

AN ETHOLOGICAL ASSESSMENT OF ALLEGIANCE TO RIVAL UNIVERSITIES IN AN INTERMEDIATE CITY

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ABSTRACT

In-group loyalty and inter-group competition are important aspects of behavior in humans and other social species. Patterns of in-group loyalty and inter-group competition are expressed in the modern context of American college football, including territorial aspects. ESPN ranked the Michigan–Ohio State NCAA Division 1 football rivalry as the greatest North American sports rivalry. “The Game,” as many fans know it, is held at the end of the regular Big Ten Conference season. Toledo is a mid-sized city in Ohio, with its northern limits at the Ohio-Michigan border. Although in Ohio, Toledo is geographically closer to Ann Arbor, MI (home of the University of Michigan), than to Columbus, OH (home of the Ohio State University). Conventional wisdom holds that team loyalties are divided among local residents, sometimes even within the same household. Merchandise featuring each school is widely available in the Toledo area and stores typically display Ohio State and Michigan items adjacently. We used an ethological approach to assess the level of allegiance for each school among Toledo residents during the 2013 American college football season. Despite the closer geographic proximity to the University of Michigan, there were more displays of allegiance to the in-state university, Ohio State University.

Key words: *ethology, territoriality, loyalty displays, football*

INTRODUCTION

Early in the morning of April 6, 2014, two young men were physically assaulted after shouting about colors in a public space, far from any houses or sleeping residents (Gringlas, 2014). What could explain this seemingly bizarre event? The men were walking through The Diag (Diagonal Quadrangle), the symbolic heart of the University of Michigan, and were shouting "Go green, go white," the colors of National Collegiate Athletic Association Big Ten Conference rival Michigan State University. This incident is a manifestation of inter-group competition related to territoriality.

In ethology, a territory is a defined area that an animal consistently defends against conspecifics. Common chimpanzees, one of the two living species closest to humans, exhibit territorial boundary patrols and inter-group raids (Goodall, 1990). Once our ancestors achieved ecological dominance over other species, other humans became the principal and greatest hostile force (Alexander, 1979). Some argue that inter-group (as well as intra-group) competition was the greatest selection pressure in recent human evolution (e.g., Alexander, 1979). The ultimate function of territorial behavior is to promote inclusive fitness, with proximate functions including defense of food sources, nesting sites, mating areas, and areas to exhibit mate attracting displays. In possibly the first scientific study on territoriality, Howard (1920) described the role territory plays in courtship and aggressive territory displays in birds. More recently, researchers have considered territoriality an innate feature of animal behavior based on psychological (i.e. proximate) needs (Thorpe, 1974).

A sign or a marker can easily communicate territorial claims (Sack, 1983). Animals mark their territories through olfactory, auditory, or visual means, or a combination of these. If an intruder ventures into a territory and encounters the territory-holder, ritualized aggression will often result. These postures, vocalizations, and displays function to solve the territory dispute without actual fighting. Usually one of the animals will flee (generally the intruder), but actual fighting may occur as a last resort (Enquist & Leimar, 1983; Parker, 1974; Sack, 1983).

A significant portion of human behavior is implicitly and explicitly oriented towards maintaining territories, boundaries, and partitioning space (Gold, 1982). Although similar in ultimate function to needs for survival and reproduction in territoriality across animals, human territoriality may also fulfill a psychological need, such as identity, recognition by others, status, and achievement of self-image (Gold, 1982). Human territoriality can stem from loyalty related to kinship, a preference towards a particular product, or even a particular sports team (Richardson & O'Dwyer, 2003). One study found that over 70% of people have loyalty to only one team, rather than choosing loyalties depending on the outcome of a game (Richardson & O'Dwyer, 2003).

In-Group Loyalty and Inter-Group Competition

In-group loyalty and inter-group competition are important aspects of behavior in humans and other social species (for a review of evolutionary accounts of inter-group conflict, see van der Dennen, 2002). Group loyalty has long been recognized as a fundamental aspect of

social psychology, perhaps even one of the most important products of socialization (Bogardus, 1924). In-group-out-group biases are extensively documented and analyzed by social scientists (see Ruffle & Sosis, 2006). For example, New Guinea natives in egalitarian tribes playing economic games will take a higher cost to punish defectors from other tribes than defectors from their own tribe (Bernhard, Fischbacher, & Fehr, 2006). Israeli kibbutz members are more cooperative toward anonymous kibbutz members than toward anonymous city residents (Ruffle & Sosis, 2006). Minimal group experiments demonstrate that even superficial criteria can lead to group differentiation and discrimination (Wetherell, 1982).

