New Team, New Fans: A Longitudinal Examination of Team Identification as a Driver of University Identification

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The authors examined the longitudinal development of team identification among stakeholders of a newly formed intercollegiate football team to empirically measure the impact of a new football team on university identification. Using a multidimensional approach to identification, data were collected over a 3-year period and analyzed using growth curve analysis to determine the changes and trajectories of the individual dimensions of identification related to both the new football team and the larger university. Conditional growth models were used to determine the percentage of change in university identification explained by changes in team identification—to test whether new team identification drives identification with the larger university. The presented findings allow for an improved understanding of the psychological impact of a new football team for the university community by using growth curve analysis, which provides a more detailed and accurate empirical examination of identification, rather than traditional two-wave cross-lagged designs. Implications of the longitudinal nature of identification and the psychological value of a new football team for the university are discussed.

Keywords: fan identification, social identity theory, intercollegiate athletics

Over the recent decades, intercollegiate sport in the United States has undergone tremendous financial growth, yet it is has done so without lessening its dependence on institutional support (Fulks, 2013). In 2011, Division I athletic departments received approximately $2.1 billion in support from their institutions, and only a handful of athletic departments were not dependent on university funding to balance their budgets (Upton & Berkowitz, 2012). In defense of this financial dependence, scholars have argued that the social impact these sport entities have on their communities vindicates the university money needed to support the teams (Clotfelter, 2011). With claims of sport teams as sources of pride, identity, or promoters of social cohesion, scholars have argued that the perceived ability of sport teams to bring a community together is justification for the institutional money needed to support intercollegiate athletic programs.

Specifically, on college campuses scholars have long noted the ability of sport to promote feelings of commu-nity among university stakeholders (Boyer, 1990). This sentiment dates back at least to the 1920s, with a report from that era claiming intercollegiate football "creates a strong sense of common interest . . . and intensifies the consciousness of human community" (Clotfelter, 2011, p. 155). More recently, there has been an increased effort by scholars to test the relationship between sport and community on campus through empirical examination. In an aggregate sense, these findings have largely supported the proposed relationship between connecting with a school's athletic teams and perceived feelings of community (Clopton, 2008; Clopton & Finch, 2008; Wann & Robinson, 2002).

Despite the surge in empirical investigations into the ability of college sport to bring a community together, the existing literature is largely based on cross-sectional research that has not adequately addressed issues of causality. Cross-sectional research methods such as regression analysis and structural equation modeling can provide insight on the directionality and importance of correlations, yet such methods cannot provide a valid indication of true prediction (Miles & Shevlin, 2001). So despite previous attempts, very little is still known about the ability of college sports to drive one's psychological relationship with the larger university. For example, although Heere and Katz (2014) found that team identity

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constructs have a significant impact on how people identity with the university, their cross-sectional approach was fundamentally limited. Their results indicated that team identification and university identification are related constructs, but their study could not provide a trust estimation of whether identifying with a sport teams drives one's identification with the university.

A handful of earlier studies implemented quasi-experimental approaches to understand the social impact of sport on their host community, reporting limited evidence of such a relationship. Warner, Shapiro, Dixon, Ridinger, and Harrison (2011) conducted a pre–post survey among university students to explore the relationship between a new football team and students' sense of community with the university, ultimately finding no significant changes. Their methodological approach represents an improvement to the aforementioned cross-sectional survey designs, but it still lacks a rigorous longitudinal approach that allows for an understanding of how team identification might drive an overall sense of community with the university. Such methodological limitations have constrained theoretical understanding concerning team identification as a potential driver of university identification. The current study specifically uses more sophisticated longitudinal data analysis to address this theoretical gap in the team identification literature.

Therefore, the purpose of this study was to examine the ability of college sport teams to increase people's sense of community with the university. Using social identity as a proxy for sense of community (Carlson, Suter, & Brown, 2008), the goal of this longitudinal research was to examine to what extent an individual's identification with a sport team predicts their identification with the wider university. To achieve this purpose, the authors collected data over a period of 3 years among stakeholders (students, faculty and staff, and alumni) of a large southwestern university that was about to add a new football team to its athletic department. With data from three different time points, this is a true longitudinal examination of team identification and university identification, which provides a valid indication of the extent to which sport teams can drive an individual's identification process with the larger community.

Literature Review

Relationship Between Team and University Identification

Few subjects have captured the attention and interest of sport marketers and managers as has that of team identification. From the development of team identification scales (Dimmock, Grove, & Eklund, 2005; Heere & James, 2007b; Kwon & Armstrong, 2002; Wann & Branscombe, 1993) to the association of levels of team identification with attendance (Wakefield & Sloan, 1995), consumer purchasing behaviors (Trail, Anderson, & Fink, 2005), or psychological well-being (Wann, 2006), the

study of sport team identification is well established in the sport marketing and management literature. People become identified with a sport team because of family, peers, institutions, and their general community (Mcpherson, 1976), who in turn often reflect an identification with a sport team that best symbolizes their identity with an associated community, such as the city, state, nation, or university, among others (Heere & James, 2007a). Hobsbawm (1990) described the notion that sport is a powerful instrument to identify with a larger imagined community (Anderson, 1983) as follows: "The imagined community of millions seems more real as a team of eleven named people" (p. 143). Although Hobsbawn was referring to a nation, it does not seem farfetched to stretch this quote to a university. A typical university often contains several thousand students, faculty, and staff and similarly uses the university's favorite sport team (e.g., football, basketball) to make the community "real." Colleges and universities have understood the value of these college sport teams, and in efforts to increase student retention, alumni involvement, and faculty satisfaction, colleges and universities dedicate substantial resources to sport to enhance stakeholder identification with the institution.

