often inherently contradictory depending on which logic is at play (Washington & Patterson, 2011). It is within this contradictory institutionalized context that change is made possible. Change in field-level logics involves “a combination of changes in narratives and practices, resulting in new vocabularies in the institutional field, by which changing theories, frames, and narratives are linked to changes in practices” (Thornton et al., p. 162). Yet, Thornton and colleagues claim the idea of the institutional logics perspective is not to explain cultural hegemony or isomorphism, but rather to unearth what “triggers particular contradictions to receive attention in an institutional field” (p. 164). Furthermore, the authors
suggest this perspective allows researchers to be more specific on what aspects of field-level practices are changing.

To reflect change processes at the field-level, Thornton et al. (2012) develop a typology of change consisting of three forms of transformation, and four forms of developmental change. In broad terms, developmental change represents an incremental change process where a substantial number of the prevailing practices and symbolic representations remain, and transformational change involves more radical, wholesale changes processes. Within transformational change, replacement infers where one institutional logic replaces another, blending refers to the combining of dimensions from diverse logics, and segregation assumes that field-level logics emerge through the separation of logics from a common origin. On the other hand, within developmental change, assimilation refers to how new practices and symbols emerge as part of the prevalent logic, elaboration signifies how internal developments in institutional logics generate new narratives and practices that reinforce the prevailing logic, and both expansion and contraction signify changes in scope of an institutional logic. More specifically, expansion reflects when practices and narratives in one institutional field lead to expansion in related fields. Whereas, contraction refers to a tightening of institutional logic to a point where its relevance in related fields is under threat.

**The Intercollegiate Athletics Sustainability Journey**

The idea that athletic departments undertake a sustainability journey recognizes how businesses progress incrementally towards an optimal business sustainability approach. The notion of an intercollegiate athletics sustainability journey also suggests that through these incremental steps athletic departments are making leaps in business logic, and transitioning to new or revised shared meanings, perceptions, and guiding principles. An institutional logics
perspective would propose these shifts in business logic are the result of an interplay between the inter-institutional system. Such an approach is consistent with the notion that the “creation of new practices and variations in existing ones are central to the emergence of and change in institutional logics” (Thornton et al., 2012, p. 149).

Figure 1.1 is a conceptualization of the sustainability journey within intercollegiate athletics. The model links Thornton et al.’s (2012) symbolic representations of field-level logics (i.e., narratives, frames, and theories) with Laszlo and Zhemayeva’s (2011) strategic sustainability responses, and Dyllick and Muff’s (2016) understanding of the inside-out versus outside-in organizational perspective as it relates to business sustainability. Two shifts in business logic characterize the journey. The first shift occurs according to Laszlo and Zhemayeva’s proposition that businesses move from perceptions of sustainability as value destruction to perceptions of sustainability as an opportunity for value creation. Importantly, within the context of intercollegiate athletics, and sport more generally, the field nor industry incurs the risks of say companies in the extractive industries. This proposition is reflected in the conceptual model through the omission of the perception that sustainability serves the purpose of value destruction avoidance or risk mitigation. Therefore, the second shift occurs according to a shift in the guiding principles businesses apply to sustainability where businesses move to the outside-in organizational perspective, which represents the optimal approach.

The Shift towards Sustainability Value Creation

In terms of the first shift, evidence suggests intercollegiate athletics initially framed sustainability as an added cost. Specifically, in 2009, when athletic department staff were asked about their views concerning initiatives and the bottom line, 33 percent felt environmental initiatives were negative to the bottom line, while 27 percent thought there would be no effect,
with only four percent feeling they would improve the bottom line. (Casper et al., 2012). At this time, budget pressures and the difficulty in justifying up-front investments were potentially playing into an overly cautious approach to sustainability by athletic department personnel (Jin et al., 2011; Pfahl & Ott, 2010). The nature of the sustainability narrative at this time supports this notion. Specifically, practitioners in the field organized sustainability into a whole that consisted of practices that required up-front investment (e.g., recycling, efficient lighting, and low-flow water fixtures). Similarly, Yale University’s senior associate athletic director, Barbara Chesler, suggests athletic departments were not leading the way in sustainability efforts during this time due to the cost factor (Johnston & Newport, 2012).

Yet, moving forward a few years, campus athletics personnel began to see that there is no down side to sustainability efforts, and that “financial bottom lines will improve over time as cost differentials abate and operational efficiencies are refined” (Johnston & Newport, 2012, p. 239). Moreover, according to Robin Harris, the executive director of the Ivy League athletic conference, “college sports departments that are adopting greener practices are helping to show that sustainability can work hand in hand with good business practices” (NRDC, 2013, p. 5). Take the Mission Bay Aquatic Center in San Diego, home to the rowing crews of San Diego State University and the University of California - San Diego, as an example. Greg Brandenburg, former director of the center, suggests that when the facility was first built there included a number of design elements that were intended to have a long-term impact on reducing operating costs (NRDC). So, at some point between the 2009 Collegiate Athletic Department Sustainability Report and the NRDC’s Collegiate Game Changers report in 2013, evidence suggests that, as a field, the mindset around sustainability progressed from value destruction to recognizing the potential of sustainability as a vehicle for value creation.
More specifically, a number of strategic responses emerging within the field appear to mediate this first shift in business logic. For example, in 2009, almost 85 percent of survey respondents identified sustainability as either a moderate, high or very high priority within the athletic department (Casper et al., 2012). The *Collegiate Game Changers* provides additional context to this finding and evidences the contribution of sustainability practices to environmental outputs, like the University of North Texas who recognize how sports greening helps protect the natural environment, and the University of Washington who, through their Huskies’ greening initiative, preserves the natural beauty of their surroundings (NRDC, 2013). The emergence of intercollegiate sport facilities seeking Leadership in Energy and Environmental Design (LEED) certification also represents a commitment to reducing the negative environmental impacts of operating athletic programs (Jin et al., 2011). Jin and colleagues refer to the LEED program’s emphasis on environmental values across-the-board (e.g., sustainable sites, water efficiency, energy and atmosphere, materials and resources, and indoor environmental quality) as an evaluation of the environmental performance of buildings, rather than their economic performance.

However, Pfahl and Ott (2010) suggest the issues that sustainability efforts address are just as important as the economic aspects of green sport. As an example, Joe Abraham, director of the office of sustainability at the University of Arizona, suggests sustainability ‘makes business sense’ by reducing energy and water use (NRDC, 2013). The *Collegiate Game Changers* report also discusses the University of Minnesota who, in 2010, undertook an energy recommissioning study of eight existing athletic facilities, revealing $412,000 in avoidable annual utility costs. To realize these energy savings, Minnesota athletics implemented a number of changes. For example, at TCF Bank Stadium, modifications to mechanical automation
controls resulted in savings of $131,000, and, at Williams Arena, the installation of a direct
digital control system and variable frequency drives, which yielded close to $61,000 in annual
energy savings. As such, the field recognizes sustainability as an eco-efficiency engine, which is
where environmental impacts become “indications of economic costs that can be driven out of
the system in a win-win for business and society” (Laszlo & Zhexembayeva, 2011, p. 62).

Athletic departments are also active in marketing their environmental programs and
brands to capitalize on new opportunities for revenue generation, such as fundraising within
athletics development and sponsor activation. As an example, Arizona State University’s
Weatherup Center cost $19.5 million, of which over $5 million was raised through private
donations (NRDC, 2013). However, donations for green stadium projects are more likely to
occur when donors possess a favorable attitude toward the behavior as well as when such
behavior is considered the social norm (Jin et al., 2011). As a result, Jin and colleagues suggest
green stadium initiatives require athletic departments to discuss sustainability in terms of trust-
building, beliefs, and attitudes among organizational stakeholders, which is an indicator of how
sustainability through green buildings is a potentially key differentiator and proposition within
donor relations. Similarly, athletic departments began more regularly partnering with businesses
whose core products include environmental products and services. In this sense, sponsors look
to align themselves with sustainability-oriented organizations (Johnston & Newport, 2012),
which demonstrates how intercollegiate athletics was utilizing sustainability as a way to
differentiate themselves in the sponsorship marketplace.

In 2009, 42 percent of respondents felt environmental programs had no effect on fan
loyalty, and a further 28 percent were uncertain as to what effect sustainability had on fan loyalty
(Casper et al., 2012). Despite this concern and uncertainty, the Collegiate Game Changers
report makes clear the commitment from intercollegiate athletics to leverage sustainability for brand enhancement. For example, the University of Florida suggest sustainability action and storytelling are essential for brand enhancement, which is central to their marketing goal to “strengthen the brand of the University of Florida as a leader in athletics, sustainability, and community involvement” (NRDC, 2013, p. 43). In addition, an increasing number of athletic programs began branding their greening efforts during this time, including the University of Washington’s ‘Go Purple, Be Gold & Green’ slogan and Yale University’s ‘Bulldog Sustainability’ brand (NRDC).

Inter-campus collaboration is also an emergent feature of intercollegiate athletics sustainability, which is providing a new dynamic to sustainability practices within the field. While the Ivy League athletic conference pioneered green championship events and resource sharing among its member universities and colleges (NRDC, 2013), the Pac-12 Conference was the first to convene a high-level symposium at the conference-level in 2017 (Pac-12 Conference, 2018). The ACC have followed suit by hosting their inaugural conference in June 2019 (Davis, 2019). It remains unclear as to whether these collaborative efforts will move beyond conference-level initiatives (e.g., the Pac-12 Conference’s Zero Waste Challenge) and resource exchange to influencing industry standards. Nevertheless, by coming together as a collective voice, albeit at the conference level, the potential exists for voluntary industry standards to emerge from such efforts.

The Shift towards Radical Innovation and Outside-in Organizational Perspectives

Pfahl (2013) suggests most of the conceptualizations, research, and knowledge of sport and the environment involve the inside-out organizational perspective. Likewise, intercollegiate athletics sustainability, by in large, remains constrained to the inside-out perspective. In 2009,
only 15 percent of athletic departments were not concerned that there was too little green expertise within the department (Casper et al., 2012). The perceived lack of knowledge at this time, coupled with the lack of a strategic approach to sustainability, suggests that the majority of athletic programs were at the beginning of their business sustainability journey, which Dyllick and Muff (2016) suggest is characteristic of the inside-out perspective. Inside-out organizational perspectives rely on continuous improvement and gradual change through strategies with low complexity in moderately dynamic contexts (Strauss, Lepoutre, & Wood, 2016). Moreover, Strauss et al. suggest that these moderately dynamic contexts yield efforts such as recycling programs, car-pooling, constructing low-resource and energy-use facilities, and introducing sustainability procurement policies.

Casper, Pfahl and McCullough (2014) claim athletic department action and strategy around sustainability is undertaken in conjunction with and under the scrutiny of multiple stakeholders. Similarly, there is substantial evidence of stakeholder engagement within the Collegiate Games Changers report. Critically, though, it is unclear whether this stakeholder view results in an organizational perspective where athletic departments start with the needs of society, as opposed to factoring stakeholder needs into modifications of existing business practices. President of Arizona State University, Michael Crow, claims that “progress toward sustainability requires the reconceptualization and reorganization of all of university enterprises” (NRDC, 2013, p. 44). Yet, again, it is unclear through the Collegiate Game Changers report or any other sources whether this approach has been adopted by the athletic department at Arizona State University, specifically, or at other universities.

Even newly constructed LEED facilities demonstrate characteristics of an inside-out organizational perspective. For example, plans for the University of North Texas’ Apogee
Stadium were triggered by a realization that the university itself had outgrown their previous stadium (NRDC, 2013). Later, the project partners adopted an integrated design process with the purpose to explore the integration of improved technology, rather than pursuing the highest LEED certification possible (NRDC). Such an example is significant as decisions within the planning and design of new stadium appear to be grounded within the context of existing business practices with a view to making them more sustainable (Dyllick & Muff, 2016), and not by the sustainability needs of society.

Another indicator is the lack of sustainability strategy development within athletics. For example, in 2009, only 10 percent of athletic departments had developed a sustainability strategic plan and just over 15 percent were actively considering the development of a sustainability strategic plan (Casper et al., 2012). While the American College and University Presidents Climate Commitment facilitates a multi-step process for universities, which progresses from organization and asset to planning, measurement, and review (Second Nature, n.d.), these plans exist at the university-level. As such, examples of sustainability strategy specific to athletic departments remain a feature of exemplar athletic programs like those featured in the NRDC’s Collegiate Game Changers report. Similarly, these exemplar athletic programs continue to pioneer new sustainability commitments and practices. For example, in May 2019, the University of Colorado Boulder signed the United Nations Sports for Climate Action Framework, and, in doing so, became the first athletic department in the United States to join these efforts (University of Colorado Boulder, 2019). The University of Colorado Boulder also implements a range of venue-based and fan-engagement initiatives. As an example, the ‘Water for the West’ campaign, in partnership with Wells Fargo, asks fans to pledge to conserve water at home, work, and play, and where the athletic program receives a 1,000-gallon offset on
their water use (University of Colorado Boulder, n.d.). However, examples of athletic programs with such diversity and authenticity behind their efforts remain the exception, rather than the norm. As such, the dominant theory and organizational perspective within intercollegiate athletics continues to support an inside-out approach.

**The Moderating Effects of the Inter-Institutional System**

The previous section discusses how, as a field, intercollegiate athletics has made the transition to perceiving sustainability as value creation, but has not made the transition to an outside-in organizational perspective (i.e., an optimal approach). As such, the nature of change within the field is not transformational, which as a process involves radical change. Rather, the change is developmental and involves more subtle changes to the prevailing logic through the assimilation and blending of new logic alongside the prevailing logic. More specifically, there appears to be two prevalent external logics at play with the field-level sustainability logic of intercollegiate athletics – the higher education sustainability logic and the sport sustainability logic. In turn, these two external logics are themselves engaged in an interplay with societal logics. The following section explores the location of intercollegiate athletics within the sustainability journey in more detail by considering the moderating effects of the inter-institutional system along with the field-level change processes. Underpinning this discussion are six propositions, which support the relationships between societal and external logics, and the strategic responses. Importantly, these propositions, while all currently active within the field, have likely developed asynchronously.

**Assimilation of Higher Education Sustainability Logic**

According to Hoffman and Bansal (2012), the year 2010 represents the peak of the third wave of environmentalism, and the authors claim that the most important issue for business in
the third wave is climate change. Given how governments supply much of the infrastructure and institutional framework that enable resource possession, transformation, and exchange (Pearce, Dibble, & Klein, 2009), legislation and policy are likely key determinants of a business’s willingness to respond to the issues of climate change. However, the political system in the United States provides greater scope for corporate discretion when compared with counterpart systems in Europe (Matten & Moon, 2008). Within the context of environmental policy, the discourse in the United States is characteristic of a standoff whereby environmental regulation is perceived as a threat to the economy (Dryzek, Hunold, Schlosberg, Downes, & Hernes, 2002).

Despite the lack of intervention at the federal level, environmental policy at the state and local levels of government are emergent. Specifically, since the enactment of the National Environmental Policy Act of 1969 sixteen states have enacted similar laws (Marchman, 2012). Moreover, and specifically with the context of mandates relating to the built environment, a total of 34 states and over 400 local jurisdictions have policies relating to green building certifications (USGBC, n.d.). In addition, environmental policies are also emergent within the higher education system. For example, universities and colleges are both early and comprehensive adopters of building energy efficiency and sustainability policies (Agdas, Srinivasan, Frost, & Master, 2015). Similarly, an increasing number of universities are utilizing LEED policies as part of their commitment to the ACUPCC. By 2012, nearly 500 universities and colleges had chosen the option within the commitment to establish a policy requiring all new campus construction to meet at least LEED silver standard or equivalent (Dyer, 2012). Even universities with no formal policy requiring certification for new construction are subject to the reputational value in achieving LEED (Dougherty, 2010). To this end, Dougherty also claims green buildings have become a central part of campus greening, and universities are increasingly
employing LEED certifications or LEED equivalent standards to help strengthen and demonstrate their commitment to sustainability.

Jones (2017) refers to green building certifications as a form of green institution, which is a testament to their pervasiveness and influence in driving new construction and existing building norms. According to the *State of Sustainability in Higher Education 2016* report, LEED projects in higher education peaked in 2012 (University of New Hampshire & Sightline, 2016). Within intercollegiate athletics, in 2009, over half of athletic departments placed a moderate or high emphasis on green buildings (Casper et al., 2012). In 2009, the University of Minnesota’s TCF Bank Stadium became the first intercollegiate athletics football facility to achieve LEED certification (Buente, 2015). Then, in 2011, the University of North Texas’ Apogee Stadium became the first football facility to earn LEED Platinum certification, the highest level of certification (Buente). Furthermore, in 2013, over 40 athletic departments surveyed as part of the *Collegiate Game Changers* report had pursued LEED certification for new facilities, renovations or existing facilities (NRDC, 2013).

At the surface, the coercive nature of green building mandates may appear to be more of a constraint on intercollegiate athletics, rather than an enabler. However, LEED certification, in particular for new construction, integrates principles consistent with the Lean Paradigm (Khodeir & Othman, 2016), which dispels the myth that business practices and environmental measures are mutually exclusive (Gordon, 2001). Specifically, in 2012, new construction green building investments were accounting for an eight percent decrease in annual operating costs, and a 15 percent decrease in operating costs over a five-year period (Smart Market Report, 2018). As such, green building mandates play a substantial role in strengthening the relationship beyond the
first field-level shift that sustainability creates value – most notably environmental and economic value.

The groundswell of LEED projects across higher education and, thus, intercollegiate athletics is indicative of how universities and colleges are compliant with green building mandates and voluntary standards. The mandates originate from societal logic (e.g., state and local government environmental legislation). However, the mandates combine through the higher education resource environment with voluntary standards that originate from external logic (e.g., field-level voluntary standards across the higher education system). The convergence of regulatory influence is consistent with McCullough and Cunningham’s (2010) assertion that sport organizations, through their green initiatives, respond to external and internal political pressures. As a result, higher education sustainability logic is being incorporated into the prevalent intercollegiate athletics sustainability logic to strengthen the commitment across the field to reducing energy, waste and materials. Furthermore, the assimilation of higher education sustainability logic is indicative of the dominant narrative within intercollegiate athletics, where a substantial proportion of sustainability practices are organized into a whole through their relation to the built environment. Accordingly, the following proposition is proposed:

Proposition 1: Compliance with green building mandates from government agencies and voluntary standards from the higher education system enable intercollegiate athletics to recognize the value creating potential of sustainability through reducing energy, waste and materials.

Universities and colleges are complex organizations. According to Gumport (2000), “the perception of higher education as an industry primarily views public colleges and universities as quasi-corporate entities producing a wide range of goods and services in a competitive
marketplace” (p. 71). Subsequently, Gumport posits higher education as having multiple marketplaces – not just students, but also faculty, industry partners, fundraising sources, and research funding. An emerging economic function of universities and colleges began to oppose the once dominant view of higher education as a social institution that “maintains, reproduces, or adapts itself to implement values that have been widely held and firmly structured by the society” (Gumport, p. 74). By the end of the twentieth century, universities and colleges found themselves in an enviable position with newfound importance as central actors within the nation’s growth and prosperity (Bok, 2003). Clark (2001) suggests the entrepreneurial character of universities creates an imbalance between these new demands and the capacity to respond, which is particularly pervasive considering how universities, or ‘multiversities,’ consist of stand-alone faculties.

Of universities, Moodie and Eustace (1974) claim, “whatever the precise boundaries of departmental authority, its existence makes of every university a ‘federal’ structure rather than a strongly centralized system” (p. 61). Within this federal structure, which includes the dividing of decisions and functions, and dispersal of power (Grodzins, 1960), basic units within universities have fairly independent decision-making power over their activities (Reponen, 1999). As a result, executing core strategy in universities is a complex matter, as different constituents demand different services and create competing priorities (Krizek, Newport, White, & Townsend, 2011). Sustainability is a prime example within higher education where organizational change necessitates the convergence of multiple departments around a central issue.

Despite the challenges of executing strategy in the context of higher education, universities have a profound, moral responsibility to create a just and sustainable future (Cortese,
Arguably, the American College and University Presidents' Climate Commitment (ACUPCC) had a major role in converting this perceived responsibility into a reality. Specifically, 400 schools made the commitment in the initial period of charter membership between December 2006 and September 2007 (Swearingen White, 2009). By 2012, nearly 700 universities and colleges representing six million students were committed to the ACUPCC (Dyer, 2012). As part of the ACUPCC, universities and colleges commit to establishing, implementing and reporting on a climate action plan, which requires input and buy-in from multiple departments, including athletic departments.

Responding to the ACUPCC within a decentralized structure means universities place emphasis on collaborative processes when it comes to sustainability and organizational change (Hoover & Harder, 2014). As a part of this wider emphasis, intercollegiate athletics sustainability also relies heavily on collaborative processes across university units (McCullough, Kellison & Wendling, 2018; Pfahl et al., 2015; Pfahl & Ott, 2010). Pfahl et al. suggest collaborative processes focusing on intercollegiate athletics sustainability tend to involve the sustainability office or sustainability office personnel as the initiator of such relationships. Arguably, however, the university-athletic department sustainability relationship is mutually beneficial. The environmental strategies and actions taken by athletic departments are used as an educational tool for students and fans (Pfahl & Ott), which stems from how universities and colleges leverage sport to promote institutional identity (NRDC, 2013).

The *Collegiate Game Changers* report presents a number of examples of inter-departmental collaboration through intercollegiate athletics sustainability. For example, the sports greening program at the University of Colorado Boulder began in 2007 because of collaborations initiated by the Environmental Center and facilities management with the athletic
department and campus recreation (NRDC, 2013). Furthermore, former Ohio State University sustainability coordinator, Corey Hawkey, suggests the partnerships supporting the zero waste efforts at Ohio Stadium were critical in the early stages in allowing the program to access the right resources for success (NRDC). Through the collaborative processes, athletic departments are also able to access funding for specific projects. As an example, a $2 million grant from the Texas State Energy Conservation Office awarded to the University of North Texas’ sustainability office made possible the wind turbine project at Apogee Stadium (NRDC). Funding for sustainability projects is also available through internal sources, such as specific ring-fenced green funds or student fees more generally. Access to funding provides further context in understanding how athletic department personnel were able to overcome the uncertainty of return on investment, which was evident in the 2009 Collegiate Athletics Sustainability Report (Casper et al., 2012).

In summary, universities retain a largely decentralized structure despite a salient market logic calling for higher education to take a more commercial and entrepreneurial outlook to their endeavors. Accordingly, the higher education sustainability logic relating to the importance and necessity of collaboration is being incorporated into the prevalent intercollegiate athletics sustainability logic. Intercollegiate athletics benefits from this assimilation in two ways. On one hand, collaborative processes plug deficiencies in the knowledge and skills required to implement sustainability practices. On the other hand, the provision of more tangible resources, like funding, mitigates the financial risk to the athletic department that initial upfront costs might present. While Laszlo and Zhexembayeva do not offer collaboration as one of their six value creating strategies, collaborative processes are an important means by which athletic departments
retain a perception of sustainability as value creation. With this in mind, the following proposition is proposed:

**Proposition 2:** Collaborative processes on university campuses enable intercollegiate athletics to recognize the value creating potential of sustainability through reducing energy, waste and materials.

