EACH SPORT HAS A UNIQUE MORAL CULTURE: EVIDENCE FROM DATA MINING MORAL VOCABULARY FROM TRANSCRIBED ATHLETE INTERVIEWS

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THESIS ABSTRACT

Each Sport Has a Unique Moral Culture: Evidence from Data Mining Moral Vocabulary from Transcribed Athlete Interviews

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Although sports are popular in North America, only a small research base examines the moral cultures of different sports. In this study, it was hypothesized that different sports have distinct moral cultures, that contact sports emphasize the care versus harm foundation from Moral Foundations Theory more than noncontact sports, and that contact sports emphasize morality more than noncontact sports in general. To investigate these questions, a corpus of transcribed athlete interviews was analyzed in accordance with the Moral Foundations Dictionary (MFD). A one-way ANOVA revealed that the seven sports examined (auto racing, baseball, basketball, football, golf, hockey, and tennis) significantly differed in their respective emphases on each of the moral foundations, as defined by the frequency of words from corresponding sections of the MFD used in that sport's interviews relative to the total number of words in the interviews (care: $F=108.1$, $sd=0.536$; authority: $F=46.63$, $sd=0.694$; fairness: $F=13.94$, $sd=0.314$; purity: $F=16.78$, $sd=0.240$; ingroup: $F=27.74$, $sd=0.492$; $p<0.001$ for all foundations). T-tests were used to compare contact and noncontact sports' relative frequencies of moral language use from the care category as well as their overall moral language use. The differences between contact and noncontact sports' relative emphases on the care foundation, and morality in general, were both found to be significant ($t=456.8$, $sd=0.1$, $p<0.001$; $t=5.718$, $sd=1.007$,

p=0.0168). These findings support the hypotheses that sports have distinct moral cultures, that contact sports emphasize the care foundation more than noncontact sports, and that contact sports emphasize morality more in general. These findings can guide future research on the effects that different sports have on their participants.

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Depending on who you ask, sports can be a fun way to teach children about the importance of effort, teamwork, and exercise—or a malignant way to teach children how to cheat, ostracize, and ruthlessly compete to win at all costs. Despite the uncertainty about the effects of participation, sports are widespread among youths, with about nine million participants in youth sports programs in the United States alone, as of 2008 (Lee, 2015). In North America, the sports industry is expected to be worth $73.5 billion by 2019 (Heitner, 2015). With such a large social and economic impact, we should investigate the moral implications of sports on the individual, and by extension, our society.

Moral Foundations Theory

Much of the past research on morality in sports has focused on a false binary. The arguments center around whether or not sports promote moral development in athletes (e.g. Sage, 1998). This line of thinking would lead one to believe that it is possible for a social organization to be devoid of morality entirely, which is not the case. There are a vast number of moral beliefs expressed by every social group, with some basic similarities across groups, an idea called moral pluralism (James, 1909/87). The more illuminating question to investigate is *how* a sport can influence and reflect the morality of its participants. For this question to be researched, we must begin with a broad theory of morality that can describe cognitions and behaviors in a wide variety of social contexts.

Moral Foundations Theory (MFT) conceptualizes morality as a set of intuitions around proper human behavior and beneficial relationships that evolved to help humans adapt to an increasingly complex society (Haidt, 2012). Although the foundational moral

intuitions are thought to be consistent across humanity, their salience is shaped by an individual's culture and experiences, and once they have become differentially prominent are very difficult to change. According to MFT, there are six foundations of human morality that each exist on spectrum: care versus harm, authority versus rebellion, fairness versus cheating, loyalty or ingroup versus betrayal or outgroup, purity versus degradation, and liberty versus oppression. In this study, I refer to the foundations by their positive aspect for the sake of brevity. For example, "care versus harm foundation" will simply be called the care foundation. These foundations of morality are intuitive to every person, according to theory, and form the basis for morality in all human cultures.

Haidt provides the evolutionary basis for these moral foundations in his book, *The Righteous Mind: Why Good People Are Divided by Politics and Religion* (2012). The care foundation developed in humans to urge us to care for our children and to alleviate threats to the people that we love. The authority foundation developed to allow us to navigate social hierarchies in the increasingly complex social structures of early human society. The fairness foundation developed to allow us to cooperate with others without being cheated. The ingroup foundation developed to allow us to create and maintain cooperative teams with others and encourages us to stick with the team to benefit ourselves. The purity foundation developed to encourage us to differentiate between hygienic and unsanitary behaviors and has extended to a wide variety of behaviors symbolic of the original purpose of such an intuition. The liberty foundation was defined after the first five and to my knowledge has not been attributed an evolutionary explanation.

Other theories of morality in sport are consistent with MFT. Rudd (2005) asserts that sports promote two kinds of character: moral and social. For Rudd, moral character is that which benefits all of humanity whereas social character benefits only those in the peer group of the individual in question. For example, a soccer player that is in position to make a play for the ball that would risk bodily harm to an opponent can choose to either make the play or avoid potential collision. Making the play would be the choice representing social character because it would benefit the team. Avoiding the play and preventing injury to the opponent would represent Rudd's concept of moral character. This distinction overlaps with the ingroup foundation of MFT.

Another theory of morality that aligns with MFT is that which is conceptualized by Sharon Stoll and Jennifer Beller. These two researchers created a test with the help of Hahm, the Hahm-Beller Values Choice Inventory (HBVCI), to assess the moral reasoning of athletes (Beller, Stoll, & Hahm, 1992). They conceptualize morality as a set of reasoning skills at which an athlete can be placed on a spectrum from proficient to mediocre. The test presents a set of moral problems that relate to issues that may arise in sports relating to honesty, responsibility, justice, and other moral concepts. Once the athlete has completed the test, they can be determined to be more or less proficient in moral reasoning.

This perspective, however, comes to the same problem as discussed earlier. Stoll and Beller conceptualize morality as a set of skills at which a person can become more or less proficient. As Haidt points out, the moral skills that a person learns are culturally influenced. Therefore, the athlete test takers could be assessed on a set of skills that are not valued in their sport's culture and, as such, they would not have learned in the course

of their training. This may explain the findings that Beller, Stoll, Burwell, and Cole obtained in 1995, where college team-sport student-athletes' moral reasoning scores were significantly lower than their non-athlete counterparts. Rudd's distinction between moral and social character may be useful here since athletes may value loyalty to the ingroup over a perceived benefit to society.

The HBVCI's questions often pit the test-takers' understanding of loyalty and sport culture against their conceptualization of harm versus care in society at large. Although Stoll, Beller, and Hahm have accounted for many moral skills in the HBVCI, it is possible that their test does not exhaustively assess all the possible moral skills that athletes have learned. With this in mind, MFT will be a more comprehensive framework through which to consider the morality of sports.

Sports as Unique Moral Cultures

The current study aims to provide an evidence base for investigating *how* athletes think about moral issues rather than *if* they do. In the past, some have written about sports as a monolith with a universal moral culture (Simon, 2014; Russel, 2014). This leads to another problem, however. With such a diverse array of sports available for humans to play, who is to say that all sports have the same moral culture or that all athletes think about morality in the same way? Viewing disparate sports as having different moral cultures is more precise.

Think of two sports that are vastly different on many accounts: hockey and golf. Golf is an individual sport; hockey is a team sport. Golf is played on grass; hockey is played on ice. A hip check in hockey is normal practice while a hip check in golf would be downright ludicrous. Think of the number of hours a hockey player or golfer puts into

their sport. Performing different actions, considering different problems, interacting with different people, and repeatedly seeing things from different perspectives will train athletes from different sports to interpret the world differently. As a matter of fact, Haidt defines a moral community as a "set of shared norms about how members ought to behave combined with means for imposing costs on violators and/or channeling benefits to cooperators" (2007). By this definition, each sport can be considered a moral community with its own set of standards that create a unique moral culture. The creation of different moral cultures in different sports happens in two ways: through self-selection and group socialization.

