FANDOM ON THE AIR:
Assessing Regional Identity Through College Football Radio Networks

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ABSTRACT
Sports fandom represents a significant aspect of place identity, as demonstrated by the colorful landscapes associated with team loyalty. However, there has been little research on the geography of sports fandom. While several geographers have studied the link between Southern regional identity and the sport of stock car racing, American football is the most popular spectator sport in the United States, and it seems to have a particular strength in the United States South. Therefore, examining the geography of football fandom can add depth to the study of place identity. A 1988 article by Roseman and Shelley on the geography of collegiate radio football broadcasting serves as a milestone and our inspiration here. Using data on college football radio coverage as our proxy, we mapped college football fandom for the "Power 5" conferences. Our results show that state borders continue to have an important influence on the geography of college football fandom, but we also identified a strong region of identity in the South. Our results support the theory that place identity can be fruitfully examined using quantitative data, although many questions remain about how sports fans contribute to the making of place.

Key words: place identity, fandom, American football

Introduction

Sports fans do more than participate in the celebrations and disappointments of victory and defeat on the field; they also contribute to the making of place and place meaning. Teams are almost always closely identified with places such as cities or states, and a team's very name directly connects it to place; indeed, "naming is the foundation of identity formation" (Alderman 2015, 36). A Yankees fan who lives in New York might feel personally vindicated by every Yankees victory through this kind of identification between a fan, a place, and a team (Guschwan 2011). The cultural landscape reflects sports fans' identities in a variety of ways. Stadium construction is supported by public subsidies (Nielson 1986). Teams and their fans

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literally color the landscape through their logos and names on billboards, businesses, T-shirts, yard banners, and car flags. Through fans' purchases of these items and their pilgrimages to the stadium or "spectate" (Bale 2003) that necessitate the buying of tickets and concessions, sports teams are also major economic actors in local and regional economies. These many interactions between sport and place help sports contribute to the alignment of broad regional geographies which are at once economic, social, and cultural.

College football is a major component of American culture, particularly in the South, and this is made evident in many ways. For one, colleges and universities have in recent decades begun spending many millions of dollars on the sport. Even while most football programs lose money (Poliakoff and Zhang 2016), the ultimate financial goal for institutions is to join the ranks of the top college football programs which earn as much as large private corporations. For example, in 2011-2012, the University of Alabama spent $37 million on its football program and earned $82 million (Jessop 2013). Financial success and status in college football is often made evident by a college or university's membership in an athletic conference. For example, the Southeastern Conference (SEC) outspends and out-earns all other conferences, and six of the top revenue-generating programs in the United States are members of the SEC (Berkowitz et al. 2016). Additionally, football is also the largest participant sport in high schools in the United States, particularly in the South, structuring the autumn lives of millions of children and their parents (NFSHSA 2016). Football has replaced baseball as "America's pastime," perhaps because football has better suited the cultural and political needs of the United States since the sport became popular at the turn of the twentieth century. This has been especially true in the South. In the game's intercollegiate infancy, Southern teams approached the sport with a decisive vocabulary of antagonism against the North that was reminiscent of the "Lost Cause." Teams would travel to be beaten by Northern opponents but would use the warlike rhetoric of "northern invasions" to describe the trips and return "home to congratulations for having defended the honor and traditions of the South" (Doyle 1997, 29). The interest in winning, aggressive mindset, and competitive spirit encouraged by football still strike a chord in the South today where these values are internalized and intensified amidst an ever-present backdrop of the surrender by the Confederacy at Appomattox. Wes Borucki (2003, 480) rightly states that "analogies between football and the Civil War cannot be overdrawn."

The connection between a warlike attitude and college football is not unique to the South. According to sociologist Montez de Oca (2013), business leaders and politicians all over the United States saw in football the imagery necessary for fostering an appropriate mindset for an impending threat during the Cold War: soldiers lined up on the battlefield, violence was brought to bear against an enemy using defensive strategies of containment, and there was even the thrill of an offense throwing the "bomb." The sport of football seemed to serve multiple cultural, economic, and political purposes. In the era of globalization when the social construction of regional identities through nonlocal relationships has intensified (Anderson 2016; Paasi 2003), people often turn to football fandom. This sports culture is highly commodified, and United States college football has participated in this by attracting large commercial enterprises, exploiting every avenue of mass media and intensive marketing. Even at the very local scale, in hundreds of high schools, football seems to saturate the Southern lifestyle. According to Pierce and Jackson, "football is the most important sport in the United States

South because football holds communities and towns and neighborhoods together. It bonds southerners of different classes, circumstances, races, and religions in ways no other activity has ever done" (2012, 40). This paper seeks to further explore and document this connection between regional identity and college football using the geography of radio broadcasting as our data source.

Literature

Since the 1970s, there has been a tremendous increase in scholarship on the social aspects of sport (Frey and Eitzen 1991; Oriard 2001; Washington and Karen 2001). Several studies (e.g., Wann and Branscombe 1993; Ben-Porat 2009; Ratna 2014) have demonstrated the potentially powerful role of sports fandom in the construction of individual and group identity. However, little of this research is geographically based, and almost none attends to how sports relate to regional identity. The major geographic analyses of sports focus on such topics as competitive strength of conferences (Morgan and Klimasewski 2015), the diffusion of a sport (Rooney 1969), the geographic patterns of recruiting (May 2012), and the making of particular places through sports (Gumprecht 2003). Outside of geography, scholars have noted that place is central to the power of the spectator experience. Analyzing the sports fan experience, sociologist T. R. Young (1986, 8) wrote, "There can be no greater solidarity than dozens, thousands, millions thinking, doing, and feeling the same things in the same place at the same moment." Therefore, the geographical aspects of such solidarity deserve quantitative scholarly analysis.

Geographers have demonstrated the power of vernacular regions (e.g. Ambinakudige 2009; James 2010), and while the leading texts on sports geography (Rooney 1974; Bale 2003) give little attention to regional identity, sports fandom might legitimately be considered a force in the establishment of those regions. One seminal paper by Rooney (1969, 471) does argue the important point that "fan loyalties are probably among the strongest of human attachments, and their regional boundaries are...functionally organized via major sports radio networks," but Rooney's claim for radio's role has been investigated only once, by Roseman and Shelley (1988). We seek to build upon that study from thirty years ago.

Place Identity and Sports Fandom

Fandom has the power to create, maintain, and facilitate strong place attachments and identities. This is true in the examples of naming (see Gunderman and Harty 2017 for the case of music fandom), alterations to the cultural landscape (Alderman 2008), and sports game attendance (Harris 2008). However, it importantly remains true too for sports fans removed from the physical space where their teams compete. Often, a fan removed from the gameday spectate will engage in other expressions of fandom that equally constitute placemaking practices. These practices reflect emotional attachments to a place. It is important to acknowledge that "multiple places...influence fan identity" (Baker 2018). Unlike the placemaking and collective identity construction that occurs at a localized scale through the gameday tourism experience (Harris 2008), remotely "attending" a sporting competition can

foster a fan's attachment to just about any place. Following a game "on the air" may induce emotions of nostalgia for alumni or devoted fans for past experiences in the sporting arena (Zhang et al. 2018), but it may also serve to meaningfully and imaginatively connect the fan's physical location to a larger fan community spanning a greater geographic space. It is when this occurs that we can begin to speak about collective fan regions or footprints.