Sustainability delivery is most effective within a functionally integrative organizational structure (Viebahn, 2002). Such a statement is cause for concern within the decentralized context of higher education along with the bureaucracy, students and faculty turnover, and many non-standardized processes, which creates a distinct lack of integration within organizational structures (Velazquez, Munguia, & Sanchez, 2005). To overcome these limitations, previous work highlights the importance of change mechanisms in orchestrating planned change, including campus sustainability networks (Kurland, 2011), sustainability policies (Gudz, 2004), and accreditation (Cooper, Parkes, & Blewitt, 2014). Yet, Albrect, Burandt, and Schaltegger (2007) suggest sustainability reporting in higher education can also initiate organizational learning due to its potential to mobilize stakeholders and allow for incremental learning.

Likewise, research by Ceulemans, Lozano, and Alonso-Almeida (2015) claim sustainability reporting can facilitate a more effective implementation of sustainability within higher education, which leads to an increase in operational performance and environmental improvements. As such, sustainability reporting becomes a means by which universities can orchestrate planned change and innovation toward more advanced levels of sustainability action.

Nowadays, over three-quarters of the world’s biggest companies include non-financial data (i.e., their social and environmental impact) within their annual financial reports (KPMG, 2017). More specifically, sustainability reporting has risen from 20 percent of companies
publishing such reports in 2011 to 85 percent in 2017 (Governance & Accountability Institute, 2018). However, sustainability reporting in higher education is still in the early stages with a low number of universities publishing reports, a low overall quality in reporting, and a lack of consecutive reporting (Alonso-Almeida, Marimon, Casani, & Rodriguez-Pomeda, 2015; Ceulemans, Lozano, & Alonso-Almeida, 2015; Lozano, 2011). For example, according to the Global Reporting Initiative’s Sustainability Disclosure Database, in June 2019, only 31 universities and colleges in the United States had produced sustainability reports (GRI, n.d.).

Overall, Ceulemans et al. (2015) suggest the specific structure of universities creates poor communication between departments as well as the shortage of resources to pull together data are salient barriers to more effective sustainability reporting. Scope does exist for athletic departments to publish their own sustainability reports and reap the benefits directly. So far, however, examples of athletic department sustainability reports are scarce. As one of the few examples publicly available is a sustainability report produced by the University of North Carolina at Chapel Hill in 2016 (UNC, 2016).

Nevertheless, the decentralized structure within higher education, which on one hand necessitates and enables collaborative processes, also creates a working culture that problematizes sustainability reporting. As a result, higher education appears to place less value on sustainability reporting than organizational fields that are more entrepreneurial and embrace a deeper economic function, which constrains intercollegiate athletics from maximizing the potential of sustainability reporting as a mechanism to achieve innovative sustainability solutions. In other words, by retaining a connection with the field’s historical roots as a social institution, higher education is limiting creative thought and system reconfiguration, which are characteristics of radical innovation as a strategic sustainability response (Laszlo &
Accordingly, the higher education sustainability logic is being incorporated into the prevalent intercollegiate athletics sustainability logic, and the following proposition is proposed:

**Proposition 3:** Decentralized management structures in higher education and difficulties in engaging internal stakeholders in sustainability reporting processes constrain intercollegiate athletics from embracing radical innovation and applying an outside-in perspective to sustainability.

**Assimilation of Sport Sustainability Logic**

Duderstadt (2009) argues athletic departments embody values and work towards goals that are different from academic units. As such, Clotfelter (2011) juxtaposes the traditional academic world and its commitment to the creation and diffusion of knowledge with the world of big-time college sports, which is enmeshed in the popular conception of the collegiate experience. More specifically, Johnston and Newport (2012) suggest NCAA Division I athletic programs are measured against weekly wins and losses, ticket sales, recruitment, and sponsorship, which differs radically to the metrics of the wider university that includes admissions yields, research funding, and career placement for graduates. Accordingly, Clotfelter describes academic units and athletic departments as strange bedfellows, which he rationalizes by recognizing intercollegiate athletics as a part of the country’s entertainment industry where it sells its brand of performance in the commercial marketplace.

The intercollegiate athletics sustainability survey analyzed in Casper et al.’s (2012) study was conducted approximately one year after a similar study among professional sport teams. The author compares the results, which suggest professional sport teams were more than twice as likely to believe that environmental programs will slightly or significantly increase both
profitability and brand loyalty. Babiak and Trendafilova (2011) also found that professional sport organizations are increasingly engaging in sustainability efforts for strategic motives. The authors discuss how strategic motives present organizations with advantages through enhancing reputation, addressing demands of customers, and forging deeper links within the communities in which they operate. Johnston and Newport (2012) consider how, at this time, intercollegiate athletics was playing catch up with professional sports. Specifically, the authors suggest “while the professional sports organizations recognize the business case for sustainability – reduced operating costs, increased fan loyalty, and potential increased revenues from sponsors – many of the college athletic associations have apparently not yet fully embraced the change” (p. 227).

To this end, the movement of professional sport organizations entering into socially responsible business practices has long since been established (Babiak & Wolfe, 2009). Therefore, professional sport organizations, just like large corporate entities in other industries, are feeling constrained to go beyond compliance to meet societal expectations concerning environmental protection (Gunningham, Kagan, & Thornton, 2004). At a franchise level, sustainability efforts in United States professional sport began in 2003 when the owners of the Philadelphia Eagles approached the NRDC for guidance on reducing the carbon footprint of Lincoln Financial Field. Moreover, this initiative, titled ‘Go Green,’ started with a blue recycling bin under each employee’s desk and has grown to become a strategic and embedded approach to reduce the organization’s overall impact on the environment in a financially-responsible manner (Philadelphia Eagles, n.d.).

In 2012, the NRDC published the Game Changers report, which is a professional sport version of the Collegiate Game Changers report. The report makes clear the business case of going green. For example, the Seattle Mariners saved approximately $1.5 million during the
period 2006 to 2011 by reducing natural use by 60 percent, electricity use by 30 percent, and water use by 25 percent (NRDC, 2012). Moreover, the Mariners increased waste diversion rates to 81 percent in 2011, thus saving the franchise $95,000 in landfill costs. As a further example, through enhancing operations in the pursuit of LEED certification, the Miami Heat’s AmericanAirlines Arena made year one savings of $1.6 million (NRDC). More specifically, the arena made concerted efforts to reduce both energy use, through the retrofitting of compact fluorescent lights and a building automation system, and water use, through the installation of low-flow faucets and toilet upgrades and greater irrigation efficiency.

Intercollegiate athletics is demonstrating a willingness to be a part of this broader sport greening movement. Growth in athletic department membership of the Green Sports Alliance (GSA) over recent years is a key indicator of this collective approach. Specifically, in 2013, the University of Arizona were one of just nine athletic departments to be GSA members within a 160-plus member alliance (Blue, 2013), so firmly in the minority. Fast forward to 2019 and there are 39 active athletic department members (personal communication, June 5, 2019). As an environmentally-focused trade organization, the GSA work with stakeholders across the sport industry to create meaningful change towards a more sustainable future (GSA, n.d.). In addition to serving professional sport organizations and athletic departments, GSA membership also includes national governing bodies, mega-events, league associations, and other non-sporting environmental agencies.

As demonstrated, professional sport pioneered the business case for sustainability, and in doing so made the shift in business logic from perceptions of value destruction to value creation earlier than intercollegiate athletics. Therefore, in many ways, professional sport paves the way for intercollegiate athletics in making the connection between sustainable business practices of
sporting venues, and economic and environmental value creation. As such, many of the sustainability efforts implemented within professional sport serve as a proof of concept for intercollegiate athletics. However, as a field, intercollegiate athletics, as demonstrated by GSA membership, is willingly engaging in this broader sport greening movement. Accordingly, the sport sustainability logic and the sport greening movement more generally is being incorporated into the prevailing intercollegiate athletics sustainability logic to strengthen the business case for sustainability, which leads to the following proposition:

Proposition 4: Engagement in the wider sport greening movement enables intercollegiate athletics to recognize the value creating potential of sustainability through reducing energy, waste and materials.

Towards the end of the last century, Cornwell (1995) notes three changes in corporate sponsorship: from a philanthropic to market-orientation, the growth of event-sponsorship, and the inclusion of numerous surrounding activities beyond purely a promotional technique. At this time, sponsorship began embodying a more purposeful strategic focus, rather than tactical focus (Fahy, Farrelly, & Quester, 2004). More recently, the trend to ‘go green’ is increasingly recognized as way to deliver significant rewards in product differentiation, positive publicity, a stronger brand and increased sales (Bodger & Monks, 2010). Within this new green market, there is a growth in sponsorship opportunities for businesses keen to be associated with products and initiatives that demonstrate a genuine commitment to the environment (Bodger & Monks). Accordingly, a degree of sponsor-event fit plays a central role (Bruhn & Holzer, 2015). Fierce competition for sponsorships and a tightened economy is leading to sponsors showing increased interest in performance measurement and return on their investment (Grohs, 2016).
In terms of sponsorship spending, sport sponsorship in North America accounts for over two-thirds of total investments made (Marketing Charts, 2018). As a result, sponsorship is among the main sources of revenue generation for sport organizations. In intercollegiate athletics at the Division I level, athletic departments are responsible for generating most of the revenue to cover their costs through ticket sales, licensing, and broadcasting contracts (Duderstadt, 2009). Among Division I Football Bowl Subdivision programs, in 2004, median total generated revenues was $22.9 million and a decade later, in 2014, this figure had almost doubled to $44.5 million (Fulks, 2016). However, over this same period program expenses had increased in line with revenues generated, which puts into further context the uncertainty many athletic departments had regarding the return on investment on sustainability efforts.

Evidence points to reducing energy, waste and materials, and cutting costs as a viable strategic response within intercollegiate athletics sustainability. Examples also exist of sustainability creating value through product differentiation, and, more specifically, within the corporate sponsorship marketplace. For example, the Collegiate Game Changers report presents the example of the University of Colorado Boulder and the corporate sponsorship of the up-front operational costs of their ‘Ralphie’s Green Stampede’ zero waste program (NRDC, 2013). In the Game Changers report, one of the case studies focuses on the Miami Heat’s AmericanAirlines Arena LEED certification efforts, and how this lead to approximately $1 million in corporate sponsors (NRDC, 2012). More recently, the University of California announced Sky Power Solar as the athletic department’s newest corporate partner (Cal Athletics, 2018). In 2016, 60 percent of Green Sports Alliance members reported they had sold sponsorships that include green assets (Sports Business Journal, 2016), which include can include a community of fans
with high levels of environmental concern, sustainability programs (e.g., recycling), or waste bins (GSA, 2018).

While perhaps not as prevalent as the strategic response to reduce energy, waste and materials as a means to recognize the value creating potential of sustainability, corporate sponsorships involving green assets are allowing athletic departments to differentiate their products and keep pace with the increasing costs of operating successful elite-level sport programs. In intercollegiate athletics these increasing operating costs are characteristic of an arms race where athletic departments consider the behavior of rival programs in their decision making (Hoffer, Humphreys, Lacombe, & Ruseki, 2015). However, monetizing sustainability in intercollegiate athletics is clearly connected with the field’s association with the sport industry, rather than higher education system, which suggests the sport sustainability logic is being incorporated into the prevailing intercollegiate athletics sustainability logic.

Accordingly, the following proposition is proposed:

Proposition 5: Alignment of material practices with opportunities to generate revenue enables intercollegiate athletics to recognize the value creating potential of sustainability through product differentiation.

Assimilation of Multiple External Logics

Lepoutre and Strauss (2017) refers to the inside-out organizational perspective as adopting ‘light green’ sustainable business practices. Light green also relates to sensible design methodologies that are not particularly costly (Krohn, 2018). In many ways, intercollegiate athletics sustainability maintains a light green approach where sustainable value creation is strengthened predominantly by efforts to reduce energy, waste and materials. In terms of social concerns, references within intercollegiate athletics sustainability are scarce. One example is the
University of Minnesota who demonstrate social concern, but couch this within the context of the environment. Specifically, the university implements its green athletics program to benefit staff and students while also saving resources and money (NRDC, 2013).

McKenzie (2004) suggests that any organization that adopts the overlapping circles model of sustainability (see Figure 1.1), where the three pillars or circles of sustainability converge, should immediately include social sustainability as an equal concern. Yet, McKenzie also argues that the context in which sustainability is applied determines the shared meaning of those looking to profit from its implementation. Importantly, the roots of the sport sustainability movement began with environmental agencies such as the NRDC and latterly the Environmental Protection Agency (NRDC, 2012). Furthermore, while the GSA recognize sustainability in more holistic, three-pillar terms, the organization began with a strong environmental focus. Similarly, Calder and Dautremont-Smith (2009) refer to campus greening and sustainable campus operations as the poster child of the sustainability in higher education movement. As such, the language, if not intent, of sustainability both within professional sport and higher education retains a strong environmental focus.

McKenzie’s (2004) thoughts link directly to the symbolic representations of field-level logics, and specifically what Thornton et al. (2012) consider as narratives and vocabularies of practice. The prominence of reducing energy, waste and materials as a strategic response across professional sport and higher education contributes to maintaining a sustainability narrative within intercollegiate athletics where the environment organizes material practices into a whole. Furthermore, the notion of ‘greening’ is widespread across both professional sport and higher education, which further links semantic representations and sustainability practices. Vocabularies of practice also guide attention, decision making, and mobilization (Thornton et
al.). As such, the salience of greening is potentially limiting all three fields in their pursuit of the triple bottom line.

In fact, Anderson (2006) suggests when all three pillars are maximized, sustainability becomes a positive-sum game. Specifically, Anderson presents the formula: \( F + E + SJ = TBL \), where \( F \) represents financial performance, \( E \) is environmental performance, \( SJ \) is social justice performance, and \( TBL \) is the triple bottom line. The equivalent formula under the guise of a light green sustainability, inside-out organizational perspective and symbolic representations of material practices as ‘greening’ efforts, the intercollegiate athletics’ positive-sum sustainability game, and based on the model presented in Figure 1.2, is: \( E + EE + SE = TBL \), where \( E \) represents environmental outputs, \( EE \) is environmental-economic outputs, and \( SE \) is socio-environmental outputs. According to this formula, the light green emphasis proposes organizations reap benefits in three categories: environmental outputs (e.g., waste reduction and carbon footprint), economic-environmental outputs (e.g., resource efficiency and facility design), and socio-environmental outputs (e.g., stewardship and environmental justice). All of these categories appear consistent with the examples highlighted in this paper.

The main premise of the outside-in organizational perspective is that businesses approach their purpose by first considering the needs of society. With a narrow ‘greening’ focus to sustainability, athletic departments are instantly unable to fully consider the needs of society in their most holistic sense. As an example, Slaper and Hall (2011) suggest social measures with triple bottom line calculations include unemployment, relative poverty, and health-adjusted life expectancy. At present, these types of concerns are not being factored into the intercollegiate athletics sustainability mix. Therefore, the greening emphasis within the higher education sustainability logic and sport sustainability logic are synergistic, and are simultaneously being
incorporated into the prevailing intercollegiate athletics sustainability logic. The sixth and final proposition is proposed:

Proposition 6: Retaining light green sustainability principles and a ‘greening’ vocabulary of practice constrains intercollegiate athletics from embracing radical innovation and applying an outside-in perspective to sustainability.

**Summary and Conclusion**

Businesses face an often long, but almost always incremental journey in integrating and embedding principles of sustainability. This paper began by highlighting an opportunity to conceptualize the field-level characteristics of the business sustainability journey within elite-level intercollegiate athletics. By focusing at the level of the organizational field, this allowed for the metatheoretical framework of institutional logics to be applied within this context. In summary, the field-level logics of intercollegiate athletics sustainability were understood in relation to the interplay between both higher-order societal logics, like the state and market, and external logics, like higher education and sport. As a result, there is evidence of the same logics simultaneously enabling and constraining intercollegiate athletics in the business sustainability journey. Overall, the paper provides insight into the nested, cross-level factors influencing the integration of environmental concern into intercollegiate athletics. Specifically, this paper argues that the sustainability journey within intercollegiate athletics is not simply an imitation of equivalent journeys in other corporate settings. Rather, athletic departments are simultaneously enabled and constrained through the higher education resource environment as well as through the field’s more symbolic association with the sport industry. This unique institutionalized context justifies the continuation of a more specialized, athletics-specific literature on sustainability, rather than sport sustainability more generally.
In review of the proposed intercollegiate athletics sustainability journey, the symbolic representations of sustainability locates the field between two apparent shifts in business logic. More specifically, the field recognizes sustainability as value creation, but does not recognize the need to adopt an outside-in organizational perspective as the main guiding principle. This paper discusses intra-university collaboration, compliance, cross-sector engagement, and alignment of resources as enabling value creation across the field. However, the lack of athletic-specific internal strategy relating to sustainability suggests these enabling mechanisms may, in fact, be compensating for a lack of a more holistic, coordinated approach to sustainability. Therefore, further qualitative exploration and quantitative confirmation of the intercollegiate athletics sustainability journey is needed. In particular, an opportunity exists to conduct another field-level survey of athletic department sustainability engagement (i.e., material practices) as well as perceptions of value creation. Such data would provide a more concrete longitudinal perspective on the intercollegiate athletics sustainability journey by building on the studies in 2009 (Casper et al., 2012) and 2013 (NRDC, 2013). Specifically, future studies should further establish sustainability decision-making processes within athletics, and the extent to which such decisions relate to identified strategic priorities.

Finally, there are a number of strategic sustainability responses that appear to be under-utilized within intercollegiate athletics. Specifically, few examples exist of athletic departments leveraging sustainability to say enter into new product markets. As one of few examples, the Henry Ford Detroit Pistons Performance Center, which is currently under construction, is scheduled to operate fitness, health and nutrition programs (Henry Ford Health System, n.d.). Similarly, there are few examples within intercollegiate athletics shaping government regulations or industry standards around sustainability. Perhaps one area to watch is the activation of
collective purchasing agreements by athletic departments, which has the potential to shape industry standards moving forward.
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Figure 1.1. The Intercollegiate Athletics Business Sustainability Journey
Figure 1.2. The Overlapping Circles Model of Sustainability (adapted from NIRSA, 2012)
CHAPTER 3: ‘A NUT WE HAVE OFFICIALLY YET TO CRACK’: FORCING THE ATTENTION OF ATHLETIC DEPARTMENTS THROUGH SHARED SUSTAINABILITY GOVERNANCE

This paper is under review in *Sustainability*:


Abstract

In many cases, intercollegiate athletics represents the ‘sustainable’ front porch of higher education. The high visibility, high impact nature of elite-level college athletics make athletic departments a central player in the sustainable development journey. However, not all athletic departments respond to this responsibility, nor are all responses uniformly successful. According to national reporting frameworks, an increasing number of universities are choosing to involve their athletic departments in university-level sustainability governance structures, but the benefits and limitations of which remain unclear. Using the theory of loosely coupled systems, and more specifically, the voice of compensations, which views loose coupling as an unsatisfactory state, the purpose of this paper is to explore perceptions of athletic department engagement in shared sustainability governance. Semi-structured interviews with sustainability office personnel were conducted and analyzed, and the findings imply shared sustainability governance has the potential to focus the attention of athletic departments toward sustainability, as well as reaffirm shared values. Yet, to maximize the impact of athletic departments toward the sustainable development goals of the university, sustainability office personnel suggest the deployment of additional change levers, in a multi-dimensional fashion, as supplementary coupling mechanisms, which include more rigorous sustainability goals (top-down), continued
collaboration on ‘low hanging fruit’ initiatives (lateral), student-athlete engagement (bottom-up), and the development of an internal sustainability framework (inside-out).

*Keywords:* athletics, higher education, sustainability, loose coupling, shared governance
Introduction

Executing strategy in universities is a complex matter, as the institutions themselves are likened to “multi-headed monsters, each with unique recipes for success” (Krizek, Newport, White, & Townsend, 2011, p. 28). Moreover, basic units have fairly independent decision-making power over their activities (Reponen, 1999), and freedom to self-determine policies and priorities (OECD, 2003). In essence, complex organizations, like universities, display varying levels of coupling across a number of domains where interdependent elements fluctuate in the number and strength of their interdependencies (Orton & Weick, 1990). In fact, formal structures in educational organizations are understood as being purposefully decoupled from technical activities and outcomes to maintain support in a pluralistic environment (Meyer & Rowan, 2008). Accordingly, some decisions in universities requiring specialized expertise (e.g., teaching and research) can only be made by individual professors, while other decisions come from central administrators as well as from collective and interactive processes (Hardy, Langley, Mintzberg, & Rose, 1983). Unsurprisingly, an extensive body of literature in higher education research focuses on the contentious relationships between university administrators and faculty (Birnbaum, 1992; Blackburn & Lawrence, 1995; Del Favero & Bray, 2010; Peterson & White, 1992).

As an alternative and more contemporary example of coupling in United States higher education, a number of scholars note the widening chasm between universities and intercollegiate athletic departments both financially and strategically (Chandler III, 2011; Hanford & Greenberg, 2003; Sack, 2001; Suggs, 2009). For example, on one hand, universities who compete at the highest level of intercollegiate athletic competition regard their athletic departments as “‘auxiliary activities’, responsible for generating most of the revenue to cover
their costs through ticket sales, licensing, and broadcasting contracts” (Duderstadt, 2009, p. 87). On the other hand, five out of every six of the top athletic departments successfully secure scarce general funding to intercollegiate sports through student fees (Sanderson & Siegfried, 2015). Similarly, on one hand, the very nature of intercollegiate athletics means athletic departments embody values and work towards goals that are different from academic units (Duderstadt). On the other hand, administrators leverage athletic programs to serve as the highly visible ‘front porch’ of universities (Bass, Schaeperkoetter, & Bunds, 2015). However, these examples depict what Orton and Weick (1990) define as a loosely coupled, rather than decoupled, context. As such, athletic departments, for all of their perceived autonomy, simultaneously demonstrate responsiveness and distinctiveness with the university writ large across multiple domains.

