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The role of mediated sports programming on implicit racial stereotypes

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Previous content analyses show that televised sports programming attributes athletic success achieved by Black athletes to athleticism whereas success for White athletes is attributed to hard work and intelligence. This research explores whether the amount of such programming a person views affects attitudes held about Black and White athletes. Using a unique version of the Implicit Association Test, a strong association was found between images of White athletes and ‘smart’ athlete words, whereas Black athletes were more strongly associated with ‘natural’ athlete words. Furthermore, results from a mediated sports-consumption survey suggest that there is a significant positive correlation with the amount of sports programming a participant is exposed to and the strength of these stereotypical associations.

The ubiquity of mediated sports programming is an undeniable facet of the modern world; sports programming can be seen 24 hours a day, 7 days a week. Furthermore, there appears to be a shift in mediated sports programming from a sole focus of showing sporting events/highlights, to an increase in programming that focuses mainly on the discussion of sports and the athletes themselves. Current sports programming now appears to discuss issues beyond highlights, and often engages in debates over a countless number of sports-related topics. Past research indicates that Black athletes are more often discussed in a stereotypical way when compared with their White counterparts,1 and the addition of sports-talk programming only increases the chances for similar stereotypical portrayals to be expressed.

This research focuses on the ‘brain versus brawn’ notion, and further explores athletic achievements in the context of race. Where some research attributes the athletic success of Black athletes to biological factors,2 other work has dismissed this notion suggesting that there is no direct evidence tying race to athletic proficiency.3 Instead, culture, class and environment prove much better predictors of athletic success in comparison to race.4 In contrast, the success of White athletes is more often attributed to the sports they are exposed to, encouragement, role models and family affluence.5 Furthermore, Coakley noted the issue of ‘sports stacking’ wherein White athletes are often assigned positions that are perceived as requiring a higher level of intellectual ability (e.g. quarterback and offensive linemen in American football) whereas Black athletes are expected to fill positions that require greater athletic dexterity, but require less cognitive ability.6 This line of research suggests that not only is the ‘brain versus brawn’ mentality perpetuated via media creators but also, perhaps, in coaches who make personnel decisions based in part upon these stereotypes. This notion is further bolstered by the fact that 25% of respondents from a 2011 survey noted the influence of media stereotypes in the attribution of racially driven athletic success.7 However, what researchers are now beginning to explore is

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whether or not these portrayals have any effect on viewers. This research explores whether a correlation exists between mediated sports viewing and racial associations, taking the ‘brain versus brawn’ notion as its point of departure. To address this issue, the researchers created a unique version of the Implicit Association Test (IAT) and had participants complete it after answering a survey assessing the amount of sports media they consume.

Stereotypes

The field of psychology contains a thorough history of stereotype research, with media scholars also exploring the issue. Absent from this research is a thorough discussion about the effects of repeated exposure to stereotypical images. Instead researchers appear to assume the existence of these effects with little empirical data to support such claims. That is to say, most of the media research focuses on the presence of stereotypical portrayals in mediated messages, but it does not empirically investigate further whether these depictions result in new and/or reinforced stereotypes.

The favoured method of this research is an empirical systematic examination of media messages showing that one or more particular groups are portrayed in a stereotypical manner. Another method is the sociological exploration of this topic from a reflective critical ontology. In their 2009 book, Carrington and McDonald supplied a contemporary critical socio-cultural analysis of sport and race. In addition, Carrington and McDonald explored the notion of racial bonding that is made possible by sports. In what Feagin refers to as the ‘White racial frame’ Carrington suggests that current views of race have been shaped by long-standing White supremacy. Carrington expands upon this notion when he discusses the ‘White colonial frame’ as a centuries-old social and cultural reality, and examines the subsequent political and economic racial ramifications on the Black sporting diaspora.

However, in the communication and sociology literature, it is far less common for researchers to explore whether these stereotypical portrayals and/or the prevalence of sports in society leads to, reinforces, or correlates with specific stereotypes. Testing this requires a different methodology, but doing so allows researchers to consider more thoroughly the relationship between media portrayals of certain groups and public perceptions of those groups. For the purpose of this research, stereotypes are conceptually defined as beliefs or expectations about the qualities and characteristics of certain social groups. This research gives specific attention to the role played by modern media in the stereotype process, and uses a cultivation and social reality theoretical perspective in order to predict the effects.

