

Marketing  
Management Journal

# MARKETING MANAGEMENT JOURNAL

VOLUME 30  
Issue 1  
Spring 2020

**The Marketing of Information in the Information Age**  
*Charles F. Hofacker and Ronald E. Goldsmith*

**The Relationship among Fan-Based League Brand  
Associations, Brand Equity, and Behavioral Intentions**  
*Ceren Ekebas-Turedi, Gokhan Karaatli and Sedar Turedi*

**Narcissism versus Machiavellianism and the Role of  
Self Control towards Social Desirability**  
*Prachi B. Gala, Rahul S. Chauhan and Robert A. King*

## **Editorial: Thoughts on Marketing Management Journal**

### **The Current Issue:**

In the present issue, there are three regular submission manuscripts. These articles highlight the wide scope of topics that fall within the realm of Marketing Management. I want to highlight several key takeaways I gleaned from each of these articles. The first article, “The Marketing of Information in the Information Age,” by Hofacker and Goldsmith, discuss adding a third category, information, to the goods/services classifications. The authors provide a thorough review of what information is, what are information products, and the unique challenges that information products face. The manuscript then discusses scalability and mutable issues with information products. Overall, this is a thought-provoking manuscript that should form the basis of additional conversation pertaining to the role of information in Marketing Management.

The second article is titled, “The Relationship among Fan-Based Brand Associations, Brand Equity and Behavioral Intentions in a Sport League,” and is written by Ceren, Gokhan, and Serdar. This study proposes and tests a model predicting behavioral intentions by assessing both brand equity and brand association using a sample of NFL fans. Brand association was modeled as a second-order construct using nine dimensions. The study split the sample into two groups, those that attended NFL games and those that did not. Study findings suggest that stronger league brand associations lead to stronger league brand equity, which in turn increases fans’ tendency to watch and/or attend the games.

The next article, “Narcissism versus Machiavellianism and the Role of Self Control towards Social Desirability,” was written by Gala, Chauhan, and King. The study examines theoretical differences in Machiavellianism and narcissism. The study provides excellent overviews of both Machiavellianism and narcissism, prior to elaborating on the key differences between the two constructs. The study then tests two hypotheses linking both Machiavellianism and narcissism to social desirability. Two additional hypotheses are used to examine self-control as a moderator. Overall, this study provides a strong assessment of the current state of the literature, plus advancing our level of knowledge on similarities and differences between these two constructs.

### **Special Section Call for Papers:**

#### **Marketing Management Journal Special Section Call for Papers Marketing during Uncertain Times: How do Disruptive Events affect Marketing Management?**

As the entire world has felt, and continues to feel, the impact of COVID-19, the field of Marketing has been turned upside down. A shift from bricks-and-mortar shopping to predominantly online shopping has occurred for a number of consumers. This has a far-reaching impact on the supply-chain, as well as to customer relationship management processes and systems. Consumers are seeing delays in delivery of items, creating an excess burden on many CRM systems. Further, the traditional sales process has also changed. Salespeople are now making fewer face-to-face sales calls and the handshake might be something of the past. Demand for certain products are seeing rapid increases, while other

products are seeing massive reductions in demand. This is creating major supply/demand issues across the supply chain, in addition to creating uncertainty within the marketplace.

Recognizing that we are in a new paradigm of marketing management, *Marketing Management Journal* will have a special section of the Journal designated for research on disruptive events. While COVID-19 is at the forefront of disruption across the world, research submissions examining other disruptive events are also encouraged. Suggested topics could include:

- 1) The impact of COVID-19 on the supply chain.
- 2) The role of the CRM system in the COVID-19 crises.
- 3) The role of technology during COVID-19.
- 4) The role of technology in a post COVID-19 time.
- 5) Changes in how customers interact with front-line employees, including the sales force.
- 6) Changes to the sales process due to COVID-19.
- 7) The best practices for bricks-and-mortar retailers to survive a disruptive event.

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- 1) Manuscripts should be submitted by August 31, 2021, for full consideration.
- 2) *Marketing Management Journal* is a double-blind peer reviewed journal published by the Marketing Management Association.
- 3) The Editor will review all manuscripts before entering them into the review process.
- 4) At least two independent reviewers will provide feedback on a given manuscript.
- 5) To facilitate timely publication, all manuscripts receiving an offer for revision will be due within 90 days.