Factors Affecting Self-Selection in Sport Moral Cultures

Some think that the sport in which an individual chooses to participate is merely a reflection of their physical prowess. In some cases, this may be true. After all, Pablo S. Torre pronounced that 17% of American men 7 feet or taller between the ages of 20 and 40 play in the NBA, using figures from the CDC to make his estimate (2011). Although numbers like this seem to make a convincing case for physical attributes as the motivating factor behind which sport an athlete chooses to play, it is not the whole picture. It could also be hypothesized that socioeconomic factors, race, gender, and other social characteristics play a role in an athlete's choice of sport. The present study, however, focuses on the *psychological* characteristics that lead to sport participation rather than genetic or social factors.

There is evidence that people with certain personality traits are attracted to different types of activities. For example, Tok's 2011 study found that athletes in high-risk sports (think of our hockey player) tended to have higher levels of openness and

extraversion, and lower levels of conscientiousness and neuroticism than non-participants. Tok's study suggests that athletes are different from non-athletes in personality but what about athletes and other athletes? Klinar, Burnik, and Kajtna's 2017 study compared the personality traits of high-risk athletes with recreational athletes and found striking results, as well. According to their study, high-risk athletes had lower levels of trait conscientiousness than recreational athletes, replicating Tok's results. Klinar et al. also found that the recreational athletes in their sample had higher trait openness and agreeableness. These results suggest that people with different personality traits are attracted to different types of sports.

A person's personality traits are also associated with the different emphases they place on the moral foundations. More than one study has found that higher levels of personality trait agreeableness positively correlate with promotion of the care and fairness foundations (Lewis & Bates, 2011; Hirsh, DeYoung, Xu, & Peterson, 2010). These studies also found that higher trait openness negatively correlates with promotion of the authority and purity moral foundations (Lewis & Bates, 2011; Hirsh, et al., 2010). These studies provide evidence that suggest that people with certain moral beliefs tend to be attracted to different types of activities, including different types of sports. This is one way in which a moral culture can be created in a sport community.

Personality traits are not the only individual characteristics that affect sport choice. Past evidence has shown that level of income influences a person's sport participation choices, as well (Holt, Kingsley, Tink, & Scherer, 2011). Social categories such as socioeconomic status, nationality, and other characteristics contribute to a person's moral belief system, as well. For example, Haidt, Koller, and Dias found that

people of different socioeconomic statuses in their sample viewed the moral problems with which they were presented differently (1993). The participants from this study also differed in moral belief along lines of nationality (Haidt, Koller, & Dias, 1993). Personality traits, socioeconomic status, and nationality are three key examples of the characteristics of an individual that can influence their sport choice and contribute to the creation of a sport's unique moral culture.

Factors Affecting Socialization in Sport Moral Cultures

Even though some moral foundations are based on protecting one's own interests, morality as a whole is not an individual endeavor. According to the social-intuitionist model of morality, the main way that a person's moral thinking can change is through interactions with other people (Haidt, 2012). Haidt theorizes that the basis of human morality is emotional rather than rational, and this is why we have feelings about morality for which we must create post-hoc rationalizations. It follows then that a person is more likely to accept the moral thinking of someone they like, admire, or want to impress because of the emotional significance that person has, and change their own rationalizations to correspond to that of their model.

This same effect will be observed in sport communities because of the effects of group membership and ingroup bias. Group membership has been shown to breed similarity in affect in its participants (Spoor & Kelly, 2004). Spoor and Kelly theorize that shared affect benefited groups evolutionarily by streamlining communication about environment and groups structures while simultaneously fostering bonding among group members and group loyalty (2004). The syncing of affect in group members can be linked to the moral foundations because moral thinking is derived from affect (Haidt,

2004). In this way, the effects of group membership can help to create a moral culture in a sport.

A unique moral culture can be fostered in a sport through ingroup bias, as well. In the hallmark study on ingroup bias, it was found that people favor others that they perceive to be similar to themselves (Tajfel & Turner, 1979). This can be extended to include those that play the same sport as they do. It has also been found that ingroup biases are similarly prevalent among those in minority groups as those in the majority (Axt, Ebersole, & Nosek, 2014). As such, ingroup bias will be present among all athletes in all sports rather than only in a portion of them. The socialization effects of ingroup bias that arise due to a shared identity among participants of the same sport will result in a unique moral culture in each sport.

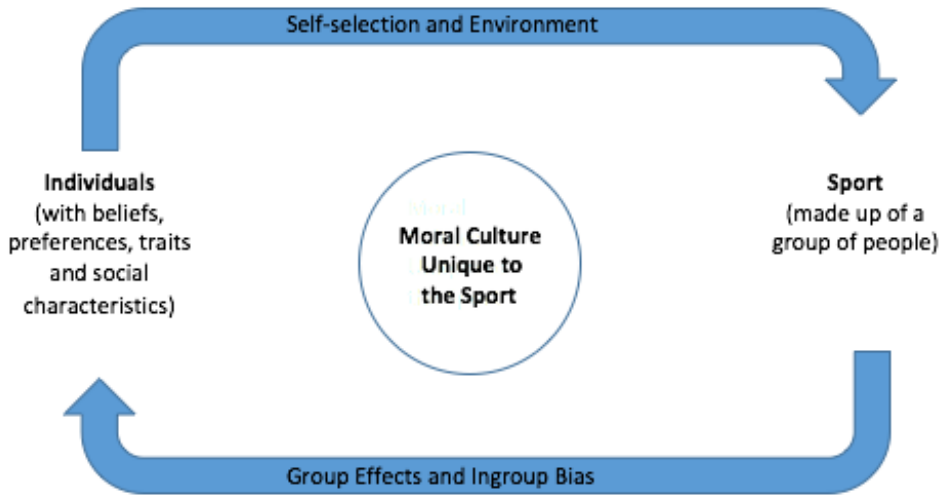

Figure 1. Model delineating the process of creating a sport's unique moral culture.

The evidence base for a theory of unique moral cultures by sport exists. We know that a sport can act like a moral community by Haidt's definition. We also have a mechanism for how a moral culture can be created in a sport community: through self-

selection, group membership, and ingroup effects (Figure 1). The precedent for how to scientifically measure a culture is outlined below.

Measuring Culture

Measuring moral cultures has been attempted using different methods in the past. Surveying the population of interest is one method that has been successfully utilized. Surveying athletes in-person using the Moral Foundations Questionnaire (Graham, Nosek, Haidt, Iyer, Koleva, & Ditto, 2011) could provide insight into a sport's culture but would not elicit enough data given environmental constraints on the current study. The pool of athletes at Rutgers University - Camden, the home university of this study, is too small to collect the necessary sample size with which comparing sports would be informative. Thus, I elected to use Big Data methods to obtain enough data to adequately address the research question of whether or not sports have different cultures.

Big Data research is becoming increasingly popular and many methods for dissecting the wealth of information available on the Internet have been developed. For instance, some studies analyze tweets, published thoughts on the website twitter.com, to assess psychological and cultural effects on a large scale (Thorstad & Wolff, 2018). This method, unfortunately, would not be viable for the current study due to the lack of verifiability that Twitter accounts truly belong to the athletes they purportedly represent.

There are other methods for assessing moral culture, however. In their seminal study on the differences in prominence of the moral foundations among people with different political beliefs, Graham, Haidt, and Nosek, created the Moral Foundations Dictionary (MFD; 2009). The MFD contains 295 words and word stems that reflect one of the moral foundations (2009). For example, the purity foundation has words like

"sacred," "holy," and "lewd," listed in the MFD. The fairness foundation has words like "justice," "equable," and "dishonest," listed. The complete MFD can be found in Appendix A. The liberty foundation was not included in the MFD because it was not completely defined at the time of the study. In the study, Graham, et al. analyzed speeches made by religious leaders by conducting a word count for each entry in the MFD and its derivatives in their speeches. They then used the frequency of the words from each moral foundation and divided it by the total number of words from the speech to calculate the relative frequency of words from each foundation in the MFD. By using this method, the researchers found significant differences in the emphases placed on each moral foundation based on the political ideology of the religious leader. This study showed that language use is a viable way to assess moral cultures.