In the sustainability domain, previous empirical work supports the willingness of athletic departments to prioritize (Casper, Pfahl, & McSherry, 2012; Casper & Pfahl, 2015) and adopt greener practices (Casper, Pfahl, & McCullough, 2014). This greening movement within intercollegiate athletics follows the increasing number of universities worldwide that are recognizing the importance of sustainable development (Ferrer-Balas et al., 2008; Krizek et al., 2011), and aligning themselves to the principles of sustainability (Adams, Martin, & Boom, 2018). As such, sustainability becomes an interdependent element where athletic departments demonstrate a level of responsiveness with the university more generally. Conversely, athletic departments are utilizing their unique resources, such as their high profile status and marketing platform (Casper et al., 2012), to develop a more distinctive approach to sustainability efforts in comparison to other university departments and units. As a result, the simultaneous responsiveness and distinctiveness of athletic department sustainability action makes the university-athletics relationship is, again, loosely coupled.
Loose coupling is often perceived as an unsatisfactory state, which must be reversed, and this perspective is referred to as the voice of compensations (Orton & Weick, 1990). In terms of corporate social responsibility more generally, Asif, Seracy, Zutshi and Fisscher (2013) suggest managing stakeholder interests in isolation places pressure on organizational resources (e.g., personnel, time, and money), and leads to the ineffective use of such resources. Therefore, sustainability delivery is most effective within functionally integrative organizational structures (Viebahn, 2002), or tightly coupled systems. To compensate more generally for a lack of integration, calls for greater accountability in higher education has facilitated a move toward tight coupling and narrow control (Meyer & Rowan, 2006), which has been accompanied by frequent shifts in governance arrangements (De Boer, Enders, & Leisyte, 2007). In the sustainability domain, it is at the organizational level where the charge is to create and establish campus-wide policies, objectives, and targets as well as provide the main decision-making function (Velazquez, Munguia, Platt, & Taddei, 2006), and, thus, compensate for the lack of integration across the institution as a whole. To this end, Adams (2013) puts forwards a framework for managing sustainability in higher education, and these governance arrangements include a number of essential elements, including an empowered senior person responsible for sustainability, and a collaborative approach across senior leaders. In many ways, Adams’ framework aligns with the notion of shared governance, which allows for a share in key decision-making process while also enabling certain groups to exercise primary decision-making in particular areas (Olson, 2009).

Athletic departments look to compensate for a lack of a coordinated and organized approach to sustainability through the creation of cross-functional ‘green teams’ (Pfahl, 2010; Casper et al., 2012; Casper & Pfahl, 2015; McCullough, Kellison, & Wendling, 2018). Green
teams are voluntary and formal collaborative arrangements between relevant internal and external stakeholders that can help advance an organization’s sustainability initiatives (McCullough et al.). Moreover, a green team is a planning and policy making team whose impact extends into organization operations and the external world of its stakeholders (Casper & Pfahl). However, previous research suggests the capacity in which athletic departments serve on green teams as well as the mission of these teams remains unclear (Casper et al.). The operational focus of green teams suggest more a unit-based approach to governance, where each unit establishes its own system, which therein creates multiple models within a single institution (Yanko, Hardt, & Bradstock, 1995). Subsequently, there is a scarcity of research focusing on athletic department involvement in university-level sustainability planning and coordination. As a result, an opportunity exists to understand the perceived benefits of athletic department contributions to shared governance models.

The purpose of this study is to describe athletic department involvement in shared sustainability governance. Furthermore, the purpose of this study is supported by two specific research questions:

**RQ2.1.** How are universities forcing the attention of athletic departments toward sustainability through engagement in shared sustainability governance?

**RQ2.2.** How is athletic department engagement in shared sustainability governance compensating for loosely coupling with the university writ large?

Accordingly, this study examines sustainability governance at universities across the United States through semi-structured interviews with sustainability office personnel. The result is a better understanding of how governance mechanisms compensate for the loose coupling between intercollegiate athletic departments and the wider university system. The remainder of this paper
is organized as follows. First, the context and background of strategic sustainability management in higher education and intercollegiate athletics is summarized. Then, the theoretical foundations are built through the perspective of loosely coupled systems and the role of shared governance as a coupling mechanism. The methods are then explained before a combined findings and discussion section is presented. Finally, the study concludes with practical implications and suggestions for future research.

**Research Context**

**Sustainability Management in Higher Education**

Universities are integrating sustainability as a core strategic principle across the campus (ISCN Secretariat, 2014) through the development and implementation of comprehensive plans for setting sustainability goals (Swearingen White, 2014). Arguably, this strategic commitment began in 2006 when 12 college and university presidents initiated the American College and University Presidents' Climate Commitment (ACUPCC) (Second Nature, n.d.). The ACUPCC ignited a sustainability movement with 400 schools making the commitment in the initial period of charter membership between December 2006 and September 2007 (Swearingen White, 2009). The commitment itself made clear the role higher education has in leading climate and sustainability action for the sake of students and society (Second Nature).

Universities and colleges have taken significant green strides in demonstrating sustainability in practice, thanks in part to the 2008 Higher Education Sustainability Act and the establishment of the University Sustainability Grants Program (Tilbury, 2011). Accordingly, the role of universities in advancing sustainability is twofold: as an institution that needs to be changed and/or a potential change agent (Stephens, Hernandez, Román, & Graham, 2008). For example, universities are adopting a number of infrastructural and operational business practices
to reduce their ecological footprint. Such efforts include waste management strategies like recycling and composting (Hottle, Bilec, Brown, & Landis, 2015), and the reduction of greenhouse gas emissions (Klein-Banai & Theis, 2011). Additionally, universities are operationalizing their potential as sustainability change agents by integrating sustainability into the curriculum, student and faculty life, and the wider community (Dmochowski, Garofalo, Fisher, Greene, & Gambogi, 2016). However in higher education’s twofold responsibility, a tendency exists for universities to focus more so on how higher education can change internally (Stephens et al.). Dyer and Dyer (2017) claim this tendency is reinforced by the ACUPCC, which creates a framework wherein institutions commit to future success, in the form of climate neutrality, and then backcast to the present before creating plans to move toward the desired future state.

Salviono, Franzoni, and Cassano (2017) consider university governance with such a limited propensity towards sustainability as an inefficient condition to promote change. Accordingly, a number of frameworks exist to encourage best practice approaches to sustainability management in the higher education context. Adams (2013) put forward a framework for managing sustainability in universities that includes a number of essential and desired elements. Among the essential elements include: visible support of the President/Vice-Chancellor and the governing body, pro-active senior leadership, an empowered senior person responsible for sustainability, and a collaborative approach across senior leaders. Additional desirable elements in Adams’ framework include: an advisory board of external expertise, policies that incorporate sustainability, a stakeholder engagement strategy, and alignment with existing national quality frameworks. Epstein’s (2008) Corporate Sustainability Model considers drivers of sustainability performance (inputs), actions managers can take to affect performance
(processes), and consequences of those actions (outputs). In terms of managerial actions, Epstein advocates the importance of committed leadership, strategy development, organizational design that embeds sustainability across all units, and alignment of systems to coordinate activities and motivate employees. Such frameworks are warranted due to the proliferation of strategic approaches to sustainability at the university level, which is evidenced through emerging green campus indexes like The Princeton Review’s ‘Top 50 Green Colleges’ and the Sierra Club’s ‘Cool Schools’ ranking for the greenest colleges and universities.

**Sustainability Management in Intercollegiate Athletics**

In intercollegiate athletics, sustainability decision-making is highly differentiated between institutions. At the Division III level, sustainability decision-making is a function of the Athletic Director (Casper & Pfahl, 2015), whereas, at the Division I level, decision-making occurs, predominantly, through Associate Athletic Directors (Casper et al., 2012). Yet, athletic department personnel can lack the environmental skills or training to make effective decisions (Pfahl et al., 2015), which necessitates a process of resource exchange in order for athletic departments to, at least, initiate sustainability projects. Often, and without a direct mandate from a higher administrative power, collaborative relationships develop through outreach from sustainability office personnel to the athletic department (Pfahl et al.). Such collaborative efforts are particularly effective in developing sustainability initiatives focusing on public external events (e.g., tailgate and facility/stadium recycling) (Pfahl et al.). Accordingly, not only are athletic departments somewhat reactive in their commitment to sustainability, but these collaborative efforts are predicated on interpersonal relationships as opposed to institutional commitments.
Where athletic departments are involved in structures beyond dyadic interpersonal ties, like in green teams, the scope and remit of these groups show considerable variation. For example, of the two athletic departments involved in environmental committees in the Pfahl and colleagues (2015) study, one is involved in a working group that “makes recommendations that are then filtered up to the athletics administration” (p. 40) and the other a higher-level council consisting 20 to 25 campus units. Such variation is likely pervasive across the higher education sector. Casper et al. (2012) found 41 percent of Division I institutions to have athletic department representation on campus-wide sustainability teams, while Casper and Pfahl (2015) found 28 percent of Division III institutions with similar involvement. Nevertheless, McCullough and colleagues (2018) suggest green teams provide a bridge with university-wide goals through formal, joint decision-making processes.

**Theoretical Foundations**

**Loosely Coupled Systems**

Any location in an organization, be that a department, unit, office, or working group, contains interdependent elements that vary in the number and strength of their interdependencies (Orton & Weick, 1990). Moreover, these interdependent elements represent shared variables, which influence the degree of interaction, or coupling, between specific locations within an organization or broader systems (Glassman, 1973). In other words, coupling refers to “the degree to which events within one part of a system are felt by other parts of that system” (Bossert, Dwyer, Rowan, & Lee, 1982, p. 245). Glassman also suggests that with coupling, two qualifying variables are necessary. First, coupling requires time to be isolated as a special variable as any judgment on an organization or system is relevant only in a given interval of time. Second, provision must be made for the presence of interactions between variables of
varying strength. So, as opposed to being a dichotomizing concept, coupling has the flexibility to reflect complexity of organizations as living systems. For example, Orton and Weick suggest organizations can be tightly coupled (i.e., where they demonstrate responsiveness without distinctiveness), decoupled (i.e., where they demonstrate distinctiveness without responsiveness), or loosely coupled (i.e., where they demonstrate distinctiveness and responsiveness simultaneously).

Loose coupling allows organizations to “follow their idiosyncratic learning processes while retaining some degree of responsiveness” (Brusoni & Prencipe, 2001, p. 1,028). Importantly, Weick (1976) presents educational organizations as loosely coupled exemplars, and, in doing so, demonstrates the process by which soft structures guide the loose assemblages of diverse educational organizations, like schools, to develop similar meanings across time. Specifically, Weick depicts the relationship between the counselor’s office and the principal’s office, whom both retain some level of identity and separateness, but remain attached under the overarching umbrella of the school. Yet, Goldspink (2007) suggests educational reform within a loosely coupled context is incompatible with formal or bureaucratic control, rather different forms of management are necessary to realize their distinct advantages. As a result, higher education experiences frequent shifts in governance arrangements including the reshuffling of authority and responsibilities (De Boer, Enders, & Leisyte, 2007). In the context of United States higher education, calls for more accountability has contributed to a move toward tight coupling with narrow control (Meyer & Rowan, 2006).

The main advantage of loose coupling as a durable concept is summarized by Orton and Weick (1990) in the following passage:
…loose coupling allows theorists to posit that any system, in an organizational location, can act on both a technical level, which is closed to outside forces (coupling produces stability), and an institutional level, which is open to outside forces (looseness produces flexibility) (p. 205).

However, Orton and Weick suggest that the application of loose coupling is often confused. Specifically, organizational theorists succumb to not distinguishing between the dialectical interpretation (i.e., based on the degrees of responsiveness and distinctiveness, organizations are either non-coupled, tightly coupled or loosely coupled) and the unidimensional interpretation of loose coupling (i.e., loose coupling is the end point of a sliding scale between tightly coupled and loosely coupled).

**Shared Governance as a Compensation for Loose Coupling**

In response to the varied use of the concept, Orton and Weick (1990) present a reconceptualization of loose coupling by identifying five distinct voices in the related literature where the voice of compensations suggests loose coupling is an unsatisfactory condition that should be reversed. Tierney and Minor (2004) suggest attempts to tighten loose coupling within university settings center around effective governance. Therefore, using the voice of compensations, governance arrangements present and opportunity to rectify loose coupling, as an unsatisfactory condition, through enhanced leadership, focused attention, and shared values (Orton & Weick). Specifically, Orton and Weick refer to the role of leadership (strong or subtle) in unifying goals, the role of targets in focusing attention, and the role of reaffirming shared values in rectifying losses in control.

Governance gives overall direction to an organization, and oversees and control management actions through accountability and regulation (Tricker, 1984). As such, shared
governance allows various groups of people a share in these key decision-making processes (Olson, 2009). Shared governance also allows certain groups to exercise primary responsibility for specific areas of decision-making (Olson). According to Lechuga (2004), shared governance is a unique characteristic of the United States higher education system. Cramer and Mozlin (2017) suggest the modern roots of shared governance in higher education stem back to the 1966 Joint Statement on Government of Colleges and Universities. More specifically, the joint statement defines the main campus constituents as the governing board members, administrators, faculty members, students, and other persons. Therefore, shared governance in higher education refers to the structures and processes through which these constituents participate in the development of policies, and in decision making that affect the institution (SUNY Shared Governance Transformation Team, 2011). Bejou and Bejou (2012) offer a similar definition and suggest shared governance must focus on informed decision making, transparency, open lines of communication between and among all components of the university community, but, importantly, highlight the need for accountability, mutual respect, and trust within this participatory system.

Lapworth (2004) claims models of shared governance fall under one of two categories: corporate models, with focus on the governing body, and consensual models, with focus on the role of others. Alternatively, Yanko and colleagues (1995) identify four different models of shared governance: unit-based, councilor, administrative, and congressional (see Figure 2.1). In unit-based shared governance models, each unit establishes its own system, which therein creates multiple models within a single institution. In councilor models of shared governance, a coordinating council directs activities on a more aggregate, departmental level, and the unit councils replicate the coordinating council structure. In congressional models of shared
governance, all staff belong to a congress, which draws direct comparisons to the federal government. Furthermore, in congressional models of shared governance, committees submit work to a ‘cabinet’ for approval. Finally, in administrative models of shared governance, separate practice and management structures exist, and a forum integrates the work of the councils overseeing these parallel structures.

Importantly, models of shared governance operate at different organizational levels, which influences extent of authority, decision-making, and participation (Bernreuter, 1993). Unit-based governance, intuitively, operates at the unit level. The unit-level does, however, hold different meanings across varying organizational contexts. For example, for an institution such as a university or college, the unit can often denote the department, versus an institution such as a hospital where the unit can be interpreted as a functional area or team. Yet, when governance is restricted to the unit-based level it is incompletely shared (Hess, 1994). Alternatively, councilor and administrative models of shared governance operate at a more organizational level. Specifically within the context of higher education, it is at the organizational level where the charge is to create and establish campus-wide policies, objectives, and targets as well as prove the main decision-making function (Velazquez et al., 2006). The challenge with shared governance models is that organizations are complex and dynamic, which means for these models to be effective they need to be diverse and flexible where individual institutions can adopt models to suit their character and needs (Lapworth, 2004).

Evidence exists to support the effectiveness of shared governance across various settings. Generally speaking, shared governance can reduce information asymmetry (Saxton, 1997), promote a common understanding of goals, and help prevent misunderstandings (Asmus & Griffin, 1993), and assist in coordinating goals and skills between partners (Lawson, Peterson,
Additionally, Bstieler, Hemmert, and Barczak (2014) suggest shared governance can be a bonding mechanism that helps partners to adapt to new circumstances, like, in the context of this study, an emerging organizational priority such as sustainability. In the context of nursing, which is where much of the literature of shared governance exists, outcomes of moving to a governance model include improved financial performance, employee satisfaction, and retention (Anthony, 2004). For university-industry partnerships, evidence points to the importance of shared governance and intellectual property policies as significant facilitators of trusting relationships and successful outcomes (Burnside & Witkin, 2008). Moreover, Bstieler and colleagues interpret trust formation as an outcome of parties collectively working through challenges, negotiating mutual adaptations, and making project-related decisions.

**Methods**

**Research Design**

This study applied a descriptive research design to establish a “relatively concrete description” (de Vaus & de Vaus, 2001, p. 1) of athletic department involvement in organizational-level models of shared sustainability governance. The uncertainty surrounding athletic department involvement in models of shared governance beyond the unit-level justified a descriptive research design, which has the multi-faceted goal to describe situations and events, and examine why the patterns in these situations and events exist as well as what they imply (Babbie, 2012). Participant interviews were used as the primary research method. Specifically, the participant interviews followed a semi-structured format, which allowed for interviews to cover the same topics along with some flexibility to probe other related topics (Remler & Van
Ryzin, 2011). The semi-structured interviews enabled the elicitation of subjective experiences relating to athletic department involvement in shared sustainability governance.

**Study Population**

For this study, the population comprised degree-granting institutions in the United States committed to advancing sustainability, which also included a National Collegiate Athletic Association (NCAA) affiliated athletic program. To access this population, sampling was restricted to universities participating in the Association for the Advancement of Sustainability in Higher Education’s (AASHE) Sustainability Tracking, Assessment and Rating System (STARS), which is a transparent, self-reporting framework for colleges and universities to measure their sustainability performance. Furthermore, STARS is considered “as the singular consensus-based tool for use by colleges and universities” (White & Koester, 2012, p. 100), and all completed reports are publicly accessible online. In December 2018, at the time of sampling, 228 universities, out of a total of 1,027 active STARS participants, met the inclusion criterion of having an active report at the Bronze level or higher and a NCAA affiliated athletic program. A further review of STARS reports identified the number of universities who involve their athletic departments in organizational-level models of shared sustainability governance. Specifically, involvement was understood through responses within the ‘PA-1: Sustainability Coordination’ credit category where universities were asked to list sustainability committee members, to which a total of 32 institutions emerged. Figure 2.2 outlines the steps taken to arrive at a target population, and Table 2.1 summarizes the broad institutional characteristics of the study population.
Data Collection

Semi-structured interviews were conducted with university sustainability personnel from 12 of the 32 universities in the target population. The sample of 12 universities was approximately representative of the target population with a majority of public institutions (10 public, and two private), NCAA Division I athletic programs (11 Division I, and one Division II), and STARS certification at the Gold level (seven Gold, and five Silver). The institutions were sampled using non-specific emphasis with an opportunistic strategy (Palinkas, Horwitz, Green, Wisdom, Duan, & Hoagwood, 2015). First, the researchers took advantage of the network of sustainability practitioners at their host institution, and sought participants by asking these practitioners to facilitate introductions with peers at institutions within the target population, which yielded five research participants. Second, the researchers made contact with all of the remaining institutions by phone or e-mail with a view to securing additional research participants. The recruitment of research participants confirmed to a number of protective principles, which were vetted by IRB at the researcher’s host institution, including the right to participate and cease participation, the full disclosure of study context, and the right to privacy (Barrow & Khandhar, 2019). Ultimately, the sample of 12 enabled the point of data saturation where the ability to obtain additional new information had been attained (Guest, Bunce, & Johnson, 2006).

The justification for using sustainability office personnel as interview participations was based on their knowledge of and experience with the phenomenon of interest (Cresswell & Plano Clark, 2011). Specifically, the frequent interactions of sustainability office personnel with shared sustainability governance furnished them with the subjective knowledge from which to construct a descriptive understanding of the situation. While 12 institutions were included in this
study with 13 participants agreeing to be interviewed. Of these 13 participants, seven held positions at Director-level, three at Coordinator-level, one at Manager-level, one at Officer-level, and one held the title of assistant to a senior administrative officer. The goal was to continue interviewing until reaching the point of data saturation. Interviews were conducted via telephone, and lasted on average 25 minutes each, and all interviewed were conducted over a four-week period across the months of February and March 2019.

The interview guide was developed using the literature on sustainability management in higher education, loosely coupled systems, and shared governance. Specifically, the interview guide was separated into two parts in line with the two research questions. For example, the essential and desired elements of Adams (2013) framework for managing sustainability in higher education guided a number of questions in the interview guide relating to exactly what structures athletic departments were engaged in. Similarly, the benefits of shared governance (see Asmus & Griffin, 1993; Bstieler et al., 2014; Lawson et al., 2009; Saxton, 1997) guided the questions relating to how the interview participations perceived athletics to benefit from engagement in shared sustainability governance structures, which were also framed using the voice of compensations (Orton & Weick, 1990). As such, the interview guide made use of direct and indirect questioning. The use of indirect questioning was seen as a key strategy for ensuring data credibility through informant honesty (Shenton, 2004), which helped mitigate the effects of social desirability bias (Fisher, 1993) by asking the participants (sustainability office personnel) to respond from the perspective of another group (athletic department). Furthermore, credibility was sought through a process of early familiarity with the culture of participating organizations (Shenton), which included a broader review of each institution’s STARS report and other relevant strategic documents posted online.
Data Analysis

Interviews were transcribed by the researcher and converted to textual format, which generated 41 single-spaced pages of data. The nature of the research questions called for a coding process involving multiple steps. Specifically, the first research question relating to how athletic departments are engaged in shared sustainability governance was largely exploratory in nature. Whereas, the second research question had a stronger theoretical undergirding. As such, first, the researcher used the two primary research questions as a basis for structural coding, which allowed for further coding based on comparable segments (Saldaña, 2015). Second, the data segment relating to the first research question then underwent descriptive coding, which identified discreet topics (Saldaña). Third, the data segment relating to the second research question underwent a process of thematic analysis in keeping with Braun and Clarke’s (2006) methods, which allowed for the researcher to play an active role in the creation of themes in the data. Specifically, the coding frame in this third step was derived from the literature on the benefits of shared governance (i.e., trust, bonding, reducing asymmetry, goal coordination, etc.). Fourth, and finally, the data segment relating to the second research question underwent descriptive coding, which was intended to capture any unexpected topics. The coding of transcripts was conducted using NVivo 12 software.

Findings and Discussion

The findings and discussion section is divided into three sub-sections. First, the engagement processes are discussed, which not only covers how athletic departments come to be involved, but also what systems of shared sustainability governance athletic departments are becoming involved in specifically, why are they involved at this level, and who is representing athletic departments on shared governance coordinating councils. Second, the positive outcomes
of athletic department involvement in shared sustainability governance are discussed with a particular focus on how shared governance compensates for the loosely coupled context of athletics sustainability. Third, the limitations of shared sustainability governance as a coupling mechanism are presented.

**Engaging Athletics in Shared Sustainability Governance**

**Governance Typologies.** The respondents describe shared sustainability governance within higher education mostly as interactions among and between either departments or subunits of departments. For example, one respondent describes the coordinating council for sustainability as having “representation from across the institution” and “every department and business unit.” However, what is also evident is interaction between departments, and individuals who represent ideas and intentions. Specifically, in referring to the representation of the coordinating council for sustainability, another respondent states:

> It’s primarily staff, facilities, campus planning and development, academic affairs, so the Deans of all of the colleges on campus or there designate is represented, and then a representative from housing and residential life, and then those students who are designate environmental senators serve on the committee along with a handful of other students that have various roles on campus.

Shared sustainability governance appears to reflect departmental interactions through the interactions between individuals who represent those departments. On one hand, shared sustainability governance calls for representative involvement, rather than total, which is a logistical necessity considering the vastness of university campuses. However, on the other hand, the presence of individuals representing ideas and intentions also appears to be a matter of organizational structure and hierarchy. As an example, one respondent describes how the
coordinating council includes the President, directors, faculty, and students. In other words, the President and directors are representing their particular position and directorates by way of seniority, whereas, faculty and student members of the shared sustainability governance system are likely representing their colleagues and peers through a personal or professional interest in the subject matter.