The literature in higher education has identified the importance of integration (Tinto, 1987) and involvement (Astin, 1984) as key indicators of retention, development, and alumni giving. For Tinto (1987), new students require connections to the campus culture, be it academically or socially, to become integrated into the campus community and increase their commitment to both individual and organizational goals. Similarly, Astin (1984) interpreted student change as a matter of involvement; as students devote time and energy to joining formal or informal clubs, organizations, or campus activities, students enhance their psychological connection to the university overall. Involvement on campus is very much connected to integration on campus (Clopton, 2008), and both lead to significant increases in retention and graduation (Braxton, Sullivan, & Johnson, 1997; Gerdes & Mallinckrodt, 1994). After reviewing a decade's worth of research on student development, Pascarella and Terenzini (2005) concluded that "the evidence consistently indicates that academic and social involvement in whatever form (but some more than others) exert statistically significant positive net influences of student persistence" (p. 440).

Researchers have examined a wide spectrum of engagement possibilities for campus stakeholders, yet most of the work examining intercollegiate athletics has focused exclusively on student-athletes. Only a select few scholars have examined the impact of intercollegiate athletics on campus integration and university identity beyond those participating in sport by examining the impact of sport fanship. The first wave of academic interest in this perceived relationship was anecdotal in nature. Boyer (1990), for instance, noted the ability of sports on campus to develop feelings of community, a sentiment echoed by Toma (2003). Chu (1989) similarly wrote,

"By affiliating with the [university] team, by caring for its scores, we declare allegiance to an interest greater than oneself—the community" (p. 160). Although each of these authors intuitively understood the connection between sport fanship and identification with the university community, their research lacked empirical support for the alleged communal value of college sports.

As a response to these anecdotal accounts, the second wave of research was focused on the social impact of college sports and allowed for an empirical examination. Clopton (2008) found a significant relationship between the extent to which stakeholders connected with athletic teams and their subsequent perceived sense of community. Similarly, in a follow-up study, Clopton and Finch (2008) found that fan identification was significantly related to perceived levels of social capital on campus. Wann and Robinson (2002) found that identification with college sport teams was positively correlated with intentions to persist at the university, echoing an earlier study by Wann, Inman, Ensor, Gates, and Caldwell (1999) that found that student fan identification was positively associated with academic and psychological benefits. Each of these studies, however, is inherently limited because of its cross-sectional design. The correlations produced from these studies portray a relationship between sport fanship and positive social outcomes on the campus community, but the cross-sectional design prevents any discussion of directionality in that relationship.

Two more recent studies took a different approach to empirically measure the social impact of college sports on campus by examining newly formed college football teams. Heere and Katz (2014) found that a new team did have a significant impact on how students and alumni connect with the larger university. In a different study, however, Warner et al. (2011) found no evidence that consuming sport as a fan led to campus integration, though their work used attendance as a measure of sport fanship. Because there are important differences between sport fans and sport spectators (Trail, Robinson, Dick, & Gillentine, 2003), their results do not address the potential relationship between sport fanship and campus integration.

Although these two studies represent an innovative next step in understanding the relationship between sport fanship and social outcomes on campus, they still do not address the limitations of cross-sectional research. In an aggregate sense, the notion that sport fanship can lead to campus integration and university identity is supported only by anecdotal evidence (Boyer, 1990; Chu, 1989; Toma, 2003) and inherently limited cross-sectional studies (Clopton, 2008; Katz & Heere, 2014; Wann & Robinson, 2002). Without a true longitudinal examination, whether increasing one's identification with sport teams leads to an enhanced identification with the university remains largely unanswered. For all the criticisms of college sports (e.g., Sperber, 2000), such a longitudinal examination is necessary if supporters of intercollegiate athletics are to use the social impact on

campus as one of the positive benefits of college sports. Because such social impact arguments date back to the early 20th century (Clotfelter, 2011), a true longitudinal examination is needed to appropriately and reliably examine whether sport fanship drives identification with the larger university.

How to Measure Social Identity

In addition to the methodological limitations that have restricted understanding of whether team identification drives university identification, much of the existing research has been limited in its treatment of identity as a unidimensional construct. Scholars searched for associations between identification and outcomes such as individual well-being (e.g., Wann, 2006) or consumer behaviors such as attendance and purchasing intentions (e.g., Wakefield & Sloan, 1995). As the amount of research dedicated to team identification increased, sport management scholars began to reconceptualize identification not as a unidimensional construct, but as one that is multidimensional in nature, following the academic discourse in social identity theory (Ashmore, Deaux, & McLaughlin-Volpe, 2004), because these multidimensional scales allowed researchers to better understand the underlying components of social identity. Beginning with Dimmock, Grove, and Eklund's (2005) first multidimensional measure of team identification, team identification was segmented into three distinct dimensions: (a) cognitive–affective, (b) personal evaluation, and (c) other evaluation. A few years later, Heere and James (2007b) proposed a six-dimensional model of team identification based on the earlier work of Ashmore et al. (2004) that contained the following dimensions: (a) private evaluation, (b) public evaluation, (c) sense of interdependence, (d) interconnection, (e) behavioral involvement, and (f) cognitive awareness.

The argument for using these multidimensional perspectives on social identity is not that they are somehow more valid than one-dimensional approaches, because there are many one-dimensional social identity scales in a wide variety of academic disciplines that are widely accepted as valid. For instance, the organizational identification literature has used the one-dimensional approach proposed by Mael and Ashforth (1992), who actually used a university setting to validate their scale, and in political science, Huddy and Khatib (2007) developed a one-dimensional national identity scale to measure how people identify with their nation. These studies were built off the same social identity theories as the multidimensional scales proposed by Dimmock et al. (2005) and Heere and James (2007b).