If there were a way to analyze the moral language use of athletes through a data source with more authenticity than Twitter, the methods described in Graham, et al.'s (2009) study on moral language use could be used. Fortunately, there is an online database at asapsports.com containing thousands of transcribed athlete interviews (134,682 athlete interviews as of December 5, 2018). The number of interview transcriptions available for each sport is listed in Appendix B. Although this source is limited by time period (ASAP Sports was only founded in 1989) and event (sport leagues generally contact ASAP Sports to transcribe for major events like playoff games rather than regular season games), it will still provide reliable enough data with which to draw conclusions. Because of the sheer number of interviews on the website, there is enough data available to detect subtle differences in moral language use even though the interviews do not directly address morality.

For the current study, I used the same methods as Graham, et al. (2009) to investigate the moral cultures of different sports. I used the software program R to scrape moral language data, from the transcribed interviews on asapsports.com. Using this technique allowed me to investigate the final product of the model presented earlier. Namely, that different sports would have different moral cultures. It does not test the processes attributed to the creation of unique moral cultures in sports. However, it is the first step in finding evidence in support of the model. Exploring a small subset of the data beforehand allowed for the development of additional hypotheses.

One such hypothesis that was obtained from the exploratory analyses is the connection between contact sports and the care moral foundation. In the subset of the data, contact sports tended to use more language from the care category of the MFD. A possible explanation for this is that the culture of contact sports predisposes its athletes to place more emphasis on the care foundation, including harming another person. There is evidence to suggest that contact sport athletes behave more aggressively, as well, although this relationship may be mediated by alcohol consumption (Sonderlund, et al., 2014). If contact sport cultures emphasize this moral foundation, it may promote moral beliefs that benefit the athlete's team in a sport that requires aggressive physical contact with opposing players.

Contact sport athletes in the exploratory sample tended to use more moral language overall, as well. This could be due to the heightened arousal that is associated with the physicality of their sports. There is evidence to suggest that when people are highly aroused, they tend to rely on affect for decision making rather than cognitive reasoning (Storbeck & Clore, 2008). Since moral beliefs are rooted in affect, athletes who

become highly aroused through the physical contact of their sport may tend to interpret the world morally and use more moral language to describe it (Haidt, 2012).

Synthesizing the evidence from past research on self-selection and socialization in sports led to my first hypothesis. Namely, that all sports have unique moral cultures. Using the evidence from the exploratory analyses led me to my two secondary hypotheses. Athletes from contact sports will place more of an emphasis on the care foundation than athletes from noncontact sports, as well. And finally that athletes from contact sports will tend to use more moral language overall than athletes from noncontact sports, as well.

Hypotheses

1. All sports have significantly different moral cultures from one another.
2. Contact sports have moral cultures that promote the care foundation more than noncontact sports.
3. Contact sports have moral cultures that promote overall moral thinking more than noncontact sports.

Methods

Sample

The sample used for this study was made up of the transcribed athlete interviews on asapsports.com. As stated earlier, this website has a very large database of transcribed interviews with athletes organized by which sport the athlete participated in at the time, the letter with which the athlete's last name begins, and the year in which the interview took place. Only the sports with more than 1,000 transcribed interviews on the website were used for analysis to ensure that calculated effect sizes would be large enough to draw conclusions. Sports that fit this criterion were auto racing, baseball, basketball, American football, golf, hockey, and tennis (5,119 total auto racing interviews, 8,812 total baseball interviews, 16,991 total basketball interviews, 9,944 total football interviews, 59,721 total golf interviews, 4,658 total hockey interviews, and 27,200 total tennis interviews, as of December 5, 2018. See Appendix B for a listing of how many interviews were available for each sport on the website by letter).

Interviews from all years available on the website, 1989-present, were included in the final analysis. Information on the gender of the athlete being interviewed was not available for all the interviews. There was no information available on the age, race, or

religion of the athletes being interviewed on the website. The interviews themselves usually took place after competitions or at major publicity events for the sport. In some interviews, more than one person is being interviewed at a time.

Some interviews on the website were conducted with non-athlete figures from the sport under which they were listed. Although the interviews were all related to sports and the leagues where the competitions are held, interviews with coaches, team owners, promoters, and other sport-related figures are all included on asapsports.com mixed in with the athlete interviews. It was determined that the best course of action was to continue conducting the analysis as described because these interviews can be considered artifacts of each sport's culture, reflecting the same moral culture as interviews with athletes of that sport.

A preliminary analysis was conducted using interviews with athletes whose last names began with the letters A, B, and C. For the final analysis, only interviews with athletes whose last names began with the other letters of the alphabet were included. During the preliminary analysis, it was discovered that certain words in the MFD had a different meaning in a sport context. For instance, "guard," is listed in the care section of the dictionary but is also a position in basketball. Thus, the words "guard," "guards," "guarding," "guarded," "defense," "defender," "defenders," "defending," "defenses," "defends," "defended," "defensive," and "defensively," were removed from the dictionary that was used for analysis. This had no discernible effect on the small portion of data used for preliminary analysis, suggesting that these words were not responsible for a significant portion of what was recorded as moral language used by athletes.

Materials

The resource used to determine the moral language use in the interviews was the Moral Foundations Dictionary (Graham, Haidt, & Nosek, 2009).

The software program R was used to scrape the moral language data from asapsports.com and to conduct statistical analyses on the data.

Design

The independent variable in this study for the first hypothesis was the sport with which the interview was associated. For the first hypothesis, the dependent variable was the relative frequency of moral language used from each category of the MFD. For the second hypothesis, the independent variable was the sport type: contact or noncontact. The dependent variable was the relative frequency of moral language used from the care category of the MFD. For the third hypothesis, the independent variable was the sport type: contact or noncontact. The dependent variable was the relative frequency of moral language used from the entire MFD. A between-groups design was used to compare the relative frequency of moral language used between sports and sport types.

Procedure and Statistical Analyses

A script was written in R to scrape the moral language data from the transcribed interviews on asapsports.com. Stop words such as “the,” “at,” and “so” were removed from the dataset before analysis. R used the scraped data to count instances in which the athletes used entries from the MFD dictionaries in their interviews. Since the original study that used this method utilized a different software, LIWC, some procedures were adjusted to fit the current study to accomplish the same goals using R (Graham, et al, 2009). Specifically, the LIWC software can detect word stems and counted all instances

of words containing these stems in the original study. R was unable to detect the word stems from the dictionary in the corpus. To account for this difference, the lead researcher entered every derivative of the MFD entries into the R script in order for it to count each instance of the entries and their derivatives. In this way, the original study's methods were maintained using a different software.

The word counts that R collected were organized into groups representing the moral foundation to which they corresponded in the MFD. Once organized into these categories, the moral word counts for each interview were divided by the total number of words uttered during the interview. In this way, the relative frequency of moral language use for each category of the MFD was calculated. The mean of these relative frequencies was calculated across the interviews for each sport to produce a mean relative frequency of moral language use for each category of the MFD by sport. These means were listed as percentages. The mean relative frequencies of moral language use for each moral category by sport were compared to one another using a one-way ANOVA in order to test the first hypothesis.

To compare the relative emphases placed on the care foundation by the contact sports group (basketball, football, hockey) and the noncontact sports group (auto racing, baseball, golf, tennis), an aggregate relative frequency for each group of sports was calculated. This was constructed by taking the mean of the mean relative frequency scores for moral language use in the care category for each sport in the contact and noncontact groups. These overall means were considered to be the relative frequency at which each group of sports used moral language from the care category. These two values were compared using a t-test.

The overall use of moral language for each sport was calculated by dividing the total number of words from the MFD used by the athletes from that sport by the total number of words used in the interviews for that sport. This constructed the overall moral language use relative frequency for each sport. To test the difference between contact and noncontact sports, the overall moral language use relative frequencies for each sport were added within the contact sport group and the noncontact sport group and divided by the number of sports in each group. These two values were then compared using a t-test.