Cultivation and social reality theory

Cultivation theory suggests that media consumption has an influential cumulative effect on the way an individual views the world. Gerbner and his colleagues suggest that social influences have shifted from education/religion to television because of its mass-produced, repetitive and symbolic nature, which is still prevalent in today’s mediated culture. Furthermore, the more one is exposed to mediated messages, the closer their beliefs about the real-world mirror that of the mediated world. This line of research has found that, as exposure to television increases, an individual’s beliefs and opinions of the real world become more similar to that of the television world. This research applies this perspective by predicting a correlational relationship between automatic stereotypical associations and the amount of sports programming an individual reports consuming.
Gerbner and his colleagues expanded upon the initial formulation of cultivation theory by including individual differences and other demographic variance that affect the degree of cultivation, especially in adolescents. Furthermore, they suggested that the cultivation effects of television contribute to the conception of social reality in that, it assumes an interaction between a pervasive medium and other subtle, complex and intermingled influences.

The theoretical concept of ‘social reality’ was developed to extrapolate the psychological and cognitive processes that explain how Gerbner’s cultivation effect occurs. People construct their reality by automatically and unconsciously selecting certain events that occur in their world and storing them in long-term memory networks. Because mediated messages may make up a substantial portion of the events individuals selectively choose to expose themselves to, the media plays a large role in what can later be drawn upon to construct a person’s conception of reality. A person’s cognitive response to a message helps construct the memory of daily events. Information stored as a result of viewing a mediated message goes on to determine – at least partially – how the person will act or react to future events. Social reality does not assume that all media is created equal and understands that it will not have the same effect on everyone. Rather it postulates that several circumstances lead to stronger long-term memory traces than others.

One such circumstance is the repetition of information. The more frequently facts, opinions or attitudes are repeated, the stronger the memory networks associated with those details become. Social reality is a multiple-trace model of memory networks – one that states each repetition of an event results in an independent, yet coexisting, memory trace. These multiple memory traces are then used as heuristic cues that allow people to gauge how frequently an event happens. Thus, the frequency of repeated comments celebrating the natural athletic ability of Black athletes (as opposed to stressing hard work or intelligence) arguably leads viewers to assume this is true, more often than it actually is.

Furthermore, arousal has also been shown to affect the encoding of information and its subsequent storage into the long-term memory system. Things that arouse are better remembered than things that are calm in nature or presented within a calm context. This is an important aspect of social reality theory for the current discussion considering that the very nature of sporting events is often exciting and emotional. In addition, with sport-related programming focusing more on clip shows compared with the competitive events themselves, the impact of excitement on long-term memory formation is even more salient. In sports clip shows, only the most exciting and/or controversial plays are shown and discussed by commentators – professional speakers hired for their ability to create excitement in viewers. Therefore, with respect to stereotyping of athletes based on race, viewers are repeatedly exposed to emotionally charged content that depicts Black athletes as naturally talented and White athletes as hard workers. The media that an individual chooses to consume may have an effect on that individual’s beliefs, and possibly their actions. Thus, individuals who are heavily exposed to sports programming have the potential to form long-term memory networks containing information provided in the subtle messages conveyed via sports announcers and commentators.

Certainly, there are exceptions to this phenomenon that are task dependent. Social reality suggests that real-world face-to-face experience will most likely (but not always) trump perceptions obtained from a mediated environment. Furthermore, social reality theory suggests that the most relevant information will be called upon when making a decision. It is possible that a person with little to no experience with members of an out-group (e.g. members of a race different than oneself) would more readily recall the
mediated messages he or she has either consciously or unconsciously obtained. Consequently, this would influence his or her social judgement decisions of this individual based solely upon mediated messages. This has been suggested in regard to the stereotyping of Black people in the context of media consumption. Fujioka found that the effects of mass media are more pronounced when the viewer lacks significant face-to-face interactions with Black people. As a result, these data suggest that people will rely on stereotypical media portrayals of Black people if real-world exposure is lacking.