Kraszewski (2008) and Baker (2018) use the concept of home to view this connection between fandom and place attachment, specifically in the cases in which fans are removed from the gameday spectate. Home is a nuanced concept increasingly studied by geographers that couples tangible sites, structures, and spaces with intangible emotions and senses of belonging. Like identities, home is not a static concept; rather, it is fluid and is defined and redefined by those who construct and inhabit this "spatial imaginary" (Blunt & Dowling 2006, 2). The very ideas of "sport and home are intimately connected" (Baker 2018, 15). Indeed, "a primary function of sports fandom in contemporary America [is that] it allows displaced populations to negotiate home and home identities" (Kraszewski 2008, 140). This is a geographic process by which people imagine themselves and their sense of belonging in relationship to the places where sport and fandom are meaningfully conducted. Radio allows fans listening *in* to feel a strong link between their own location and that of their chosen team through a vicarious performance of fandom. Like the concept of home itself, this can operate at every scale, from the local town rivalries to national and international identities (Blunt and Dowling 2006). For example, in Nebraska, a state known for its strong college football fandom (Aden & Titsworth 2012), a survey found that most respondents held a rather negative attitude toward soccer with many agreeing with the statement that the sport is "un-American" (Lindner and Hawkins 2012). Foer's (2004) book, *How Soccer Explains the World*, argues that this negativity toward soccer is a defensive attitude in the face of globalization; this is a clear example of place identity operating at the national scale.

Media consumption is one way fans express their fandom, negotiate their ideas of home, and imagine themselves within larger communities (Anderson 2016). Baker (2018, 13-14) discusses these as "virtual" spaces of fandom. The use of media that can reach a wide geographic audience lends itself to a larger debate about the effects of globalization and the extent to which modern sport has become placeless (Bale 1998). However, media information "always has a geography [and] helps define how we understand and create places" (Poorthuis et al. 2016, 248). Kraszewski's (2008, 143) research on television and professional football fandom illustrates this: "NFL regional telecasts [invite] viewers and fans to attach other regional aspects of sporting culture to the football club. The interweaving of television markets and local cultures render regions which are always made up of competing and conflicting notions of home." While the game itself is national, its media broadcast is regional. A regional structure of broadcasting sports is not random; it is economically motivated because networks acknowledge the consumers' notions of home and market to them. This holds true for both radio and television regional markets; radio has an "inclusionary potential" (Wilkinson 2015, 132), especially because it is accessible to a wider range of audiences in less accessible geographies (Pompeii 2015, 796). Both create and contribute to home and facilitate place attachment to the consumer.

Of the many geographic scales of home ranging from the body to the nation and even the globe (Blunt & Dowling 2006), the region is an important collectively constructed place wherein its inhabitants infuse it with social and cultural meaning and, in this placemaking process, develop an attachment to the region that informs their identity. For people both within and outside of it, the region can be a "placed" representation of home. Paasi (2003, 475) argues for a renewed critical understanding of regional identity as a socio-political phenomenon within geographic experience: "(P)eople's awareness of being part of the global space of flows seems to have generated a search for new points of orientation, efforts to strengthen old boundaries and to create new ones, often based on identities of resistance." This critical approach to regions in studies of geography, home, and sports is important. We do not use the term lightly or assume the physical existence of regions but rather understand them as constructed, fluid, dynamic, and relational entities (Wilson 2017, Nagel 2018). Yet, scholarship dedicated to studying regions actually facilitates their social existence (Powell 2007, 7), and their popular recognition makes them a materially, economically, politically, and socially important geographic scale that deserves continued study and analysis. Published studies of regional identity within grounded social phenomena such as politics (Cooper & Knotts 2010), foodways (Davis & Morgan 2015, Kelting 2016), and both economic and symbolic capital (Alderman 2015) demonstrate the resilience of the importance of regional identity in modern scholarship within and outside of geography.

For Paasi (2003, 477), "narratives of regional identity lean on miscellaneous elements: ideas on nature, landscape, the built environment, culture/ethnicity , dialects, economic success/recession, periphery/centre relations, marginalization, stereotypic images of a people/community , both of ' us' and ' them' , actual/invented histories, utopias and diverging arguments on the identification of people. These elements are used contextually in practices, rituals and discourses to construct narratives of more or less closed, imagined identities." Sport is one such ritual that "carr[ies] a regional language of identity" (Kraszewski 2008, 141). Sports fandom is always a tangle of many meanings which can have deep historical, cultural, and social significance. A wide array of research shows that sports fans often invest considerable emotion and meaning in their mediated experience of sports events, including negotiation of their social identities (Kim et al. 2017). While the modern world has created a culture of individualistic selves that are isolated, even cast adrift, sports fandom and place identity may function as "horizons of significance" by which people seek to authentically define themselves (Taylor 1991, 39). Fandom functioning as both a miscellaneous element (Paasi 2003) and a horizon of significance binds people together and buttresses the construction of collective identity. Through sport and fans' geographic negotiations of belonging and home, cultural narratives are written, identity is imagined, and places are created. Drawing upon existing literature and current data, we argue that college football fandom contributes to the formation and maintenance of regional identities in the United States.

In 1988, the fledgling journal *Sport Place* published a study by Curt Roseman and Fred Shelley examining the radio coverage of United States college football. The authors sought to assess the "experience of college football in places away from the stadium" (Roseman and Shelley 1988, 43). Radio has a long history as an instrument for the diffusion for sports information, the recruiting of team fans, the promotion of ticket sales (Howard and Crompton 2007), and

fundraising from donors. Roseman and Shelley were among the first to recognize something larger in scale: sports fans' place identity.

Stock car racing was demonstrated by Pillsbury (1974) and later Alderman et al. (2003) to be important to identity in the United States South, but these authors recognized that this sports identity is no simple matter. Southern regional identity has always been complicated by relations with other regions. Southerners, particularly working-class white males, might want to claim stock car racing as their own. But the nationalization and corporatization of the sport has constrained such simple identification. None of these geographic studies empirically assessed the patterns of fandom itself, and geographers have not mapped where sports fans are identifying both with their team and region. We may then ask, what are the dimensions of fandom's role in place identity?

Data on mass media can provide some answers to such a question. The power of the media in identity formation has already been established (e.g., Anderson 2016; Horton and Wohl 1956; Zagacki and Grano 2005). Questions of identity are mentioned in recent geographic studies of sports such as Andris (2018, 479) and Zeitler (2013, 35-36). However, Roseman and Shelley's paper represents a path initiated - but then mostly neglected - of using mass media data to spatially assess and analyze sports fandom and cultural place identities. Their paper importantly demonstrated the usefulness of the geographic analysis of media, and this work continues today (see Andris 2018 and Zeitler 2013). However, the application of such analysis to regional identity or fandom has been largely neglected; we seek to build on their initiative by integrating new data, modern GIS technologies, and sound cultural geographic frameworks.

Mass media networks are much larger today than in the 1980s, as sports fans can follow the action through a wide array of cable and satellite television and even streaming websites. But one format remains the staple for many fans because they can access it while traveling: radio. Television is perceived to be the leading format for mediated sports experience, but radio has a higher "penetration" of United States households than television (Nielsen data cited in Dunn 2017). This may be partly because even loyal fans who can afford access to television and internet follow their teams while either working or driving; they cannot stop to watch a screen, so radio coverage of a team's performance has a critical role. We therefore agree with Roseman and Shelley (1988, 50) who argue that "the radio audience may be generally more reflective of true fan support for a particular team than the television audience."

In their geographic analysis of college football radio stations, Roseman and Shelley included a wide variety of schools, not just those in the prominent conferences. They examined different spatial distributions of radio affiliates, specifically for the year 1987, across the United States for many different teams and constructed different types of fan bases using these distributions. Their main conclusion was that state borders play an important role in the delineation of fan regions (Roseman and Shelley 1988, 43). In Paasi's (2003) terms, college football fandom seems to reinforce identification with the state where a fan resides. One of our goals is to assess this conclusion in the light of new data, changes in technology and organization, and recent literature on sports and identity.