**Decision-making Authority.** Further context provided by the respondents into the decision-making authority of the coordinating council reveals some variation in committee purpose and function. Some sustainability office personnel discuss their coordinating council as an entity that drives campus sustainability strategy through the identification of very specific areas for the university to target, which is consistent with Orton and Weick’s (1990) claim how the careful selection of targets can compensate for loose coupling. As an example, one respondent shared how the coordinating council “weighed in heavily” on a number of campus issues, which also highlights how the coordinating council leverages an enhanced leadership status to influence other organizational levels and components (Orton & Weick). Furthermore, another respondent shared how the university has been using the coordinating council “as governance for decisions as we move forward,” which involved having input into changing university-wide goals as well as making changes to the campus sustainability plan.

However, some coordinating councils play a less authoritative role in campus sustainability matters. For example, one respondent describes the purpose of the council as a “sounding board and a vetting entity” for the initiatives of the office of sustainability, while another describes the role of the council to advise the administration on what can be done around sustainability. As a result, some shared sustainability governance systems reflect a more typical definition of shared governance that includes a balance between corporate and collegial
approaches (Lechuga, 2004), and participatory decision-making along with primary decision-making responsibilities (Olson, 2009). Alternatively, other systems appear to have less of an orientation around accountability whereby efforts simply look to facilitate purposeful behavior towards the attainment of a goal or final state (van Gigch, 1978).

**High Visibility.** First, and foremost, the justification for including athletic departments in shared sustainability governance is a matter of visibility. For example, according to one respondent athletics is “the public face of the university.” More specifically, another respondent claims athletics to be “one of the most visible activities for any university that has Division I athletics.” The high visibility of athletics in these universities presents an opportunity for sustainability to engage new audiences, which according to one respondent includes a “broad brush of stakeholders that traditionally the university research outcomes would not necessarily reach.” As such, intercollegiate athletics occupies a unique position as a university department, which another respondent makes clear by suggesting how “people have an affinity to the university as a result of athletics” and that “if anyone is going to help with promoting sustainability and creating outreach and awareness, athletics is a big component of that.”

Subsequently, athletics provides a very public gateway for various stakeholders to gain a sense of the university’s commitment to sustainability. As one respondent stated, “athletics has become the face of sustainability in many ways.” This respondent further elaborated on this connection with the following statement:

> I liken this to a job I had in the private sector where we were committed to sustainability, but it didn’t have a face until we tied it to one of the more popular products. Once we tied sustainability to athletics that gave us a front door to open conversations with a number of different stakeholders.
Skyttner (2001) contends that the introduction of an input that is both unique and time critical may permit a semi-organized system to organize itself and to grow. In essence, the introduction of athletics as an input into the sustainable development journey of the university has had a similar effect. Furthermore, the majority opinion of sustainability office personnel suggests how athletic departments possess the potential to leverage its position as the ‘front porch’ of the university (Bass et al., 2015), and become the sustainable front porch. As one respondent states, “Certainly how the public sees us it’s really vital,” and goes on to elaborate that, proportionately, “…even a smaller initiative in athletics could make a big difference.” Ultimately, athletic departments serve in a sustainability ambassadorial role on university campuses.

**High Impact.** Second, some shared sustainability governance systems involve their athletic departments, and simultaneously excludes other departments on campus, due to athletics’ status as a high impact partner. For example, one respondent considers intercollegiate athletics to be “a major function of the university.” More specifically, another respondent claims:

> Athletics has two primary areas where they overlap with sustainability – one is greenhouse gas emissions, and the other is materials. … So by engaging the Athletics Director we are reaching an important subset of campus that is having an impact in those sustainability areas.

Moreover, this impact according to another respondent includes a “big role” within waste production and resource consumption. As such, combining high visibility with high impact as grounds to include athletics in shared sustainability governance helps universities in their quest to meet their twofold sustainability responsibility, which Stephens and colleagues (2008) describe in terms of sustainable operational change and sustainability change promotion.
**Representation.** Despite the compelling case for the inclusion of athletics on coordinating councils, much variation exists in exactly who represents the athletic department at this level. At one university, the sustainability office representative identifies the Athletic Director as the coordinating council appointee for athletics, but, in the same breath, explains how appointees are free to delegate who actually attends the formal meetings. A number of other sustainability office personnel shared how coordinating council representation sits with the Director of Athletics, which is somewhat contradictory to how Casper et al. (2012) evidenced how sustainability decision-making within Division I programs occur predominantly at levels below that of the Athletics Director. However, in other cases, athletic department representation took the form of a more facilities-based approach (e.g., Director of Facilities, Director for Internal Operations, Stadium Manager, etc.). In the case of the latter, athletic department representation in shared sustainability governance potentially falls foul of how Stephens and colleagues (2008) claim universities often focus disproportionately on how higher education can change internally, rather than realizing the potential of higher education as a sustainability change agent.

While athletic department representatives appear to vary across campuses in title, seniority, and role, the rationale for appointment or identification of representatives shares much similarity across different contexts. Specifically, personal interest, experience, and passion for sustainability often provides a justifiable means for inclusion in the coordinating council. For example, one respondent describes how “a personal interest in sustainability” is useful “no matter what role you have.” Likewise, another respondent describes their athletics representative as someone who “was familiar with LEED and sustainability initiatives in general” and who “came in a few years ago, kind of charged, fired up about those kinds of ideas.”
**Securing Commitment.** Athletic department representatives with interest, experience, and/or passion are sometimes groomed for voluntary coordinating council involvement through their prior involvement in on-the-ground sustainability initiatives. For example, one respondent describes the following scenario:

So we did have someone within athletics say two years ago who had more experience working with green athletic programs at other universities. He helped us to implement green soccer games, we connected him with our composting and catering on campus, and worked really hard to make sure there was as little waste at games as possible.

Therefore, the typical approach appears to focus on engaging representatives who already have the basic knowledge and awareness of sustainability. Furthermore, just like Pfahl and colleagues (2015) identify how collaborative processes are initiated by sustainability office personnel, the identification of suitable coordinating council representatives from within athletics often lies with the sustainability office.

Alternatively, some athletic department representatives become involved in shared sustainability governance on an appointee-basis. As an example, one respondent describes the process of appointment, and states how “every year the executive vice president comes up with a list of new [coordinating council] members and we do that in conversation with the committee co-chairs.” Another respondent discusses how appointment of representatives helps to create a routine, which, in turn, “helps to make sure they are attending our meetings and our engaged in our sub-committees and working groups.” Yet, such efforts demonstrate what Orton and Weick (1990) consider to be focused attention whereby sustainability office personnel who are empowered by senior accountable officers are forcefully creating orderly contingencies among university departments and campus constituents.
Regardless of the nature of the forceful attention applied by systems of shared sustainability governance, sustainability office personnel emphasize the importance of formalizing the commitment beyond the level of the individual. For example, as one respondent claims, “it is very important to find ways to institutionalize what we’re doing so that when people leave everything doesn’t fall apart.” Similarly, another respondent describes how informal commitments are problematic, especially when coupled with the perceived high staff turnover within athletics, and states: “You’re making a little bit of progress in terms of getting some people on board, and then again, unfortunately he left athletics.” Additionally, the interviews suggest not all of what is disclosed on the STARS report is the case in practice. Specifically, three of the 12 institutions included within the sample referred to the athletic department no longer being a member of their university-wide sustainability committee whether that be personnel changes or a shift in the approach of the coordinating council.

Table 2.2 summarizes the characteristics of shared sustainability governance and athletic department representation at the sample of 12 universities included within this study. Most of the councils are coordinating councils, while others are advisory councils. Similarly, most of the councils involve athletics within the coordinating council, while others are involved within thematic subcommittees. On one hand, these findings reify previous research (see Pfahl et al., 2015), which evidences the varying scope and remit of environmental committees. On the other hand, however, the variation apparent across the shared sustainability governance systems included in the sample support Lapworth’s (2004) proposition that effective models of shared governance require diversity and flexibility to suit context-specific character and needs.
Shared Sustainability Governance as a Compensation for Loose Coupling

Collaboration. Sustainability office personnel shared a number of benefits to engaging athletic departments in shared sustainability governance. Functionally, even at the university-level, shared sustainability governance serves as a conduit for collaboration whereby a diverse group of people and departments come together to create sustainable solutions. One respondent explains how the functional capability of the coordinating council and the resulting diverse thinking, in many ways, encapsulates the very notion of sustainability “in a nutshell.” Other practical examples were also shared. For example, one respondent was able to draw on scenarios where the athletic department had tabled possible solar and stormwater management projects through the coordinating council, which sparked a number of possible inter-departmental collaborations. In essence, this respondent felt that engagement in the coordinating council was helping the athletic department with their future sustainability plans. Again, the fact that university-level models of governance provide opportunities to table department-specific problems is another example of the varying scope and remit of environmental committees (Casper et al., 2012; Pfahl et al., 2015)

Mitigating Loss of Control. Beyond the direct effects of collaboration, shared sustainability governance is seen as critical to mitigating the loss of control that the decentralized, loosely coupled structures within higher education promote. Specifically, one sustainability office representative states:

A lot of times athletics can feel like its own separate world because they are funded differently and all that. But they are still a part of the university. So I think having them be a part of a larger sustainability committee helps them realize being bold and savvy should translate over to athletics as well.
Accordingly, these findings reify the work of McCullough et al. (2018) who suggest cross-functional sustainability teams provide a bridge with university-wide goals through formal, joint decision-making processes. Similarly, shared governance provides an opportunity for universities to operationalize sustainability as a legitimate bonding mechanism, which Bstieler and colleagues (2014) suggest is made possible by how shared governance enables organizations to adapt to new circumstances. After all, as one respondent claims, athletic departments are “not a separate wing that can go off on their own.”

**Reaffirming Shared Values.** Athletic department involvement in shared sustainability governance also promotes shared values around the sustainability goals of the wider university. As an example, one respondent claims how securing commitment from the athletic department to the coordinating council “shows that they value the campus values” and are “trying to support a larger vision of the university.” Moreover, another respondent describes the sense of having “a unified presence” where all major functions of the university are “on the same page” as the main benefit of engaging the athletic department within the coordinating council. Subsequently, shared sustainability governance is likely creating assumptions among non-athletic department staff that attendance is some way indicative of Meyer and Rowan’s (1977) notion of ‘the logic of confidence and good faith,’ which creates the assumption that departments are performing their tasks and responding to their responsibilities correctly.

Alternatively, shared governance may enable, as Orton and Weick (1990) suggest, a genuine reaffirmation of shared values. For example, sustainability office personnel consider how shared vision helps athletic departments, and other university departments for that matter, in identifying the potential synergies and leverage points of sustainability. In turn, these opportunities foster a sense of motivation toward sustainability action, which one respondent
summarizes as an emergent perspective on the “direction for how and what type of action to take.” Furthermore, another respondent suggests the coordinating council provides the athletic department with the drive to “get ahead and stay ahead” with peers on campus, which leverages the competitive edge that is synonymous with athletics competition. As such, shared sustainability governance in this context is active in promoting a common understanding of goals (Asmus & Griffin, 1993), as well as coordinating goals and skills between partners (Lawson et al., 2009).

**Preventing Misunderstandings.** Sharing values and perspectives is not one-directional. In fact, a number of respondents discuss how having the athletic department represented on the coordinating committee facilitates a deeper appreciation of the unique challenges faced by athletic programs. The following passage from one of the respondents embodies this mutually beneficial process:

> We understand athletics has special needs and concerns, but we might not fully understand what those concerns are. So to have them at the table, it's great. So for example, just turf, our baseball fields are turf. So for sustainability it reduces water I guess and pesticide use because it’s not real grass. But that wasn't their only reason for getting it, it was because we can't compete with southern schools because it's cold and shitty, you know, up here in spring. So we have to have artificial turf in order for our fields not to flood.

Similarly, another respondent discusses how a lack of involvement by several campus constituents, such as students, faculty, and staff, with the athletic department often leads to misinformed perceptions of decision-making within athletics. To which this same respondent claims:
Perhaps there may be an actual reason why the stadium lights are on all night long and there's no game. Maybe there’s an actual reason. Like they’re doing construction in there or something like that. And those kind of things come up in meeting and people were actually getting an answer, and they were like ‘Right. OK. That makes sense.’

Accordingly, shared sustainability governance is active in reducing information asymmetry (Saxton, 1997), and helping to prevent misunderstandings between governance members (Asmus & Griffin, 1993). As one respondent summarizes, “it makes the athletic department more personable,” which provides a platform from which to build trusting relationships and, potentially, successful outcomes (Burnside & Witkin, 2008).

Yet, overall, shared sustainability governance appears to compensate for the decentralized nature of university structures, which makes sustainability a discretionary endeavor. To do so, shared sustainability governance enhances leadership around specific targets by reaffirming with the athletic department the value of sustainability.

‘A Perfect Storm’: Supplementing Shared Sustainability Governance

Despite athletic department involvement in shared sustainability governance furnishing a number of benefits, the benefits were neither uniform nor absolute. As an example, collaboration was understood as a benefit by some, but by others collaboration was mostly one-sided. On the topic of collaboration between the athletic department and other university departments or campus constituents, one respondent replies that most of these collaborations are “people reaching out and engaging them [the athletic department] and it’s not happening the other way yet.” Furthermore, another respondent expresses their frustration by stating how they are “getting participation on a campus-wide basis from athletics, but not seeing a whole lot within the athletics department just yet.” So, there is a sense that athletic departments are, in
some ways, honoring the commitment of attending coordinating council meetings, but not necessarily converting this commitment into action. In this sense, the shared sustainability governance structures represent an epistemic community where actors share basic causal beliefs and normative values (Haas, 1992). However, as Newig, Günther, and Pahl-Wostl (2010) argue, participation in these communities does not necessarily involve the same level of interest in the problem at stake, which in this case is sustainability.

Similarly, the coercive nature of appointment-based engagement in shared sustainability governance is likely a step too far for some athletic departments. As one respondent explains:

They see the benefit, but I think it’s still at the point where we’re making them do something. So I think it’s been a long time where I think that’s where we’re perceived as we’re telling them to do something rather than working with them.

Herein lies one of the challenges presented by forcing attention toward specific targets or goals within a decentralized system. By forcing athletic department attention toward sustainability, athletics personnel perhaps feel constrained to operate within the parameters of the university. As is discussed in Chapter 2, intercollegiate athletics draws simultaneously from its relation to the university as well as the sport industry. Fittingly, another sustainability office representative uses a sporting metaphor to effectively relate this thought by suggesting “they’re [the athletic department] sort of playing the game and they’re on the field. I'm not sure if they've really realized what the end goal is.” Such a quandary leaves some sustainability office personnel increasingly frustrated in their attempts to help athletic departments realize the full extent to which sustainability creates value. To this end, one respondent claims: “It is a nut that we have officially yet to crack and even with athletics being a part of the committee on sustainability they weren’t necessarily actively pushing for sustainable practices in athletics.”
Ultimately, the overriding consensus among sustainability office personnel interviewed in this study is that shared sustainability governance involvement only stands to enhance commitment when used in concert with other change levers. This sentiment is most accurately explained by one respondent who describes a scenario whereby “you [the university] have support from the top down and the bottom up, and then you have some champions in the middle that helps to connect that. It's rare to find that, to find all of those factors together in the same institution, a perfect storm.” Figure 2.3 is a visual representation of the change levers the respondents disclosed, which either they have successfully deployed or that they feel would be a success given the complexities of engaging athletic departments in the sustainability journey.

Casper and Pfahl (2015) suggest “environmental activities blur lines between distinct management functions making it both a top-down and bottom-up issues at the same time” (p. 24). Figure 2.3 embodies the notion of the ‘perfect storm’ by organizing the disclosed change levers through not only a top-down, bottom-up approach, but a multidimensional, all-angles approach. Specifically, there are strategic moves that the university could enforce in a top-down manner, or whereby a critical mass could focus attention through bottom-up endeavors. Likewise, there are strategic moves that the university could introduce to incentivize lateral collaboration or involvement in sustainability, as well as measures the athletic department could activate from an inside-out perspective. As such, the identification of these supplemental change levers represent the “nonobvious sources of order that administrators can use to influence dispersed organizations” (Orton & Weick, 1990, p. 211). Table 2.3 provides additional context and supporting quotations for each of the proposed change levers.
Conclusion

Compensations proved a relevant voice to use within the loosely coupled context of athletic departments and wider university sustainability goals and priorities, as most respondents within this study consider this level of coupling to be a sub-optimal state. Yet, perhaps loose coupling in this context is more advantageous than disadvantageous. As one respondent claims: “The university is so diffuse. There is a lot of autonomy. Ideas are coming from departments. How can we do x, y and z? There is no top-down pressure being applied.” In such a scenario, the coordinating council empowers the representatives to go back to their departments and say this is worthwhile, rather than returning simply to communicate and update on the university’s overall strategy and goals. Furthermore, Haas (2004) suggests the best institutional structure for dealing with complex policy environments is, in fact, loose and decentralized, but also dense networks. Haas suggests network density enables the quick relay of information, and that the loosely coupled and decentralized nature of such networks allow the inactivity of one actor not to jeopardize the efforts of the whole. Accordingly, an opportunity exists to research shared sustainability governance through a voice of direct effects or organizational outcomes. After all, and as discussed at length in Chapter 2, athletic departments also turn to their professional sport counterparts for indications on what sort of guiding principles to apply to sustainability, and constraining these external opportunities through system tightening could serve to further stall efforts to focus attention within this domain even longer.

Nevertheless, the insight generated through this study points to a number of practical implications for sustainability office personnel. Likewise, such implications are potentially useful for athletic department staff who identify as sustainability leads, and who wish to create greater buy-in internally from colleagues. First, justification should be made for athletic
department involvement in shared sustainability governance. For example, does the athletic department boast high visibility as well as being a high impact campus department? If yes, then athletics likely deserves a seat at the table as a critical cog in the twofold responsibility of universities to sustainability (i.e., as an operation to be changed, and as a change agent). Second, which is dependent upon the model of shared governance being deployed, is where exactly the athletics department are engaged in the system. Athletics, as understood through several of the respondents within this study, has the potential to be the ‘sustainable front porch’ of the university. However, depending on the context, there might be more merit in engaging the athletics department through a thematic subcommittee where tighter coupling exists, and where greater leverage points and synergies can be pitched to optimize levels of engagement.

Third, identifying the most appropriate person to represent the athletics department is crucial, as it is this individual who will serve as a more formal bridge with the university’s sustainability goals. Fourth, which is connected to the third practical implication, is the extent to which the shared sustainability governance system will focus the attention of the athletic department. In other words, who will represent the athletic department and will this representative be appointed or approached with a request to voluntary join the coordinating council and/or thematic subcommittee? Such decisions are not solely a matter for athletic departments. However, appointing the Director of Athletics to the coordinating council does not automatically amount to an institutionalized commitment. Rather, sustainability office personnel should match as best they can the personal interest and passion for sustainability of existing athletic department with an appropriate means by which to make this engagement routine. Recognizing the relatively high turnover of staff within athletic positions, those charged with heading up shared sustainability governance systems should perhaps focus on succession
planning. For example, campuses that address leadership continuity as well as provide training and advice to new officers are more successful at governance (Lee, 1991).

Fourth, and most importantly, efforts to engage athletic departments in shared sustainability governance should be supplemented by other change levers. Ultimately, the aspirational condition is to achieve the ‘perfect storm,’ which calls for a combination of top-down, bottom-up, lateral, or inside-out tactics. While further research is necessary to tease out the importance and effectiveness of multi-dimensional efforts to engage athletic departments in sustainability action, evidence within this study suggests that securing an institutionalized commitment is a complex matter, which involves several moving parts.
References


Reponen, T. (1999). Is leadership possible at loosely coupled organizations such as universities? Higher Education Policy, 12(3), 237-244.