There are many determining factors that influence a person’s social reality, and it is not always as simple as a person recalling relevant information to shape their reality. One of the important distinctions to understand is that mediated messages vary on a number of factors (e.g. medium, genre and technology). This is clear when looking at a television drama in comparison with a news broadcast. One is fictional while the latter, if nothing else, has at least an illusion of reality. Social reality theory argues that a person will often deem real events more relevant than fictionalized events. This is important when looking at the discussion of athletes by sports commentators. Sports are unscripted and, therefore, what is said in the context of these sports programmes has the potential to be considered more relevant by viewers, and thus perceived as factual, either consciously or subconsciously.

Under the theory of social reality, the creation and utilization of stereotypes often happens without the individual ever being aware of it. And while it is possible to control these stereotypical views, humans have cognitive mechanisms that make this more difficult than one might assume. The reliance on automatic responses to situations can lead a person to use familiar information even when making decisions about unfamiliar stimuli. When an individual possesses little knowledge about a particular topic he or she will call upon any relevant information within memory to make a judgement. If a person has limited non-mediated exposure to a particular situation, and most of their information about it – be it a person, place or thing – comes from the media, then the media help shape their attitude about that object.

**Black athletes in mediated sports**

Several content analyses have been conducted to explore how Black athletes are portrayed in the media. A good deal of this research has investigated how the athletic traits of White male athletes are described in comparison with those of Black male athletes, with additional research exploring why differences exist. Results suggest that athletic success achieved by Black athletes is more commonly attributed to athleticism, whereas success for White athletes is more often attributed to hard work and intelligence. Furthermore, Whites are more commonly portrayed as natural leaders in comparison with Black athletes. This difference in the perception of Black and White athletes is not a new phenomenon. According to Carrington, it dates back to the 1930s when the rise of the Black athlete concurrently gave way to the atavistic attribution of Black athletic success. This success ‘would disallow any suggestion that such sporting achievements be reflective of any deeper, cognitive and above all intellectual disposition’, with contemporary-mediated studies supporting this perception.

While Black athletes may have gained equality on the playing field with regard to participation percentages, at times their accomplishments are undermined by television’s biased coverage of sports. Studies suggest that Black athletes are more likely to be characterized in a way that trivializes the amount of work they have put into achieving their athletic status. The more recent content analyses suggest that while these kinds of
stereotypes appear to be diminishing, they have not yet disappeared completely. Media presentations of racially fuelled stereotypes have shifted from overt descriptions to covert portrayals. These studies suggest that while sports commentators appear to be increasing equality when it comes to describing athletes of different races, they have yet to achieve an actual balance.

Although the presence of stereotypical attributions in media commentary has been well documented, researchers have only recently considered if and when these presentations lead to stereotypical attitudes on the part of sports viewers. The literature contains far more studies of content analysis of race in sports, and researchers rarely set their focus on people’s perceptions of race with regard to sport. One such study empirically explored the relationship between the perception of athletic success and race. The researchers found that 25% of respondents attribute the influence of perpetuated stereotypes to mediated portrayals. In a similar study, Buffington and Fraley found that participants endorse the notion that Blacks and Whites possess different physical and mental skills (in relation to sport). These studies suggest that exposure to television could have partially led to the construction of these responses. The numbers of such studies, however, are few. This research attempts to add to the literature in this area.

**Hypotheses**

The media has the ability to reach mass audiences with sports and sports-related information, and these messages have been shown to contain stereotypical depictions of race. Furthermore, social reality theory and cultivation theory suggest that the more frequently an individual is exposed to a piece of information through the media, the more likely she/he is to believe it to be true due to an increased number of nodes in long-term memory networks that are developed over time. Therefore, the following predictions were made:

H1: The more sports programming a person reports viewing in an average week, the greater their level of association of Black athletes as ‘natural’ athletes.

H2: The more sports programming a person reports viewing in an average week, the greater their level of association of White athletes as ‘intelligent’ athletes.

**Method**

As part of this study, 114 telecommunication students (65 males and 49 females) at a large Midwest university participated in exchange for course credit. All participants were treated according to Institutional Review Board standards. Students ranged in age from 18 to 25 years (M = 20.10, SD = 1.59), and all but seven self-identified as White.