Instead, the argument for using multidimensional scales is that these scales could be more informative about the social identity process itself and are better suited to pick up on any changes in the social identity process. Using a multidimensional scale, Heere et al. (2013) measured national identity before and after the 2010

World Cup to examine whether this event would cause any change in how people identified with their nation. They found that although people evaluated their nation more positively, they did not feel more interconnected with their nation, and their behavioral involvement with their nation actually decreased. Had Heere et al. used a one-dimensional social identity scale, similar to Wann and Branscombe (1993) or Mael and Ashforth (1992), they probably would have reported no change, because these scales are very similar to the interconnection construct in Heere and James's (2007b) group identity scale.

The reliability and validity of the group identity scale has been examined in several studies (Heere & Katz, 2014; Heere, Walker, Yoshida, Ko, Jordan, & James, 2011; Heere, Walker, et al., 2011; Lock, Funk, Doyle, & McDonald, 2014). Although Heere and his colleagues noted some discriminancy issues between several of the constructs, they did find strong evidence of the scale's external validity, and in each of the studies the scale was able to predict variance in other constructs (consumer behavior) while demonstrating differences between pre- and posttests in quasi-experimental studies. Ultimately, the advantage of these multidimensional scales is that they enable researchers to gain a deeper understanding of the identity process and allow researchers to use a scale with a stronger capacity to explain variance in expected outcome variables (Heere, James, et al., 2011). For instance, would Warner et al. (2011) have found changes in how people identified with the university community if they had used a multidimensional construct, used additional data collections, or both? As a result of this limitation in survey instruments, theoretical understanding of sport as a potential driver of university identity requires a multidimensional examination of this potential relationship.

Dynamic Nature of Identification

Identification is not a stagnant construct. Even when individuals strive to maintain a consistent identity throughout the lifecycle, they are faced with numerous disruptive events and transitions that make identity change a natural, unavoidable, and critically important part of life (Robins, Noftle, Trzesniewski, & Roberts, 2005; Swann & Bosson, 2006). Dramatic identity changes can occur after a number of large-scale environmental or sociocultural changes, but also as a result of an individual's development in community-initiated changes such as age, status, or social role (Swann & Bosson, 2010). Whenever individuals leave one social group and join another (e.g., high school to university, moving from one city to another), they have to find ways to assimilate into their new environments and find new communities to become part of. As a result of such changes, individuals are forced to either renegotiate their identities or redefine their larger self-concepts because of the new social identities they develop through their membership in the new groups (Ethier & Deaux, 1994). Social identities presumably emerge throughout the life span (Swann & Bosson, 2010), and one's social identity inherently changes throughout the life course. A social identity such as father may develop after the birth of a child and may ultimately transition to a social identity as grandfather later in life. Other prominent social identities, from political affiliation to age, occupation, and status all develop, grow, change, and possibly decay or disappear altogether throughout the various stages of an individual's life.

People's identification with their favorite sport teams is no exception to this rule (Hyatt & Foster, 2014). Although fans choose their first favorite teams at an early age (James, 2001) and appear very loyal to their choices, social transitions in life do push them toward new teams in different sports or structures. For instance, when individuals transition from high school to college (or similarly, from college to the workplace), they might choose to devote their resources to support the new local team to assimilate into their new surroundings. In many instances, such occurrences result in individuals having to renegotiate their social identities, potentially including their identification with a sport team. Several earlier studies have sought to examine the dynamic nature of team identification (e.g., Dietz-Uhler & Murrell, 1999; Gau, Wann, & James, 2010; Lock et al., 2014), yet each of these studies was methodologically unable to address the true nature and trajectory of change within the team identification process.

These earlier studies were able to predict later levels of identification or find causal relationships between identification and some initially measured variable, yet two-wave statistical techniques cannot adequately address questions of development and change (Singer & Willett, 2003). The association between an initial variable and a later measurement does not address the trajectory of change directly, and such a technique is likely to be an unreliable estimator of change because it offers only "snapshots" of incremental change (Singer & Willett, 2003) and "contain[s] an extremely limited amount of information about the change of each individual" (Rogosa, Brandt, & Zimowski, 1982, p. 729). Repeated-measures two-wave designs assume that the overall pattern of change within a sample is generalizable to all individuals; any individual difference in change is considered random error (Chen & Cohen, 2006). Because individual fans vary in their levels of identification with sport teams (Wann, Melnick, Russell, & Pease, 2001), any study of how changes in team identification drive changes in university identification requires a statistical method that embraces and measures interindividual change. In the current study, the authors propose a new methodological approach to the study of team identification to better understand the dynamic nature of identification development, growth, and change and its effect on university identification.

Using a Longitudinal Approach to Understand How Identification With a Sport Team Drives Identification With the University

To address the theoretical gap that is associated with sport's ability to serve as a driver of university identification, a method that does more than explain variance is needed to analyze a longitudinal data set. Growth curve modeling typically refers to a wide array of statistical models for repeated-measures data, yet growth curve analysis more specifically refers to statistical methods that allow for the estimation of interindividual variability in intraindividual patterns of change over time (Curran, Obeidat, & Losardo, 2010). Growth curve modeling is sometimes referred to as *individual growth modeling* (Rogosa et al., 1982), *multilevel modeling* (Goldstein, 1995), *hierarchical linear modeling* (Raudenbush & Bryk, 2002), *random coefficient regression* (Hedeker, Gibbons, & Flay, 1994), or *mixed modeling* (Pinheiro & Bates, 2000), but the researchers in this examination specifically use the name *growth curve analysis* to emphasize the individual trajectories that are the focus of the identification development process. Rabe-Hesketh and Skrondal (2012) referred to growth curve analysis as the most prominent and reliable multilevel approach to longitudinal data analysis.