Exploratory Analyses

For exploratory purposes, the mean relative frequencies of moral language use for each moral category by sport were compared to one another using t-tests in addition to the ANOVA. Although the ANOVA compares these groups more efficiently, t-tests were used to investigate whether there were any interesting differences between two individual sports as opposed to all the sports from each other.

Two separate sport groups were included in exploratory analyses, as well. The team sport group (baseball, basketball, football, hockey) and individual sport group (auto racing, golf, tennis) were created to compare whether or not this dimension of the sports had an effect on their moral culture. The mean relative frequencies of moral language use for each category and overall moral language use were calculated for each sport group in the same way as for the contact and noncontact sports except with the new grouping of sports. The two groups' moral language use for each category and overall moral language use were compared using t-tests.

Results

Hypothesis 1

The mean relative frequencies for language use in each category of the MFD for each sport are represented graphically in Figure 2. The exact mean relative frequencies for language use for each MFD category are also shown in Table 1. A one-way ANOVA test showed that these relative frequencies were significantly different for every moral foundation when comparing individual sports (care: $F=108.1$, $sd=0.536$; authority: $F=46.63$, $sd=0.694$; fairness: $F=13.94$, $sd=0.314$; purity: $F=16.78$, $sd=0.240$; ingroup: $F=27.74$, $sd=0.492$; $p<0.001$ for all foundations). The mean relative frequencies for moral language use by sports were significantly different from the others in every category of the MFD. These results suggest that athletes from one sport do tend to use different moral language than athletes from other sports.

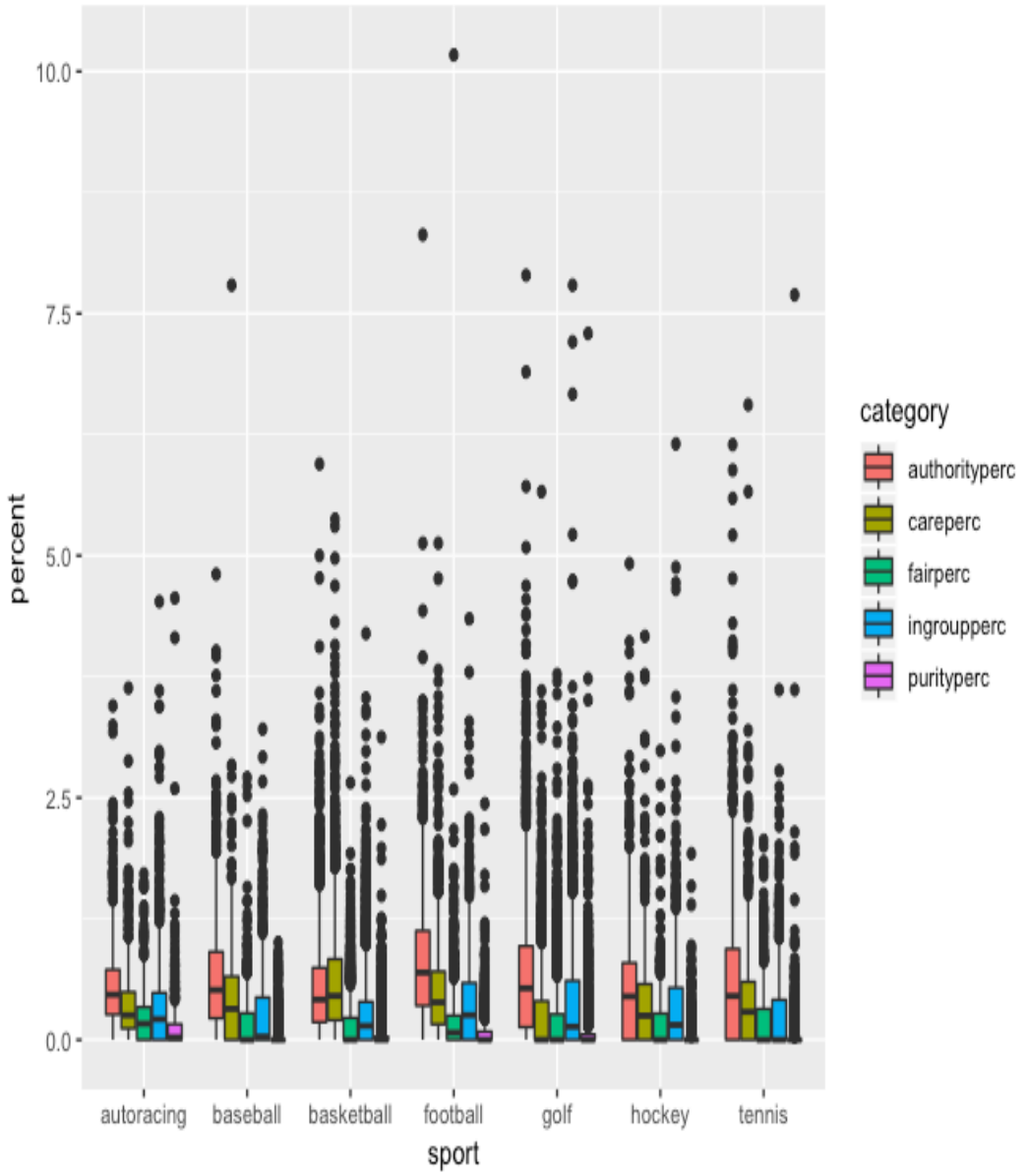

Figure 2. Box plots showing the mean relative frequency of moral language use from every category of the MFD

Table 1

Relative Frequency of Language Use from MFD Categories by Sport (Results shown in percentages rounded to three decimal places)

Sport/Moral Foundation	Care/Harm	Fairness / Cheating	Authority / Rebellion	Ingroup/Outgroup	Purity/Degradation
Auto Racing	0.357	0.232	0.557	0.387	0.129
Baseball	0.448	0.180	0.653	0.295	0.067
Basketball	0.590	0.146	0.525	0.264	0.067
Football	0.513	0.179	0.804	0.386	0.075
Golf	0.272	0.201	0.691	0.388	0.113
Hockey	0.395	0.182	0.570	0.381	0.062
Tennis	0.401	0.189	1.119	0.254	0.072

A paired-samples t-test was conducted to compare mean relative frequency of moral language for each foundation between sports. These comparisons did not produce any clear findings about the specific nature of the moral cultures of any of the sports.

Hypothesis 2

The mean relative frequencies of moral language use from the care category for the contact sports and noncontact sports were compared using a t-test. The results of the t-test showed a significant difference between moral language use from the care foundation by sport type ($t=434.6$, $sd=0.1$ $p<0.001$). The athletes from the contact sports used significantly more moral language from the care category of the MFD than athletes from the noncontact sports, supporting the hypothesis. This is shown graphically in Figure 3. Comparisons showed that athletes from the contact and noncontact sports used significantly different amounts of moral language in every category of the MFD, as well. The exact mean relative frequencies for each category are listed in Table 3.