Data and Methods

For their study, Roseman and Shelley (1988, 43) mailed surveys to the sports information director at each university whose football team competed in the NCAA Division 1-A (the modern-day Football Bowl Subdivision or FBS) and Division 1-AA (today's Football Championship Subdivision or FCS) along with "a few others located in regions lacking major universities in the first two categories." Their response rate was about 77 percent. Because radio broadcasting information is now available online, the current study can rely on more comprehensive data. The present study limits its scope to the "Power 5" conferences: the Atlantic Coast (ACC), Big Ten (B1G), Big 12, Pacific 12 (Pac-12), and Southeastern (SEC) conferences. The Power 5 represents only 64 of the approximately 350 Division I football schools, but because of their schools' large budgets and the advertising power they hold in the media, these conferences dominate the spectator experience of college football (Burnsed 2014; Smith 2015; Wolohan 2015). A focus on these five premier conferences is frequent in the current study of college football, although the membership in these and other conferences is far from stable. At the time of Roseman and Shelley's publication, quite a few colleges and universities competed in major sports without belonging to a conference; this has since become rare. Abbott's (1990) study of college athletic conferences' connections to American regions used 1987-1988 data and is thus outdated; several conferences he examined no longer exist. Even Morgan and Klimasewski's recent (2015, 216) research on the preeminence of Southern collegiate football was based on the Bowl Championship Series, a now defunct system that preceded today's College Football Playoff system. Morgan and Klimasewski also focused solely on the "dominant conference[s]" of that time - the year 2013 - then the "Power 6." The Big East Conference has since dropped from this prestigious standing, so we focus on the remaining conferences, the "Power 5." Notre Dame and Brigham Young University, currently independents belonging to no conference, and the United States Air Force Academy, a Mountain West Conference member institution, were also included for comparative purposes.

Each university examined here maintains a webpage on its institution's official athletic website that lists all of the radio station affiliates that broadcast football games. Some webpages provided locations from which the stations broadcast while others did not. In certain cases, further research was necessary to determine the locations of the studios (and not the radio towers) that broadcast the games. While there is a great deal of difference between FM and AM radio stations in the quality, wattage, and range of the signal, no distinction between the two were made in this study because, as with the 1988 study, the data is expressed using points rather than polygons to display the radio network's geographic reach. The area an AM station can serve might differ greatly based on the station's wattage and even the time of day. This makes mapping AM stations' ranges difficult. Point data (station location) is our only readily available data on radio's spatial reach, so it serves as a surrogate for polygon data, leaving for now some limitations on our analysis of radio patterns. Each institution's radio locations were batch geocoded to obtain these points spatially and then examined team by team.

Roseman and Shelley identified five categories radio networks could fit into: single-station local coverage, single-station extended area coverage, within-state regional coverage, state saturation, and multi-state coverage. We also include five categories. However, the first category of single-station local coverage did not apply to any of the Power 5 teams' networks studied here, so it is excluded. The fifth category then comes from our split of the "state saturation" category into "state saturation" and "statewide coverage" categories for the sufficient differences between the two.

No previous quantitative geographical analysis of fandom has examined football conferences. The prior literature on athletic conferences and their current prominent role within intercollegiate athletics mentioned above not only dictated the teams on which to focus our study but also which conferences as a whole to examine. Abbott (1990) has already shown that there is some correlation between the geographies of athletic conferences and the major US cultural regions. We therefore believe that studying footprints of fandom at the larger conference scale can lend further insight into the connection between sports fandom and cultural place identity.

One of our assumptions is that the geography of radio sports broadcasting reflects demand from the fans. In other words, where there are sufficient fans, radio sports coverage will follow. We recognize that other factors influence the geography of radio sports coverage, such as the pattern of available radio stations, which in turn depends on several factors. In the case of collegiate sports radio, there are other qualifications. For example, the radio coverage could depend less on the ability to sell advertising and more on the size and budget of a given college's athletic program. In any case, the presence of a sports show on a radio station is assumed to indicate significant fan demand for that show among the listeners in that area.

Results

Teams

State Saturation

Most Power 5 teams exhibit a pattern of coverage which Roseman and Shelley called "state saturation" (1988, 45-46). This means that a university's radio coverage matched rather closely to the borders of the state where that school was located. This broadcasting method may reflect a rational strategy of many "comprehensive public universities" (44). Roseman and Shelley also found that most such universities exhibit this pattern. Our results show that 38 out of 67 (57 percent) studied teams' radio networks exhibit a state saturation pattern. Stations carrying these teams' football programming thus commonly blanket that school's home state, making football games available to listeners anywhere within the state's borders. An excellent example of this pattern is demonstrated by The Ohio State University, located in Columbus, OH. Figure 1 A shows how Buckeye fans can listen to games all across Ohio as radio stations blanket the state and line the Ohio River at numerous cities. A couple of radio stations are even located just across the border in Kentucky and West Virginia.

Roseman and Shelley (1988, 46) noted several variations of the state-saturation pattern. Sometimes the coverage is statewide but not as thorough as Ohio State's. Indiana University was cited as an example of this: Hoosier stations skirted West Lafayette, "the home of Purdue University, Indiana's other comprehensive university and prime sports rival" (46). This phenomenon is still true with the Hoosiers' modern day network shown in Figure 1 B (though the pattern exhibited truly fits the "statewide coverage" category discussed later). The absence of an Indiana station around West Lafayette raises a question: could a state that hosts two Power 5 universities see its state saturated by either team's radio stations? Is the lack of an in-state rival for Ohio State the reason for their saturation? Upon examination, however, it is true that in most instances, rival schools within a state do not have mutually exclusive areas around their campuses; instead, there is often an overlap in coverage. Consider Texas, a state known for its "high-quality play...over a long period of time" (Rooney 1969, 491). The University of Texas at Austin and Texas A&M, rival programs that now find themselves in different conferences, both offer coverage to the entire Lone Star State. With nearly twice the stations, Texas A&M (Figure 1 C) more truly saturates the state than does Texas, but both Aggie and Longhorn fans from El Paso to Amarillo to Houston can listen to their team's football games. Neither is there a noticeable region of absence from either school's network near the other's campus; Texas A&M even has an affiliate in Austin. While Indiana's radio coverage avoids its rival's immediate territory, this is not always the case.

The classification of "state saturation" is itself problematic because of the vast difference in size of the fifty states. Texas is the largest state by area in the continental United States, so Texas A&M's ability to support 62 affiliates to truly saturate the Lone Star State is impressive. However, state saturation status must also be given to Rutgers, New Jersey's flagship public university. Figure 1 D shows that the Scarlet Knights only support four radio affiliates, but because of New Jersey's smaller size, one can hear Rutgers football games in nearly every corner of the state as well as Philadelphia and New York City. This problem of a variation in state size will reappear in the multi-state coverage where Boston College (Figure 2 E) fails to truly saturate Massachusetts but has stations in four surrounding New England states. These variations all go to show that the idea of "state saturation" has been loosely defined, but as it will be argued later, this classification matters because of the power that state borders have in bounding collegiate football fandom.