American College Football as Inter-Group Competition

Patterns of in-group loyalty and inter-group competition are expressed in the modern context of professional and collegiate sports (Kruger, Wang, & Wilke, 2007; van der Dennen, 2002; Winegard & Deaner, 2010). Much of this team loyalty is communicated non-verbally, for example wearing apparel displaying university names and logos, athletic jerseys, or displaying team paraphilia (Lindquist, 2006). Division I is the highest level of intercollegiate athletics sanctioned by the National Collegiate Athletic Association (NCAA), these schools have the largest budgets, most elaborate facilities, and most athletic scholarships. The Michigan–Ohio State's NCAA Division 1 football rivalry was ranked the greatest North American sports rivalry by the Entertainment and Sports Programming Network (ESPN). “The Game,” as many fans know it, is held at the end of the regular Big Ten Conference season. Lindquist (2006, p. 457) notes, “the Michigan Wolverines have been the Other to the Ohio State Buckeyes since at least 1918: the two teams have met each year since that season.” Both Ohio State University and the University of Michigan are the flagship public universities of their respective states, and thus each state may be considered the territory of each university. However, residents may not display university loyalties completely consistent with state borders. We also note the within-state rivalry between University of Michigan and Michigan State University.

Toledo is a mid-sized city in Ohio, with its northern limits at the Ohio-Michigan border. Although in Ohio, Toledo is actually closer to Ann Arbor, MI (85 KM) than to Columbus, OH (222 KM), the respective homes of the University of Michigan and Ohio State University. In fact, the City of Toledo was simultaneously claimed by both Michigan and Ohio in the early 19th Century. The 1835–36 “Toledo War” was a heated boundary dispute between the State of Ohio and Michigan Territory during Michigan’s petition for statehood. Fortunately, the Maumee River and the Great Black Swamp created a natural environmental barrier that usually separated the militias, limiting direct confrontation. Eventually, the U.S. Congress created a compromise giving the Toledo strip to Ohio and expanding the Upper Peninsula of Michigan, at the expense of the Wisconsin Territory. The historical territorial conflict is echoed in the divided loyalties of current Toledo residents. Conventional wisdom holds that Toledo is a battleground between Ohio State and Michigan fans, team loyalties sometimes differ within the same household.

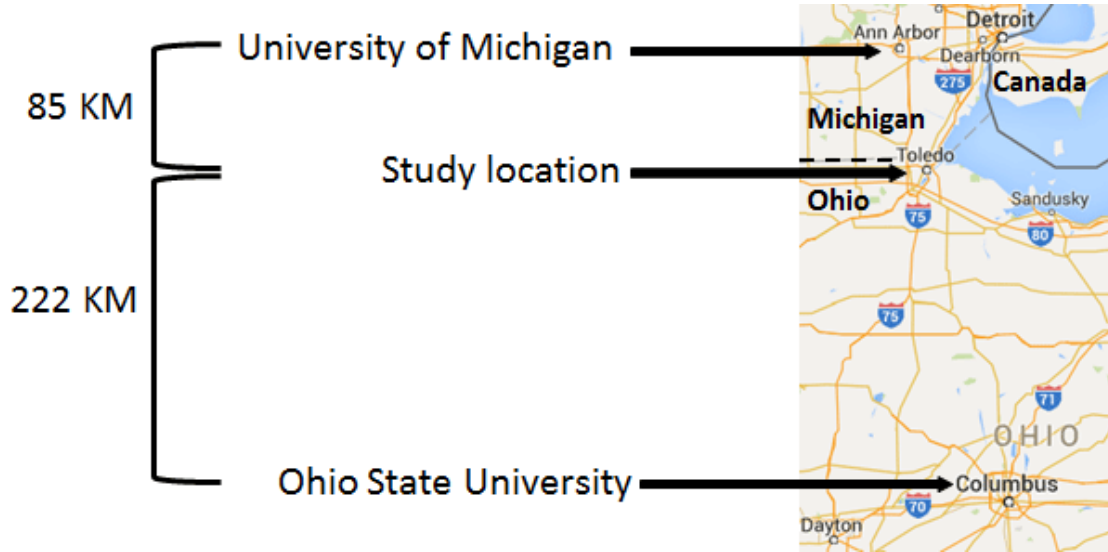


Figure 1. Study site and university locations.

Note: Map image courtesy of Google Maps

Assessing Allegiance through Urban Ethology

The authors used an ethological approach to assess the relative loyalty for each school during the American college football season. Naturalistic observations of human behavior have substantially contributed to the understanding of our species (See Eibl-Eibesfeldt, 1989). In recent years, this approach has explored topics such as nonverbal cues of sexual interest (Ahmad & Fisher, 2010), effective nonverbal courtship behavior (Renninger, Wade, & Grammer, 2004), the impact of cell phone use on social interactions (Finkel & Kruger, 2012), and neighborhood variation in both social capital (Hill, Pollet, & Nettle, 2014) and parenting practices (Nettle, 2012).