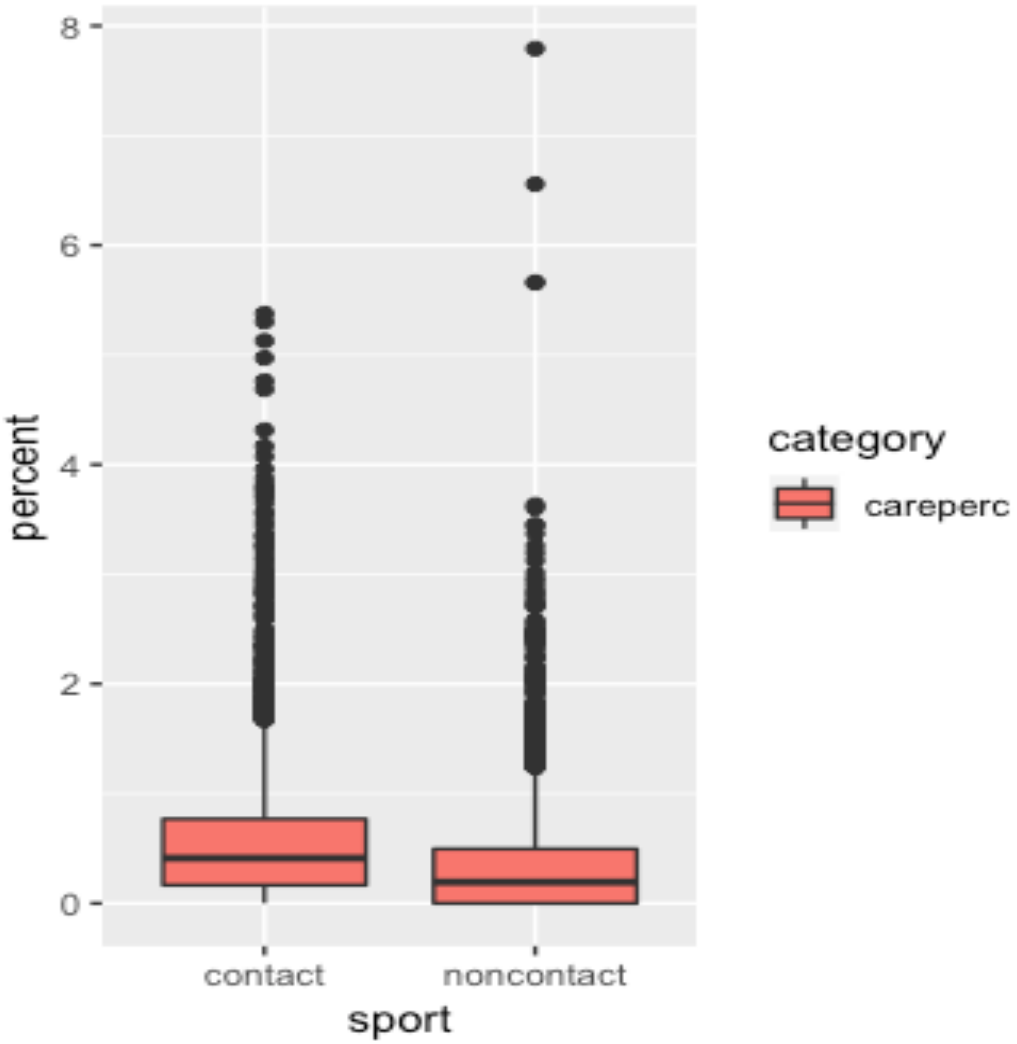

Figure 3. A box plot showing the mean relative frequencies of moral language use for contact sports and noncontact sports for the care category of the MFD.

Team and individual sport athletes were compared for exploratory purposes. It is worth noting that the team sports group (baseball, basketball, football, hockey) only differed from the contact sports group by one sport (baseball switched groups). Comparing athletes from team and individual sports showed that the two groups used significantly different amounts of moral language from every category of the MFD

($p<0.001$). This may be due to the similarity in composition of the two groups with the contact and noncontact sports.

Table 3

Relative Frequency of Language Use from MFD Categories by Sport Type

Sport Type/ Moral Foundation	Care/Harm (% of total interview length)	Fairness / Cheating (% of total interview length)	Authority / Rebellion (% of total interview length)	Ingroup/Outgroup (% of total interview length)	Purity/Degradation (% of total interview length)
Contact (Basketball, Football, Hockey)	0.545	0.159	0.603	0.310	0.068
Noncontact (Auto racing, Baseball, Golf, Tennis)	0.336	0.200	0.746	0.348	0.101
Team (Baseball, Basketball, Football, Hockey)	0.486	0.172	0.638	0.331	0.068
Individual (Auto racing, Golf, Tennis)	0.343	0.208	0.789	0.343	0.105

Hypothesis 3

The aggregate mean relative frequencies of moral language use for every foundation by sport type were compared using a t-test. The difference between the groups was found to be just significant ($t=5.718$, $sd=1.007$, $p=0.0168$). Figure 4 shows the

overall moral language use for contact and noncontact sports and Table 4 presents the exact relative frequencies of moral language use for each group of sports. Exploratory analyses were conducted to compare the groups of team and individual sports. The difference between these two groups was found to be significant ($p<0.001$).

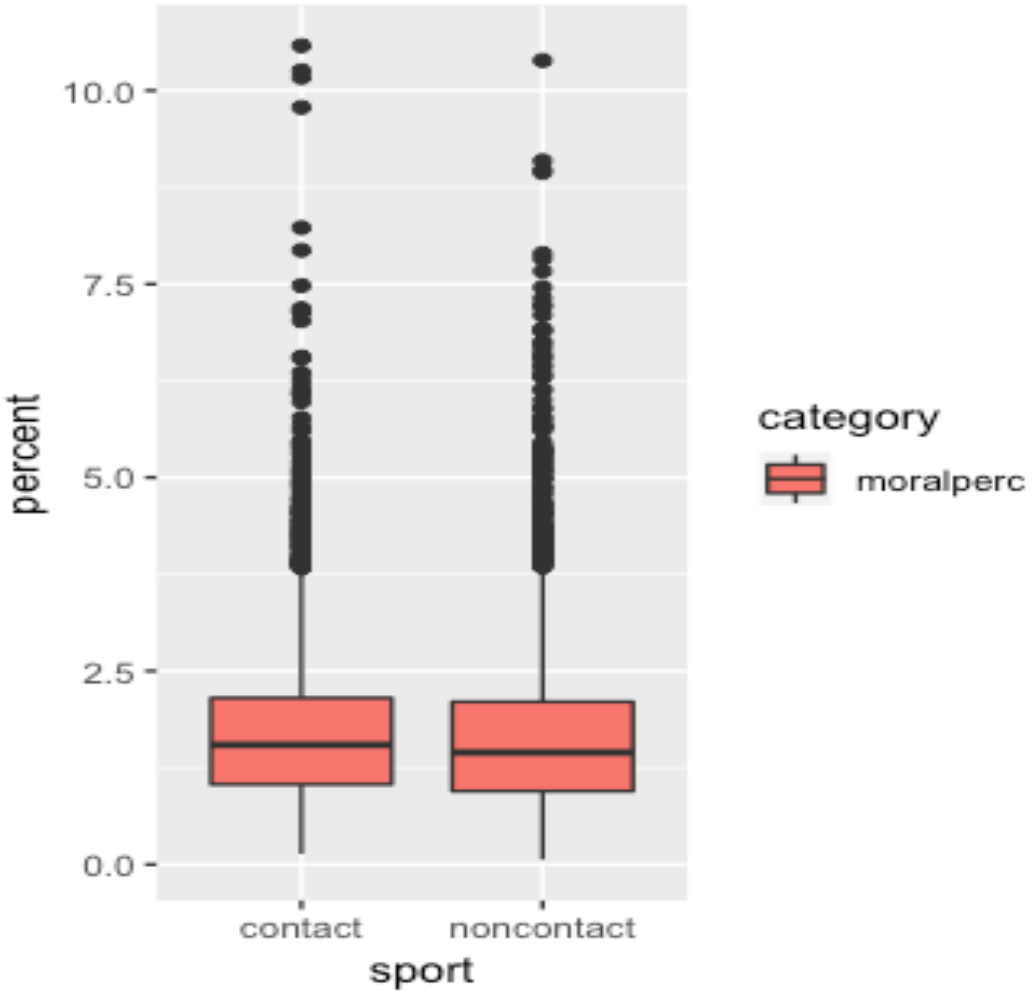

Figure 4. Box plots showing the mean relative frequencies of overall moral language use by sport group.

Table 4

Relative Frequency of Language Use from MFD Overall by Sport and Sport Type

Sport Type	Overall Moral Language Use Frequency (% of total interview length)
Contact	1.712
Noncontact	1.750
Team	1.694
Individual	1.786

Discussion

Hypothesis 1: All sports have significantly different moral cultures from one another.