# MARKETING MANAGEMENT JOURNAL

Volume 30, Issue 1

Spring 2020

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*The Marketing Management Journal* (ISSN 1534-973X- print; ISSN 2329-9762- online) is published semi-annually by the Marketing Management Association. Issues are posted online as published; print version published following release of the fall issue combining spring and fall issues. Subscriptions, address changes, reprint requests and other business matters should be sent to:

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# MANUSCRIPT AND SUBMISSION GUIDELINES

## MARKETING MANAGEMENT JOURNAL

January 2020

### Scope and Mission

The mission of the *Marketing Management Journal* (MMJ) is to provide a forum for the sharing of the academic, theoretical, and practical research that may impact the development of the marketing management discipline. Manuscripts that focus upon empirical research, theory, methodology, and review of a broad range of marketing topics are strongly encouraged. Submissions are encouraged from both academic and practitioner communities.

### Submission Guidelines

Manuscripts that do not conform to submission guidelines will not be distributed for review. Authors should submit manuscripts via email to [mmj@mmaglobal.org](mailto:mmj@mmaglobal.org). Each submission should consist of two files:

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2. A file containing the manuscript title, an abstract of no more than 150 words, keywords, and manuscript. Author identification or affiliation should not appear anywhere in this file.

Manuscripts should be submitted using 12-point Times Roman font and should not exceed 30 typewritten pages inclusive of body, tables and figures, and references. Margins must be one inch. Preparation of the manuscript should follow style guidelines in the most recent *Publication Manual of the American Psychological Association*, 6<sup>th</sup> edition. Tables and figures used in the manuscript should be included on a separate page and placed at the end of the manuscript. Authors should insert a location note within the body of the manuscript to identify appropriate placement. Tables and figures should be constructed in table mode of Microsoft Word.

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# THE MARKETING OF INFORMATION IN THE INFORMATION AGE

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*The long-standing distinction made between goods and services must now be joined by the distinction between these two categories and “information products.” The authors propose that marketing management, practice, and theory could benefit by broadening the scope of what marketers market by adding a third category besides tangible goods and intangible services. It is apparent that information is an unusual and fundamental physical and logical phenomenon from either of these. From this the authors propose that information products differ from both tangible goods and perishable services in that information products have three properties derived from their fundamental abstractness: they are scalable, mutable, and public. Moreover, an increasing number of goods and services now contain information as a distinct but integral element in the way they deliver benefits. Thus, the authors propose that marketing theory should revise the concept of “product” to explicitly include an informational component and that the implications of this revised concept be discussed. This paper presents some thoughts on the issues such discussions should address, focusing on strategic management implications for marketing information products in the information age.*

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## INTRODUCTION

A major revolution in marketing management and theory occurred when scholars established that “products” should not be conceptualized solely as tangible goods, but also as intangible services. Owing to the efforts of Shostack (1977) and others, the services revolution transformed the nature of marketing from a narrow goods-focused discipline to a more complex academic specialty and practice. The evolution of digital technology is now ushering in a new revolution with the emergence of “information products.” Similar to the way in which the shift from a goods-oriented to a service-oriented economy revealed new opportunities and challenges to the marketing discipline (e.g., Grönroos, 2006; Vargo & Lusch, 2004), the increase in information product offerings now requires researchers’ and practitioners’ attention.

The purpose of this paper is to argue that marketing needs another revolution, perhaps nearly as pervasive as the services-inspired one. The field needs a re-thinking of what we mean by “product” to include a third type,

“information,” in addition to goods and services (originally proposed by Freiden et al. 1998), while identifying unique characteristics of pure information products. To support this position, the authors identify key attributes that set apart an information product from a good or a service; and how these differences affect marketing theory and practice. We put the term “information” in quotes in this instance to highlight how difficult it is to define to the satisfaction of all parties. For instance, James Gleick’s (2011) book, *The Information*, reviews the historical emergence of the concept of information without ever giving it a concise definition, but revealing how complex and pervasive information is in the physical, social, psychological, and commercial worlds. Our argument is that the concept, as it relates to products, is sufficiently important to the marketing discipline that it needs to be discussed and debated.

The remainder of the paper presents the argument for a new product concept and the implications it holds for marketing. We note that we do not use the term “information products” in the narrow sense proposed by Meyer and Zack (1996, p. 43) to refer to “information provided in either electronic or printed form and sold to external markets as well as that provided by information systems departments within firms to internal

‘customers’.” Our usage is broad enough to include all aspects of digital or analog signals, to all other media that transmit information, and implies that goods, services, and information are not perfectly distinguishable.