Statewide Coverage

Roseman and Shelley (1988, 46) also observed some networks that provide "statewide coverage but [where] true saturation occurs only in part of the state" (46). Schools that exhibit this pattern were still included in the larger "state saturation" category in the original article, but even there, the distinction was made within that category. Syracuse is an institution the authors used to illustrate this qualified statewide coverage pattern because it "saturate[s] nearby areas and also extend[s] coverage to more distant large markets" such as, in this case, New York City. Figure 2 F showing Orange coverage in New York state looks very similar today with the area around Syracuse more densely saturated and the more distant cities of Albany, Massena, and

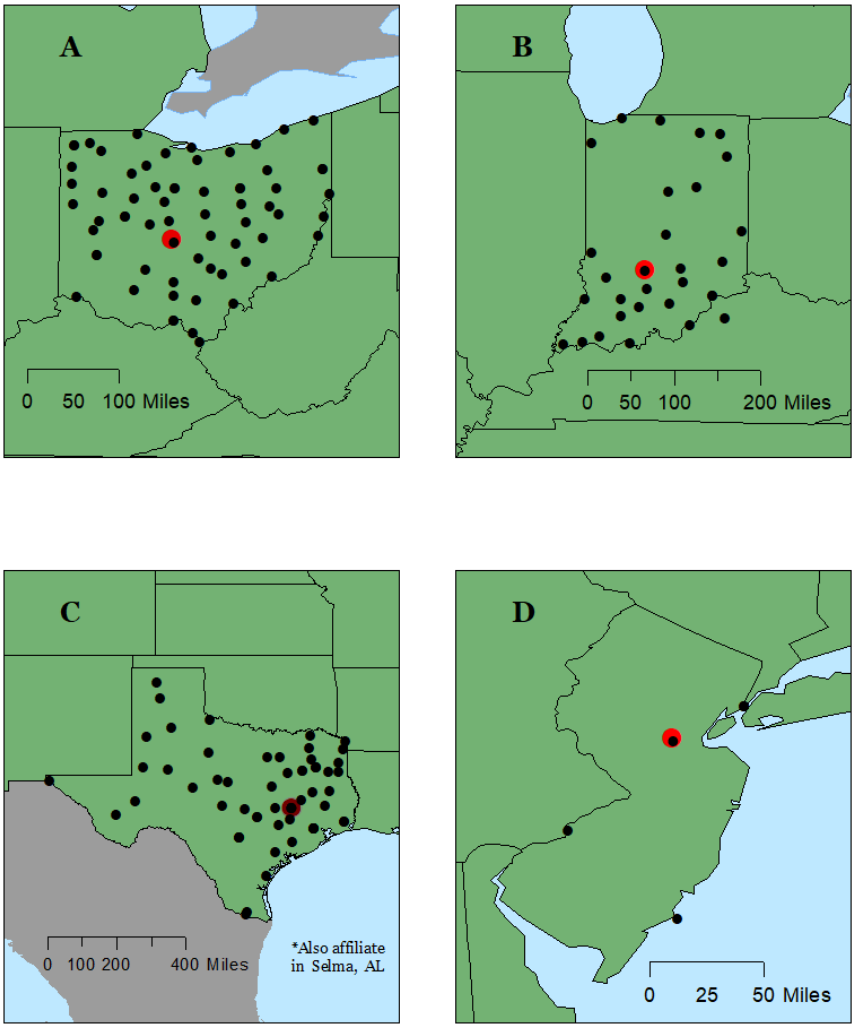


Figure 1. Radio affiliates of (A) Ohio State, (B) Indiana, (C) Texas A&M, and (D) Rutgers.

New York also offering a signal. Other teams such as Indiana (mentioned earlier), Texas Tech, Miami (FL), and Duke exhibit similar patterns. 9 out of 67 teams (13 percent) exhibit statewide coverage. While this pattern necessitates that a state has full coverage, the density of the stations is significantly different enough from the "state saturation" category that it has been presented here as its own category.

Within-State Regional Coverage

A prominent distribution pattern outside of state saturation is "within-state regional coverage." This has been defined as a grouping "of networks, usually three to seven stations, located within a certain region of a state" (Roseman and Shelley 1988, 45). 9 out of 67 teams (13 percent) exhibit within-state regional coverage. A perfect example of this type of coverage is Vanderbilt's radio network. Vanderbilt is situated in Nashville in the Middle Tennessee region. Of its nine stations shown in Figure 2 G, seven are within Middle Tennessee; only the urban centers of Memphis and Chattanooga partially extend coverage of the Commodores to the other regions of Tennessee. All of Vanderbilt's Middle Tennessee affiliates lie in or between Nashville and Huntsville, AL. Surprisingly, no station exists in Clarksville, a Middle Tennessee city to the north of Nashville. One quality Roseman and Shelley (1988, 45) observed in schools that exhibited this pattern in 1987 was that they were often located "in places distant from the comprehensive state universities." Vanderbilt is a private school and competes for territory with the University of Tennessee, Knoxville, the Volunteer State's flagship and most well-known university. The University of Tennessee radio coverage saturates the entire state, which perhaps renders it more difficult for the smaller Vanderbilt to establish the same fanbase through all of Tennessee. Additionally, Vanderbilt sees competition in West Tennessee from both Memphis and Ole Miss, is bound to the north by the University of Kentucky, and even shares space within its own south-of-Nashville region with the University of Alabama. Rather than attempting to establish a broad network, the Commodores instead cater particularly to the Middle Tennessee fans.

This study identified a pattern quite similar to the one seen in the Roseman and Shelley (1988, 45) study where "a few of the regional networks are rather extensive." These networks exceed the single-digit station count of typical networks with regional coverage but do not offer statewide coverage because they are still concentrated within a state's region. The University of Pittsburgh was designated by Roseman and Shelley to have statewide coverage because of stations in Scranton and Philadelphia offering East Pennsylvania coverage. The newest data in Figure 2 H shows a shift from this statewide coverage to a Pittsburgh-based network that has concentrated within Southwest Pennsylvania. The network no longer offers coverage from Philadelphia and Scranton; the easternmost stations are now at Harrisburg and York. Every other station in the network lies within a 100-mile radius of Pittsburgh within the Pennsylvania state line. Residents of bordering parts of Ohio and West Virginia are more able to hear Panthers games than those of Philadelphia. Today, the network has only one station fewer than it had in 1987, but their cumulative spatial dispersion is more concentrated now than in the past. Perhaps the presence of the highly successful program of Penn State located in the center

of Pennsylvania limits the urban school of Pittsburgh's reach into the rest of its home state. Therefore, the Panthers' network is an excellent example to show that within-state regional coverage does not have to inherently exist as a category for networks with few stations.

Multi-State Coverage

The most geographically wide-reaching coverage category found to exist in 1987 was "multi-state coverage" in which the radio stations of a team's network vastly go beyond the boundaries of the state where the institution is located. These few cases reflect instances in which state borders that are normally so instrumental in bounding collegiate fan bases are transcended for one reason or another. Roseman and Shelley found only eight schools to support multi-state coverage: Illinois, Nebraska, Oklahoma, Southern California, Washington, Notre Dame, Air Force, and BYU. Of these institutions, only Nebraska, Notre Dame, and BYU have retained a network with multi-state coverage; Alabama, Auburn, Penn State, Florida State, and Boston College have risen to join this group. 8 out of 67 teams (12 percent) exhibited multi-state coverage. It is worth examining some of these networks in detail. Roseman and Shelley (1988, 43, 45, 50) saw the multi-state coverage pattern as a rarity that often could be connected to external geographical trends not directly related to football such as out-migration from states to locations "where career opportunities are greater," tourism, and religious affiliation.

Boston College (Figure 2 E) is an odd member in this multi-state category because, as mentioned above, the Eagles' network fails to truly saturate the relatively small state of Massachusetts, but its stations can be found in four other New England states. Just as Rutgers achieves state saturation by the nature of New Jersey being small in size, so Boston College benefits from being the only Power 5 team in the multi-state region of New England. New Englanders identifying with Boston sports teams is no new phenomenon; the Greater-Boston-based Patriots professional football team even use the region as its place-name, reflecting this trend.

Florida State, Auburn, Alabama, Penn State, and Nebraska are good examples of the paradigm of multi-state coverage. These networks all saturate the state of the team in question and spill across state lines into bordering states. While Nebraska (Figure 3 I) no longer fosters the vast radio network from Texas to California (which Roseman and Shelley attributed to the history of migration out of Nebraska), but the university still maintains many stations in medium-sized cities of neighboring states along with one in Las Vegas as a result of those old migration patterns. The Cornhuskers benefit from the lack of a Power 5 rival in the Dakotas to the north, and their exceptionally passionate fanbase has helped them maintain this extensive pattern of fandom (Aden & Titsworth 2012).