Systematic naturalistic observations of allegiance displays would help to quantify the proportion affiliating with each university, providing a more accurate and precise estimate than current qualitative and anecdotal descriptions. Merchandise featuring each school is widely available in the Toledo area and stores typically display Ohio State and Michigan items adjacently. Thus, public displays of university merchandise may be an unbiased metric for assessing allegiance. Such merchandise is designed to conspicuously display the logos and brands for each school; both the yellow Michigan "Block M" and red Buckeye "O" are easily seen and recognized.

We hypothesized that loyalty to one's home state would be more influential than geographic proximity in determining university allegiance. This prediction is consistent with research findings on social identity, where minimal cues of social identity, such as seeing the state listed in one's postal address, can foster in-group loyalty (see Wetherell, 1982). Therefore, we predicted that Toledo area residents would display more merchandise featuring Ohio State than the University of Michigan.

METHODS

The authors jointly observed 4021 individuals in Toledo, OH on weekends when both Ohio State and Michigan Fall 2013 season football games were played. We conducted 15 separate observations, ranging from 15 to 60 minutes ($M = 39$, $SD = 15$), in 11 separate locations. Preliminary observations in several local settings were used to inform the study design; these observations were not included in the final counts. Most observations were on Saturday afternoon, during or shortly before the football games, so that we were less likely to observe individuals who were specifically dressed to attend the game. Observations were conducted in public places where casual clothing would be considered appropriate attire; restaurants, department stores, the farmer's market, the zoo, and a large indoor shopping mall. The entire area of each location was surveyed, with the exception of the shopping mall. In this case, the open corridors of the mall were surveyed rather than the interiors of each individual store. Both observers reached verbal agreement on counts and previous inclusion of individuals, as individuals were in visible range, to prevent under-counting or double-counting. We included all visible adult and teenage customers/patrons in our sampling frame; we did not include store/restaurant/zoo employees (who may be following dress codes) or children under one meter in height (who may not be old enough to select their own clothing). We used a smartphone-based event tallying application to record the total number of individuals and the number of individuals with any visible clothing or personal item with the names and/or logos of any college or university. We categorized individuals into those displaying Ohio State, Michigan, some other college or university, and no college or university. Sample sizes for each observation ranged from 10 to 1349 individuals ($M = 268$, $SD = 384$).

RESULTS

Individuals visibly displaying university-related merchandise ($n = 257$) comprised 6.4% of our sample. Confirming our prediction, individuals displaying Ohio State University merchandise ($n = 101$) comprised a greater proportion of those displaying college merchandise (39%, 2.5% of sample) than those displaying University of Michigan merchandise (27%, 1.7% of sample, $n = 69$). The difference in proportions of the entire sample was statistically significant, $\chi^2_{(1)} = 5.76$, $p = .002$. There appears to be approximately 46% more Ohio State fans than Michigan fans currently in the Toledo metropolitan area. These were the top two universities represented by merchandise displays.

Individuals displaying merchandise featuring other schools ($n = 87$) collectively comprised another 2.2% of the sample (34% of those displaying college merchandise). These displays primarily featured the two moderately large public universities in the local region, University of Toledo and Bowling Green State University. Several individuals were also seen displaying merchandise featuring Notre Dame, Michigan State, and Ohio University, which are NCAA Division I universities in a wider geographical region. The smallest relative proportions of

individuals were seen displaying merchandise from the smaller colleges and universities in the local region, as well as larger universities in non-adjacent states. No individuals were observed simultaneously wearing multiple items featuring different schools.