### Table 2.1. Institutional Description

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### Table 2.2. Athletic Department Engagement in Shared Sustainability Governance

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<tr>
<th>Institution Location/Description</th>
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<th>Shared Governance Charge</th>
<th>Athletic Department Council Representation</th>
<th>Athletic Department Council Representative</th>
<th>Method of Securing Representation</th>
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Table 2.2. (Continued)

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### Table 2.3. Levers for Forcing Athletic Department Attention toward Sustainability

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<th>Tactical Lever</th>
<th>Origin</th>
<th>Representative quotation</th>
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<td>Rigorous sustainability goals</td>
<td>Top-down</td>
<td>“Until all sustainability is just incorporated into every single unit or until out climate commitments have some sort of teeth behind them and saying you must do it.”</td>
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<td></td>
<td></td>
<td>“I think the opportunity we’ve had is just applying these increasingly rigorous sustainability goals for all facilities to athletics, which sort of brings them along in a way that maybe they haven’t called out for themselves.”</td>
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<tr>
<td>Leadership directives</td>
<td>Top-down</td>
<td>“My hope would be that the department’s priorities are synced with the university’s priorities, and values, and one of those is sustainability. So it is my hope that would filter down.”</td>
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<tr>
<td>‘Low hanging fruit’</td>
<td>Lateral</td>
<td>I think there’s an interest within waste management and recycling and composting. I say that just because that’s the thing we spend the most time talking about and folks seem to get the most excited about. We do have a lot of low hanging fruit opportunities there within that realm. So that might be one sort of focal area where I can sort of see a little bit more traction with them.”</td>
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<tr>
<td>Voluntary initiatives</td>
<td>Lateral</td>
<td>“We are also working on a program that is in-house that allows departments to sign up to make their travel carbon neutral or by helping the university to reduce greenhouse emissions through efficiency projects on campus. We are hoping that be using programs like this it will allow departments and events to advertise the fact that they are doing something that is carbon neutral and get credit for that, that will apply pressure, peer pressure.”</td>
</tr>
<tr>
<td>Internal framework</td>
<td>Inside-out</td>
<td>“I would say the responsibility of the university writ large with sustainability would be to create a culture where somebody on the inside of athletics says, ‘you know what, sustainability is really part of what we do and we need to call it out here.’”</td>
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<tr>
<td></td>
<td></td>
<td>“I think having a framework for them can sort of clearly define their expectations, their strategies, to make athletics more sustainable.”</td>
</tr>
<tr>
<td>Leadership support</td>
<td>Inside-out</td>
<td>“I would think it would have to be our Athletics Director wanting sustainability to be part of what they do. And that might happen through conversations with our President. … But if it became part of the leadership team and one of their goals was around sustainability, then I could imagine a greater involvement with athletics.”</td>
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<td></td>
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<td>But I think it they are going to go all in, then it’s going to take that top level leadership to say, ‘look, this is really important.’ We want a culture of winning and winning games, but we’re not just winning on the field, but we’re winning off the field.”</td>
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<td>Table 2.3. (Continued)</td>
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<tr>
<td><strong>Sustainability coordinator</strong></td>
<td>Inside-out</td>
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<td></td>
<td>“I think it would take dedicated time from the current staff. We can help support from the outside, but with larger departments on campus there are certain sub-cultures in these departments. And so until those sub-cultures recognize sustainability as part of their daily practices, I think any change that comes from the outside will only be temporary.”</td>
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<td></td>
<td>“For the athletics department to become more sustainable and really push that, honestly it’s having someone that’s dedicated 24/7 to the operations of our athletics department.”</td>
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<tr>
<td><strong>Sponsorship</strong></td>
<td>Inside-out</td>
<td></td>
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<td></td>
<td>“The other would be sponsorship. Nothing has come to fruition yet, but that is something that if it did happen, that would be a much easier way for athletics, especially the operations, to really make it a priority. That would be a game changer.”</td>
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<tr>
<td><strong>Student-athlete action</strong></td>
<td>Bottom-up</td>
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<td>“Two years ago I had a student working on zero waste. They worked a lot on reducing waste and raising awareness on campus. … Our Athletics Director was engaged in that and he helped and advocated for building composting into some of the athletics events and recycling. So that connection, that student-to-director at a smaller scale and not as part of the large group was probably more impactful than coming to the large group.”</td>
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<td></td>
<td>“I think student interest goes a long, long way. And so if some of the sports teams are interested in this, saying that it is a huge problem for the future of the sport, that would go a long way. I think that goes farther than anything I can say or do as a staff member.”</td>
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<td></td>
<td>“I think on a college campus the more the student are invested in, involved in something, the better chance of success we have.”</td>
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Figure 2.1. Models of Shared Governance (adapted from Yanko, Hardt, & Bradstock, 1995)

Figure 2.2. Target Population
Figure 2.3. Levers for Forcing Athletic Department Attention toward Sustainability
CHAPTER 4: TEAMWORK MAKES THE NET-WORK: PARTICIPANT-GOVERNED NETWORKS AND ATHLETICS SUSTAINABILITY COLLABORATION

Abstract

Collaborative processes are the bedrock of sustainability action within intercollegiate athletics. The expertise that athletics programs leverage from within the university as well as outside goes a long way to mitigating some of the risks and barriers preventing more advanced levels of sustainability integration. Many athletic departments are turning to cross-functional green teams as a mechanism from which to control and coordinate sustainability initiatives by convening periodic meetings to discuss recent successes and future plans. As such, green teams provide a sort of halfway house between, on one end, university-level shared governance, and, on the other end, governance through action. To date, research on cross-functional green teams has focused on their purpose and formation, including who and why certain individuals become representatives on such teams. Subsequently, an opportunity exists to explore the influence of network governance teams on wider collaborative networks. Using organizational network analysis, this paper studies an athletic sustainability collaborative network as a single case study. More specifically, the intent was to understand how the presence of network governance enables collective learning throughout the collaborative network by facilitating information transmission and deliberation. The results point to a key role for network governance in driving heterophilous and multiplex relations across the collaborative network. Furthermore, the governance team meetings provide a forum for planning and coordination, which will be critical for the network moving forward in transitioning beyond single-loop to double-learning learning, and more sophisticated, advanced forms of business sustainability.

Keywords: athletics, sustainability, collective learning, network analysis, deliberation
Introduction

Environmental issues are cause for increasing concern for sport organizations. In the context of intercollegiate athletics, sustainability is a priority at a growing number of universities and colleges, but not the primary focus across all campuses (McCullough, Kellison, & Wendling, 2018). A number of contributing factors support this assessment. Johnston and Newport (2012) suggest “athletic programs are under pressure to win, and perhaps this pressure trumps the ability to focus on greener outcomes and accountability” (p. 223). Alternatively, many managers in charge of environmental operations are working to comply with standards and guidelines (Pfahl, 2010), but these policies vary in the lengths they go to mandate green building construction, and sustainable operations and maintenance (University of New Hampshire & Sightlines, 2016). For many sport managers addressing sustainability issues is neither part of their job description nor area of personal expertise, which means “attempts to address organizationally-related environmental strategies have the potential to fall short of goals and/or expectations” (Pfahl, p. 39). As a result, intercollegiate athletics sustainability is predominantly undertaken through collaborative processes across university units (McCullough et al.; Pfahl; Pfahl, Casper, Trendafilova, McCullough, & Nguyen, 2015).

The collaborative networks of partners working on athletics-related sustainability initiatives are often supplemented through the formation of cross-functional green teams (McCullough et al., 2018; Pfahl, 2010). These green teams are voluntary and formal collaborative arrangements between relevant internal and external stakeholders that can help advance an organization’s sustainability initiatives (McCullough et al.; NRDC, 2013). Moreover, a green team is a planning and policy making team whose impact extends into organization operations and the external world of its stakeholders (Pfahl). As such, green teams
serve to formalize a multiplicity of inter- and intra-organizational partnerships through network governance, which involves the institutionalization of relations as well as the transmission of information and learning processes (Newig, Günther, & Pahl-Wostl, 2010). Therefore, green teams occupy a central role within intercollegiate athletics sustainability networks. For example, McCullough and colleagues suggest green teams operate autonomously with one overarching goal, which allows these more formalized collaborative efforts to bridge potential differences in organizational perspective and orient multiple partners toward a pro-environmental mission.

Previous research on intercollegiate athletics green teams focuses on the purpose, formation and outcomes of such governance arrangements (McCullough et al., 2018; Pfahl, 2010). An opportunity exists to build on this research and further establish the benefits of green teams, and, more specifically, the value these voluntary, yet formal efforts add beyond the dyadic collaborative partnerships that exist perpetually across university campuses. With this in mind, the purpose of this paper is to examine the network relations between university departments, campus constituents, and other external parties that surround intercollegiate athletics sustainability efforts. To do this, a sociocentric network analysis of a single case study is conducted. The remainder of this paper is structured as follows. The paper begins with a summary of the general background to sustainability in intercollegiate athletics. Second, the paper introduces the theoretical undergirding of the study. Then, the paper describes the study methods, and presents the study results, which then leads into a separate section that discusses and interprets these results. Finally, the paper’s conclusion offers a consideration of both practical and research implications.

**Background**

“The primary role of institutions of higher education can be viewed in two ways: universities can be perceived as an institution that needs to be changed or universities can be
perceived as a potential change agent” (Stephens, Hernandez, Roman, Graham, & Scholz, 2008, p. 320). For example, universities are adopting a number of infrastructural and operational business practices to reduce their ecological footprint. Such efforts include waste management strategies like recycling and composting (Hottle, Bilec, Brown, & Landis, 2015) and the reduction of greenhouse gas emissions (Klein-Banai & Theis, 2011). Additionally, universities are operationalizing their potential as sustainability change agents by integrating sustainability into the curriculum, student and faculty life, and the wider community (Dmochowski, Garofalo, Fisher, Greene, & Gambogi, 2016).

In many ways, sustainability efforts in intercollegiate athletics defy the complexities of relationship management and strategic environmental planning that exist on university campuses (Casper, Pfahl & McSherry, 2012). Part of this success is the willingness of athletic departments to engage in collaborative processes whereby “tangible and intangible resource areas (as discussed earlier) can be drawn upon to strengthen, replace, or fill in weaknesses in an organization’s resource base” (Pfahl, 2010, p. 43). Another part of this success is the establishment of cross-functional green teams, which draw on the various environmental experiences of organizational members as well as available resources (Pfahl). Furthermore, Pfahl’s framework for action and sustainable environmental performance in sport and recreation organizations suggests the charge of internal sustainability teams is to develop and conduct operational changes, organizational policies, and daily/strategic practices.

Alternatively, McCullough et al. (2018) liken the role of green teams to cross-sector social partnerships whereby member organizations within the partnership actively cross their functional boundaries to achieve societal outcomes. Yet, the authors outline how each members’ responsibility to the team is “secondary to their primary roles on campus (i.e., their professional
and/or academic obligations)” (p. 71), as well as how some members feel integral to the committee, while others do not. McCullough and colleagues also suggest the formation of green teams links athletic departments to the broad sustainability goals of the university, and provides a medium through which university and athletic department personnel can work collaboratively toward mutual goals. In essence, green teams are active in blurring the boundaries between different departments and their assumed, primary functions.

**Theoretical Foundations**

**Collaborative Networks**

Collaboration is “a process of joint decision making among key stakeholders of a problem domain about the future that domain” (Gray, 1989, p. 227). Therefore, collaboration is ‘what one does’ (i.e., collaborate or to work together in a joined-up way) (Carnwell & Carson, 2008). In the context of sustainability within higher education, Mader, Scott, and Abdul Razak (2013) posit collaboration as a key enabling strategy of organizational change. More specifically, the authors emphasize the importance of fostering a culture where “teams involved in cross-faculty and inter-unit projects are supported, recognized and rewarded” (p. 271). In terms of athletics’ contribution to sustainability, athletic department personnel often lack the environmental skills or training to initiate meaningful action, which necessitates a process of collaboration with other university departments (Pfahl et al., 2015). To this end, Pfahl and colleagues note the sustainability office as an important on-campus ally, but suggest such collaborative relationships are mostly one-directional, rather than true joint efforts, with sustainability office personnel dominating exchanges from initiation through to action. In addition, there exists significant variation among athletic-university collaborative relationships
due to differences in academic units, budget, resource deficiencies, and personal motivation for change.

“Collaboration through the use of networks and partnerships to get results citizens care about is a growing trend that appears to have staying power” (Kamensky, Burlin, & Abramson, 2004, p. 5). As such, Kamensky and colleagues suggest collaboration makes use of tools ranging from more traditional coordination and cooperation processes to the construction of both informal and formal networks. Networks are, however, different than partnerships. McQuaid (2010) emphasizes how the term partnership “covers a multi-dimensional continuum of widely differing concepts and practices and is used to describe a variety of types of relationship in a myriad of circumstances and locations” (p. 128). Semantically, however, the term partnership is a noun, which serves as a label for an inter-organizational relation (Cropper, Ebers, Huxham, & Rin, 2008). More specifically, “partnerships tend to be more formal joint ventures with binding obligations for action” (Kamensky et al., p. 8). Kamensky and colleagues suggest that networks, on the other hand, are more informal relationships, which are predicated on voluntary obligations to act. Another difference, the authors claim, is how networks are organized around common shared goals, while partnerships are often organized around common outputs and results.

Provan and Kenis (2007) define networks as “groups of three or more legally autonomous organizations that work together to achieve not only their own goals but also a collective goal” (p. 231). As such, Provan and Kenis offer a narrow definition, which implies networks are inter-organizational entities. Yet, decentralization within higher education where basic units have fairly independent decision-making power over their activities (Reponen, 1999) renders groups of intra-organizational departments within this context as comparable to autonomous organizations. Furthermore, a network represents “the webs of relationships in
which people or entities are embedded” (Quatman & Chelladurai, 2008). Chapter 2 discusses how intercollegiate athletics draws a sense of autonomy from the field’s connection with the sport industry writ large, but also proposes how intercollegiate athletics is simultaneously influenced by the field’s embeddedness within the higher education system. Collaborative networks imply longer-term multi-stakeholder commitments (Head, 2008). Moreover, Head suggests collaborative networks involve members becoming more closely linked around a realization that they “must extend themselves beyond their familiar home-base roles and functions, and begin to create new roles and functions that are specific to the collaboration” (p. 736). Accordingly, and hereafter, the term collaborative network is used to represent the multiplicity of actors who are working together on university campuses to deliver athletics-related sustainability action.

**Network Governance as Compensation for Loose Coupling**

Kamesky et al. (2004) suggest networks “tend to be time-consuming to develop and fragile to maintain” (p. 10), which is indicative of their informal nature. Accordingly, networks are often supplemented by governance structures, which involve “the use of institutions and structures of authority and collaboration to allocate resources and to coordinate and control joint action across the network as a whole” (Provan & Kenis, 2007, p. 231). Network governance is gaining traction within sustainability and environmental management as a result of the need to solve complex problems, which, in turn, necessitates the exchange of different sources of knowledge and competencies to foster both individual and collective learning (Newig et al., 2010). Within higher education sustainability, governance is a key strategic enabler of organizational change (Mader et al., 2013). Among other key governance steps such as appointing a senior accountable officer with a direct reporting line to the Vice Chancellor or
President, Mader and colleagues suggest universities should establish a “senior leadership and coordination team to ensure consistent cross-departmental and unit linkages and collaboration” (p. 271). While these teams vary in name (e.g., environmental steering committees, environmental action teams, sustainability councils, etc.), their goal is to develop and conduct a variety of operational changes, organizational policies, and daily/strategic practices (Pfahl, 2010).

“Inviting different sources of knowledge and expertise in environmental governance can be done in different forms of participatory governance and collaborative management” (Newig et al., 2010). Provan and Kenis (2007) describe three forms of network governance: participant-governed networks, lead organization-governed networks, and the Network Administrative Organization. Participant-governed networks is the simplest and most common form of participant governance whereby the network members themselves provide governance. Furthermore, participant-governed networks exist on a formal-informal continuum. At the formal end, governance is accomplished through regular meetings of designated organizational representatives, while at the informal end, governance is accomplished through the ongoing, uncoordinated efforts of network members. A further, formal variation of participant-governed networks is shared participant-governed networks. Shared governance refers to “giving various groups of people a share in key decision-making processes, often through elected representation; and allowing certain groups to exercise primary responsibility for specific areas of decision making” (Olson, 2009).

According to Head (2008), network-governance approaches assume the presence of governance in networks is central to network learning and, in turn, quality of network outcomes. Inter- and intra-organizational networks are also systems, whereby sub-units are coupled with
sub-units (Snook, 2000) as coupling elements (Beekun & Glick, 2001). Moreover, systems surround a specific content area, which provides context for the relationships between coupling elements (Beekun & Glick). Head’s assumption that network governance is a compulsory part of successful networks posits systems as naturally diffuse. Therefore, Head’s work is characteristic of the voice of compensations, which views loose coupling within a system as an unsatisfactory condition that should be reversed (Orton & Weick, 1990). Network governance becomes a coupling mechanism, which asserts influence over the strength, directness, consistency, and dependence between coupling elements (Beekun & Glick).

Learning is critical within the context of environmental management and sustainability as “frequent knowledge gaps regarding complex social-ecological issues call for an integration of different kinds of expertise as provided by a larger number of actors” (Newig et al., 2010). Moreover, Newig and colleagues suggest networks provide access to novel information, which is generated through collective experience. Furthermore, the authors suggest networks enable actors to utilize this information to adapt both the methods used to achieve certain goals (i.e., single-loop learning) and the goals themselves (i.e., double-loop learning). Finally, Newig et al. outline how in order to facilitate this learning, networks must facilitate information transmission and deliberation (i.e., idea exchange) between actors, as well as foster resilience (i.e., the capacity of a network to remain intact when subject to pressure or sudden change).

**Linking Network Governance and Learning through the Social Relational Approach**

By way of a concise definition, the social relational approach “seeks to explain and shed light on human and systems behaviors by investigating how patterns of social relations among actors within a system enable and constrain actors and processes” (Bodin et al., 2011, p. 7). Social network theory approaches networks from a social relational perspective where the “dynamic relations embedded within the unfolding processes become the primary units of
social network theory is distinguishable from other theoretical frameworks as it emphasizes the importance of concepts and information on relationships among units (Wasserman & Faust, 1994), which when compared to other social science theories makes it one of few frameworks that is not reductionist (Kadushin, 2004).

Underpinning social network theory from a methodological standpoint is social network analysis, which emphasizes the importance of concepts and information on relationships among units (Wasserman & Faust). Wellman (1988) offers five characteristics of network analyses, which are: 1) behavior is interpreted through structural constraints (not inner forces), 2) analyses focuses on relations between units, 3) relationships are understood among multiple actors in terms of their joint affect, 4) structure is treated as a network of networks, and 5) analytic methods deal directly with the relational nature of social structure.

Beekun and Glick (2001) suggest one conceptual approach that can capture the dialectical nature of loose coupling is network analysis. Newig et al. (2010) connect network analysis to collective learning and governance issues through various network measures. First, the authors suggest the overall nature of relations in a network likely affects the network’s potential to foster learning, and propose homophily (i.e., the degree to which two actors in a network interacting with each other have certain similar attributes) and multiplexity (i.e., where network relations are of different types) as two relevant measures. Specifically, a network with high homophily is supposed to distribute information quickly, and multiplexity supports information diffusion. Second, tie strength is another facilitator of learning whereby stronger ties lead to greater information-sharing power, while weak ties often fail to create trust, shared values, and norms. Network size and density relate more to deliberative processes whereby Newig and colleagues suggest larger networks restrict opportunities for members to engage in deliberative processes,
while denser network foster greater deliberation. Finally, information transmission is easier in highly centralized networks as information can flow quickly between actors.

Connecting network governance and collective learning to the social relational approach leads to the study’s primary research question:

**RQ3.1.** To what extent does an athletics sustainability network governance team facilitate collective learning across an athletics sustainability collaborative network?

**Methods**

**Study Setting**

Like many other universities, athletics sustainability at Southeastern State University began over 15 years ago with a tailgate recycling program at football games. The program engages and educates fans with the intent to reduce the amount of waste being sent to the landfill. Over time, the program expanded to include recycling efforts in-stadium, and later to include a more holistic waste management effort (i.e., through the integration of composting). Furthermore, the program now includes other sports beyond football. The program is delivered as a partnership between athletics and the on-campus waste management department as well as the contracted waste hauler, and draws on both paid and voluntary workers to implement the program on game days. Still to this day, the program remains the most visible athletics-related sustainability effort on campus.

Southeastern State University also boasts a stock of athletic facilities that integrate energy and water efficiency measures. Most notably, the university’s multipurpose arena boasts a Leadership in Energy and Environmental Design Silver certification at Silver level, and includes sustainable features such as the use of native or adaptive species in planting areas and a new energy-efficient HVAC system. More recently, a number of athletics facilities have been
retrofitted with efficient lighting, which, in turn, is enhancing light quality as well as making significant cost savings. Sustainability efforts also extend to fan engagement, and a number of athletic events are earmarked as specific green-themed games. These games provide an opportunity to engage and educate fans on at-home sustainable behaviors, and include a collaborative effort between university departments (e.g., sustainability office and the waste management department) and environmentally-oriented student groups.

In 2010, a cross-functional athletics sustainability team (hereafter referred to as the governance team) was established by the Sustainability department, a sub-unit of the facilities department, and the Sport Management department, a sub-unit of an academic college. Membership of the governance team has historically centered on university employees representing sub-units who are active in delivering athletics sustainability initiatives. Accordingly, the membership grew to include representatives from the athletics department (both the sub-units of facilities and marketing), the waste management department (another sub-unit of the facilities department), and campus dining. In total, 11 university employees became regular attendees of the governance team meetings (see Table 3.1). While frequency of meetings has changed over the years, in the most recent academic year the governance team convened twice each semester. The charge of the governance team is to create shared initiatives and collectively communicate the athletics sustainability story. The governance team is co-chaired by a senior leader from the sustainability office and the athletics department.

Sustainability efforts within the wider university pre-date those relating specifically to athletics. However, Southeastern State University’s formal university-level commitment to sustainability began with the creation of the first sustainability strategy in 2010. Since then, a sustainability policy has been introduced along with a refreshed strategic plan.
the university’s strategic plan exists through a councilor model of shared governance, which includes a coordinating council and a number of thematic working groups or sub-units (Yanko, Hardt, & Bradstock, 1995). Importantly, the athletics governance team does not connect formally to the governance structures of the university strategic plan, but representatives on the governance team are well-placed to emphasize the connections albeit through a more informal approach.

**Boundary Specification**

Newig and colleagues (2010) argue that if networks are defined according to a limited set of actors, the network boundary is indeed given by definition. Furthermore, the authors suggest that in the context of a governance network, one way to identify the members, or actors, is by considering who meets regularly as part of the group, which is consistent with a ‘realist’ approach to boundary specification (Wasserman & Faust, 1999). In the study setting, the members of the governance team, constitute the governance network, as these members are those who commit themselves to the governance task at hand (Knoepfel & Kissling-Näf, 1998). Therefore, six university sub-units, and, more specifically, 11 university employees are recognized as the boundaries, and, thus, egos of the governance network. Furthermore, while these employees and their sub-units are active as governance team members, they assume these positions as university employees and sub-units responsible for the majority of the athletics sustainability initiatives being delivered on campus (e.g., recycling and composting programs, green-themed games, etc.).

**Data Collection**

Contact information for the 11 university employee members of the governance team were retrieved from the co-chairs of the group. On May 6, 2019, an e-mail was sent to all
representatives to introduce the study and ask for participation. Participation involved a structured face-to-face interview. Rather than recording the interview, the researcher recorded answers to the interview questions on a log sheet in-situ and by hand. Over the course of May, all 11 network governance team members were interviewed, with interviews lasting an average of 15 minutes.

Network data was collected through open-ended questions, and the questions were derived from Newig et al.’s (2010) operationalization of network governance and learning. First, egos were asked to disclose the full list of alters they have interacted with relating to athletics sustainability initiatives over the past academic year (i.e., ‘Who do you work with on athletics-related sustainability initiatives?’). In addition, egos were asked to share what sub-unit, department or organization (if external) each of these alters was associated with. Once a full list of names was generated, then, second, egos were asked about the nature of each relationship (i.e., ‘What is the focus of your relationship with each of the people and organizations you have just listed?’). Detailed notes were recorded by the researcher, which were retrospectively coded using the Association for the Advancement of Sustainability in Higher Education’s (AASHE) self-reporting framework, the Sustainability Tracking, Assessment and Rating System (STARS). Specifically, within STARS 2.1, sustainability initiatives are broken down into five categories, and 19 sub-categories. At the sub-category level, initiatives are grouped according to their focus (e.g., curriculum, academics, buildings, energy, waste, public engagement, etc.). By using the sub-categories as a coding frame, potential existed for dyadic relations to have more than one focus (e.g., waste and energy).

Third, egos were asked about the frequency of interaction with each alter against each focus area (i.e., ‘How often do you interact with x around y?’). Responses to this question were
recorded by the researcher verbatim, but were coded after-the-fact through an iterative process. Accordingly, five frequency measures were created: at least once a week, at least once a month, once every other month, once a semester, and once a year. Finally, egos were asked about the consistency of these interactions (i.e., ‘Is your interaction with x around y consistent throughout the year?’). As a result, responses to this question were simply converted into a dichotomous measure of either consistent or inconsistent. The only attribute data collected was relating to the location of the sub-units which each identified alter was a part, which was a critical factor in determining the likeliness between actors within the network. This attribute data was collected through desk research by searching organizational structure charts from the university’s website. For external stakeholders and agencies, the researcher coded these actors based on core product/service likeness (e.g., sport organizations were considered as homophilous to athletics).