Many disciplines have already embraced growth curve analysis and longitudinal research, including quality of life (Chen & Cohen, 2006), developmental psychology (Curran et al., 2010), and marriage literatures (Karney & Bradbury, 1995; Umberson, Williams, Powers, Liu, & Needham, 2005). Yet to our knowledge, such examinations are entirely absent from the sport consumer behavior literature. A true longitudinal measure of change requires a minimum of three waves of data collection, an outcome whose values change systematically over time, and a sensible metric for clocking time analyzed using growth curve analysis (Singer & Willett, 2003).

We propose the use of growth curve analysis in the study of sport fans to enhance the theoretical understanding of team identification and its ability to drive identification with other associated communities. In this study, growth curve analysis was used to explore how new sport fans develop the different dimensions of team identification and how these developments affect their identification with the university. Growth curve analysis allowed the researchers to examine the different trajectories for each dimension of team and university identification over a 3-year period without the methodological limitations of previous cross-sectional research. On the basis of the methodological advantages of growth curve analysis to address the theoretical gap in team identification, this research was guided by three research questions:

Research Question 1: How do the different dimensions of team identity change over time?

Research Question 2: How do the different dimensions of university identity change over time?

Research Question 3: To what extent can the development of team identity dimensions explain the change in university identity dimensions?

Method

Data Collection

The data collection for this research took place over a 3-year period within the context of a newly formed intercollegiate football program by a large southwestern university located in a large metropolitan area. The university used in this research decided to add football as part of a university-wide initiative to elevate it status among a number of Tier I institutions in its state and transition its organizational reputation from the commuter school it was decades earlier to a Tier I research university. This university of roughly 30,000 students was part of a wider university system in which it was not the flagship institution. Comments by university administrators reflected a strong commitment to building a successful football program to serve as a focal point for the university and a source of pride connecting the university to the local community because they perceived that many of their stakeholders held an existing loyalty to either the flagship university or the biggest rivals of this flagship university. The first wave of surveys was distributed in Spring 2011, roughly 6 months before the new team competed in its first game.

With assistance from the school's administration, a link to the survey was included in a routine broadcast email to university students, faculty and staff, and alumni. The researchers used these three categories of stakeholders because the university organized its broadcast emails according to these group distinctions. These groups did not receive a direct email with a request to fill out the survey, and how many people actually opened the overall broadcast email is unknown. As a result, how many people viewed the request is also unknown and thus a response rate cannot be confidently calculated. It is estimated that in general most people ignore these emails because of the large number of requests received each day (Bickart & Schmittlein, 1999). Moreover, respondents often ignore surveys that are sent to a large number of individuals sent without a prenotification letter (Sheehan, 2001). To avoid the risk of response bias concerning attachment to the football team, there was no mention of football in the link to the survey, which is believed to minimize the likelihood of inherent bias toward the football team among the respondents.

Because the survey was anonymous, individuals were asked to enter their email addresses if they wanted to be included in a raffle of team and university merchandise. Email addresses were needed to identify individual respondents in the process of building a longitudinal data-

set. A total of 3,191 usable surveys were collected, and 2,221 individuals provided their email address. In Spring 2012, after the new team's first season of competition, the same survey distribution protocol was followed. Again, university administrators included a link to the survey in a routine broadcast email to all stakeholder groups. A total of 2,781 usable surveys were collected, and 1,519 individuals included their email address. The third wave of data collection occurred in Spring 2013 after the team's second season of competition, using the same distribution protocol as the previous two waves of data collection. The third wave resulted in 1,973 usable surveys, and 1,279 individuals provided their email addresses.

The researchers searched the several thousand provided email addresses for those who completed each of the three surveys. Altogether, 158 individuals satisfactorily completed all three waves of the survey, resulting in a sample size that exceeded the suggested sample size approaching 100 offered by Curran et al. (2010) as sufficient for growth curve analysis. Moreover, Huttenlocher, Haight, Bryk, Seltzer, and Lyons (1991) successfully used a sample size of 22 to complete a growth curve analyses, further supporting the appropriateness of the sample size in this research. Of the 158 participants, 40 (25.3%) identified as students, 69 (43.6%) as faculty or staff, and 49 (31.0%) as alumni of the university. The average ages of the students, faculty and staff, and alumni were 22, 49, and 43 years, respectively. The overall sample included 90 men and 68 women.

The researchers recognize there may be an inherent bias in voluntary longitudinal responses. An individual's completing all three waves of the study suggests a long-term relationship and commitment to the university; a participant who completed all three waves must have received the school's broadcast email in all 3 years of the data collection process. Although the researchers recognize this potential limitation in terms of generalizability, they have no theoretical reason to believe that the trajectories of change would be any different for the portion of the population who completed all three rounds of data than for those who did not. The baseline measures may be higher for the 158 participants in this research than the general population, but the researchers do not believe the relationship between the specific dimensions of identity or their longitudinal trajectories are significantly different than for other university stakeholders.

Instrumentation

Both university identity and team identity were measured by the group identity scale proposed by Heere and James (2007b) and later modified by Heere, James, et al. (2011; Heere, Walker et al., 2011; Heere et al., 2013). Following the arguments set out in the literature review, the choice was made to use a multidimensional group identity scale in the hope that it would allow for a more accurate depiction of any change in group identity development. A short description of each construct from the group identity instrument used in this study is provided in Table 1.