### WHY DO WE NEED THIS CONCEPT?

We argue that marketing needs to rethink the concept of “product” for four reasons. First, the very issues raised by Gleick’s book suggest that if information is so pervasive an element in the commercial world, it is necessarily an important concern for marketing. Here we follow the same logic that states that economies dominated by service industries require services marketing. In Table 1 we attempt to quantify the scope and scale of the information economy. One particularly interesting new example of information product is what we choose to call “connection platforms.” Typically, these firms are vehicles that allow one or more groups to enter into an exchange. They include game platform marketers, who connect game developers and players, credit card companies who connect merchants and purchasers, and companies like Google that connect searchers with those wishing to be found. Marketing strategies of connection platforms are little studied outside of economics. The industries listed in Table are fairly pure examples of information companies. Our thesis, however, is that all products have an information component to a more or lesser degree. For example, it is clear that while e-tail often involves shipping a tangible good to the consumer’s home, much of the core benefit of the service is based on digital information and algorithms.

Second, certain anomalies have surfaced in the last few decades to suggest further thinking is needed to cope with the issues raised by information products. For example, the huge impact file sharing had on the film and recorded music business raises questions about what consumers buy when purchasing movies or music (Hennig-Thurau, Henning, & Sattler, 2007). If it isn’t a tangible plastic disk, then this implies it is a service. By the same token, it can’t be a service if the customer can give copies away. The same issue arises in the software industry where piracy is widespread (Givon, Mahajan, & Muller, 1995). Some argue

this is simply a legal problem requiring legislation and enforcement. But this approach does not seem to resolve the issue. Instead, it leads to the odd situation in which an industry is at war with its customers. Much like the problem of spam, perhaps a legal or technical solution is simply not possible (Greenemeier, 2011), and so re-thinking of how to manage such information products is needed.

Third, the spread of the Internet protocol and of the transformations it has brought to virtually every aspect of life highlight the fact that the digitized signal is rapidly becoming a central element of everything humans do. These transformations have resulted in a wide variety of new products created to provide, and to help people use and manage, information. Moreover, some traditional products, such as newspapers and bookstores, have been transformed by the Internet and need new business models and marketing theory to cope with these changes (Peterson, Balasubramanian, & Bronnenberg, 1997). Finally, scholars are recognizing this transformation and have begun to recommend ways to manage the new information services and products (e.g., Bergemann & Bonatti, 2019; Kannan, 2013).

Finally, more and more traditional goods and services now incorporate some connected, online, or digital feature that enables or improves delivery of benefits (Meuter et al., 2000). Thus, we feel justified in proposing that not only are there increasing numbers of products that should not be classified as either goods or services, but that many goods and services now contain a new element that demands marketing them in new ways.

### DEFINING INFORMATION PRODUCTS

#### *What is Information?*

There are a variety of definitions of information. In fact, so diverse are these perspectives that Case (2002) delineates distinct “families” of information definitions. Thus, “information” can refer to objective descriptions of reality, subjective interpretations of that reality, or sense-making procedures and behaviors we use to move between these two. Other views have information as a resource or commodity,

**TABLE 1:  
Size and Scope of the Information Economy**

<b>Category</b>	<b>Total Revenue in Billions \$US</b>
Computer and Packaged Software Wholesaling	\$326.60
Wireless Telecommunications Carriers	\$204.40
E-Commerce and Online Auctions	\$186.40
Software Publishing	\$170.90
Wired Telecommunications Carriers	\$141.40
Cable Providers	\$133.40
Motion Picture and Recording Sound Industries <sup>a</sup>	\$104.40
Operating Systems and Productivity Software Publishing	\$54.70
Credit Card Processing and Money Transferring	\$43.70
Computer Manufacturing	\$40.70
Video Games	\$40.70
Satellite TV Providers	\$38.20
Book Publishing	\$31.40
Book, Newspaper, and Newspaper Wholesaling	\$30.50
Movie and Video Production	\$30.00
Video Game Software Publishing	\$28.80
Business Analytics and Enterprise Software Publishing	\$27.30
Search Engines	\$24.50
Database, Storage and Backup Software Publishing	\$23.90
Book Stores	\$19.20
Computer Peripheral Manufacturing	\$18.20
Cable Networks	\$16.70
Radio Broadcasting	\$16.70
Movie Theatres	\$12.60
Telecommunication Equipment Manufacturing	\$10.20
Telecommunications Resellers	\$9.10
Printing and Related Support Activities <sup>a</sup>	\$8.60
Major Label Music Production	\$7.50
Music (including Digital)	\$6.80
Satellite Telecommunications Providers	\$5.10
Music Publishing	\$4.90
Video Postproduction Services	\$4.10
Movie and Video Distribution	\$2.10
Record Stores	\$1.80
Album Sales	\$0.33
Independent Label Music Production	\$0.32
Number of Cable TV Subscriptions	\$0.11
Total	\$1,826.26
United States GDP for 2010	\$14,582.40