A tradition of excellence on the gridiron and exceptional fandom seem to reinforce one another for all four of these institutions, and that perhaps explains their multi-state coverage. Indeed, football fan identities can reach an almost religious intensity, the state of Alabama being the leading example. Teams in the Heart of Dixie have been some of the most successful programs coming out of the South, a region where college football is "woven into its civil religion" and interacts constantly with its culture (Bain-Selbo 2009). As of 2019, nine out of

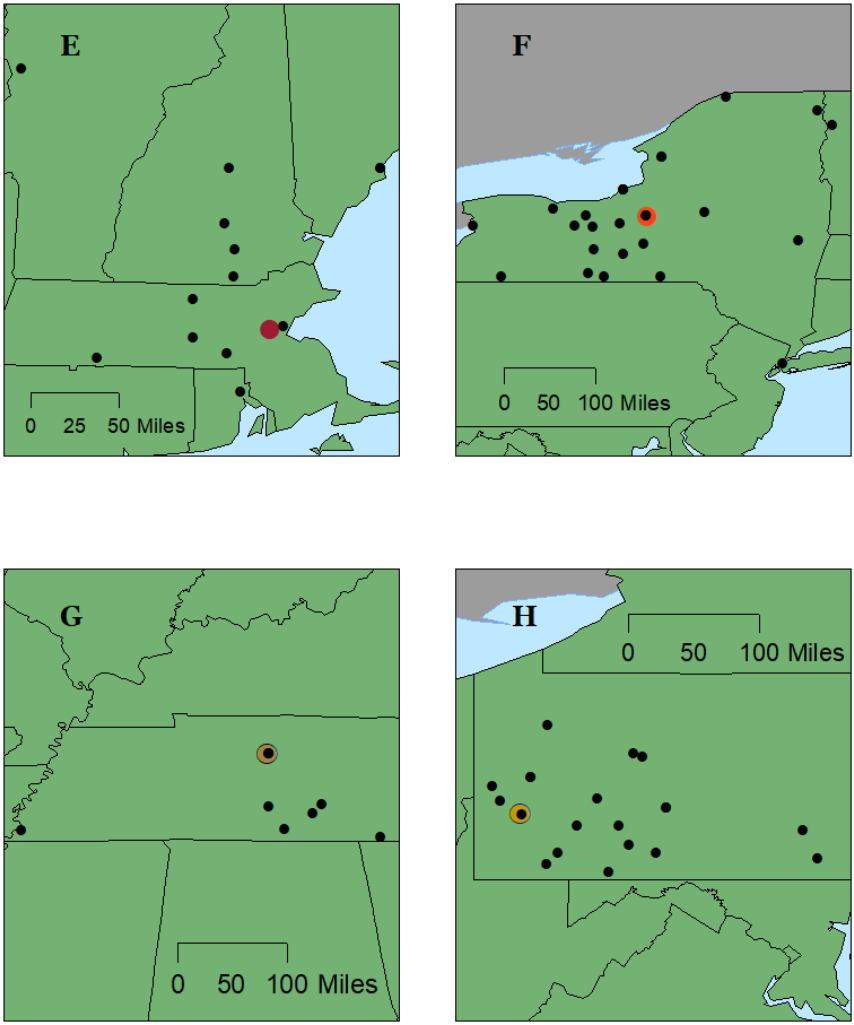


Figure 2. Radio affiliates of (E) Boston College, (F) Syracuse, (G) Vanderbilt, and (H) Pittsburgh.

the previous ten college football national championship games have featured either Auburn or Alabama, and six of those have been victories. This is important because for Southern teams, "athletic superiority...is a flattering story that offers a basis of keen regional pride and serves as a source of relentless bragging rights" that is "likely one of the strongest forces defining regional identity in the South" (May 2012, 50; Morgan & Klimasewski 2015, 216). This quasi-religious fandom may have a stabilizing social function in the United States South where society suffers from strong divisions in race and class. "The structures of privilege, inequality, and oppression are left intact" by such fandoms (Young 1986, 9), and so challenges to the order can be dismissed. The passion and religious-like fervor of the Alabama and Auburn fanbases can be seen geographically by their multi-state coverage radio patterns; each have stations in Tennessee, Mississippi, Florida, Georgia, and South Carolina as well as a comprehensive saturation of Alabama itself (Figure 3 J).

Brigham Young University is another university where religiosity seems to play a role in the geography of fandom. Roseman and Shelley (1988) noted that its radio network's spatial pattern is a fairly close match to the Mormon Culture Region described by Meinig (1965). This pattern is concentrated in the region of the Interior West and is centered on Utah, but the region, like the Cougars' radio network, extends up and down the Rocky Mountains. While the number of stations for BYU has been halved since 1987, the spatial distribution of the stations remains largely the same and continues to reflect the connection between the "religious heritage of the university" and the "unique sport-place relationship...expressed by the [radio] network" (Roseman and Shelley 1988, 50).

Just as it was in 1987, the most extensive network in all of college football today and certainly the only truly national network is supported by the University of Notre Dame. Another private institution with religious affiliations, the Fighting Irish radio network displayed in Figure 3 K "extends truly from coast to coast" (Roseman and Shelley 1988, 50). They attribute this national coverage to the university's well-known connection to the Catholic Church and subsequent appeal to fans all over the United States. Like BYU, Notre Dame has had their number of radio affiliates halved since the original study was conducted, but the essential outlook of the Irish's fan region is the same; 110 stations span from San Diego to Miami and from Seattle to Boston.

Single Station Coverage

The last category identified by Roseman and Shelley (1988, 45) was that of single-station coverage. This type of coverage was more common in their study due to their more comprehensive look at a variety of institutions rather than just the ones from the most prominent conferences, and therefore they divided it up into stations with local or extended-area coverage. The latter fits best for the 3 institutions (out of 67, 4 percent) that fall into the category today: Utah, Stanford, and Northwestern. These schools "are located in major cities" and "have access to powerful stations" (45) from which to broadcast their games. These stations can often be registered for a great distance around the city from which it is broadcast and sometimes into neighboring states. Utah and Northwestern have maintained their single-station status since 1987, and while Stanford was not included in the original study, its similarity in urban location may indicate stasis as well.