Despite the recommendation of Lock et al. (2014) to drop sense of interdependence, the construct was maintained. The authors chose to do so for several reasons. First, they aimed to have a single instrument to measure both social identities, allowing for a stronger assessment of predictive change. Although the argument of Lock et al. (2014) seems to be validated in a sport context because most respondents disagree with the statements with regard to sense of interdependence with the team (e.g., mean scores below 4 on a 7-point Likert scale), respondents do agree with the statements in a university context, providing support that in a university setting interdependence might be a required component of university identity. Second, the authors do not necessarily believe that there is only one true multidimensional instrument to measure social identification. Roccas, Sagiv, Schwartz, Halevy, and Eidelson (2008) proposed a four-dimensional model to measure social identity (importance, commitment, superiority, deference), and Leach et al. (2008) proposed five components of social identity (individual self-stereotyping, ingroup homogeneity, solidarity, satisfaction, centrality), clustered in two overarching dimensions of self-definition and self-investment. Each of these instruments focuses on different facets of social identity and, depending on the purpose of the study, authors might prefer one over the other. Thus, although the authors do not necessarily reject the view of Lock et al. (2014) that sense of interdependence might not be a required component of team identification, it is included in this study because the ultimate purpose is to better understand university identification and what role the football team plays in this identity development, and sense of interdependence is a strong indication of how important both the football and the university are in people's lives.

Data Analysis

As discussed previously, the authors used growth curve analysis to properly examine issues of trajectory, intraindividual, and interindividual change within the dimensions of team and university identity. Growth curve analysis is a multilevel approach to examining data that explicitly models the shape of individual trajectories over time and examines how these trajectories vary, both systematically as a result of occasion-level and subject-level covariates and randomly by subject (Singer & Willett, 2003). Level 1 analysis, also called the *unconditional growth model* or *individual growth model,* is used to examine how a specific outcome changes over time. It is a descriptive question and seeks to characterize each individual person's pattern of change over time. Unconditional growth models are used to examine within-individual change and characterize each person's individual growth trajectory. For this study, the Level 1 model is

$$Y_{ij} = \alpha_{0i} + \beta_{1i} + \varepsilon_{ij}$$

The Level 1 model indicates that in the population for the study, the dependent variable (Y) is a function of the individual's initial baseline level (α_{0i}), the linear growth

Table 1   Group Identity Instrument (Heere, Walker, et al., 2011)

Constructs	Descriptions
Private evaluation	The positive (or negative) attitude that an individual has personally toward the group: • I feel good about being a fan/member of my team/university. • In general, I am glad to be a fan/member of my team/university. • I am proud to think of myself as a fan/member of my team/university.
Public evaluation	The perceived positive (or negative) attitude of nonmembers toward the group by the individual: • Overall, my team/university is viewed positively by others. • In general, others respect my team/university. • Overall, people hold a favorable opinion about my team/university.
Sense of interdependence	The degree to which the individual feels his/her faith is dependent on the faith of the group: • What happens to my team/university will influence what happens in my life. • Changes affecting my team/university will have an impact on my own life. • What happens to my team/university will have an impact on my own life.
Interconnection of self	The degree to which the individual feels the group is a part of him- or herself: • When someone criticizes my team/university, it feel likes a personal insult. • In general, being associated with my team/university is an important part of my self-image. • When someone compliments my team/university, it feels like a personal compliment.
Behavioral involvement	The degree to which an individual engages in actions that directly implicate the group identity: • I participate in activities supporting my team/university. • I am actively involved in activities that relate to my team/university. • I participate in activities with other fans/members of my team/university.
Cognitive awareness	The general awareness (or knowledge) that an individual has of the group: • I am aware of the tradition and history of my team/university. • I know the ins and outs of my team/university. • I have knowledge of the successes and failures of my team/university.

trajectory of subject i (β_{1i}), plus his or her random error as it varies by age (ε_{ij}). The unconditional growth model is intended to produce a model that represents each participant's dimensions of identification change trajectories. To address Research Questions 1 and 2, a Level 1 analysis was conducted for each individual dimension of the group identity scale for both team and university identification.

The Level 2 model, also called the *conditional growth model* or *systematic interindividual difference in change model,* is used to examine whether some time-invariant characteristics of the individual can predict individual changes in trajectory. It is a relational examination and examines the association between predictors and patterns of change in an attempt to determine interindividual dif-

ferences in change. The Level 2 model treats both the intercept and slope of an individual's growth trajectory as Level 2 outcomes that may be associated with some predictor. For Research Question 3, conditional growth models were conducted with the six dimensions of team identity as independent variables and a single dimension of university identity as the dependent variable, for a total of six different models. Six different models were conducted to examine how the individual dimension trajectories of team identity relate to the changes in each dimension of university identity. Although running six models may increase the chance of Type I error, the dataset for this study was not large enough to combine the six different dimensions of university identity into a single model. In addition, to measure whether the inclusion of the team identity dimension trajectories improves the fit of the model, pseudo-R^2 statistics were calculated for each model. Psuedo-R^2 statistics are essentially the proportional reduction in residual variance as additional predictors are included in the model (Singer & Willett, 2003), serving as a benchmark to measure whether additional variables increase or decrease the proportion of within-person variation explained by the model.