Source: Data from IBISWorld Market Research, Forrester Research, the United States Bureau of Economic Analysis, and the World Bank

<sup>a</sup>Motion Picture and Printing Data for 2009

something that is produced, purchased, replicated, distributed, sold, manipulated, passed along, or controlled (Case, 2002, p. 44), or as data in the environment. Generally, “information” can be analyzed in terms of a process, such as communication or storage, as the outcome of a process (that which is communicated, stored or computed), or as the mechanism through which the process is effected (the data or documents that contain the knowledge). Beyond this, information can include or describe algorithms that store dynamic processes, which is to say, software (See also, McKinney & Yoos, 2010).

Floridi (2010) also admits that information is “a conceptual labyrinth” (p. 19). He exposes the commonalities and differences among different types of information; mathematical, semantic, physical, biological, and so forth and suggests that information is, “data plus meaning” (See also Buckland, 1991). Following the founder of information theory, Claude Shannon, Floridi (2010) strongly emphasizes the distinction between the message and the medium.

For our purposes involving products, we too would like to emphasize that information is stored and communicated using some medium, and yet is logically and practically distinct from that medium. Information cannot exist without a medium to carry it, but it is (ever increasingly) transferable to or from any particular medium. Just as service scholars originally defined a service by what it was not (Judd, 1964), it is tempting to define information by what it is not; specifically, information is that which remains after the medium is subtracted. In order to create a positive definition, we start by pointing out that networked electronic devices are an increasingly important platform in which the message is (temporarily) embedded or carried in the form of a digital file consisting of a series of binary digits, that is, a string of 1's and 0's. Any such digital file therefore consists simply of a single natural number (nonnegative integer) expressed in base 2. Thus, we define information as *anything that can be converted into bits*. This definition seems to be consistent with how Gleick (2011) uses the term throughout his book, in which he starts with an example of African drummers and ends with a discussion of DNA. In this instance, the

stretched animal skins and the four nucleic acids are merely media that carry the information from one place and time to another.

Our definition of information is somewhat more inclusive than the typical English language usage of the word that implies “data” (Glazer, 1991). It seems possible that this language habit has influenced the literature on the economics of “information goods.” That literature pertains mostly to structured data used for some practical purpose.

### *What Are Information Products?*

The ‘conceptual labyrinth’ evident in defining ‘information’ is reflected in the diverse way both scholars and practitioners present the concept. The few attempts to define ‘information products’ in the scholarly literature rarely seem to capture the essence of the concept we present here (see Table 2). One use of the term “information product” refers to selling of information that is valuable for making decisions, such as expert advice or opinions (Sarvary & Parker, 1997). A final, even narrower sense of an information product is that which offers useful data in specific formats, such as reports, tables, or lists (Shankaranarayan, Ziad, & Wang, 2003). Our definition closely matches Meyer and Zack (1996) and Tiwana and Ramesh (2001) who define information products as interdependent and intangible packages of information capable of distribution in digital form. This is quite similar to our notion presented below.

In addition to music, films, and software, our definition most certainly also includes newspapers and books. In addition, there are GPS location services and market-making services like eBay. There are algorithms that find the best price or a potential mate, or the bits owned by Eve Online that allow hundreds of thousands of people to play the same online game at the same time. Surely the economy is witnessing a huge growth in electronic services, which are in effect services that have been thusly transformed. In the case of e-service firms, like Google or Amazon, the bits code for and implement algorithms, which is the information theoretic term for a service process once it has been thusly transformed into bits. But these examples merely scratch the surface

**TABLE 2:**  
**Definitions of ‘Information Products’ from the Literature**

We define information products broadly to include information provided in either electronic or printed form and sold to external markets as well as that provided by information systems departments within firms to internal “customers.” (Meyer & Zack, 1996)

I take this to be anything that can be digitized—a book, a movie, a record, a telephone conversation. (Varian, 1998)

Products that consist solely of information, that which is recorded about something, are information products. (Nezlet & Hidding, 2000)

An information product is defined as a highly interdependent package of information that is capable of being distributed in digital form. (Tiwana & Ramesh, 2001)

For example, information may be a private good or a public good, a raw “material”, intermediate or final product, it may be tangible or intangible, it may be confused with code or data or the systems delivering it, and the same information can be presented or versioned differently. (Raban, 2007)

Information good in economics and law is a type of commodity whose market value is derived from information it contains. Wikipedia [https://en.wikipedia.org/wiki/Information\\_good](https://en.wikipedia.org/wiki/Information_good).