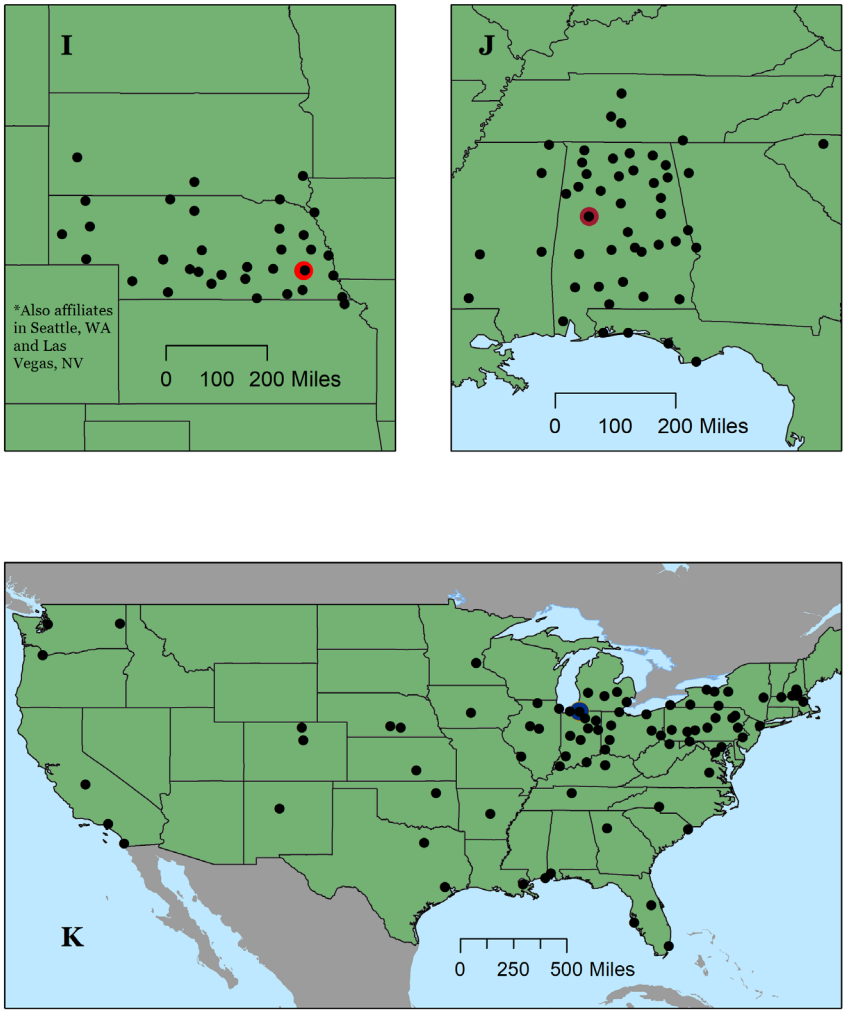


Figure 3. Radio affiliates of (I) Nebraska, (J) Alabama, and (K) Notre Dame.

Conferences

In order to study regional identity, we must examine regions at multiple geographic scales. Roseman and Shelley (1988) demonstrated the power of state borders to organize fandom and proposed that many college football fans were identifying with their state of residence. Considering the limited literature on the correlation between fandom and regional identity, we use our same data to analyze broader regions in the context of fandom and identity.

Radio stations broadcasting for members of the Power 5 football conferences were mapped using the same data as in the analysis above. Figures 4, 5, and 6 show the aggregates of the team-level data for each of the Power 5 conferences. While our sample size (n=5) is too small to construct meaningful categories for these data, certain spatial discrepancies at the conference level are immediately apparent. For instance, the radio affiliates of the Pacific 12 saturate the West much less than its counterparts do their respective regions. The use of points to represent the data here lends itself to "the problem of overplotting," (Poorthuis and Zook 2015, 153) and this is especially true with the aggregated Pac-12 map. As shown in Table 1, the number of teams from the Pac-12 saturating their states (4/12, 33 percent) is lower on average than those from the Big Ten (12/14, 86 percent) or SEC (13/14, 93 percent) for example. Multiple teams support radio affiliate stations in urban areas like San Francisco, Los Angeles, and Las Vegas, but many states included in the conference's footprint are not densely covered. Our dependence on point data here leads the current analysis to accent the widespread nature of radio stations at the expense of urban densities.

Our next step is to examine these conference geographic radio footprints through the lens of regional identity by comparing them to established US cultural regions. Carl Abbott (1990) holds that the very "formation of college conferences" was fostered and enabled by "a sense of regional cultural identity." Perhaps the geography of fandom within athletic conferences still points toward a modern expression of regional identity.

Returning to Figures 4, 5, and 6, we can see the widespread nature of each conference's footprint. When 10 to 14 team networks are combined, can the resulting geographies resemble any recognizable cultural region? Most conferences do not. The Pacific 12 network (Figure 6 O) does not resemble the Pacific region delineated by Zelinsky (1980). The addition of Utah and Colorado into the conference within the past decade stretches the network hundreds of miles eastward from the Pacific; the very large Western region now intersected by the conference includes large areas with which the coastal areas of California and Washington do not closely identify. The geography of the Big 12's network (Figure 5) does partly match the Great Plains, but West Virginia sits as an exclave far to the east of that region. The ACC's network footprint (Figure 6 P) could perhaps be likened to the South, Atlantic, or East, but there are major discrepancies with each of these comparisons: Boston College and Syracuse are not Southern, Pittsburgh is not Atlantic, and Louisville is not Eastern. The Big Ten's footprint (Figure 4 M) almost matches the Middle West, but its expansion teams of Penn State, Rutgers, and Maryland have pushed the conference's footprint all the way to the Atlantic; no recognizable vernacular region encompasses Nebraska, Washington DC and New York City.

The SEC coverage (Figure 4 L), however, does resemble the South. There is the obvious omission of radio coverage in Virginia and North Carolina, but each member of the SEC broadcasts its football games from within the South. The SEC is notably the only conference

to offer radio coverage from each of its members from within a single region, indeed one of the main culture regions defined by geographers, the classic example being Zelinsky (1980; see also Ambinakudige 2009).

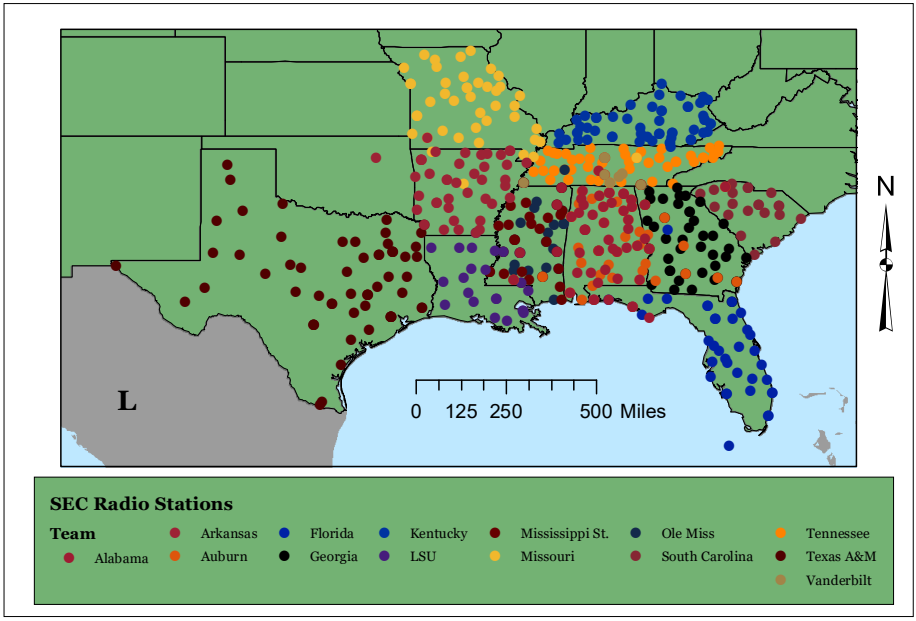
Table 1. Radio Affiliate Information by School

School	1987 (Roseman & Shelley)	(Cooper & Davis)	2015 Classification
Atlantic Coast Conference			
Boston College	-	13	Multi-State Coverage
Clemson	57	19	State Saturation
Duke	38	15	Statewide Coverage
Florida St.	59	29	Multi-State Coverage
Georgia Tech	63	29	State Saturation
Louisville	8	12	State Saturation
Miami	50	18	Statewide Coverage
NC St.	53	20	State Saturation
North Carolina	70	39	State Saturation
Pittsburgh	21	20	Within-State Regional Coverage
Syracuse	12	26	Statewide Coverage
Virginia	-	15	Within-State Regional Coverage
Virginia Tech	-	28	State Saturation
Wake Forest	15	9	Within-State Regional Coverage
Big Ten			
Illinois	43	38	State Saturation
Indiana	51	30	Statewide Coverage
Iowa	9	36	State Saturation
Maryland	-	12	State Saturation
Michigan	-	32	State Saturation
Michigan St.	-	31	State Saturation
Minnesota	1	41	State Saturation
Nebraska	44	49	Multi-State Coverage
Northwestern	1	1	Single Station
Ohio St.	44	43	State Saturation
Penn St.	47	53	Multi-State Coverage
Purdue	40	24	State Saturation
Rutgers	-	5	State Saturation
Wisconsin	30	45	State Saturation
Big XII			
Baylor	-	18	Statewide Coverage
Iowa St.	35	32	State Saturation
Kansas	30	26	State Saturation
Kansas St.	-	31	State Saturation
Oklahoma	73	35	State Saturation
Oklahoma St.	28	26	State Saturation
TCU	1	5	Within-State Regional Coverage
Texas	-	32	State Saturation
Texas Tech	3	32	Statewide Coverage
West Virginia	-	28	State Saturation

Table 1 cont.