The interview data was transferred from the log sheets, through the previously mentioned coding process, to an edgelist format in Microsoft Excel. The next step involved aggregating the data from individual employee level, to sub-unit level. For example, three employees from the athletics facilities unit were aggregated to represent one unit-level response. Replicated ties were condensed to one tie based on frequency and consistency (i.e., the most frequent and consistent ties were retained). Finally, the data from each of the 11 distinct ego networks was combined into one large sociocentric network, which is referred to as the ‘connect the dots’ approach (Weeks, Clair, Borgatti, Radda, & Schensul, 2002).

To prepare the data for analysis, the relational data of frequency, multiplexity, and consistency was converted into a single measure of tie strength, which reflected a four-point scale: strong, moderately-strong, moderately-weak, and weak. For a tie between two actors to be measured as ‘strong,’ the relationship needed to include 1) at least weekly interaction, 2)
interaction across more than one sub-category of sustainability initiative, and 3) consistent interaction across the academic year. A tie with two of these three criteria was measured as ‘moderately-strong,’ one of the three as ‘moderately-weak,’ and none of the criteria as ‘weak.’

**Data Analysis**

The structural features of the athletics sustainability collaborative network (hereafter referred to as the collaborative network) were assessed using whole network measures of network size, density, homophily, and centralization. Furthermore, the same analysis was repeated, but minus the ties relating to the presence of the governance team (i.e., planning and coordination activities).

The structural features of the egos and their ties within the network were assessed using a combination of networks such as homophily and centrality, and a more descriptive process utilizing various indicators of tie strength (i.e., frequency, multiplexity, and consistency). In terms of the descriptive analysis, each of the ego-alter ties were measured in terms of the four-point tie strength scale, and, then, the same process was repeated minus the ties relating to planning and coordination. As such, this analysis highlighted which ego-alter relations would weaken in the absence of the athletics sustainability team.

Data analysis was conducted using UCINET 6.

**Results**

Figure 3.1 provides a graphical representation of the collaborative network. Nodes are plotted manually with university-based actors in the core of the network, and external stakeholders and agencies as peripheral actors. Furthermore, the nodes are color coded as follows: red nodes represent sub-units within the athletics department, green nodes represent sub-units within the facilities division, black nodes are campus constituents, yellow nodes are
university-based sub-units that are neither part of the athletics nor facilities departments, and purple nodes are external stakeholders and agencies. Nodes are also sized by centrality, and the ties are weighted based on the four-point tie strength scale that combines frequency, multiplexity, and consistency.

Whole Network Measures

Beyond the six members of the governance team, egos identified a further 20 university departments/sub-units, campus constituents, and external stakeholders/agencies as active participants within the collaborative network, which provided an overall network size of 26 actors. More specifically, 17 of the actors within the network exist as part of the university, while nine are external stakeholders and agencies. Furthermore, of the 17 university-based actors, seven are sub-units within the athletics department, six are sub-units within the wider facilities division, two are campus constituent groups (e.g., students and student groups), one is an academic department, and one is part of the university’s catering and hospitality department. Ties within this undirected network focus on nine of the 19 AASHE STARS sub-categories: curriculum, research, campus engagement, public engagement, energy, grounds, purchasing, waste, and coordinating and planning. The network minus the governance team does not impact network size. However, the network minus the governance team does reduce the focus sub-categories to eight, with coordinating and planning no longer a focus of the network.

The network density of .200 indicates that 20 percent of links which could possibly exist among actors within the network do in fact exist (Mitchel, 1969). Minus the governance team, network density decreases to .182 or 18.2 percent of total possible ties utilized. Network centralization refers to overall cohesion or integration by assessing how central the most central node in a network is in comparison to every other node (Sinclair, 2009). The network
centralization of .607 indicates that nodes within the network neither achieve the same centrality score nor are nodes dominated by one specific actor. Minus the governance team, the network centralization score is .583. Results of network centralization suggest the presence of planning and coordination reduces the likelihood of nodes being dominated by particular focal points and actors within the network. Finally, the E-I Index measures homophily in a network by comparing the relative density of internal connections within a group and the number of connections this group has to others groups (Krackhardt & Stern, 1998). Therefore, the E-I Index is used in this study to measure if ties within the network are typically part of homophilous or heterophilous relationships. An E-I Index score of .415 (YULES Q .138) suggests a greater tendency for the network to include heterophilous interactions. Minus the governance team, the E-I Index score is .390 (YULES Q .172), which suggests that without planning and coordination in the network the interactions are less likely to include heterophilous interactions, albeit only slightly.

**Local Measures**

Homophilous interactions between facilities-related actors is the most prevalent interaction within the athletics sustainability collaborative network (36.1 percent). Interestingly, the next most prevalent interaction is the heterophilous interactions between athletics-related actors and facilities-related actors (27.2 percent). Furthermore, athletics-related actors are less likely to engage in homophilous interactions with like-minded sub-units and external agencies (16.7 percent), and even less likely to engage in heterophilous interactions with academics-related actors (7.4 percent). Minus the governance team, homophilous interactions between facilities-related actors are even more prevalent (77.8 percent). Similarly, the likeliness of heterophilous interactions between athletics-related actors and facilities-related actors increases
to 40.7 percent, and, likewise, homophilous athletics-related interactions increase to 27.8 percent. In essence, the governance team is contributing a greater sense of heterophilous interaction throughout the network.

As shown in Figure 3.1 and Table 3.2, Athletics Facilities occupies a central role within the network, with a normalized degree centrality of .440. Additionally, the other members of the governance team also play a central role in the network. However, minus the governance team, the normalized degree centrality of the network governance members decrease (see Table 3.2). Most notably, the Sport Management department experiences a greater reduction in degree centrality in comparison to the other governance team members (from .340 to .230).

Table 3.3 categorizes the strength of tie for all relations of governance team members. To recap, in this study tie strength is a combined measure of frequency, multiplexity, and consistency. The results suggest Athletics Facilities and Waste Management possess the greatest number of strong ties (four each). The directional arrows represent what would to network ties minus the governance team. More specifically, one arrow denotes a one-step decrease in tie strength (e.g., from strong to moderately-strong), while two arrows denote a two-step decrease (e.g., from strong to moderately-strong to moderately-weak). As the table shows, Athletics Facilities, the most central actor within the network, would lose all strong ties in the absence of governance team. Furthermore, all other governance team members would experience a weakening in strength of at least three ties.

**Discussion**

For the most part, network representatives were unable to share examples of planning and coordination interactions outside of the governance team. Therefore, the governance team is
essential in enabling deliberation among the members of the governance team. More specifically, the governance team meetings provide a forum in which to engage in genuine exchange of ideas and arguments, regardless of societal power asymmetries (Habermas, 1981). In addition, many of the governance team members, both as individuals, but especially as university sub-units, are mainstays since the formation of the governance team in 2010. Subsequently, groups in which actors know each other show more potential for deliberation (Newig et al., 2010). Yet, the intensity of the interactions, both in terms of frequency (once every other month), but then also in terms of strategic intent, means that the governance team does not regularly produce creative ideas and solutions (Newig et al.).

Newig and colleagues (2010) claim “the more actors there are, the more there is to learn from them.” There are 17 actors within the collaborative network who exist internal to the university and a further nine sets of external actors (e.g., colleges and universities represent one actor in the network analysis, but multiple actors in reality). Only six actors convene the governance team. Yet, there are examples throughout the year where the governance team invited additional university representatives to attend meetings on an ad-hoc, as-and-when-needed basis (e.g., Energy Management and the Multimedia Rights Holders). Newig et al. suggest large networks problematize deliberative processes. Furthermore, Gomes-Casseres (1994) claims too many partners within a network places overwhelming demands on resources, as well as on the ability to define a common goal. Craps (2003) suggests the optimal group size for deliberation is eight to 15 actors, which means the size of the governance team at Southeastern State University aligns with best practice guidelines.

Haas (2004) suggests that along with loose coupling and decentralization, it is the density of networks that facilitate the quick relay of information. Moreover, Newig and colleagues’
(2010) claim the denser a network, the more easily information will be transmitted. The governance team serves to increase the density of the network, albeit only slightly. However, the overall density of the collaborative network is low, which is surprising considering how the majority of actors within the collaborative network are internal to the university. Newig et al. posit less dense networks as likely causes of information distortion as transmission occurs along specific paths between actors as opposed to rippling across myriad relations. To this end, Crona and Bodin (2006) note that information transmission is typically easier in centralized networks, and Newig et al. claim this is a result of centralized networks being able to find the quickest path to peripheral actors through central actors. So, the collaborative network has low density, but moderate levels of centralization, which means that information likely flows through the network via a number of central actors, which in this case is the members of the governance team.

Homophily is based on the premise that knowledge and flow of ideas mostly occurs among individuals who are similar (Rogers, 1995). Overall, the collaborative network demonstrates a tendency to seek out heterophilious interactions, and the governance team further accentuates this tendency. These findings are indicative of how athletic department personnel seek expertise from non-sporting university departments and/or external agencies for their sustainability solutions. In essence, the governance team increases heterophily, which is critical in moving toward more advanced stages of business sustainability, like with double-loop learning (Newig et al., 2010). Furthermore, heterophilous interactions are a further indicator that organizations are taking into consideration the needs of their stakeholders in the business decisions they are making, which is symptomatic of the outside-in organizational perspective (Dyllick & Muff, 2016).
Additionally, Newig and colleagues (2010) also suggest “the frequent knowledge gaps regarding complex social-ecological issues call for an integration of different kinds of expertise.” The author’s statement raises important questions about the representation of the governance team relative to the representation of the collaborative network in totality. In this case, among the six members, the governance team includes two sub-units from the facilities division and two sub-units from the athletics department. However, the nature of the ties in the network suggests these representative sub-units are not necessarily representing their wider division/department. As examples, neither Athletics Facilities nor Athletics Marketing interact with Athletics Student-Athlete Support on sustainability-related matters, but Sustainability, a sub-unit with the facilities division, does. Likewise, Capital Projects, Building Commissioning, and Grounds, all sub-units within the facilities division, interact with Athletics Facilities on sustainability-related matters, but not Sustainability.

These findings have implications for what is considered as ‘representation’ in non-elected capacities, like sitting on governance teams. For example, non-elected representatives may represent specific needs, interests, or wants that are in some way detached from the wider body being represented (Chapman & Lowndes, 2014). It is also likely that, how Agranoff (2004) suggests, “when administrators from different agencies come together to solve problems or to inform one another, most operate differently than in their home agencies” (p. 69). These behavioral or attitudinal changes may be positive or negative. As an example, an athletics representative may experience a sense of empowerment during governance team meetings, but a lack of appetite change within the athletic department may stifle this enthusiasm when this representative returns to his or her ‘day job.’ Green teams also typically include representatives from external agencies including sponsorship companies, concessionaires, and environmental
NGOs (McCullough et al., 2018). More specifically, McCullough and colleagues found that as members of the athletic department began to defer to outside experts, the need to include individuals outside of athletics became clearer, which was spanning the boundaries of the athletic department and its support system. Yet, the governance team in this study includes a distinct lack of external representation, which, in turn, limits the expertise from which the network can draw from.

**Conclusion**

Overall, the results suggest the collaborative network is relatively small, with low density among actors, moderately-low centralization, and a tendency to include heterophilous interactions. In turn, the governance team promotes greater density, reduces centralization, and increases the likelihood of heterophilous network interactions. As such, the governance team has an important role to play in learning processes across the network. The collaborative network does demonstrate characteristics of double-loop learning (i.e., a reflection on the goals themselves and on the interrelations between the network members (Newig et al., 2010)). Specifically, the heterophilous network interactions encouraged by the governance team demonstrates a willingness of network members to search for advice and opinion from actors different to themselves (Pahl-Wostl, 2009). However, the charge of the team remains consistent with a single-loop learning approach, which is when “an actor group reflects on the experiences of collective action, but only transfers this information in a way to reach a pre-determined goal” (Newig et al.). Take the governance team charge, for example, which is to create shared initiatives and collectively communicate the athletics sustainability story. Such a purpose embodies a distinct action-orientation, rather than collaborating and coordinating to control sustainability action in athletics.
Nevertheless, this research supports Cristofoli, Markovic, and Meneguzzo’s (2012) claim that network success is not simply a matter of size and geographical concentration, rather the management of networks (i.e., network governance) matters. In the case of sport and recreation organizations, Pfahl (2010) suggests managers need to carefully construct the infrastructure for a sustainability team in a way that can ensure proper oversight and management. Southeastern State University provides an intercollegiate athletics-specific example of this need, whereby subtle changes to the network governance structures could potentially leverage greater information transmission, deliberation, and resilience across the network.
References


department collaboration regarding environmental issues. *Communication & Sport, 3*(1), 27-56.


Table 3.1. University Employee Representation of the Athletics Sustainability Team

<table>
<thead>
<tr>
<th>Sub-unit (No. of representatives)</th>
<th>Employee title (Leadership role, if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Athletics Facilities (3)</td>
<td>Associate Director (co-chair)</td>
</tr>
<tr>
<td></td>
<td>Assistant Director</td>
</tr>
<tr>
<td></td>
<td>Manager</td>
</tr>
<tr>
<td>Athletics Marketing (1)</td>
<td>Assistant Director</td>
</tr>
<tr>
<td>Campus Dining (1)</td>
<td>Assistant Director</td>
</tr>
<tr>
<td>Sport Management (3)</td>
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<td></td>
<td>Assistant Professor</td>
</tr>
<tr>
<td></td>
<td>Graduate Student</td>
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<tr>
<td>Sustainability (2)</td>
<td>Director (co-chair)</td>
</tr>
<tr>
<td></td>
<td>Coordinator</td>
</tr>
<tr>
<td>Waste Management (2)</td>
<td>Manager</td>
</tr>
<tr>
<td></td>
<td>Coordinator</td>
</tr>
</tbody>
</table>

Table 3.2. Degree Centrality for Network Governance Members

<table>
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<th>nDegree Including governance network</th>
<th>nDegree Minus governance network</th>
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<tr>
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</tr>
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<td>.290</td>
</tr>
<tr>
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<td>.280</td>
</tr>
<tr>
<td>Sport Management</td>
<td>.340</td>
<td>.230</td>
</tr>
<tr>
<td>Campus Dining</td>
<td>.250</td>
<td>.170</td>
</tr>
<tr>
<td>Athletics Marketing</td>
<td>.190</td>
<td>.130</td>
</tr>
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### Table 3.3. Strong and Weak Ties of the Collaborative Network

<table>
<thead>
<tr>
<th>Ego</th>
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<th>Moderately-strong Ties</th>
<th>Moderately-weak Ties</th>
<th>Weak Ties</th>
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<tr>
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<td>• Athletics Team Operations</td>
<td>• Building Commissioning</td>
<td>• Colleges and Universities</td>
</tr>
<tr>
<td></td>
<td>• Sport Management ►►►</td>
<td>• Campus Dining</td>
<td>• Consultants</td>
<td>• Community Groups</td>
</tr>
<tr>
<td></td>
<td>• Sustainability ►►►</td>
<td>• Capital Projects</td>
<td>• Grounds</td>
<td>• Multimedia Rights Holders</td>
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<tr>
<td></td>
<td>• Waste Management ►</td>
<td>• Contractors</td>
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<td>• Sponsors</td>
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<td></td>
<td>• Energy Management</td>
<td></td>
<td>• Student Groups</td>
</tr>
<tr>
<td>Athletics Marketing</td>
<td>• Athletics Facilities ►</td>
<td>• Campus Dining</td>
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<td>• Students</td>
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<td>• Sport Management</td>
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<td>• Waste Management</td>
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<td>• Athletics Facilities</td>
<td>• Athletics Team Operations</td>
<td>• Energy Management</td>
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<td></td>
<td>• Athletics Marketing</td>
<td>• Suppliers</td>
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<td>• Athletics Marketing</td>
<td>• Energy Management</td>
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<td>• Campus Dining</td>
<td>• Students</td>
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<td></td>
<td>• Waste Management ►</td>
<td>• Colleges and Universities</td>
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<td>• Sport Organizations</td>
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<tr>
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<td>• Athletics Marketing</td>
<td>• Energy Management</td>
<td>• Athletics Student-Athlete Support</td>
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<td>• Campus Dining</td>
<td>• Students</td>
<td>• Sponsors</td>
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<td>• Colleges and Universities</td>
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<tr>
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<td>• Athletics Facilities ►</td>
<td>• Athletics Marketing</td>
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<td>• Trade Organizations</td>
<td></td>
<td>• Colleges and Universities</td>
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Figure 3.1. Athletics Sustainability Collaborative Network by Centrality and Tie Strength
CHAPTER 5: CONCLUSION

While the first paper established the unique institutionalized context of intercollegiate athletics sustainability, the second and third papers drilled down into network governance as a coupling mechanism. Specifically, the second paper focused on formal, shared governance, and the involvement of athletic departments in mostly university-level policy and decision-making. Furthermore, the universities represented by the research participants appeared to adopt two further types of shared governance: one in which the athletic department was involved in the coordinating council, and one where involvement was at the thematic working group level. In the third paper, the focus was on a single athletics sustainability collaborative network, which included a governance team. However, the governance team was more indicative of a unit-based approach, which is more indicative of a system of participatory decision-making specifically tailored to an individual unit.

Previous research identifies both structural and relational contingencies as central considerations within network governance decisions. The findings of this dissertation further support the need to consider structural and relational contingencies, but advance the relevance of specific contingencies that relate to the unique context of intercollegiate athletics. As a result, the findings from this dissertation propose athletic department involvement in network governance involves three structural contingencies (or decisions to make), and six relational contingencies (or network considerations to consider).

In terms of the structural contingencies, universities have three decisions to make. First, universities must decide whether formal network governance (i.e., structures with representative meetings) is necessary, or whether network governance could exist through less formal mechanisms (i.e., through the sustainability actions and partnerships themselves). If universities
decide on a more formal route, then a further two decisions must be made. Subsequently, second, universities must decide whether to base representation within governance structures on an appointee basis versus a less formal, voluntary commitment. Then, third, universities must decide whether athletics deserves a seat at the table at the university-level versus whether athletics would be better suited to contributing towards a particular thematic focus area.

In terms of the relational contingencies, universities have six network considerations to factor into their decision-making. The first three relational contingencies relate to the decision of whether to involve athletic departments in either formal or informal network governance. Accordingly, practitioners are well served to consider the centralization, homophily, and multiplexity of networks of existing relations focusing on athletics-related sustainability initiatives. Chapter 4 discusses the role of network governance in promoting collective learning through information transmission and deliberation. Centralization relates to the extent to which a network is dominated by a central actor, and within centralized networks it is a necessity that information flows through these central actors. Therefore, formal governance structures are more likely to be of value when networks are largely decentralized. In this context, formal network governance structures would help to facilitate, not just, more rapid information transmission, but the transmission of information that helps to maintain control of the network.

Homophily relates to the extent to which actors in a network are drawn to engage in interactions with like-minded actors who shared similar attributes. Naturally, information transmission occurs to a greater extent between homophilous actors. However, heterophilous relationships are a key indicator of more advanced learning processes and approaches to business sustainability. Specifically, as efforts become more sophisticated, business, and in this case athletic departments, are increasingly likely to look externally for expertise, knowledge and
solutions. Therefore, more formal network governance is likely to be of greater use within a network with high homophily, and, as such, becomes a mechanism for introducing diversity of thought.

Multiplexity relates to how actors share ties across multiple coupling dimensions. In the case of sustainability on university campuses, for example, actors may share interactions that focus on more than one sustainability focus area (e.g., waste, energy, and public engagement). Multiplexity is an indicator of tie strength, which, in turn, promotes network resiliency. As such, universities should consider more formal approaches to governance where multiplexity is low. As demonstrated by the case discussed in Chapter 4, the governance team presents a valuable opportunity for partners to deliberate, as well as plan and coordinate, in a space that is separate from the sustainability action itself.

Should a university decide to progress with athletic department involvement in shared governance, then a further three relational contingencies must be considered. With regards to the second structural contingency, and whether representation should be appointed or made on a voluntary basis, universities should consider the levels of sustainability interest within the athletic department. Chapter 3 discusses how sustainability office personnel overwhelmingly consider interest in and passion for sustainability to be a key indicator of how best athletic departments can add value to network governance. If interest exists, then a more amiable approach is necessary. However, if interest is not evident or latent, then a more forceful approach is necessary.

Finally, in deciding on the structural contingency of where best athletic department representation sits, then universities should consider both the extent to which athletics on campus is high visibility and high impact. Again, in Chapter 3, sustainability office personnel rationalize
their decisions to involve athletics in university-level decision-making through their unique position as a high profile campus partner who reaches diverse stakeholder groups. Similarly, sustainability office personnel rationalize these decisions through the relative high impact status of athletics operations. A correlation exists between visibility and impact (i.e., the higher the visibility and profile an athletic program, typically the larger the program and its resulting ecological footprint). In this case, high visibility and high impact justifies university-level input into network governance. However, low visibility and low impact may justify athletic department input into a more specialized, targeted thematic area (e.g., waste, energy or transportation). Such a decision is not to pigeonhole athletic departments, but rather ensure help determine an entry point for athletics into sustainability network governance.

In summary, network governance decisions around sustainability on university campuses are complex. Adding to this complexity is the unique institutionalized context of intercollegiate athletics, and the overall sense of autonomy athletic departments enjoy in comparison to other university departments. However, this dissertation points to the importance of managing sustainability networks, and the role that governance plays within that process. Ultimately, athletic departments stand to represent the sustainable front porch of universities. If done right, students (both current and potential), alumni, fans, sponsors, community groups, and a whole host of other internal and external stakeholders will stand to receive a glimpse through athletics of the values that the university stands for, particularly in relation to the institution’s assumed role as a sustainable operation and sustainability change agent.
APPENDICES
Appendix A: IRB Approval (Chapter 3)

NORTH CAROLINA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD FOR THE USE OF HUMAN SUBJECTS IN RESEARCH
SUBMISSION FOR NEW STUDIES

Protocol Number 16586

Project Title
Athletic department involvement in strategic sustainability management

IRB File Number:

Original Approval Date:
05/09/2019

Approval Period
05/29/2019 -

Source of funding (provide name of funder not account number):

NCSU Faculty point of contact for this protocol NB: only this person has authority to submit the protocol
Bunds, Kyle S: Parks, Recreation & Tourism Management

Does any investigator associated with this project have a significant financial interest in, or other conflict of interest involving, the sponsor of this project? (Answer No if this project is not sponsored)
No

Is this conflict managed with a written management plan, and is the management plan being properly followed?
No

Preliminary Review Determination

Category:
Exempt d.2

In lay language, provide a brief synopsis of the study (limit text to 1500 characters)
The study focuses on the involvement of athletic departments in the strategic coordination of sustainability within higher education institutions (HEIs). A qualitative approach will be implemented among a sample of 30 HEIs where involvement of athletic department personnel in sustainability management at the university-level is evident.

As such, the study involves conducting structured interviews with sustainability office personnel to understand
1) the governance structures surrounding sustainability management at the university-level, and
2) the perceived advantages of involving athletic departments in this process.