Results

The authors present the results from fitting the unconditional growth model for each dimension of team and university identity in Table 2. In addressing Research Question 1, the data support the notion that individual dimensions of team identity manifest themselves to varying degrees early in identity development. The

range of intercepts for team identification was 2.338, where private evaluation reported the highest intercept (5.915) and sense of interdependence the lowest (3.577). In terms of rate of change, five of the six dimensions of team identification had significant (positive) slopes from Year 1 to Year 2; only sense of interdependence had a nonsignificant slope. Behavioral involvement increased the steepest from Year 1 to Year 2 ($\beta = 0.808$, $p < .001$), followed by cognitive awareness ($\beta = 0.640$, $p < .001$) and public evaluation ($\beta = 0.491$, $p = .008$). Private evaluation also significantly increased from Year 1 to Year 2 ($\beta = 0.150$, $p = .05$), though it is worth nothing that after having the highest intercept in Year 1 private evaluation reported the smallest slope among the five significant dimensions. Examining the slopes from Year 2 to Year 3, none of the dimensions of team identity reported significant change, meaning none of the individual dimension scores showed significant growth or significant decline from the second data collection point to the third collection point. Figure 1 graphically represents the results from the unconditional growth model for the dimensions of team identity.

The results for Research Question 2 are also found in Table 2. The unconditional growth model for the dimensions of university identity revealed a smaller range of intercept values (.0693) than for team identification. Just as with team identification, for university identification private evaluation reported the largest initial value (6.306) and interconnection with the group (5.154) reported the smallest initial value. Each of the dimensions of university identity reported a higher intercept than the same dimension of team identity. In terms of rate of change, only behavioral involvement ($\beta = 0.218$, $p = .009$) and

Table 2   Summary of Growth Curve Analysis for Individual Dimensions of Identification (ID)

ID and Variable	Intercept	Slope Years 1–2	SE	p	Slope Years 2–3	SE	p	ICC
Team ID								
BEH	4.177	0.808	.108	<.001***	0.004	.107	.968	.802
COG	4.511	0.640	.092	<.001***	0.136	.092	.140	.777
INT	4.161	0.253	.094	.008**	0.044	.094	.640	.746
PREV	5.915	0.150	.078	.05*	0.031	.078	.689	.857
PUB	5.243	0.491	.077	<.001***	-0.068	.076	.370	.742
SOI	3.577	0.076	.113	.498	-0.070	.112	.553	.764
University ID								
BEH	5.230	0.218	.083	.009**	-0.020	.084	.807	.809
COG	5.497	0.130	.060	.033*	0.010	.060	.862	.782
INT	5.154	-0.111	.087	.206	0.140	.087	.108	.694
PREV	6.306	-0.024	.046	.597	0.123	.046	.008**	.819
PUB	5.613	0.032	.061	.599	0.142	.062	.022*	.769
SOI	5.182	-0.182	.105	.085	-0.034	.104	.741	.699

Note. BEH = behavioral involvement; COG = cognitive awareness; ID = identification; INT = interdependence; PREV = private evaluation; PUB = public evaluation; SOI = sense of interdependence.

*$p < .05$. ** $p < .01$. *** $p < .001$.

cognitive awareness ($\beta = 0.130$, $p = .033$) significantly changed from Year 1 to Year 2. When examining the slopes from Year 2 to Year 3, both private evaluation ($\beta = 0.123$, $p = .008$) and public evaluation ($\beta = 0.142$, $p = .022$) changed significantly. Figure 2 graphically represents the results from the unconditional growth model for the dimensions of university identification.

For Research Question 3, the resulting pseudo-R^2 statistics indicate the proportional reduction in residual variance due to the inclusion of additional predictors in the model. The models used for Table 3 included the six dimensions of team identification, so the pseudo-R^2 statistics indicate the level of within-person variation in university identity models explained by the team identity dimensions. In other words, the pseudo-R^2 statistic indicates what percentage of change in university identity

is explained by the change in team identity. The newly added football team appeared to be a powerful instrument to increase people's behavioral involvement with the university, explaining almost 25% of the increase in behavioral involvement with the university. In addition, it caused 10% of the increase in cognitive awareness of the university and 11% of the increase in private evaluation of the university, the attitude an individual has personally toward the university. It also had a very small effect on the increase in public evaluation of the university, the perceived attitude of nonmembers toward the university, causing an increase of 4%. Although both interconnection of self with the university and sense of interdependence with the university did not increase over the 3-year period, the team identity developments had a significant impact on these constructs.
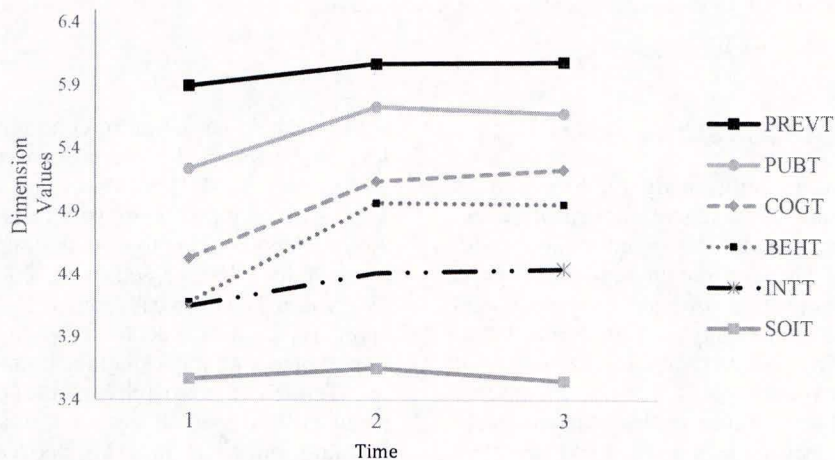