School	1987 (Roseman & Shelley)	2015 (Cooper & Davis)	2015 Classification
Independent			
Notre Dame	201	110	Multi-State Coverage
BYU	14	7	Multi-State Coverage
Mountain West			
Air Force	22	2	Within-State Regional Coverage
Pacific 12			
Arizona	Statewide	9	Within-State Regional Coverage
Arizona St.	-	15	Statewide Coverage
California	6	7	Statewide Coverage
Colorado	22	11	Statewide Coverage
Oregon	-	24	State Saturation
Oregon St.	15	30	State Saturation
Stanford	-	1	Single Station
UCLA	14	3	Within-State Regional Coverage
USC	10	7	Within-State Regional Coverage
Utah	1	1	Single Station
Washington	35	16	State Saturation
Washington St.	22	21	State Saturation
Southeastern Conference			
Alabama	26	53	Multi-State Coverage
Arkansas	-	42	State Saturation
Auburn	68	48	Multi-State Coverage
LSU	-	23	State Saturation
Mississippi St.	-	29	State Saturation
Ole Miss	-	28	State Saturation
Texas A&M	-	61	State Saturation
Florida	60	37	State Saturation
Georgia	92	44	State Saturation
Kentucky	-	55	State Saturation
Missouri	-	44	State Saturation
South Carolina	45	21	State Saturation
Tennessee	80	56	State Saturation
Vanderbilt	20	9	Within-State Regional Coverage

Figure 4. Radio affiliates of the (L) Southeastern and (M) Big Ten Conferences.



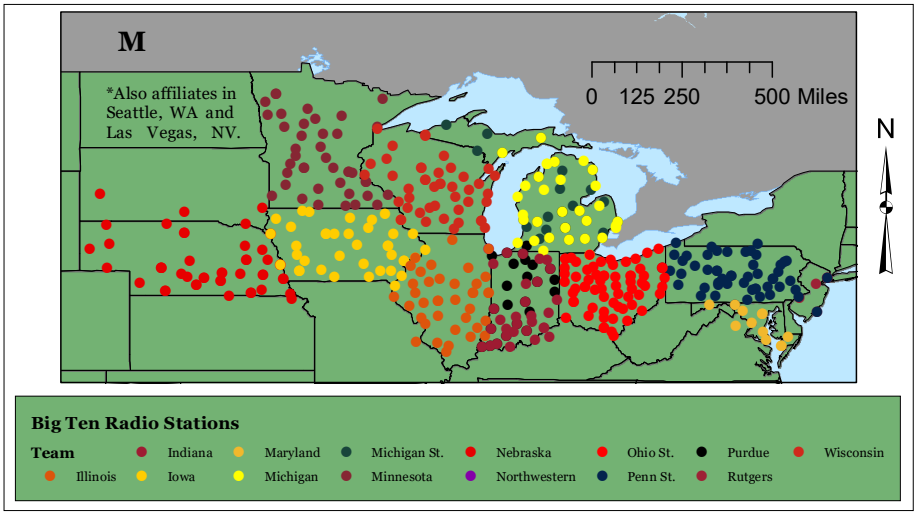


Figure 5. Radio affiliates of the (N) Big XII Conference.

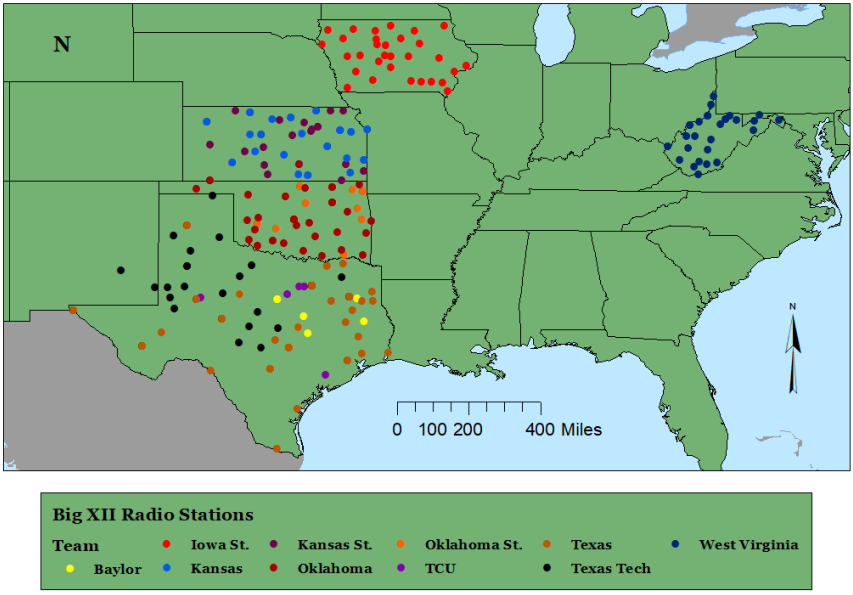
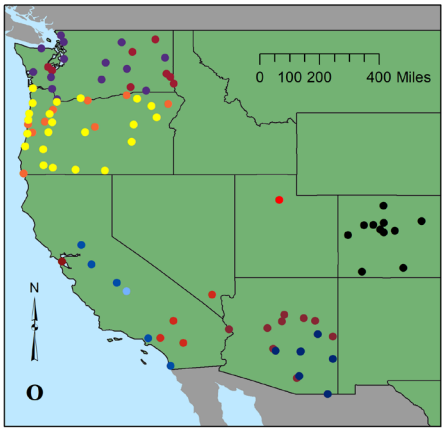
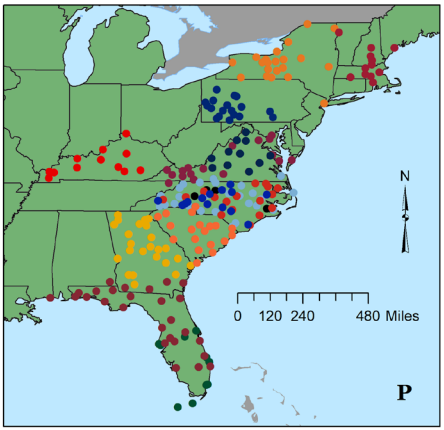


Figure 6. Radio affiliates of the (O) Pacific 12 and (P) Atlantic Coast Conferences.





Discussion

Three main features of our results stand out: the standardization of Power 5 radio networks, the importance of state borders in bounding team fandom, and the varying strengths of conferences as avenues to large-scale regional identity. The standardization, which might be called a "move to the middle," reflects a real change from the network variation identified in 1988 by Roseman and Shelley. A change in the number of radio station affiliates for a school can be confusing as some schools such as Oregon State doubled their affiliate count while Colorado saw its number halved. Many of the extensive networks from 1987 no longer support the same density and volume of affiliates (Georgia went from 92 to 48; Notre Dame went from over 200 to 110), but other teams that have risen to a more prominent role in premier college football have increased their affiliate counts significantly. Texas Tech for example now supports 32 affiliate stations as opposed to 3 in 1987. So while a substantial decrease in affiliate stations is the trend, the more accurate assessment of the change over the past three decades is a move towards a standardized model of a radio network for a premier college football team. There is less disparity between the top and bottom of these conferences than in 1987. Perhaps most teams look to establish themselves in a respectable light compared to other institutions.