The first hypothesis in the study attempted to answer the question of whether there is an observable difference in the moral cultures of different sports. Sport moral cultures were operationalized as the amount of moral language used by each sport's athletes from each category of the MFD in an interview. The relative frequency of each category of the MFD in athlete interviews from a certain sport was interpreted to represent the emphasis that that's sport's culture place on that moral foundation. The results of the ANOVA conducted between sports suggest that athletes from some sports tend to use moral language differently than athletes of different sports. These results provide evidence that the sports included in this study have different moral cultures judging by the differences in emphases placed on different moral foundations by their athletes.

These results conflict with the writings of Russell and Simon in their respective chapters of *Ethics in Sport* (2014). Both treat the set of all sports as having a universal moral culture. The findings from this study show that one cannot make a broad claim about the morality of sports because their moral cultures are heterogeneous. This aligns with Haidt and James's conceptualization of morality as pluralistic (2012; 1909/87).

Results from this analysis may also help explain the results from Beller, et al.'s (1995) study where it was found that athletes from team sports scored significantly lower on the HBVCI moral reasoning test than non-athletes. If the moral reasoning test assessed moral reasoning too narrowly, then athletes who had developed moral beliefs based on their sport may have scored poorly when tested on moral reasoning tasks that were

irrelevant to their sport's culture. This, however, does not explain the developmental findings that Stoll, Beller, and Hansen obtained in their 2004 study where it was found that athletes moral reasoning scores decreased during adolescence. It seems that James's theory of pluralistic morality and, more recently, Haidt's MFT were corroborated by the results of the first hypothesis but more research is needed to examine how sport participation influences moral development in athletes (1909/87; 2012).

Hypothesis 2: Contact sports have moral cultures that promote the care foundation more than noncontact sports.

The second hypothesis proposed that contact sports would promote the care foundation more than noncontact sports. This and the third hypothesis were attempts to not only detect the differences between the moral cultures of the different sports but to provide an evidence base with which those differences could be described. The results obtained from the study supported this hypothesis. It was found that contact and noncontact sports were significantly different on the measure of moral language use from the care category and that contact sports used moral language from this category more often.

I assert that this phenomenon was observed due to an increased emphasis on harm in contact sports. My logic is as follows: athletes who are naturally attracted to contact sports already place high value on the care foundation of morality. Coaches then encourage these athletes to engage with these beliefs more often because situations that relate to the care foundation are likely to arise during contact sports. When these two factors coincide and occur repeatedly in the context of the sport, the sport develops a unique moral culture that emphasizes and highly values the care foundation. The results

from this test may more clearly frame Sage's assertions that sports impact athletes' morality negatively (1998). If defined by the care versus harm foundation of morality, perhaps athletes who play contact sports do tend to fall closer to the harm end of the spectrum of moral belief rather than the care side.

Hypothesis 3: Contact sports have moral cultures that promote overall moral thinking more than noncontact sports.

The third hypothesis was another attempt to describe the differences between the moral cultures of each sport. This hypothesis proposed that athletes of contact sports would use more total moral language than athletes of noncontact sports. The results support this hypothesis but not to the same degree as Hypotheses 1 and 2. The significant difference may have occurred due to differences between the two groups of sports in arousal. Haidt contends that moral beliefs are an affective process rather than a cognitive one and there is evidence to suggest that people in higher arousal states tend to rely on affective reasoning more than cognitive reasoning (Haidt, 2012; Storbeck & Clore, 2008). However, with the difference between the two groups barely achieving significance, it is difficult to draw strong conclusions. This may suggest that both contact and noncontact sports are similarly arousing and thus no difference would be observed in athletes' use of moral language between sports. This may also be a reflection of the low number of sports included in the dataset. With more sports incorporated in the dataset, particularly individual contact sports and team noncontact sports, these findings could generalize more easily.

Exploratory Results

The exploratory analyses approached the question of how the moral cultures of team and individual sports differed. This was another attempt to not only detect the differences in moral cultures between sports but to describe them. The results of the comparisons made between team and individual sports by the care foundation and by overall moral language use showed that the two were significantly different in both respects. As has already been stated, these groupings were very similar to the contact and noncontact sport groupings. These analyses may provide a basis on which to build further research but more sports should be included in future analyses to truly test the validity of these results.

Limitations

Perhaps the greatest strength of this study was the use of Big Data methods. Assessing such a large number of interviews bolsters the validity of the results of this study. Despite the large scale of the dataset analyzed, however, several limitations can be placed on the study's results. For example, the MFD was not separated by valence of the words from each category of the dictionary. For example, words that reflected care and words that reflected harm were both counted as an instance of language use for the same category. By splitting the categories of the MFD into two sections, a clearer picture of the differences in moral culture between sports could have been observed. This would have strengthened the results from Hypothesis 2 because it would have shown how the emphases from the care category were placed by athletes from contact sports.

It was discovered in post-study analysis that including the word "serve" in the MFD used for this study could have skewed results. Including the word "serve" could

have artificially inflated the instances of moral language use from the authority category in tennis interviews. Future studies can correct this issue by removing "serve" from the dictionary and conducting the same analyses on the same dataset.

Conducting the same analyses from the present study on a cleaner dataset could also make the results more precise. There exist a few key ways this dataset could have been cleaned. First, the transcribed interviews on asapsports.com sometimes included multiple speakers. Perhaps the results would have revealed other nuances in the moral cultures of sports if only individual interviews were included in analyses.

Second, this study's dataset included interviews with non-athlete figures in their respective sports like coaches, team owners, and other sport-associated interviewees. In some ways, this could be said to strengthen the study's conclusions since the differences among the sports' moral cultures prevailed even while including figures who were more loosely associated with the sports than the athletes themselves. On the other hand, these interviewees may not have been the best representations of the sport's culture for which they were analyzed and may have skewed the data. Further research that differentiates between athletes and other figures within sports is needed to determine whether non-athletes contribute to a sport's culture in similar ways to athletes.

Finally, the interviews on asapsports.com were word-for-word text write-ups of what the interviewer and interviewee said during their interaction. Thus, the questions asked by the interviewer were included in those transcriptions. For analyses, the words from the questions were included. Perhaps cleaning the dataset to only include words actually uttered by the athlete would have made the results demonstrate the sport's moral

culture more exactly. However, as stated earlier, it is possible that the interviewers use language that fits the sport's moral culture and contribute to it rather than obfuscate it.

Directions for Future Research

Although the results robustly support the main hypothesis of this study, there are still several ways in which follow-up studies can increase the validity of the results. The results of this study have been drawn entirely from transcribed interviews and use the language choices made by interviewees to approximate their beliefs. Another option for testing the hypotheses of this study would be to directly ask athletes about their moral beliefs. The Moral Foundations Questionnaire (MFQ) was created for the purpose of assessing the moral beliefs of the person answering the questions (Graham, et al., 2011). It would be interesting to assess whether the answers given by individual athletes on the MFQ align with the emphases placed on the moral foundations by their sport as a whole. The answers to the MFQ could also augment our ability to describe the moral cultures of sports in more detail. With more direct, detailed data on an athlete's moral beliefs used for analyses, instead of data that measures a representation of those beliefs, more nuanced insight could be made possible.

Future studies can also use the same techniques as the current study on a different dataset. There is an extraordinary amount of books written on various sports, athletes, coaches, and other sports figures. The current dataset from asapsports.com has an incredibly large amount of data for the seven sports included in this study's analyses but lacks a large amount of data for other sports. Analyzing the moral language used in sports books could be done using the methods described in this study and provide more detail about the moral cultures of sports that were not included in the current study's analyses.

The results gathered from such a study could strengthen the results found while testing Hypothesis 2 and 3 of the current study.

Even though one can easily imagine the developmental implications of the results of this study, the results do not imply any longitudinal effect. Rather, they only provide a cross-section of data on the moral cultures of sports as they are today and perhaps reflect an aggregated snapshot of the moral cultures of those sports since 1989, the year of ASAP Sports founding. A valuable follow-up study to this one could include an analysis of the moral language used in each sport over time and analyzing the changes. In the same vein, this study does not imply that a person who spends a significant amount of time in a sport's culture will internalize that sport's moral culture. Such a conclusion would require evidence following individual athletes over longer periods of time.