Interviews will be conducted by either telephone or online through Qualtrics (both methods of data collection will include the same questions). The aim is to conduct interviews with all 30 of the HEIs in the sample making this a census study.

Briefly describe in lay language the purpose of the proposed research and why it is important.

While previous studies evidence collaboration between sustainability office and athletic department personnel (peer to peer), the extent of athletic department involvement within strategic sustainability management is unclear. Therefore, the research is important to understand the benefits of involving athletic departments at a strategic level, and whether the institutionalization of collaborative efforts has the potential to lead to a greater commitment to and contribution toward sustainability efforts at the university-level. Practically, results from this study could assist HEIs to better leverage sustainability as a means to promote cross-departmental working.

My research qualifies for Exemption. Exempt research is minimal risk and must fit into the categories d.1 - d.6 found here: http://www.hhs.gov/ohrp/humansubjects/guidance/45cf46.html

Is this research being conducted by a student?
Yes

Is this research for a thesis/dissertation/capstone?
No

Is this research for a dissertation?
<table>
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<th>Answer</th>
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</thead>
<tbody>
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<tr>
<td>Is this research for a course?</td>
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<td>Do you currently intend to use the data for any purpose beyond the fulfillment of the class assignment?</td>
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<td>If so, please explain</td>
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<td>If you anticipate additional NCSU-affiliated investigators (other than those listed on the Title tab) may be involved in this research, list them here indicating their name and department.</td>
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<td>Dr. Jonathan Casper - Parks, Recreation &amp; Tourism Management</td>
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<tr>
<td>Dr. Michael Edwards - Parks, Recreation &amp; Tourism Management</td>
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<tr>
<td>Dr. Scott Showalter - Poole College of Management</td>
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<td>List collaborating institutions and describe the nature of the collaboration. If researchers from both institutions are doing any of the following activities: recruitment, consent process, data collection or handling or identifiable information/specimens a reliance agreement may be appropriate. For more information, please contact <a href="mailto:irb-coordinator-admin@ncsu.edu">irb-coordinator-admin@ncsu.edu</a></td>
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<td>An IRB equivalent review for local and cultural context may be necessary for this study. Can you recommend consultants with cultural expertise who may be willing to provide this review? Consultants may not be a part of the research team or have a stake in the research project. Provide email contact information for consultant(s). A local context review may lengthen the time it takes for your approval.</td>
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<td>Adults 18 - 64 in the general population?</td>
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</tr>
<tr>
<td>NCSU students, faculty or staff?</td>
<td>No</td>
</tr>
<tr>
<td>Adults age 55 and older?</td>
<td>No</td>
</tr>
<tr>
<td>Minors (under age 16—be sure to include provision for parental consent and/or child assent)?</td>
<td>No</td>
</tr>
<tr>
<td>List ages or age range</td>
<td></td>
</tr>
<tr>
<td>Could any of the children be “Wards of the State” (a child whose welfare is the responsibility of the state or other agency, institution, or entity)?</td>
<td>No</td>
</tr>
<tr>
<td>Please explain</td>
<td></td>
</tr>
<tr>
<td>Prisoners (any individual involuntarily confined or detained in a penal institution – can be detained pending arraignment, trial or sentencing)?</td>
<td>No</td>
</tr>
<tr>
<td>Pregnant women</td>
<td>No</td>
</tr>
<tr>
<td>Are pregnant women the primary population or focus for this research?</td>
<td>No</td>
</tr>
</tbody>
</table>
Provide rationale for why they are the focus population and describe the risks associated with their involvement as participants.

Refuses?
No

Students?
No

Does the research involve normal educational practices?
No

Is the research being conducted in an accepted educational setting?
No

Are participants in a class taught by the principal investigator?
No

Are the research activities part of the required course requirements?
No

Will course credit be offered to participants?
No

Amount of credit?
No

If class credit will be given, list the amount and alternative ways to earn the same amount of credit. Note: the time it takes to gain the same amount of credit by the alternate means should be commensurate with the study task(s).

How will permission to conduct research be obtained from the school or district? IRB approval is not permission to conduct the research. You need to access a gatekeeper. If you are implementing a survey with NC State populations, please make sure you follow the NC State survey regulation.

Will you utilize private academic records?
No

Explain the procedures and document permission for accessing these records.

Employees?
Yes

Describe where (in the workplace, out of the workplace) activities will be conducted.

Interviews will be conducted by telephone or online through Qualtrics. It is anticipated that research participants will be in the workplace during this correspondence. As such, where interviews are conducted by telephone, participants will be interviewed in a private setting (e.g., private office or conference room) free from other people and distraction.

From whom and how will permission to conduct research on the employees be obtained?

Permission for sustainability office representatives to be involved in the research will be sought by the researcher in communication with the representatives’ superiors.

How will potential participants be approached and informed about the research so as to reduce any perceived coercion to participate?

Research participants will be approached about the research informally through Lindsey Batchelor (NCSU Sustainability Office representative with existing peer-to-peer relationships with research participants) who will act as a conduit to secure initial interest from the participants in the research. Following this initial introduction, participants will be contacted directly by Martin Barrett (Ph.D student who dissertation research this study constitutes), and, at this stage, each interested participant will be provided a consent form for information.

Is the employer involved in the research activities in any way?
No

Please explain:

Will the employer receive any results from the research activities (i.e., reports, recommendations, etc.)?
Yes

Please explain. How will employee identities be protected in reports provided to employers?

All participating HEIs will be anonymized (e.g., Large Northeastern public university). Furthermore, all sustainability office personnel serving as research participants will be referred to as a "sustainability office representative" (i.e., no job
Impaired decision making capacity/Legally incompetent?
No

How will competency be assessed and from whom will you obtain consent?

Mental/ emotional/ developmental/ psychiatric challenges?
No

Identify the challenge and explain the unique risks for this population.

Describe any special provisions necessary for consent and other study activities (e.g., legal guardian for those unable to consent).

People with physical challenges?
No

Identify the challenge and explain the unique risks for this population.

Describe any special provisions necessary for working with this population (e.g., witnesses for the visually impaired).

Economically or educationally disadvantaged?
No

Racial, ethnic, religious and/or other minorities?
No

Non-English speakers?
No

Describe the procedures used to overcome any language barrier.

Will a translator be used?
No

Provide information about the translator (who they are, relation to the community, why you have selected them for use, confidentiality measures being utilized).

Explain the necessity for the use of the vulnerable populations listed.

Employees are at the very heart of strategic sustainability coordination at the university-level. Therefore, it is important that this research seek to subjectively understand this phenomenon through the HEI sustainability office personnel involved in these efforts on a daily basis.

State how, where, when, and by whom consent will be obtained from each participant group. Identify the type of consent (e.g., written, verbal, electronic, etc.). Label and submit all consent forms. Consent Form Template for NC State Research

First, participants will be provided a consent form for information from Martin Barrett (Primary Researcher). This document outlines the study purpose, participant eligibility, risks, benefits, confidentiality, and the withdrawal process. Second, for telephone interviews, Martin Barrett will read a consent statement to all participants, which they will be asked to agree or disagree. Also, for online interviews, participants will be required to read the same consent statement and asked to agree or disagree.

The consent statement used in the interview guide and the Quatrics survey is the same, and this statement is based on a condensed version of the consent form.

If any participants are minors, describe the process for obtaining parental consent and minor’s assent (minor’s agreement to participate).

N/A

Are you applying for a waiver of the requirement for consent (no consent information of any kind provided to participants) for any participant group(s) in your study?
No

For each participant group that you are requesting a waiver of consent for, please state what method this waiver is needed for, why it is needed and address each of the above 5 criteria to justify why your study qualifies for a waiver of consent.

Are you applying for an alteration (exclusion of one or more of the specific required elements) of consent for any participant group(s) in your study?
No

Identify which required elements of consent you are altering, describe the participant group(s) for which this waiver will apply, and justify why this waiver is needed.

Are you applying for a waiver of signed consent (consent information is provided, but participant signatures are not collected)? A waiver of signed consent may be granted only if the research involves no more than minimal risk. The research involves no procedures for which consent is normally required outside of the research context.

Yes

Would a signed consent document be the only document or record linking the participant to the research?

No

Is there any deception of the human subjects involved in this study?

No

Describe why deception is necessary and describe the debriefing procedures. Does the deception require a waiver or alteration of informed consent information? Describe debriefing and/or disclosure procedures and submit materials for review. Are participants given the option to destroy their data if they do not want to be a part of the study after disclosure?

For each participant group please indicate how many individuals from that group will be involved in the research. Estimates or ranges of the numbers of participants are acceptable. Please be aware that participant numbers may affect study risk. If your participation totals differ by 10% from what was originally approved, notify the IRB.

Secondary analysis of Association for the Advancement of Sustainability in Higher Education’s (AASHE) Sustainability Tracking, Assessment and Rating System (STARS) reports identified 30 universities and colleges who involve an athletic department representative on their university-wide sustainability committee. One sustainability office representative from each of these 30 higher education institutions will be targeted for involvement in the study.

How will potential participants be found and selected for inclusion in the study?

The identification of research participants will occur through a combination of Lindsay Batchelor’s (NCSU Sustainability Office) professional network of peers/contacts as well as desk research to locate sustainability office personnel within each of the universities/colleges in the sample.

For each participant group, how will potential participants be approached about the research and invited to participate? Please upload necessary scripts, templates, talking points, flyers, blurbs, and announcements.

Lindsay Batchelor (NCSU Sustainability Office) will facilitate an introduction with each of the universities/colleges in the sample - see attached e-mail script. Following this introduction, Martin Barrett (Primary Researcher) will make contact with each of the potential participants and provide them with a consent form for information - see attached consent form.

Describe any inclusion and exclusion criteria for your participants and describe why those criteria are necessary. (If your study concentrates on a particular population, you do not need to repeat your description of that population here.) Inclusion and exclusion criteria should be reflected in all of your recruitment materials and consent forms.

Inclusion criteria: Sustainability office representative, and knowledge of university-level sustainability governance mechanisms.

Exclusion criteria: N/A

Is there any relationship between researcher and participants - such as teacher/student, employer/employee?

No

What is the justification for using this participant group instead of an unrelated participant group? Please outline the steps taken to mitigate risks to participants from the pre-existing relationship, including power dynamics of this relationship and/or perceived coercion.

Describe any risks associated with conducting your research with a related participant group.

Describe how this relationship will be managed to reduce risk during the research.

How will risks to confidentiality be managed?

Address any concerns regarding data quality (e.g. non-candid responses) that could result from this relationship.

In the following questions describe in lay terms all study procedures that will be experienced by each group of participants in this study. For each group
of participants in your study, provide a step-by-step description of what they will experience from beginning to end of the study activities.

1. Potential research participants will be approached via e-mail by Lindsay Batchelor (NCSU Sustainability Office).

2. Participants will then be contacted by Martin Barrett (Primary Researcher) and provided with a consent form for information.

3. Participants will then be asked if they prefer to participate in a structured interview via telephone or complete the structured interview online. For telephone interviews, a preferred date and time will be scheduled based on the participants' availability. For online interviews, the URL link to the interview on Qualtrics will be forwarded to the participant by e-mail.

4. Interviews will be conducted either by telephone or online - see attached interview guide* and Qualtrics survey (Qualtrics link: https://ncsu.qualtrics.com/jfe/form/SV_5dSTyZnYzZwRYryr)

*Please ignore 'Interview Guide MB Athletic Deps', this document was uploaded in error.

Are you requesting the use of existing information to be used as data for this research project or are you requesting secondary data to be used as data for this research project? (Discuss the following: access, transfer, storage, destruction, (re)identifiable nature of the data and if data is subject to FERPA or HIPAA)

Data will be collected by Martin Barrett (Primary Researcher) either through audio recorded telephone interviews or online interviews. Data collection is provisionally set to take place across the months of June and July.

Social/Reputational?
No
Psychological/Emotional?
No
Financial/Employability?
No
Legal?
No
Physical?
No

Academic (affect grades, graduation)?
No
Employment (affect job)?
No
Financial (affect financial welfare)?
No
Medical (harm to treatment)?
No
Insurability (harm to eligibility)?
No
Legal (reveals unlawful behavior)?
No
Private behavior (harm to relationships/reputation)?
No
Religious Issues/Beliefs?
No

Describe the nature and degree of risk that this study poses. Describe the steps taken to minimize these risks. You CANNOT leave this blank, say ‘NA’, none or ‘no risks’. You can say “There is minimal risk associated with this research.” For each “Yes” selected above, describe the probability of the risk occurring and the magnitude of harm should the risk occur. Discuss how you are mitigating those risks through participant selection, study design, and data security.

There is minimal risk associated with this research.

If you are accessing private records, describe how you are gaining access to these records, what information you need from the records, and how you will receive/record data. Private records may include: educational, medical, financial, employment. Some of these private records may be subject to
Are you asking participants to disclose information about other individuals (e.g., friends, family, co-workers, etc.)?  
No

You have indicated that you will ask participants to disclose information about other individuals (see Populations tab). Describe the data you will collect and discuss how you will protect confidentiality and the privacy of these third-party individuals.

If you are collecting information that participants might consider personal or sensitive or that if revealed might cause embarrassment, harm in reputation or could reasonably place the subjects at risk of criminal or civil liability, what measures will you take to protect participants from those risks?

N/A

If any of the study procedures could be considered risky in and of themselves (e.g. study procedures involving upsetting questions, stressful situations, physical risks, etc.) what measures will you take to protect participants from those risks?

N/A

Describe the anticipated direct benefits to be gained by each group of participants in this study (compensation is not a direct benefit).

No direct benefits anticipated.

If no direct benefit is expected for participants describe any indirect benefits that may be expected, such as to the scientific community or to society.

Results from this research could assist research participants and their organizations in maximizing the benefits of involving athletic departments within the strategic sustainability management process (as opposed to solely contributors toward strategy implementation).

Will you be receiving already existing data without identifiers for this study?

No

Will you be receiving already existing data which includes identifiers for this study?

No

Describe how the benefits balance out the risks of this study.

Will data be collected in a way that would not allow you to link any identifying information to a participant?

No

Will any identifying information be recorded with the data (ex. name, phone number, IDs, e-mails, etc.)?

Yes

Will you use a master list, crosswalk, or other means of linking a participant's identity to the data?

No

Will it be possible to identify a participant indirectly from the data collected (i.e. indirect identification from demographic information)?

No

Audio recordings?

Yes

Video recordings?

No

Images?

No

Digital/electronic files?

No

Paper documents (including notes and journals)?

No

Physiological Responses?

No

Online survey?

Yes

Restricted Access (who, what, when, where)?

Yes

Password Protection (files, folders, drives, workstations)?

Yes

Suggestions of anonymous browsing?
Locks (office, desks, cabinets, briefcases)?
Yes
VPN (transfer, upload, download, access)?
Yes
Encryption (files, folders, drives)?
No

Describe all participant identifiers that will be collected from each data collection method (surveys, interviews, focus groups, existing data, background data collected via host site or software). Discuss why it is necessary to record identifiers at all and describe the de-identifying process.

Interviews - None of the interview questions require the participants to identify themselves.

Online surveys - The only question that potentially identifies participants is when participants are asked to disclose the name of their organization, which is part of the de-identifying process. Furthermore, the de-identifying process will involve converting organization names to generic labels (discussed below).

If recording identifiable information about participants, discuss any links between the data and the participants and why you need to retain them. Discuss destruction of links or removal of identifiers.

With the online surveys it is important to collect organization name as a way to keep track of which organizations within the sample have participated.

Discuss if you’ll be working with your departmental IT to create a data management plan and if you’re using NC State managed devices, NC State Google Drive or other NC State non-networked device. If using a personal device, discuss data protection.

Interview audio recordings and transcripts will be saved on a password protected USB memory stick.

Online survey responses will be downloaded from Qualtrics, and, again, saved on the same password protected USB memory stick.

The USB memory stick will be kept in the primary researcher's on-campus office, in a locked filing cabinet.

Describe any ways that participants themselves or third parties discussed by participants could be identified indirectly from the data collected, and describe measures taken to protect identities. (Data can be reidentified by researcher access, technology employed, researcher expertise, and triangulation of data or other information. Discuss the probability of reidentification and the magnitude of harm to participants should the data be reidentified. Discuss the probability of reidentification occurring and the magnitude of harm should it occur).

Athletic department representation on university-level sustainability committees is low nationally (i.e., the 30 higher education institutions identified were from a larger sample of 226 - so only 13%). Therefore, the scarcity of athletic department involvement may make institutions indirectly identifiable. However, all institutions will be anonymized (e.g., large northeastern university) and individual participants (name and job title) will be kept confidential.

For all recordings of any type: Describe the type of recording(s) to be made; describe the safe storage of recordings; Who will have access to the recordings; Will recordings be used in publications or data reporting? Will images be altered to de-identify? Will recordings be transcribed and by whom?

Interviews will be audio recorded using a voice recorder, and transcribed by Martin Barrett (Primary Researcher). Participants will be required to only disclose the name of the organization which they represent. The data (recorded and transcribed files) will be kept in a locked cabinet in an on-campus office location that is secure.

Describe how data will be reported (aggregate, individual responses, use of direct quotes) and describe how identities will be protected in study reports. Reporting data may sometimes re-identify your participants. If needed, you can adjust how you report your data to protect the identities of your participants. Discuss.

Data will be reported at the aggregate level. For example, responses from sustainability office representatives will be aggregated so to represent an organizational perspective and all individual identifiers will be removed.

Will anyone besides the PI or the research team have access to the data (including completed surveys) from the moment they are collected until they are destroyed? This includes sharing data with sponsors, journals, or using the data for future research endeavors. If you are sharing the data, this should be in your consent form.

Only the primary researcher and Co-Chairs of his dissertation committee will have access to the data.

Describe any compensation that participants will be eligible to receive, including what the compensation is, any eligibility requirements for that compensation, and how that compensation will be delivered. Examples of compensation include: monetary compensation, research credits, raffle/drawing, novel items. Make sure to check with your department regarding issues of tracking payments as your department accounting office may have requirements that affect your human subjects privacy (such as the mandatory tracking of anyone who receives compensation). This tracking may
influence the confidentiality/anonymity of your research and must be addressed in this application.

<table>
<thead>
<tr>
<th>No compensation for participation.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explain compensation provisions if the participant withdraws prior to completion of the study.</td>
</tr>
<tr>
<td>N/A</td>
</tr>
</tbody>
</table>
Appendix B: IRB Approval (Chapter 4)

Note. IRB approval was initially sought for a two-phase study, but only the second phase was retained as part of the dissertation. Accordingly, references to the obsolete phase of the IRB approval have been redacted.

NORTH CAROLINA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD FOR THE USE OF HUMAN SUBJECTS IN RESEARCH
SUBMISSION FOR NEW STUDIES

Protocol Number 14256

<table>
<thead>
<tr>
<th>Project Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental sustainability in intercollegiate athletics: Sustainable value and inter-departmental/organizational partnerships</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IRB File Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Original Approval Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/13/2018</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Approval Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/13/2018 -</td>
</tr>
</tbody>
</table>

| Source of finding (provide name of funder not account number): |
|                                                              |

| NCSU Faculty point of contact for this protocol: NB only this person has authority to submit the protocol |
| Buhrs, Kyle S; Parks, Recreation & Tourism Management |

| Does any investigator associated with this project have a significant financial interest in, or other conflict of interest involving, the sponsor of this project? (Answer No if this project is not sponsored) |
| No |

| Is this conflict managed with a written management plan, and is the management plan being properly followed? |
| No |

<table>
<thead>
<tr>
<th>Preliminary Review Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category: Exempt c.2</td>
</tr>
</tbody>
</table>

In lay language, provide a brief synopsis of the study (limit text to 1500 characters)

The study focuses on the strategies that intercollegiate athletic departments use to derive sustainable value from their environmental efforts (e.g., waste management, renewable energy, community conservation, etc.).

The study involves distributing a survey to one intercollegiate athletic department as well as each of their environmental partners to understand how the structure of inter-departmental/organizational partnerships complement the strategic approaches identified in the first phase. In addition, the survey will seek to establish how PTSOs acquire various resources through different kinds of relational ties to other organizations. Surveys will continue until at least 75% of the partners within the network have participated.

Briefly describe in lay language the purpose of the proposed research and why it is important.

While intercollegiate athletic departments in the United States are recognized as part of the wider greening of sports movement, the adoption of such business practices by athletic departments remains varied. Therefore, the research is important to understand how exactly sustainability is either embedded or bolted on to core business strategies.

Practically, results from this study could assist intercollegiate athletic departments in maximizing sustainable value by understanding the potential of exchange relationships in bringing the optimal mix of resources to bear on environmental efforts.

My research qualifies for Exemption. Exempt research is minimal risk and must fit into the categories a.1 - a.8 found here: http://www.hhs.gov/orhp/humansubjectsguidance/45cf45.html

| Is this research being conducted by a student? |
| Yes |

170
Is this research for a thesis/dissertation/capstone?  
No

Is this research for a dissertation?  
Yes

Is this independent research?  
No

Is this research for a course?  
No

Do you currently intend to use the data for any purpose beyond the fulfillment of the class assignment?  
No

Please explain

If so, please explain

If you anticipate additional NCSU-affiliated investigators (other than those listed on the Title tab) may be involved in this research, list them here indicating their name and department:

Dr. Jonathan Casper - Parks, Recreation & Tourism Management
Dr. Michael Edwards - Parks, Recreation & Tourism Management
Dr. Scott Showalter - Poole College of Management

Will the investigators be collaborating with researchers at any institutions or organizations outside of NC State?  
Yes

List collaborating institutions and describe the nature of the collaboration. If researchers from both institutions are doing any of the following activities: recruitment, consent process, data collection or handling of identifiable information/samples or a reliance agreement may be appropriate. For more information, please contact irb-coordinator-admin@ncsu.edu

Temple University - Dr. Gareth Jones is an external committee member within this dissertation project. Dr. Jones has research expertise on inter-organizational partnerships and network analysis, which is a central part of this dissertation project.

What is NCSU’s role in this research?  
NCSU have been responsible for the design of this study, and will be responsible for the implementation (data collection, analysis, dissemination, etc.).

Describe funding flow, if any (e.g. subcontractors)  
N/A

Is this international research?  
No

Identify the countries involved in this research

An IRB equivalent review for local and cultural context may be necessary for this study. Can you recommend consultants with cultural expertise who may be willing to provide this review? Consultants may not be a part of the research team or have a stake in the research project. Provide email contact information for consultant(s). A local context review may lengthen the time it takes for your approval.

Adults 18 - 54 in the general population?  
Yes

NCSU students, faculty or staff?  
Yes

Adults age 65 and older?  
No

Minors (under age 18—be sure to include provision for parental consent and/or child assent)?  
No

List ages or age range:

Could any of the children be “Wards of the State” (a child whose welfare is the responsibility of the state or other agency, institution, or entity)?  
No

Please explain:
Prisoners (any individual involuntarily confined or detained in a penal institution – can be detained pending arraignment, trial or sentencing)?
No

Pregnant women?
No

Are pregnant women the primary population or focus for this research?
No

Provide rationale for why they are the focus population and describe the risks associated with their involvement as participants?