**Predictor and outcome variables**

The ways in which people can be exposed to information about sports competition has expanded far beyond broadcasts of the sporting event itself. In order to capture the full range of ways in which participants could be exposed to sports and commentary on sports, an original survey was constructed. Participants completed a media-use survey that focused specifically on how much time they spend with all types of mediated sports programming. Furthermore, because sports viewing habits may be different depending upon whether weekdays or weekends are considered, participants were asked about each separately. Specifically, participants were asked: On an average weekday how many...
hours/mins do you spend: (1) Watching live sports? (2) Watching sports highlights? (3) Watching sports talk? (4) Reading about sports in newspapers or magazines? (5) Surfing the Internet about sports? and (6) Listening to radio stations about sports? The same questions were then asked about an average weekend day. The media sports survey information was further collapsed into three categories: (1) Total time (in minutes) spent with sports media on an average week day, (2) total time (in minutes) spent with sports media on an average weekend day and (3) the overall total time (in minutes) spent with sports.

The topic of racial stereotypes is a very difficult area to address, not only because participants are often unwilling to acknowledge their own stereotypical attitudes but also because they may be unaware that they even possess them. This latter phenomenon has been dubbed ‘implicit social cognition’, and led to the development of the IAT. The IAT asks participants to rapidly pair various stimuli objects and traits. During this task, decisions are made so quickly that the participant relies on associations that have been learned and reinforced through repetitive exposure. The rapid nature of the IAT response is believed to result in respondents using heuristic processing to provide a more automatic response. The ability to respond quickly is based on the strength of developed long-term memory networks. In the case of this research, it is hypothesized that these memory networks have been developed through repeated exposure to sports media and the information they contain about race and athletic performance. The IAT provides cognitive processing data that self-report survey research might not be able to obtain because many cognitive processes affecting behaviour are unconscious in nature and, therefore, inaccessible by simply asking questions of a participant or even observing their overt behaviors.

In this research, the IAT was administered through a computer programme where participants were asked to associate words describing particular traits with a certain side of the computer screen (left or right), along with images of particular group members. Both the images and the words were chosen to be unambiguously a part of a specific category: individuals in the images were easily recognized as Black or White, and the words were selected to be representative of the categories ‘Smart Athlete’ or ‘Natural Athlete’. The words chosen for the IAT task needed to be short due to the speed of the response task the participants were asked to do. The specific words selected were descriptors that either appeared frequently in previous content analyses of sports content or their synonyms. To decrease confusion, the images and the categories associated with each of the words were shown to the participants before the test began, following proper IAT protocol.

The theoretical underpinnings of the IAT state that pairings that are consistent with a participant’s view of the world are called compatible pairings and result in much quicker categorizations. Pairings that are inconsistent with a participant’s view of the world are called incompatible pairings and result in longer reaction times. The IAT is a measure of how closely participants implicitly associate groups of people with a certain identifiable characteristic with particularly valenced words.

The IAT in this study was specially designed to incorporate sports-related racially stereotypical traits and pictures of White and Black people. Furthermore, to test the specific stereotypes of interest, instead of words that were synonymous with ‘Good’ or ‘Bad’ (e.g. the typical IAT protocol), it was designed to use adjectives shown to be commonly associated with White and Black athletes in media portrayals. Similar IAT studies in the past have utilized stereotypical words that are not as obviously valenced, such as ‘Career’ versus ‘Family’. This research employs a similar approach in regard to ‘natural athlete’ words compared with ‘smart athlete’ words. On the surface, complimenting an athlete for
his athletic ability and physical attributes would seem to be a positive reflection on that person; however, bias reveals itself when such commentary is viewed through the lens of race. Previous research has shown that announcers often confine both their descriptions and praise of Black athletes to their athletic abilities and physical attributes. The 14 stereotypical words in this study were broken down into two equal categories: ‘natural athlete’ and ‘smart athlete’. The words in the ‘natural athlete’ category specifically were tall, strong, quick, fast, good jumper, agile and big. The ‘smart athlete’ category included: determined, intelligent, disciplined, moral, strategic, prepared and coachable.