A large part of this process of standardization has been the power of state borders to bound the radio networks of these teams. The move towards the middle is not all about radio affiliate count but also the pattern of the team's network on a map. Over 80 percent (55/67) of the teams surveyed here exhibit statewide coverage, state saturation, or multi-state coverage that also saturates the home state of the institution. Roseman and Shelley (1988, 43) detected a similar pattern and attributed it in part to "in-state tuition benefits, extension programs, and other linkages between citizens and universities that change abruptly at state lines." One of those unspecified linkages may be more important than any other in their list: place identity. College football is for many people a tangible way of expressing and preserving identity in connection with place, and the patterns delineated here indicate that states, through college football fandom, are important agents in constructing and bounding those identities.

However, at a larger scale, conference-based college football fandom does not seem to act as an agent of regional construction, identification and expression nearly as much as its team-based counterpart does for state identity. Athletic conferences used to be a vehicle for this regional cultural identity, but the realignments of 2010 and 2012 fundamentally changed the notion of what an athletic conference is and how member institutions are organized. The size of conferences ballooned to numbers unimaginable in 1990, and the cultural region began to fade as a framing idea for the structure and geography of conference membership. Instead, as Rooney and Pillsbury (1992, 63) accurately predicted, the shift to "align schools with television programming demands" became "the rule rather than the exception."

Through these recent realignments, the Southeastern Conference was the only one of the current Power 5 conferences to retain its traditional regional bounds. While the SEC was also motivated by capital and media gain just like the other conferences, it was unique in that its

leaders prioritized regional-cultural cohesiveness as a factor in expansion decisions. Primary sources from the 2012 SEC expansion to absorb Texas A&M and Missouri state this explicitly (Loftin & Burson 2014, 73). R. Bowen Loftin, president of Texas A&M at the time of the 2012 realignment, writes that he "considered factors such as...cultural similarities" in deciding whether to pull A&M from the Big 12 to the SEC. He eventually decided to advocate for the move, citing among "twenty-six million good reasons" the fact that "the cultural fit [of Texas A&M in the SEC] was very appropriate" (Loftin & Burson 2014, 120). When the move was complete, "SEC fans began to embrace the Aggies as a perfect addition in their league," and "the A&M community went absolutely crazy with 'SEC fever'" (Loftin & Burson 2014, 157). Another university spokesperson claimed that "Texas A&M has always been an SEC school in terms of [its] tradition,...spirit,...and passion" (Loftin & Burson 2014, 120). And while some at the time did not perceive "Missouri to be the perfect geographical fit in the SEC" (Loftin & Burson 2014, 159), the fact that the state "borders three SEC states (Tennessee, Kentucky, and Arkansas)" (Loftin & Burson 2014, 162) was considered by officials. Again, geography and location were factors in determining conference affiliation for the SEC.

The radio coverage's geographic data here support this fandom-region connection. The SEC radio network does not perfectly resemble the South; the states of North Carolina and Virginia each host only one SEC broadcasting station (both University of Tennessee affiliates), and the Texas A&M and Missouri networks push further west and north respectively than even the broadest delineations of the vernacular South (see Reed 1976). However, each team in the SEC offers coverage to some part of the traditional culture region of the South. No other Power 5 conference's teams all offer radio coverage for a single United States cultural region. The fan footprints of the Pac-12, Big Ten, Big 12, and ACC no longer resemble a cultural region. This is striking; while individual team fandom seems to conform broadly to fit within state borders, conference fandom has become much less tied geographically to cultural regions than in the past, with the SEC as the exception.

Southern regional identity is a complex and multifaceted phenomenon that cannot be understood simply with the data here (Wilson 2017, Nagel 2018). However, we can gain insight into cultures through the study and examination of "expressions of regional consciousness and identity" (Alderman 2015). If, as discussed earlier, a key element of football's attractiveness has been its war-like spirit, then we may not be surprised at the determination of many fans to imagine SEC football victories as vengeance against northerners, or at least as restoration of lost pride. Morgan and Klimasewski (2015) present data that indicate the SEC's recent success acts as a vehicle for Southern regional pride. Cooper and Knotts (2017) demonstrate the resilience of the *idea* of the South as a driving force in our current cultural discourse. The data in our study support this conclusion and goes further: it demonstrates that, as it is constructed and reconstructed through the political economy of radio for millions of college football fans, the United States South is, as Zelinsky (1980) suspected, the "sturdiest of [North America's] vernacular regions." We suggest that it is not only college football but the particular variety of the sport being played, watched, and listened to in the Southeastern Conference that helps maintain Southern regional consciousness.

Conclusion

Roseman and Shelley established that radio coverage of college football can inform us about the geography of fandom. Since sport and place identity are both important elements of culture, their intersection tells us something of the cultural geography of particular places. This study finds that college football radio coverage overlaps with - and may help maintain and even solidify - identities within state borders and less so within larger cultural regions. State "boundaries help in defining the spatial distribution of fans" and foster "linkages between citizens and universities that change abruptly at state line[s]" (Roseman and Shelley 1988, 43). The state-saturation pattern that has become even more clear since the 1987 study reinforces this connection between people and the functional region of the state.

However, in some cases, such processes do not seem to maintain. Sometimes, state borders are less relevant to the pattern of radio coverage for certain teams. Football fans can identify with their state but also with other institutions, such as a religious denomination (as with Notre Dame, Brigham Young). Additionally, we have shown that fans may also identify with an athletic conference, as in the case of the SEC and the South.

Technologies that now exist were not factors at the time of Roseman and Shelley's research in 1987, yet they certainly now affect remote fandom. These new media, including satellite radio, satellite television, and the Internet have changed the face of the sports industry in ways that are not yet clear. Access to live game coverage is now potentially much wider since fans with access to these technologies are able to listen to, watch, and follow games almost anywhere (see Albarran et al. 2007). In this age of big data, "the proliferation of...user generated data makes a range of everyday social, economic, and political activities more visible than was previously possible" (Poorthuis et al. 2016, 249). Social media is a modern technology by which fans passively follow and actively engage with sports and fandom. The resulting volunteered geographic information (VGI) from social media platforms like Twitter can be used to study "how and where events are discussed online...and how places are represented and understood by different people" (Poorthuis et al. 2016, 249). Indeed, geography through the utilization of GIScience is making use of these new VGI data to robustly and quantitatively study and assess the geographical construction of identity at many scales including regional (Arthur & Williams 2019).

Additionally, satellite and internet radio now allow the college football fan to "spectate" while seated far away from the bleachers and beyond any ordinary sense of a place or region; she or he can practice their fandom while thousands of miles from the game itself. This medium certainly competes with local commercial radio and has contributed to a drop in the latter's popularity in recent years (Shelley 2015). It is important that geographers analyze the impacts of these shifting technologies upon the sports landscape and associated regional identities. These new technologies can and should also be used to compliment research using more established media.

Our research, however, supports the conclusion that there is no significant decline in the broadcasting of college football on traditional radio frequencies. The Nielsen corporation's surveys continue to find radio as the number one entertainment medium in the US (Music 360 2014), and geographic research shows that people still access information by radio more than any other media (Pinkerton & Dodds 2009). Our data show a solidification and standardization of big-time college football radio networks to provide coverage to their entire states rather than an across-the-board decrease of station affiliates. This is evidence of the strength of fandom at the local and regional scales. Additionally, the total geographic reach of those networks' gameday broadcasts is today greater due to internet and satellite radio listeners. We are confident in our use of radio as a proxy for football fandom but encourage geographers to compare the results presented here with other studies delineating fandom footprints using a wide variety of audio, video, digital, and social media.

Our research on the geography of football fandom raises other questions about the role of college sports and fandom in the creation and maintenance of place identity. For example, how does race affect place identity at the state and regional scales, and can we find expressions of this among sports fans? Also, does a fan's understanding of her or his vernacular region, such as the South, have an identifiable impact on his or her college football spending behavior? A socio-economic geographic analysis of greater depth using both qualitative and quantitative methods is needed to further investigate the overlapping nature of multiple place identities in the context of sports fandom.

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All maps projected with the World Geodetic Survey 1984 coordinate system.

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