Figure 1 — Longitudinal development of team identity dimensions. BEH = behavioral involvement; COG = cognitive awareness; ID = identification; INT = interdependence; PREV = private evaluation; PUB = public evaluation; SOI = sense of interdependence
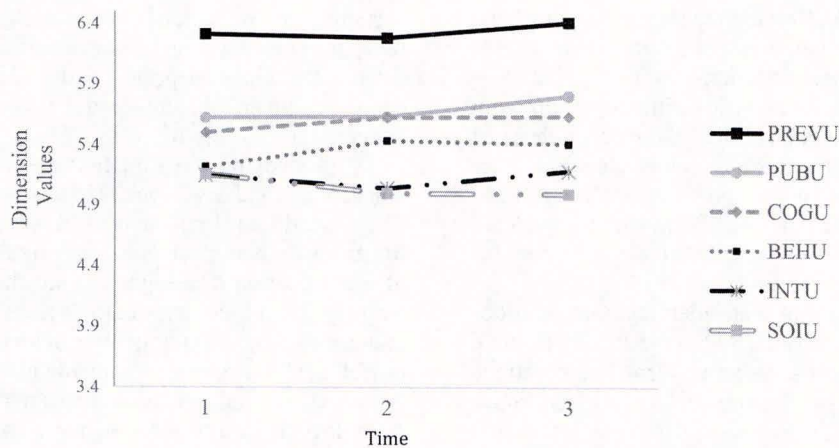

Figure 2 — Longitudinal growth of university identification dimensions. BEH = behavioral involvement; COG = cognitive awareness; ID = identification; INT = interconnection with the group; PREV = private evaluation; PUB = public evaluation; SOI = sense of interdependence

Table 3   Summary of Conditional Models of University Identity With Team Identity as Predictors

Variable	1	2	3	4	5	6
Pseudo-R^2	.2497	.1047	.2254	.1136	.0440	.0368
1. BEH	.3654***	-.0080	-.0178	-.0054	.0387	-.0059
2. COG	.0321	.2284***	-.1199**	.0128	-.0360	-.2013***
3. INT	-.0324	.0099	.5667***	.0879**	.0292	-.0102
4. PREV	-.0896	-.1107**	-.0274	.1666***	-.0132	.1182
5. PUB	.0749	.1516***	.0168	.0274	.3811***	.1620*
6. SOI	.0487	.0558*	.0792*	.0087	.0416	.4904***
Model fit index						
Log likelihood	-600.34	-465.65	-575.10	-382.73	-470.52	-694.62
Wald χ^2	187.33	126.07	347.38	114.53	169.82	160.23

Note. BEH = behavioral involvement; COG = cognitive awareness; INT = interdependence; PREV = private evaluation; PUB = public evaluation; SOI = sense of interdependence

$* p < .05. ** p < .01. *** p < .001.$

Discussion

For the 158 participants in this study, the formation of the new football team was a salient enough life event to significantly alter their existing identification with the larger university. The idea that intercollegiate sports can have a positive impact on how campus stakeholders identify with the larger university has long been cited as a benefit of sponsoring college sports, and the results of this longitudinal study provide support for this notion. The pseudo-R^2 statistics found in this study indicate that the creation of a new college football had a positive impact on the degree to which the participants identified with the university, particularly within the construct of behavioral involvement. Campus administrators and decision makers have a particular interest in enhancing behavioral involvement based on Astin's (1984) theory of involvement, and the results of the conditional growth models used to address Research Question 5 suggest that nearly 25% of the change in behavioral involvement with the university for the participants in this study was explained by changes in team identification. Although previous literature has questioned the effectiveness of college sports as a mechanism to enhance campus integration and involvement for sport fans (Warner et al., 2011), this study found that identifying with a sport team resulted in increased involvement with the university for the participants.

Beyond the impact of team identification development on behavioral involvement with the university, there is also evidence from this study that identifying with the new team helped the participants feel a part of the larger campus community. The pseudo-R^2 from interconnection of self with the university suggests that nearly 23% of changes in how the participants felt the university were a part of themselves were explained by their development of team identification. The relationship between

sport fanship and notion of community on campus has long been supported by anecdotal evidence (e.g., Boyer, 1990; Toma, 2003), but this study represents the first longitudinal empirical support for such a relationship. As scholars continue to note the importance of finding community (Warner & Dixon, 2013) and belonging (Strayhorn, 2012) on campus, the social value of college sports for campus stakeholders continues to increase in importance for campus administrators.

Though this research project specifically examined a new college football team, it also adds to the existing literature on the relationship between team identification and university identification. Previous research by Clopton (2008), Wann and Robinson (2002), and Heere and Katz (2014) found significant correlations between individuals' identification with sport teams and their identification with the larger university, and the findings from this study further validated that relationship for the participants. The lack of change between Years 2 and 3 raises the question of how much identification changes for existing team identification, but the relationship between team and university identification was present in the data collected for this study.

This study provides the first insight into the longitudinal change and development of new team identification. The multidimensional nature of the analysis allowed for an examination of how each individual dimension of identification developed during the first 3 years of a newly formed college football team, highlighting the underlying formation of new team identity development as well as changes in university identification. The use of growth curve analysis rather than a traditional two-wave cross-lagged design allowed for a more accurate and trustworthy empirical examination of the development of both team and university identity. Though the conceptualization of identification as a dynamic construct is well established outside sport management (e.g.,