Greenwald et al. have identified the standard for the number of trials, blocks and order of presentation for the IAT. This study followed the IAT standard to explore whether or not repeated viewing of racially stereotypical sports media is correlated with implicit attitudes towards race. As typically done, the words and the categories were first shown to each participant before the IAT was administered to eliminate confusion.

The template for the IAT used in this study was obtained as part of the DirectRT software program and closely mirrors the online version created by the originators of the IAT (available at: http://www.implicit.harvard.edu). The close-up images of seven Black people and seven White people dressed in casual attire used in this study were also part of the sample IAT included with DirectRT. Stimuli appeared in the centre of the screen against a black background. The words for each category appeared in uppercase letters in a blue font against a black background. Reminder labels were positioned in the upper left and right sides of the screen. These reminders read ‘African American’ and ‘European American’ for target-classification blocks and ‘Natural Athlete’ and ‘Smart Athlete’ for attribute-classification blocks. As the IAT provides participants beforehand with objective words/images and their appropriate categories, incorrect classifications were followed by a red ‘X’, signifying that they had pressed the wrong key. Following an incorrect answer (e.g. when a participant categorized an image of a Black individual as White, or when she/he categorized a ‘natural athlete’ term as ‘smart athlete’), participants are still required to press the correct key as soon as possible to continue to the next stimulus. Each participant completed a total of seven blocks and 180 trials. Of these, 100 trials were practised and the remaining 80 recorded for analysis (Table 1).

Participants completed the IAT on individual laptops but were run in groups of 1–5 people. Participants were separated from each other with dividers to reduce the possibility of distractions. Participants were given a brief overview of the media use survey and the IAT by the researcher prior to being left alone to complete the media use survey. After that, each participant contacted the researcher to initiate the IAT.

In accordance with past IATs, to correct for anticipatory responses and momentary inattention, response times less than 300 ms and more than 3000 ms were re-coded as 300 and 3000, respectively. Reaction times from incorrect categorizations were kept as part of the data-set. In other words, if someone initially categorized a word or picture incorrectly they still had to press the correct key to move on to the next picture or word. Pairing the association incorrectly indicates that there in not a strong association between the two stimuli, and to exclude that data would eliminate data suggesting that little or no association exists. In addition, past research suggests that there is only a trivial difference when participants with high error rates – defined by Greenwald as above 17.5% – are eliminated. Therefore, data from the single participant in this study who had error rates above 17.5% (but clearly tried to classify the stimuli) were retained for analysis. However, one participant’s data were excluded because of excessively fast (<100 ms) response latencies, consistent with standard IAT protocol. This resulted in data from 113 participants being used in the final analysis.
To analyse the IAT scores, the mean latency for African American/Natural Athlete and European American/Smart Athlete (‘compatible’ responses) was subtracted from the mean latency for African American/Smart Athlete and European American/Natural Athlete (‘incompatible’ responses). In other words, the equation is as follows: the mean reaction time for incompatible responses minus the mean reaction time for compatible responses. Thus, positive difference scores indicate stronger associations with consistent pairings compared with inconsistent pairings. The next step was to convert the difference between mean latency into $D$ scores. This measure divides the difference between means by the standard deviation of all the latencies, thereby adjusting differences between means for the effect of underlying variability. This adjustment has been recommended for use because it helps account for both higher means and greater variability of latencies. Division of a difference between means by a standard deviation is quite similar to the well-known effect size measure, $d$. This conversion results in scores that range from 0 to 1, with larger numbers indicating stronger associations and small numbers indicating smaller associations. Lastly, based upon their mediated sports survey, participants were divided into light sports media users and heavy sports media viewers based on a median split of their overall total time spent with mediated sports programming.