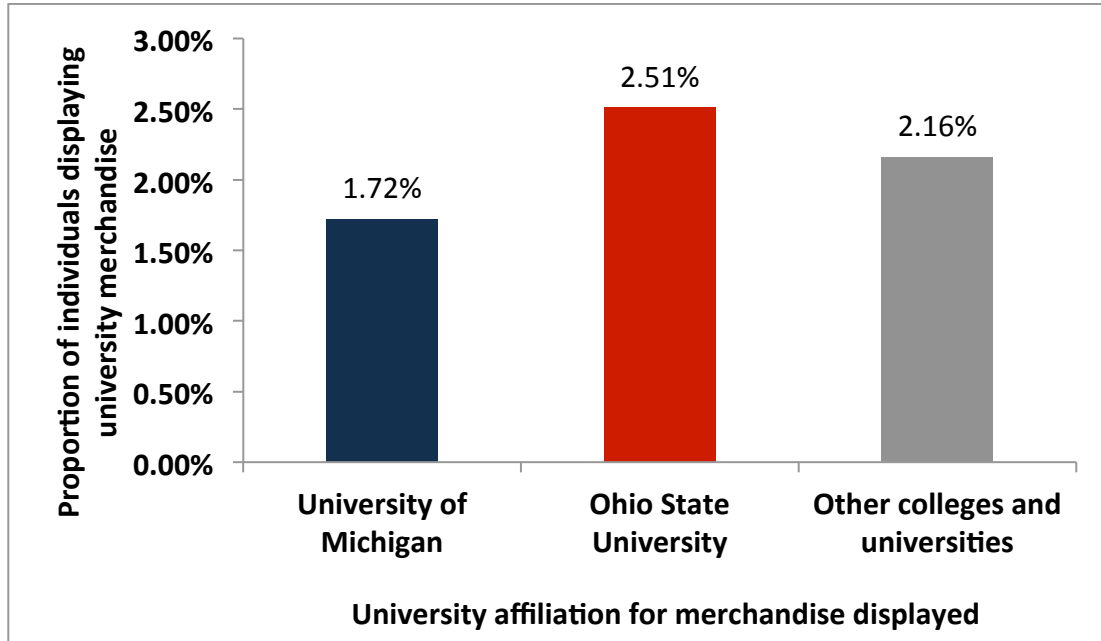


Figure 2. Proportion of individuals displaying university related merchandise ($N = 4021$).

DISCUSSION

Residents of Toledo display a mix of university loyalties, consistent with Toledo's status as a border city and one whose territorial affiliation was historically disputed. Although there are a considerable number of individuals loyal to the University of Michigan in the Toledo area, there are approximately 46% more individuals who display loyalty to Ohio State than to Michigan. Despite the closer geographic proximity to the University of Michigan, there is a greater degree of loyalty to the in-state flagship university. We expected this result because Toledo is located within Ohio and residents may be more likely to identify with their home state.

Loyalty to one's state may imply loyalty to one's state's flagship university, at least in competitions with out of state universities. Past studies support that territoriality displays show control over an area (Sack, 1983), which may be particularly relevant given the historical dispute over territory. Replicating previous research (Richardson & O'Dwyer, 2003); there were no observations of people displaying merchandise from more than one school at a time.

Our findings are consistent with social identity theory (Tajfel, Billig, Bundy, & Flament, 1971) and the notion that mechanisms for group categorization are part of evolved cognitive and motivational systems that facilitate adaptive social strategies (MacDonald, 2001). Self-categorization may be reinforced by frequent reminders of one's state of residency, for example providing identification with a driver's license and viewing license plates of vehicles. Such reminders are sufficient to trigger social identity mechanisms and foster in-group loyalty (see Wetherell, 1982).

Limitations

We observed individuals in the City of Toledo; however, we did not determine that they were residents of Toledo, or even of Ohio. The Toledo, OH Metropolitan Statistical Area is contained entirely within the State of Ohio and had a population of 651,429 in the 2010 U.S. Census. The adjacent communities of Temperance and Lambertville across the Michigan border had a combined population of 18,470 in 2010, 2.8% of the population of the Toledo MSA. The nearest City in Michigan is Monroe, 2010 population 20,733, located 38 KM northeast of Toledo. Thus, we expect that the proportion of Michigan residents in our sample is small.

When we observed individuals on game days, we conducted observations during or shortly before the football games were played, as those attending games typically wear clothing related to the universities in the game. Thus, we are not likely to count those attending games in person, who may be the most loyal. However, we did include locations (restaurants, bars) where the games were displayed on televisions.

Those displaying University of Michigan clothing and merchandise could be graduates who moved to the Toledo area or family members of alumni/ae. Because of the geographic proximity to Ann Arbor and the limited-access highway connecting the cities, it is a relatively easy one-hour drive to University of Michigan sporting events. This could help foster loyalty, compared to the 2.5-hour drive to Columbus, which is partially over local (i.e. non-highway) roads. Individuals observed were unlikely to be attending the actual games (and thus dressing for the occasion), as the games occurred elsewhere during most of the observational timeframe.

Conclusion

We hold that the ethological framework for understanding behaviors in non-human animals can also promote the understanding of modern human social phenomena. Modern sports have been interpreted as ritualized combat; college football is ritualized aggression between institutions in the same geographic region (Zillmann, Bryant, & Sapolsky, 1989). The visual and verbal displays of college football fans mimic the territorial markings and ritualized competitions in other animals. Individuals display their college affiliations to identify their group membership and suggest control over their local habitat. Our systematic

quantification of allegiance displays has provided a clearer understanding of the relative proportions of residents with loyalties to the two neighboring public flagship universities in a geographically intermediate city.

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