Swann & Bosson, 2006), this study provides the first evidence that team identification is similarly dynamic in nature. That constructs such as behavioral involvement and cognitive awareness increased so much might not be surprising because during the first data collection the team has not yet played any games, and thus both involvement and awareness were hard to achieve. Yet, the growth was not limited to these constructs, because both the evaluation processes and the interconnection with the group increased. That five of the six dimensions of team identity significantly changed from Year 1 to Year 2 is evidence that new fan identity is a fluid social identity that develops fairly fast, because none of the dimensions of team identity changed from Year 2 to Year 3 for the participants in this study. New fan identity development is not a linear process; had a two-stage test been conducted before the first season and after the second season, the data would have revealed linear growth over the 3-year period. Yet this is not an accurate portrayal of new fan identity development; including the third wave of data allowed for a more accurate trajectory that showed a substantial increase in identification after the 1st year of competition but very little change after that. In fact, the lack of growth in team identity from Year 2 to Year 3 suggests that after the initial adjustment period, the entire evaluation process takes longer. The formation of a new team, as an example of a disruptive or transitional event that affects one's identity, appears to have an immediate short-term honeymoon effect (Helmreich, Sawin, & Carsrud, 1986) that causes substantial changes in individual identification. After this short period of change, the evaluation process requires a longer period of time (or another disruptive life event) to change again. Although no dimensions of team identity increased from Year 2 to Year 3, both private and publication evaluation of the university showed significant growth during this period. It appears that some constructs in an existing identity may take longer to increase after the initial transformative event. One's behavioral involvement and cognitive awareness can intuitively increase quickly, but other constructs take longer. On a positive note, though, none of the constructs decreased, signaling that development of team identification is a robust process, that an initial honeymoon effect might exist, and that in this case it was a happy marriage, and the respondents were happy to be a part of it.

The differences in range and growth between team identification and university identification are also an important takeaway from this study. As a new identity, the changes in team identification were more volatile because the participants were still deciding on their dispositions toward the team. There was greater variation between the participants and more significant changes longitudinally among the dimensions of team identity, suggesting that participants' attitudes toward the new team were still being formed. Once attitudes are formed, previous literature has shown that attitudes are less volatile (Eagly & Chaiken, 1993) as individuals try to maintain a consistent self-concept and identity. Research outside of sport man-

agement has shown that certain life events, however, force individuals to renegotiate their social identities (Ethier & Deaux, 1994; Swann & Bosson, 2010). The formation of a new football team did serve as a driver of university identification for the participants in this study.

Conclusion

Critics of college sports often focus on the scope of economic commitment required of academic institutions to sponsor intercollegiate athletics, stating that this focus has moved college athletics away from what it initially was supposed to do (Sperber, 2000). Yet, this study empirically validates that intercollegiate sport programs can still be viewed as mechanisms for accomplishing institutional objectives. Boyer (1990) wrote that the ultimate goal of campus administrators and student affairs departments in particular is the creation of community on campus, and this study provides causal empirical evidence that a newly formed college football team drove the university identification of the research participants, helping the university meet its institutional goal. Individual aspects of student affairs programs are rarely conceptualized in terms of profits and costs; rather, they are viewed as important expenditures for promoting feelings of belonging and community on campus (Strayhorn, 2012). In the particular setting of this research, the addition of a football team was able to achieve the same impact, particularly on how the research participants rated their behavioral involvement and interconnection of self with the university.

Despite the criticism of some that intercollegiate athletics has moved outside the academic mission of the university, this study validates the view that intercollegiate athletics can be a part of the institutional tool kit for enhancing involvement on campus. Many athletic departments, perhaps most, already cite the value of intercollegiate athletics as focal point for school identity and spirit in their mission statements (i.e., the University of Texas at Austin). The findings of this study support the social value of college sports and suggest that critics and scholars should also view social impact as the primary goal of athletic programs rather than economic profit or gain. As nonprofit organizations, institutions of higher learning largely define their organizational legitimacy in terms of educational opportunities, public services, or the development of knowledge. Because involvement is an important component of institutional objectives (Astin, 1984), the creation of a new college football team in this particular setting helped achieve these goals for the research participants. Although opponents of college athletics typically address the financial impact on the university, college sports can also be conceptualized as a tool for achieving the institutional objectives of the university.

Because this research was conducted within a single setting, it is important to note the limitations of attempts to generalize the findings presented here. Ultimately, this longitudinal study relied on the voluntary participation of 158 individuals. Each of these participants had an existing

relationship with the university as a student, faculty or staff member, or alumnus. The impact of a new college football team may be different on community members with no formal relationship with the university. Moreover, completing a survey 3 years in a row may indicate a response bias toward the university. The authors acknowledge that the baseline measures may be higher for the participants than for the larger population, but they have no reason to believe the relationship between the specific dimensions of identity or their longitudinal trajectories are significantly different than those of other university stakeholders. It is important to note that the focus of this study was not necessarily on gaining a perception of the overall population of university stakeholders but rather on the change in attitude among them. Therefore, no statements are made with regard to the strength of the identity (the baseline score); rather, the focus is on the change within them.

A few other noteworthy limitations need to be addressed as well. First, this research took place in a major metropolitan area known for its regional devotion to football but that previously had no major football team representative of the city. Second, the team in question largely met (or perhaps exceeded) the expectation of most fans during the 1st year of competition. Though the team did not compete for conference or national championships and finished with a losing record, they did win some games against smaller schools, and their fans seemed to be content with their performance given their status as a new program. Given these setting-specific characteristics, the conclusion from the data collected is most appropriately stated as follows: A new college football team can, but will not necessarily, have a significant social impact on the university. Previous scholars have noted a substantial list of negative outcomes associated with intercollegiate sports (e.g., Sperber, 2000), and this study does not claim that the social impact of intercollegiate sports outweighs the financial, academic, and cultural flaws in all settings. Rather, in this particular setting the new team had a positive and significant impact on how the research participants viewed the university and had a significant social impact on the university as a whole.

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