**Results**

Prior to controlling for mediated sports consumption, results show that a heuristic preference for White people associated with ‘smart’ athlete words and Black people associated with ‘natural’ athlete words was found (average IAT effect of $M$ difference $= 96.21 \text{ ms}$; $SD = 197.62$; $D = 0.48$). As expected, participants were 96.21 ms faster in their associations when presented with a compatible pairing (African

<table>
<thead>
<tr>
<th>Block</th>
<th>Number of trials</th>
<th>Function</th>
<th>Items assigned to left key response</th>
<th>Items assigned to right key response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
<td>Practice</td>
<td>‘Natural’ athlete words</td>
<td>‘Smart’ athlete word</td>
</tr>
<tr>
<td>2</td>
<td>20</td>
<td>Practice</td>
<td>African American images</td>
<td>European American images</td>
</tr>
<tr>
<td>3</td>
<td>20</td>
<td>Practice</td>
<td>‘Natural’ athlete words + African American images</td>
<td>‘Smart’ athlete word + European American images</td>
</tr>
<tr>
<td>4</td>
<td>40</td>
<td>Test</td>
<td>‘Natural’ athlete words + African American images</td>
<td>‘Smart’ athlete word + European American images</td>
</tr>
<tr>
<td>5</td>
<td>20</td>
<td>Practice</td>
<td>European American images</td>
<td>African American images</td>
</tr>
<tr>
<td>6</td>
<td>20</td>
<td>Practice</td>
<td>‘Natural’ athlete words + European American images</td>
<td>‘Smart’ athlete word + African American images</td>
</tr>
<tr>
<td>7</td>
<td>40</td>
<td>Test</td>
<td>‘Natural’ athlete words + European American images</td>
<td>‘Smart’ athlete word + African American images</td>
</tr>
</tbody>
</table>

Note: For half of the subjects, the positions of blocks 2, 3, and 4 were switched with those of blocks 5, 6, and 7, respectively.
American + ‘natural’ athlete and White + ‘smart’ athlete) compared with incompatible pairings (African American + ‘smart’ athlete and White + ‘natural’ athlete) resulting in a $D$ score that suggests a ‘moderate’ relationship. However, when the participants were separated into heavy and light sports media users, the reaction times support the hypotheses. The mean latency difference for light mediated sports users ($M_{\text{difference}} = 43.78 \text{ ms}; SD = 167.39; D = 0.26$) was significantly different $F(1112) = 8.98; p = 0.003$ when compared with the mean latency difference for heavy sports viewers ($M_{\text{difference}} = 151.51 \text{ ms}; SD = 212.98; D = 0.71$; Figures 1 and 2). This suggests that participants who fell into the category of heavy sports viewers more easily associated pictures of Whites with ‘smart’ athlete words and pictures of Blacks with ‘natural’ athlete words when compared to the alternative.

Additional analysis correlated the $D$ scores with amount of self-reported time spent with mediated sports. As predicted, the results show a significant positive correlation between the $D$ scores and the reported overall total time spent watching sports media on a weekly basis ($r = 0.33; p < 0.001$). Further analysis also showed significant positive correlations between $D$ scores and total weekend day sports media use ($r = 0.33; p < 0.001$) and the total weekday sports media use ($r = 0.28; p = 0.001$). For more detailed analysis, see Table 2.

![Figure 1](#)  
**Figure 1.** The mean difference scores for the IAT for all participants, and then broken down into light sports viewers and heavy sports viewers.

![Figure 2](#)  
**Figure 2.** The $D$ score (derived from the IAT) for all participants, and then broken down into light sports viewers and heavy sports viewers.
Discussion

This research has examined whether the automatic association of Whites as ‘smart’ athletes and Blacks as ‘natural’ athletes (i.e. brain versus brawn) correlates with time spent with mediated sports. Furthermore, we also predicted that people who are light media sports users would show significantly less association with these stereotypes than those who are heavy users. The data support both of these predictions. Results indicate that there is a relationship between overall time spent with mediated sports and associating pictures of Blacks with ‘natural’ athletic descriptors and pictures of Whites with ‘smart’ athletic descriptors. When the participants were separated into heavy and light sports media users by a median split, the data suggest that heavy viewers have ‘strong’ associations compared with light viewers who have a ‘small’ association. Based on the high correlation between the overall amount of time an individual spends with mediated sports and his/her result on the IAT, this is an area that demands more attention. These data suggest that people who are heavy consumers of mediated sports have, over repeated exposure, formed stronger long-term memory networks and, therefore, more implicitly associate these potentially harmful racial stereotypes with Blacks as a whole. The implicit nature of this association suggests that individuals employ this stereotype in an automatic fashion, and without conscious awareness.