Yes?
No

Students?
No

Does the research involve normal educational practices?
No

Is the research being conducted in an accepted educational setting?
No

Are participants in a class taught by the principal investigator?
No

Are the research activities part of the required course requirements?
No

Will course credit be offered to participants?
No

Amount of credit?
No

If class credit will be given, list the amount and alternative ways to earn the same amount of credit (Note: the time it takes to gain the same amount of credit by the alternate means should be commensurate with the study task(s))

How will permission to conduct research be obtained from the school or district? IRB approval is not permission to conduct the research. You need to access a gatekeeper. If you are implementing a survey with NC State populations, please make sure you follow the NC State survey regulation.

Will you utilize private academic records?
No

Explain the procedures and document permission for accessing these records.

Employees?
No

Describe where (in the workplace, out of the workplace) activities will be conducted:
Interviews will be conducted in the workplace of each of the professional sport organization representatives in a space that is both private (i.e., free from distraction) and convenient for the employee.

From whom and how will permission to conduct research on the employee be obtained?

How will potential participants be approached and informed about the research so as to reduce any perceived coercion to participate?

A written overview of the study

Each interested participant will be given

Is the employer involved in the research activities in any way?
No

Please explain:

Will the employer receive any results from the research activities (i.e., reports, recommendations, etc.)?
Yes

Please explain how employee identities will be protected in reports provided to employers?

Impaired decision-making capacity/Legally Incompetent?

No

How will competency be assessed and from whom will you obtain consent?

Mental/emotional/developmental/psychiatric challenges?

No

Identify the challenge and explain the unique risks for this population.

Describe any special provisions necessary for consent and other study activities (e.g., legal guardian for those unable to consent).

People with physical challenges?

No

Identify the challenge and explain the unique risks for this population.

Describe any special provisions necessary for working with this population (e.g., witnesses for the visually impaired).

Economically or educationally disadvantaged?

No

Racial, ethnic, religious and/or other minorities?

No

Non-English speakers?

No

Describe the procedures used to overcome any language barrier.

Will a translator be used?

No

Provide information about the translator (who they are, relation to the community, why you have selected them for use, confidentiality measures being utilized).

Explain the necessity for the use of the vulnerable populations listed.

State how, where, when, and by whom consent will be obtained from each participant group. Identify the type of consent (e.g., written, verbal, electronic, etc.). Label and submit all consent forms. Consent Form Template for NC State Research

Participant consent will be obtained by securing support from the NC State University Athletics Sustainability Team, which includes a number of representatives from the athletic department. Representatives from the athletic department will disclose a roster of each of the partners they work with on environmental initiatives. Each department/organization will then be contacted and encouraged to participate in the research. As such, each of the participants will be asked to read, initial, sign and date a participant consent form (see attached).

If any participants are minors, describe the process for obtaining parental consent and minor’s assent (minor’s agreement to participate).

N/A

Are you applying for a waiver of the requirement for consent (no consent information of any kind provided to participants) for any participant group(s) in your study?
No For each participant group that you are requesting a waiver of consent for, please state what method this waiver is needed for, why it is needed and address each of the above 5 criteria to justify why your study qualifies for a waiver of consent.

No Are you applying for an alteration [exclusion of one or more of the specific required elements] of consent for any participant group(s) in your study?

No Identify which required elements of consent you are altering, describe the participant group(s) for which this waiver will apply, and justify why this waiver is needed.

No Are you applying for a waiver of signed consent [consent information is provided, but participant signatures are not collected]? A waiver of signed consent may be granted only if the research involves no more than minimal risk. The research involves no procedures for which consent is normally required outside of the research context.

No Would a signed consent document be the only document or record linking the participant to the research?

No Is there any deception of the human subjects involved in this study?

No Describe why deception is necessary and describe the debriefing procedures. Does the deception require a waiver or alteration of informed consent information? Describe debriefing and/or disclosure procedures and submit materials for review. Are participants given the option to destroy their data if they do not want to be a part the study after disclosure?

For each participant group please indicate how many individuals from that group will be involved in the research. Estimates or ranges of the numbers of participants are acceptable. Please be aware that participant numbers may affect study risk. If your participation totals differ by 10% from what was originally approved, notify the IRB.

Participation is anticipated to yield approximately 26 to 31 participants (i.e., 1 ego - the athletic department, and 25 to 30 alters - partners of the athletic department).

How will potential participants be found and selected for inclusion in the study?

The identification of the sustainability leads within intercollegiate athletic departments will be facilitated through 1) an initial introduction by Lindsay Batchelor (NCSU Sustainability Officer) to approximately 15 institutions, and 2) the chain referral by the initial participants to other institutions.

For each participant group, how will potential participants be approached about the research and invited to participate? Please upload necessary scripts, templates, talking points, flyers, blurbs, and announcements.

NC State University is the focus of the study. Each of the partner departments/organizations that the athletic departments work with on environmental efforts will be approached directly by the primary researcher (Martin Barrett) who will provide each potential research participant with a research overview document (see attached).

Describe any inclusion and exclusion criteria for your participants and describe why those criteria are necessary. Are your study concentrates on a particular population, you do not need to repeat your description of that population here. Inclusion and exclusion criteria should be reflected in all of your recruitment materials and consent forms.

Inclusion criteria: Decision making and/or implementation responsibility for environmental business practices within intercollegiate athletic departments.

Exclusion criteria: N/A

Is there any relationship between researcher and participants - such as teacher/student; employer/employee?

No What is the justification for using this participant group instead of an unrelated participant group? Please outline the steps taken to mitigate risks to
participants from the pre-existing relationship, including power dynamics of this relationship and/or perceived coercion.

Describe any risks associated with conducting your research with a related participant group.

Describe how this relationship will be managed to reduce risk during the research.

How will risks to confidentiality be managed?

Address any concerns regarding data quality (e.g., non-candid responses) that could result from this relationship.

In the following questions describe in lay terms all study procedures that will be experienced by each group of participants in this study. For each group of participants in your study, provide a step-by-step description of what they will experience from beginning to end of the study activities.

NC State University athletic department will be approached by the primary researcher (Martin Barrett) through the Athletics Sustainability Team that meets on a monthly basis. The athletic department representatives will be provided a research overview document along with a consent form to initial, sign, and date. The athletic department personnel will then complete a survey conducted in-person at a convenient and private place. The survey asks the athletic department to disclose a roster of all partners they work with on environmental efforts, and at this point the primary researcher will ask for contact details of all disclosed partners. Each of these new research participants will then receive an overview of the study, and following acceptance to be involved in the study will then receive a consent form to initial, sign, and date. A survey date and time will be scheduled with each consenting participant. Surveys will be conducted by phone as recent social network analysis studies in the department have shown this to be the most effective method of ensuring a response rate of at least 75 percent is achieved. All consenting participants will then receive a phone call during which the survey will be conducted between the participant and the primary researcher, and will last for up to 15 minutes per survey. All participants will be given the opportunity to receive a copy of their responses to check for accuracy. The survey responses will be sent in a generic email body that is stripped of identifiers. Finally, all participants will be provided a copy of the findings of the study once completed.

Are you requesting the use of existing information to be used as data for this research project or are you requesting secondary data to be used as data for this research project? (Discuss the following: access, transfer, storage, destruction, (re)identifiable nature of the data and if data is subject to FERPA or HIPAA)

Data will be collected by Martin Barrett through a phone call to each participant. Data will be collected by entering the responses on to a paper survey form. Data collection is provisionally set to take place across the months of April and May.

Social/Reputational?
No

Psychological/Emotional?
No

Financial/Employability?
<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legal?</td>
<td>No</td>
</tr>
<tr>
<td>Physical?</td>
<td>No</td>
</tr>
<tr>
<td>Academic (affect grades, graduation)?</td>
<td>No</td>
</tr>
<tr>
<td>Employment (affect job)?</td>
<td>No</td>
</tr>
<tr>
<td>Financial (affect financial welfare)?</td>
<td>No</td>
</tr>
<tr>
<td>Medical (harm to treatment)?</td>
<td>No</td>
</tr>
<tr>
<td>Insurability (harm to eligibility)?</td>
<td>No</td>
</tr>
<tr>
<td>Legal (reveals unlawful behavior)?</td>
<td>No</td>
</tr>
<tr>
<td>Private behavior (harm to relationship/reputation)?</td>
<td>No</td>
</tr>
<tr>
<td>Religious Issues/ Beliefs?</td>
<td>No</td>
</tr>
<tr>
<td>Describe the nature and degree of risk that this study poses. Describe the steps taken to minimize these risks. You CANNOT leave this blank, say “NA”, none or “no risk”. You can say “There is minimal risk associated with this research.” For each “Yes” selected above, describe the probability of the risk occurring and the magnitude of harm should the risk occur. Discuss how you are mitigating those risks through participant selection, study design, and data security.</td>
<td></td>
</tr>
<tr>
<td>Yes, there is minimal risk associated with this research.</td>
<td></td>
</tr>
<tr>
<td>If you are accessing private records, describe how you are gaining access to these records, what information you need from the records, and how you will retrieve the data. Private records may include educational, medical, financial, employment. Some of these private records may be subject to laws such as FERPA and HIPAA. Your content here should match what you’ve discussed on the procedures tab.</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Are you asking participants to disclose information about other individuals (e.g., friends, family, co-workers, etc.)?</td>
<td></td>
</tr>
<tr>
<td>Yes, you have indicated that you will ask participants to disclose information about other individuals (see Populations tab). Describe the data you will collect and discuss how you will protect confidentiality and the privacy of these third-party individuals.</td>
<td></td>
</tr>
<tr>
<td>Research participants will be asked to disclose information about organizations that they work with or partnership-based initiatives. These organizations will be protected by anonymizing references within any reports or write-ups. For example, organizations may be referred to as a “non-profit environmental advocacy group” rather than their specific names.</td>
<td></td>
</tr>
<tr>
<td>If you are collecting information that participants might consider personal or sensitive or that if revealed might cause embarrassment, harm to reputation or could reasonably place the subjects at risk of criminal or civil liability, what measures will you take to protect participants from those risks?</td>
<td></td>
</tr>
<tr>
<td>Individual participants will not be identified within this research. Rather, only organizations via regional classification and so on will be identified. In terms of protecting the organizations from these risks, see the above response concerning anonymity of organizations.</td>
<td></td>
</tr>
<tr>
<td>N/A</td>
<td></td>
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<tr>
<td>Many of the study procedures could be considered risky in and of themselves (e.g. study procedures involving upsetting questions, stressful situations, physical risks, etc.) what measures will you take to protect participants from those risks?</td>
<td></td>
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<tr>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Describe the anticipated direct benefits to be gained by each group of participants in this study (compensation is not a direct benefit).</td>
<td></td>
</tr>
<tr>
<td>No direct benefits anticipated.</td>
<td></td>
</tr>
<tr>
<td>If no direct benefit is expected for participants describe any indirect benefits that may be expected, such as to the scientific community or to society.</td>
<td></td>
</tr>
<tr>
<td>Results from this research could assist research participants and their organizations in maximizing sustainable value by understanding the potential of exchange relationships in bringing more resources to bear on environmental efforts.</td>
<td></td>
</tr>
</tbody>
</table>
Will you be receiving already existing data without identifiers for this study?
No

Will you be receiving already existing data which includes identifiers for this study?
No

Describe how the benefits balance out the risks of this study.

Will data be collected in a way that would not allow you to link any identifying information to a participant?
No

Will any identifying information be recorded with the data (ex: name, phone number, IDS, e-mails, etc.)?
Yes

Will you use a master list, crosswalk, or other means of linking a participant's identity to the data?
No

Will it be possible to identify a participant indirectly from the data collected (i.e. indirect identification from demographic information)?
No

Audio recordings?
Yes

Video recordings?
No

Images?
No

Digital/electronic files?
No

Paper documents (including notes and journals)?
Yes

Physiological Responses?
No

Online survey?
Yes

Restricted Access (who, what, when, where)?
Yes

Password Protection (files, folders, drives, workstations)?
Yes

Suggestions of anonymous browsing?
No

Locks (office, desks, cabinets, briefcases)?
Yes

VPN (transfer, upload, download, access)?
Yes

Encryption (files, folders, drives)?
No

Describe all participant identifiers that will be collected from each data collection method (surveys, interviews, focus groups, existing data, background data collected via host site or software). Discuss why it is necessary to record identifiers at all and describe the de-identifying process. Participant identifiers will be collected during the data collection process, which will include name, organization represented, and role within the organization. This data will be collected in order to help facilitate chain referral of further research participants. Beyond the data collection process, all participant identifiers will not be retained. For example, all responses will be considered as organizational-level responses, and all organizational names will be anonymized.

If recording identifiable information about participants, discuss any links between the data and the participants and why you need to retain them. Discuss destruction of links or removal of identifiers.
N/A

Discuss if you’ll be working with your departmental IT to create a data management plan and if you’re using NC State managed devices, NC State Google Drive or other NC State non-networked device. If using a personal device, discuss data protection.
N/A

Describe any ways that participants themselves or third parties discussed by participants could be identified indirectly from the data collected, and
describe measures taken to protect identities. (Data can be reidentified by researcher access, technology employed, researcher expertise, and triangulation of data or other information. Discuss the probability of reidentification and the magnitude of harm to participants should the data be reidentified. Discuss the probability of reidentification occurring and the magnitude of harm should it occur).

N/A

For all recordings of any type Describe the type of recording(s) to be made Describe the safe storage of recordings Who will have access to the recordings? Will recordings be used in publications or data reporting? Will images be altered to de-identify? Will recordings be transcribed and by whom?

Survey responses will be transferred from verbal to written responses by the primary researcher (during the survey phone calls). The data (hand-written survey forms) will be kept in a locked cabinet in an on-campus office location that is secure. Describe how data will be reported (aggregate, individual responses, use of direct quotes) and describe how identities will be protected in study reports. Reporting data may sometimes reidentify your participants. If needed, you can adjust how you report your data to protect the identities of your participants. Discuss.

All data will be reported at the aggregate level. The representatives of the different departments/organizations surveyed will be interpreted as organizational-level responses.

Will anyone besides the PI or the research team have access to the data (including completed surveys) from the moment they are collected until they are destroyed? This includes sharing data with sponsors, journals, or using the data for future research endeavors. If you are sharing the data, this should be in your consent form.

Only the PI and co-Chairs of his dissertation committee will have access to the data.

Describe any compensation that participants will be eligible to receive, including what the compensation is, any eligibility requirements for that compensation, and how that compensation will be delivered. Examples of compensation include: monetary compensation, research credits, raffle/drawing, novel items. Make sure to check with your department regarding issues of tracking payments as your department accounting office may have requirements that affect your human subjects privacy (such as the mandatory tracking of anyone who receives compensation). This tracking may influence the confidentiality/anonymity of your research and must be addressed in this application.

No compensation for participation.

Explain compensation provisions if the participant withdraws prior to completion of the study. N/A
Appendix C: Informed Consent Form (Chapter 3)

North Carolina State University
INFORMED CONSENT FORM for RESEARCH

Title of Study/Repository: Athletic department involvement in strategic sustainability management (eIRB No. 16585)
Principal Investigator: Dr. Kyle Bunds, ksbunds@ncsu.edu, (919) 515-7635
Primary Researcher: Martin Barrett, mbarret3@ncsu.edu, (919) 282-3384

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate and to stop participating at any time without penalty. The purpose of this research study is to gain a better understanding of the benefits of involving athletic departments in strategic sustainability management at the university-level.

You are not guaranteed any personal benefits from being in this study. Research studies also may pose risks to those who participate. You may want to participate in this research because results from this research could assist your organization in maximizing the benefits of athletic department involvement in the strategic sustainability management process. You may not want to participate in this research because your institution may not want to disclose information about internal relationships between departments.

In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher named above or the NC State IRB office (contact information is noted below).

What is the purpose of this study?
The purpose of the study is to gain a better understanding of the benefits of involving athletic departments in strategic sustainability management at the university-level.

Am I eligible to be a participant in this study?
- There will be approximately 20-30 participants in this study.
- In order to be a participant in this study you must be a sustainability office representative with knowledge of the university-level sustainability governance mechanisms at your institution.
- You cannot participate in this study if the athletic department is not represented on your organization's sustainability council.

What will happen if you take part in the study?
If you agree to participate in this study, you will be asked to do all of the following:
- Participate in an interview and answer questions relating to 1) your institution's sustainability governance mechanisms, and 2) the benefits of athletic department involvement in the strategic sustainability management process
- The interview will take place by telephone
  - Participants will be encouraged to find a private setting in their place of work (e.g., private office or conference room) and interviews will be conducted at a time convenient to the participant
- Interviews will be audio recorded and transcribed by the primary researcher

The total amount of time that you will be participating in this study is 20 to 30 minutes.

Risks and benefits
There are minimal risks associated with participation in this research. There are no direct benefits to your participation in the research. The indirect benefits are the identification of benefits to athletic department involvement in sustainability that could help your institution better leverage inter-departmental resources.

Right to withdraw your participation
You can stop participating in this study at any time. In order to stop your participation, please contact the primary investigator of the research named above. If you choose to withdraw your consent and stop participating you can expect any interview responses given not to be included within both the data analysis and subsequent oral or written reports.

Confidentiality
The information in the study records will be kept confidential to the full extent allowed by law. Data will be stored securely on an NC State managed computer in a locked on-campus office location. No reference will be made in oral or written reports which could link you to the study.
Compensation
You will not receive anything for participating in this research.

What if you have questions about this study?
If you have questions at any time about the study itself or the procedures implemented in this study, you may contact the primary researcher, Martin Barrett, mbarret3@ncsu.edu, (919) 292-3384.

What if you have questions about your rights as a research participant?
If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact the NC State IRB (Institutional Review Board) Office via email at irb-director@ncsu.edu or via phone at 919.515.8754. You can also find out more information about research, why you would or would not want to be a research participant, questions to ask as a research participant, and more information about your rights by going to this website: http://co.ncsu.edu/research-participant

Consent To Participate
"I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may choose not to participate or to stop participating at any time without penalty or loss of benefits to which I am otherwise entitled."
Appendix D: Informed Consent Form (Chapter 4)

Title of study:
An organizational network analysis of environmental sustainability partnerships

What are some general things you should know about research studies?
You are being asked to take part in a research study. Your participation in this study is voluntary. You have the right to be a part of this study, to choose not to participate or to stop participating at any time without penalty. The purpose of research studies is to gain a better understanding of a certain topic or issue.

You are not guaranteed any personal benefits from being in a study. Research studies also may pose risks to those that participate. In this consent form you will find specific details about the research in which you are being asked to participate. If you do not understand something in this form it is your right to ask the researcher for clarification or more information. A copy of this consent form will be provided to you. If at any time you have questions about your participation, do not hesitate to contact the researcher named below.

What is the purpose of this study?
The purpose of the study is to establish the role of intra- and inter-organizational partnerships in the success of environmental efforts delivered by intercollegiate athletic departments.

What will happen if you take part in the study?
If you agree to participate in this study, you will be asked to respond to a number of questions about who you partner with on athletics-related sustainability initiatives. Your responses to these questions will be captured during an in-person interview, which is expected to last no longer than 15 minutes. The responses will be available to you should you wish to review it for accuracy.

Risks and Benefits
There are minimal risks associated with participation in this research. The potential benefits of this study to your organization include detailed insight into the potential of exchange relationships between organizations in bringing more and differentiated resources to bear on environmental efforts.

Confidentiality
The information in the study records will be kept confidential to the full extent allowed by law. Data will be stored securely in a locked filing cabinet in a secure office location on the NCSU campus.

What if you have questions about this study?
If you have questions at any time about the study itself or the procedures implemented in this study, you may contact the researcher, Martin Barrett, North Carolina State University, Parks, Recreation & Tourism Department, College of Natural Resources, 3026 Biltmore Hall, Raleigh, NC 27695, mbarrett3@ncsu.edu.

What if you have questions about your rights as a research participant?
If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dab Paxton, Regulatory Compliance Administrator at dapaxton@ncsu.edu or by phone at 1-919-515-4514.

Please initial box
1. I confirm that I have read and understand the information on the study above and have had the opportunity to ask questions.
2. I agree to take part in the above study.

Name of Participant
Date
Signature

Researcher
Date
Signature

1 for participant; 1 for researcher
Appendix E: Interview Guide (Chapter 3)

Interview Guide

Shared Governance Arrangements

1. What decision-making responsibility does the sustainability office (and the lead sustainability officer) have over sustainability matters on campus?

2. If applicable, how is sustainability referenced within the university’s high-level strategic plan?

3. If applicable, how does the senior leadership of the university (i.e., president/vice-chancellor and the governing body) visibly support sustainability?

4. Who is the accountable officer in terms of sustainability on campus?

5. What is the scope and purpose of the sustainability committee?

6. How did the athletics department become engaged in the university’s shared sustainability structures?

Benefits of Shared Governance

1. What are the benefits to the sustainability office of involving the athletics department in the sustainability committee? Please identify and describe each benefit fully.

2. If not already covered, how does athletics representation on the sustainability committee help to build trusting relationships between the athletics department and other university departments?

3. If not already covered, how does athletics representation on the sustainability committee help with the development of solutions to sustainability issues?

4. How do you perceive the athletics department to benefit from involvement in the sustainability committee?
Appendix F: Organizational Network Survey (Chapter 4)

Thank you for agreeing to participate in this research.

Any information supplied is strictly confidential and all responses will be de-identified to ensure the data your organization provides will be completely anonymous.

During this interview, I will ask you a series of questions about the sub-units, departments or organizations you interact with on sustainability-related initiatives. For each partner, you will be asked to indicate the focus of that interaction, the frequency of that interaction, and the consistency of that interaction.

<table>
<thead>
<tr>
<th>Focus</th>
<th>Frequency</th>
<th>Consistency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Curriculum</td>
<td>1. At least once a week</td>
<td>1. Consistent across the year</td>
</tr>
<tr>
<td>2. Research</td>
<td>2. At least once a month</td>
<td>2. Inconsistent (e.g., interaction limited to either the Fall or Spring semester)</td>
</tr>
<tr>
<td>3. Campus Engagement</td>
<td>3. At least twice a semester</td>
<td></td>
</tr>
<tr>
<td>4. Public Engagement</td>
<td>4. Once a semester</td>
<td></td>
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<tr>
<td>5. Air &amp; Climate</td>
<td>5. Once a year</td>
<td></td>
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<tr>
<td>6. Buildings</td>
<td></td>
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<td>7. Energy</td>
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<tr>
<td>8. Food &amp; Dining</td>
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<td>9. Grounds</td>
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<td>10. Purchasing</td>
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<td>11. Transportation</td>
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<td>12. Waste</td>
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<tr>
<td>13. Water</td>
<td></td>
<td></td>
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<tr>
<td>14. Coordination &amp; Planning</td>
<td></td>
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</tbody>
</table>