Relating to the previous point, the model presented to explain the creation of unique cultures by sport was only tested in part. While evidence was found to support the idea that each sport has a unique moral culture, the individual characteristics of athletes leading to their sport choice nor the socialization effects of group membership were measured. Future studies should seek to test every part of the proposed model as well as replicate the results found in the current study. Evidence that makes each part of the model more credible would powerfully support the conclusions drawn from the current study.

Follow-up research could be conducted on a similar dataset with information on socioeconomic status, level of success achieved, or nationality of the athlete included. In past research, it has been shown that people from different socioeconomic classes see the world through different moral lenses (Haidt, Koller, & Dias, 1993). Perhaps controlling

for socioeconomic status would produce new insights on the results of the current study. Other evidence suggests that there are significant differences in the personality traits of athletes who achieve different levels of success (Steca, Baretta, Greco, D'Addario, & Monzani, 2018; Allen & Laborde, 2014). Controlling for differences in personality and level of success may also create interesting distinctions in the results of the current study. Evidence for differences in how people of different nationalities value the different moral foundations exists, as well (Haidt, Koller, & Dias, 1993). Nation of origin may play a role in how a sport's moral culture manifests.

It is also possible, however, that these variables contribute to and confirm the effect hypothesized in this study. By controlling for too many of these variables, the main observations of the differences in sport culture may be lost (Rohrer, 2018). If people of different socioeconomic statuses, nationalities, or levels of athleticism are attracted to different types of sports, this would contribute to the differences in moral culture of different sports. In the future, these additional variables should be included in analyses to help researchers describe the effect that each has on a sport's moral culture.

Finally, the hybrid method of Big Data research should be utilized in follow-up studies on this research. Several authors agree that the most powerful way to study Big Data is to analyze large swaths of data using software to detect broad trends and human coders to analyze a subset of the data to detect nuance and deeper meaning (Lewis, Zamith, & Hermida, 2013). Human coders cannot be expected to read every single interview on asapsports.com or even a large portion of them. However, if human coders read a selection of prototypical athlete interviews from different sports and rated them on

their respective emphases of the moral foundations, the findings from this study could be made more robust.

Implications

The results of this study, although cross-sectional, may have developmental implications. Perhaps parents enrolling their children in youth sports programs will evaluate their choice of sport more closely with knowledge of the results of this study. School boards may use this information to consider their choice of sports for physical education. Since different sports have different cultures, it is possible that exposing children to those sports will have an effect on their development.

Knowing that sports have different moral cultures can also change the way we interpret societies. It may be the case that a nation's most popular sport reflects the moral thinking of the people in that nation. Perhaps a nation whose most popular sport uses relatively more language from the fairness foundation also has a strict judicial system. Describing the differences between the moral cultures of the different sports was attempted through the second and third hypotheses and the results for those hypotheses provide an evidence base with which further research on the moral cultures of sports can begin.

The most important finding from this study is that, through Big Data methods, the hypothesis that sports have different moral cultures was supported. This finding opens the door for much more research on different datasets using different techniques over longer periods of time to truly describe what those differences are. There is some evidence to suggest that differentiating between contact and noncontact sports as well as team and individual sports will contribute to our understanding of the unique characteristics of each

sport's moral culture. And despite the temptation, developmental effects should not be assumed based on this study's results alone. However, this study's results do provide an evidence base with which future researchers can pursue that path, as well.

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Appendix A

Moral Foundations Dictionary as described in Graham, J., Haidt, J., & Nosek, B. A. (2009).

Harm:

safe , *peace* , *compassion* , *empath* , *sympath* , *care*, *caring*, *protect* , *shield*, *shelter*, *amity*, *secur*, *benefit* , *defen* , *guard* , *preserve*, *harm* , *suffer* , *war*, *wars*, *warl* , *warring*, *fight* , *violen* , *hurt* , *kill*, *kills*, *killer* , *killed*, *killing*, *endanger* , *cruel* , *brutal* , *abuse* , *damag* , *ruin* , *ravage*, *detriment*, *crush* , *attack* , *annihilate* , *destroy*, *stomp*, *abandon* , *spurn*, *impair*, *exploit*, *exploits*, *exploited*, *exploiting*, *wound*

Fairness:

fair, *fairly*, *fairness*, *fair* , *fairmind* , *fairplay*, *equal* , *justice*, *justness*, *justifi* , *reciproc*, *impartial* , *egalitar* , *rights*, *equity*, *evenness*, *equivalent*, *unbias* , *tolerant*, *equable*, *balance* , *homologous*, *unprejudice* , *reasonable*, *constant*, *honest* , *unfair* , *unequal* , *bias* , *unjust* , *injust*, *bigot* , *discriminat* , *disproportion* , *inequitable*, *prejud* , *dishonest*, *unscrupulous*, *dissociate*, *preference*, *favoritism*, *segregat* , *exclusion*, *exclud*

Ingroup/Loyalty:

together, *nation* , *homeland* , *family*, *families*, *familial*, *group*, *loyal* , *patriot* , *communal*, *commune* , *communit* , *communis* , *comrad* , *cadre*, *collectiv* , *joint*, *unison*, *unite* , *fellow* , *guild*, *solidarity*, *devot* , *member*, *cliqu* , *cohort*, *ally*, *insider*, *foreign* , *enem* , *betray* , *treason* , *traitor* , *treacher* , *disloyal* , *individual* , *apostasy*, *apostate*, *deserted*, *deserter* , *deserting*, *deceiv* , *jilt* , *imposter*, *miscreant*, *spy*, *sequester*, *renegade*, *terroris* , *immigra*

Authority:

obey , *obedien* , *duty*, *law*, *lawful* , *legal* , *duti* , *honor* , *respect*, *respectful* , *respected*, *respects*, *order* , *father* , *mother*, *motherl* , *mothering*, *mothers*, *tradition* , *hierarch* , *authorit* , *permit*, *permis*sion, *status* , *rank* , *leader* , *class*, *bourgeoisie*, *caste* , *position*, *complian* , *command*, *supremacy*, *control*, *submi* , *allegian* , *serve*, *abide*, *defere* , *defer*, *revere* , *venerat* , *comply*, *defian* , *rebel* , *dissent* , *subver* , *disrespect* , *disobe* , *sediti* , *agitat* , *insubordinat* , *illegal*, *lawless*, *insurgent*, *mutinous*, *defy* , *dissident*, *unfaithful*, *alienate*, *defector*, *heretic* , *nonconformist*, *op- pose*, *protest*, *refuse*, *denounce*, *remonstrate*, *riot* , *obstruct*

Purity:

piety, *pious*, *purity*, *pure* , *clean* , *steril* , *sacred* , *chast* , *holy*, *holiness*, *saint* , *wholesome* , *celiba* , *abstention*, *virgin*, *virgins*, *virginity*, *virginal*, *austerity*, *integrity*, *modesty*, *abstinen* , *abstemiousness*, *upright*, *limpid*, *unadulterated*, *maiden*, *virtuous*, *refined*, *intemperate*, *decen* , *immaculate*, *innocent*, *pristine*, *humble*, *disgust* , *deprav* , *disease* , *unclean* , *contagio* , *indecen* , *sin*, *sinful* , *sinner* , *sins*, *sinned*, *sinning*, *slut* , *whore*, *dirt* , *impiety*, *impious*, *profan* , *gross*, *repuls* , *sick* , *promiscu* , *lewd* , *adulter* , *debauche* , *defile* , *tramp*, *prostitut* , *unchaste*, *wanton*, *profligate*, *filth* , *trashy*, *obscen* , *lax*, *taint* , *stain* , *tarnish* , *debase* , *exploitat* , *pervert*, *wretched*