Furthermore, because this IAT drew associations from generic pictures of Black people and White people (i.e. not images labelled as athletes), it is possible that the people who have such strong associations activate these stereotypes when interacting with individuals in general, not solely in the context of sports. The fact that these associations have the potential to transcend sports and seep their way into everyday associations makes them that much more incendiary. As we discuss below, the impact of sports viewership on racially categorized implicit attitudes towards athletes compared with the population at large is an area in need of future research.

If we work from the assumption that the relationship between exposure to mediated sports and racial stereotypes is not correlational in nature, but instead is causal, important contributions can be made to both social reality theory and cultivation theory, as the results are consistent with the tenets of both theories. Cultivation theory suggests that media consumption is cumulative, and that the more an individual is exposed to a particular mediated message, the closer the real-world perspective will mirror the mediated perspective. The effects rely on the mass-produced, repetitive and symbolic nature of television (all arguably present in mediated sports programming). This study found a strong correlation between automatic stereotypical associations and the amount of sports programming a viewer reports consuming. Thus, mediated racial stereotypes are both

<table>
<thead>
<tr>
<th>Mediated sport Genres</th>
<th>Average Weekend</th>
<th>Average Week day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total time</td>
<td>( r = 0.34; p &lt; 0.001 )</td>
<td>( r = 0.28; p = 0.001 )</td>
</tr>
<tr>
<td>Watching live sports</td>
<td>( r = 0.26; p = 0.003 )</td>
<td>( r = 0.25; p = 0.004 )</td>
</tr>
<tr>
<td>Watching sports highlights</td>
<td>( r = 0.27; p = 0.002 )</td>
<td>( r = 0.19; p = 0.023 )</td>
</tr>
<tr>
<td>Watching sports talk</td>
<td>( r = 0.19; p = 0.024 )</td>
<td>( r = 0.19; p = 0.025 )</td>
</tr>
<tr>
<td>Surfing the internet</td>
<td>( r = 0.41; p &lt; 0.001 )</td>
<td>( r = 0.27; p = 0.002 )</td>
</tr>
<tr>
<td>Reading about sports</td>
<td>( r = 0.17; p = 0.033 )</td>
<td>( r = 0.14; p = 0.067 )</td>
</tr>
<tr>
<td>Listening to sports radio</td>
<td>( r = 0.03; p = 0.375 )</td>
<td>( r = 0.08; p = 0.190 )</td>
</tr>
</tbody>
</table>
prevalent in sports programming, and are being used by the viewers to shape their view of the world (if only implicitly). And it is this implicitness that is important in contributing to social reality theory. Social reality theory operates under the assumption that media consumers unconsciously select events to construct their conception of reality. The implicit nature of these results suggests that viewers are not consciously adopting these stereotypes, but instead that they are being consumed without the viewer’s awareness.\textsuperscript{60} It would stand to reason that heavy mediated sports consumers are automatically and unconsciously selecting information from mediated sports programming to construct part of their reality. However, for a more substantial advancement of social reality theory, additional demographic and individual differences data would be necessary.

The preliminary findings from this research leave the possibilities open for future research. While this research suggests that the amount of time spent with mediated sports correlates with certain associations, other correlating demographics could be examined in the future. Specific demographic issues were not controlled for, and could be the subject of future research. Socio-economic status, time spent participating in sports, race, sexuality, gender and interracial interactions are all examples of variables that should come under consideration in future research.

This research found that people associate ‘smart’ and ‘natural’ athlete words, respectively, to generic pictures of Whites and Blacks. Future IATs could include pictures of athletic looking individuals (fit individuals dressed in athletic wear), which might increase the effect. Furthermore, IATs have been shown to be significant when as little as five target words are used.\textsuperscript{61} By pre-testing ‘smart’ and ‘natural’ athlete words researchers could identify the terms that are most closely associated with each category and use only those terms in an IAT, again increasing the effects. In addition, access to participants from minority ethnic backgrounds could allow future researchers to explore whether or not ethnic minorities possess similar implicit stereotypes, and what the role of mediated sports may or may not be in establishing them.

The initial IAT was created to explore sensitive racial issues. The creators of the IAT wanted to ensure that issues of social desirability or unknown implicit attitudes were avoided. However, the association of Whites as ‘smart’ athletes and Blacks as ‘natural’ athletes might not fall under this category. It is quite possible that people would openly admit that they endorse these associations. If this were the case, it would be important to investigate whether explicit attitudes correlate with their implicit associations.

Additional research should also be mindful of ways we measured online sports consumption; ideally, that research should add greater specificity to what participants are doing when consuming online sports content. For example, it is possible that Internet users could be watching live sports, reading articles or listening to sports-talk podcasts. It is also possible that sports consumers utilize more than one media outlet at once when getting their mediated sports ‘fix’. Specification would result in more in-depth analysis, allowing for a more concrete discussion concerning Internet use. Furthermore, this research was only concerned with overall mediated sports use. Future studies would benefit from an inclusion of a sports survey that addresses the many different types of mediated sports that are consumed by viewers. Previous research has focused primarily on basketball and American football, but has also included Olympic events, covering a wide array of athletes with different abilities. This line of research suggests that these depictions transcend any particular sport, and instead that they exist as a whole in the world of mediated sports.

Finally, data for this research were collected in the USA and it is unclear the extent to which the findings would generalize globally. Attitudes towards race are certainly determined – at least in part – by the specific social milieu in which they are formed.
However, racism in sports is certainly not a problem only in the USA, as similar European-based literature can demonstrate.\textsuperscript{62} Future studies should consider using the IAT methodology in global and comparative studies to see the extent to which the amount of sports viewing and implicit stereotypical attitudes are correlated in different cultures.

Notes

2. Entine, \textit{Taboo}.
4. Lapchick, \textit{Five Minutes to Midnight}.
7. Harrison, Lawrence, and Bukstein, ‘White College Students’.
12. Carrington and McDonald, ‘Race’, \textit{Sport and British Society}.
13. Carrington and McDonald, \textit{Marxism, Cultural Studies and Sport}.
14. Carrington, \textit{Race, Sport and Politics}.
27. Fujioka, ‘Television Portrayals’.
36. Carrington and McDonald, ‘Race’, *Sport and British Society*.
37. Carrington and McDonald, ‘Race’, *Sport and British Society*, 79.
39. Harrison, Lawrence, and Bukstein, ‘White College Students’ and *Buffington and Fraley*, ‘Skill in Black and White’.
40. Harrison, Lawrence, and Bukstein, ‘White College Students’.
41. Buffington and Fraley, ‘Skill in Black and White’.
42. Data from the seven participants who identified as non-White were included in the final analyses because removing them was found to have no impact on the statistical results. As a result of the extremely low number of non-white participants, any exploration that the race of the participant may have had on the results was left unexplored.
43. Greenwald et al., ‘Measuring Individual Differences’.
44. Greenwald et al., ‘Measuring Individual Differences’.
49. Jarvis.
50. Greenwald, Nosek, and Banaji, ‘Understanding and Using’.
51. Although the authors realize that ‘Black’ and ‘African-American’ are not synonyms worldwide, this study was conducted in the USA where the terms are often used interchangeably. Because most of the previous content analyses we relied upon were conducted on US media, and the participants in our experiment were all students in America, this term was used in the administered IAT. Furthermore, the term ‘European American’ was also used, as is consistent with previous racially based IAT studies.
52. Greenwald, Nosek, and Banaji, ‘Understanding and Using’.
54. Greenwald, Nosek, and Banaji, ‘Understanding and Using’.
55. Greenwald, Nosek, and Banaji, ‘Understanding and Using’.
56. Greenwald, Nosek, and Banaji, ‘Understanding and Using’.
57. *Cohen, Statistical Power Analysis*.
62. Burdsey, *British Asians and Football*; Carrington, *Race, Sport and Politics*; Carrington and McDonald, *Race*, *Sport and British Society*; Carrington and McDonald, *Marxism, Cultural Studies and Sport*; Fletcher, ‘Aye, but it were Wasted on THEE’; Fletcher, *Yorkshiresmen are from Yorkshire*; and King, *Offside Racism*.

**References**