Appendix B

Number of Interviews Available on Asapsports.com by Sport and First Letter of Athlete's Last Name (in cases where several athletes were interviewed at once, data is sorted into first alphabetically)

Sport (Total Number of Interviews)	First Letter of Athlete's Last Name	Number of Interviews	Number of Interviews Included in Exploratory Analyses (A-C) and Final Analyses (D-Z)
Auto Racing (5119)	A	430	A-C: 2037
	B	1070	
	C	537	
	D	332	D-Z: 3082
	E	260	
	F	280	
	G	350	
	H	412	
	I	7	
	J	161	
	K	265	
	L	140	
	M	172	
	N	78	
	O	2	
	P	215	
	Q	0	
	R	101	
	S	146	
	T	76	
	U	10	
	V	14	
	W	44	
	X	0	
	Y	4	
	Z	13	
Baseball (8812)	A	313	A-C: 2011
	B	938	
	C	760	
	D	215	D-Z: 6801
	E	93	
	F	438	
	G	751	
	H	584	
	I	17	
	J	172	

	K	184	
	L	675	
	M	1083	
	N	50	
	O	79	
	P	334	
	Q	4	
	R	395	
	S	589	
	T	411	
	U	16	
	V	190	
	W	374	
	X	0	
	Y	114	
	Z	33	
Basketball (16991)	A	1186	A-C: 5999
	B	2982	
	C	1831	
	D	1055	D-Z: 10992
	E	262	
	F	587	
	G	1059	
	H	1044	
	I	217	
	J	775	
	K	581	
	L	558	
	M	1248	
	N	169	
	O	137	
	P	735	
	Q	2	
	R	467	
	S	919	
	T	321	
	U	21	
	V	139	
	W	668	
	X	0	
	Y	19	
	Z	9	
Football (9944)	A	540	A-C: 2289
	B	968	
	C	781	

	D	606	D-Z: 7655
	E	135	
	F	1060	
	G	365	
	H	592	
	I	17	
	J	301	
	K	648	
	L	292	
	M	806	
	N	140	
	O	72	
	P	415	
	Q	24	
	R	305	
	S	988	
	T	250	
	U	5	
	V	27	
	W	571	
	X	0	
	Y	17	
	Z	19	
Golf (59721)	A	1382	A-C: 7986
	B	2435	
	C	4169	
	D	3034	D-Z: 51735
	E	1062	
	F	2954	
	G	2586	
	H	4074	
	I	646	
	J	2104	
	K	3628	
	L	3784	
	M	6085	
	N	967	
	O	1141	
	P	3240	
	Q	219	
	R	2011	
	S	6061	
	T	1649	
	U	111	
	V	663	

	W	5292	
	X	7	
	Y	333	
	Z	84	
Hockey (4658)	A	123	A-C: 1249
	B	744	
	C	382	
	D	196	D-Z: 3409
	E	121	
	F	105	
	G	183	
	H	314	
	I	15	
	J	171	
	K	177	
	L	339	
	M	348	
	N	64	
	O	37	
	P	118	
	Q	161	
	R	219	
	S	440	
	T	197	
	U	3	
	V	113	
	W	45	
	X	0	
	Y	20	
	Z	23	
Tennis (27200)	A	913	A-C: 4102
	B	1688	
	C	1501	
	D	2125	D-Z: 23098
	E	325	
	F	1630	
	G	1072	
	H	1794	
	I	545	
	J	315	
	K	1878	
	L	631	
	M	2473	
	N	1367	
	O	138	

	P	937	
	Q	116	
	R	1634	
	S	2745	
	T	636	
	U	14	
	V	274	
	W	2061	
	X	2	
	Y	80	
	Z	306	
Interviews Listed Below this Box were not Included in Analyses			
Equestrian (351)	A	25	A-C: 141
	B	71	
	C	45	
	D	26	D-Z: 210
	E	7	
	F	14	
	G	21	
	H	13	
	I	3	
	J	8	
	K	10	
	L	14	
	M	52	
	N	2	
	O	1	
	P	10	
	Q	0	
	R	2	
	S	16	
	T	3	
	U	0	
	V	2	
	W	6	
	X-Z	0	
Track & Field (497)	A	25	A-C: 119
	B	64	
	C	30	
	D	30	D-Z: 378
	E	3	
	F	35	
	G	39	
	H	31	
	I	0	

	J	7	
	K	70	
	L	10	
	M	35	
	N	5	
	O	4	
	P	18	
	Q	0	
	R	31	
	S	27	
	T	11	
	U	1	
	V	5	
	W	14	
	X	0	
	Y	1	
	Z	1	
Wrestling (270)	A	5	A-C: 44
	B	25	
	C	14	
	D	32	D-Z: 226
	E	0	
	F	3	
	G	20	
	H	18	
	I	0	
	J	8	
	K	5	
	L	3	
	M	31	
	N	16	
	O	4	
	P	10	
	Q	0	
	R	23	
	S	34	
	T	8	
	U	0	
	V	3	
	W	8	
	X-Z	0	
Boxing (31)	A	4	A-C: 16
	B	8	
	C	4	
	D	9	D-Z: 15

	E	0	
	F	2	
	G	0	
	H	1	
	I	0	
	J	0	
	K	0	
	L	0	
	M	2	
	N	1	
	O-Z	0	
Soccer (198)	A	19	A-C: 57
	B	21	
	C	17	
	D	4	D-Z: 141
	E	1	
	F	7	
	G	5	
	H	10	
	I	0	
	J	0	
	K	1	
	L	2	
	M	53	
	N	1	
	O	7	
	P	8	
	Q	0	
	R	2	
	S	9	
	T	7	
	U	0	
	V	16	
	W	8	
	X-Z	0	
Extreme (2)	A	0	A-C: 1
	B	1	
	C	0	
	D	1	D-Z: 1
	E-Z	0	
Collegiate Sports Information Directors of America (46)	A	1	A-C: 10
	B	5	
	C	4	

	D	1	D-Z: 36
	E	2	
	F	2	
	G	0	
	H	2	
	I	0	
	J	2	
	K	2	
	L	1	
	M	3	
	N	2	
	O	0	
	P	4	
	Q	0	
	R	0	
	S	5	
	T	8	
	U	0	
	V	1	
	W	1	
	X-Z	0	
Volleyball (159)	A	12	A-C: 56
	B	22	
	C	22	
	D	5	D-Z: 103
	E	13	
	F	1	
	G	9	
	H	3	
	I	0	
	J	0	
	K	2	
	L	1	
	M	6	
	N	0	
	O	0	
	P	0	
	Q	0	
	R	1	
	S	56	
	T	0	
	U	0	
	V	0	
	W	6	
	X-Z	0	

Lacrosse (91)	A	6	A-C: 48
	B	25	
	C	17	
	D	19	D-Z: 43
	E	1	
	F	3	
	G	5	
	H	4	
	I	0	
	J	1	
	K	5	
	L	2	
	M	1	
	N	1	
	O	0	
	P	0	
	Q	0	
	R	1	
	S-Z	0	
Swimming (222)	A	15	A-C: 49
	B	25	
	C	9	
	D	9	D-Z: 173
	E	4	
	F	15	
	G	0	
	H	24	
	I	0	
	J	8	
	K	5	
	L	29	
	M	15	
	N	0	
	O	0	
	P	21	
	Q	0	
	R	0	
	S	15	
	T	8	
	U	0	
	V	7	
	W	12	
	X	0	
	Y	0	
	Z	1	

Cricket (359)	A	28	A-C: 61
	B	9	
	C	24	
	D	40	D-Z: 298
	E	2	
	F	4	
	G	7	
	H	18	
	I	2	
	J	5	
	K	32	
	L	6	
	M	82	
	N	2	
	O	0	
	P	14	
	Q	0	
	R	8	
	S	22	
	T	25	
	U	13	
	V	5	
	W	9	
	X	0	
	Y	2	
	Z	0	
Generic Sports (1)	A		A-C: 1
	B		
	C	1	
	D-Z	0	D-Z: 0