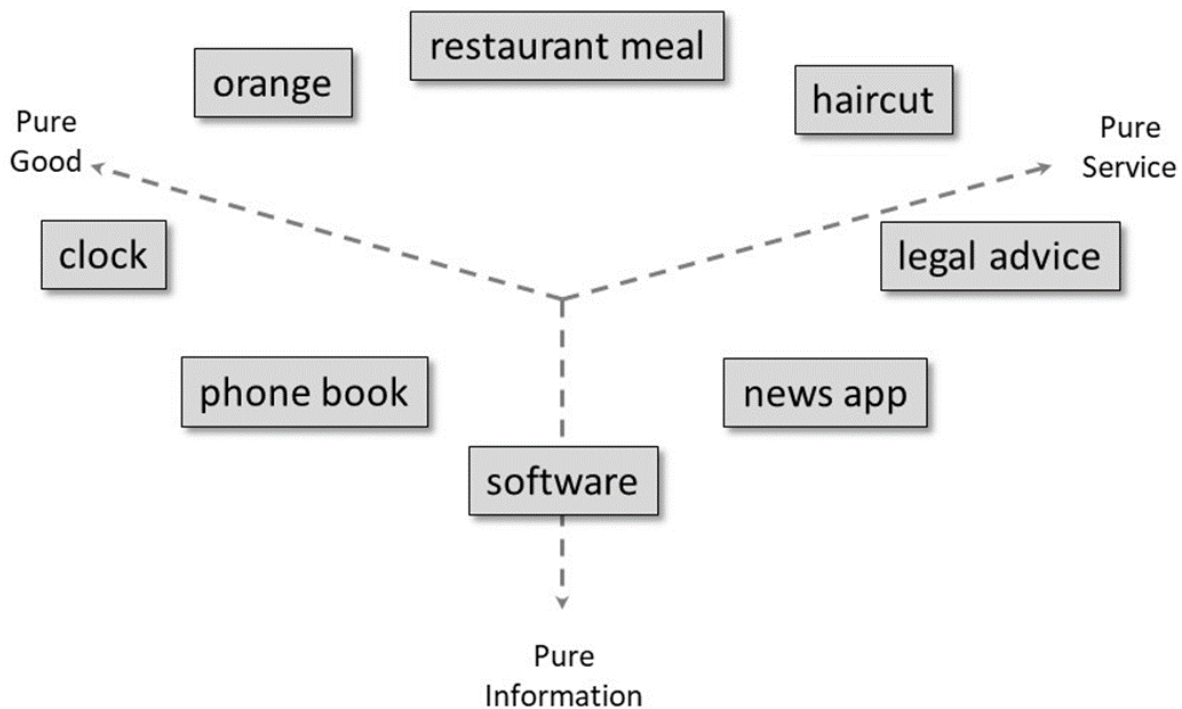
of the exploding information economy. The definition of an information product therefore becomes straightforward: *any product whose core value is capable of being converted to bits*. The mathematical basis for information products makes them uniquely abstract.

We propose that all products have (or could have) an information component to a varying degree, much like Kotler and Levy (1969) proposed that all products are mix of goods, services, persons, and so forth (see also, Nezlet & Hidding, 2000). For example, it is clear that while online retail usually involves shipping a tangible good, much of the core benefit of the service is based on digital information and algorithms. Almost every product can be seen as some combination of tangible (good) elements, perishable service elements, and information elements. Freiden et al. (1998) posit, as a bundle of benefits, every product contains some degree of information located more or less central to the core benefit it provides. Figure 1 illustrates the principle with some examples.

To pick an example not featured in Figure 1, it is estimated that a modern luxury car has 100,000,000 lines of computer code (Charette, 2009). The fourth foundational premise (FP4)

of service-dominant logic (Vargo & Lusch, 2004) proposes that knowledge is the fundamental source of competitive advantage. More and more we see knowledge codified into software making FP4 true in the economy. As another example, consider the Amazon Kindle, which is clearly a combination of a good, service, and information. Since its introduction in 2007, it has already come to nearly dominate an industry that can be said to have started with the invention of moveable type in China in 1040 and 1450 in Europe. New information products are emerging that will further challenge the economic status quo: the self-driving car might radically change transportation services, automated essay grading may reshape education, and professional services may be disrupted by products that resemble IBM's Watson, the program that beat the best humans at *Jeopardy!*. The category of 3D printers, which are systems that translate code and diagrams into tangible goods, holds out the prospect of an even more fluid relationship between information, services, and goods. Finally, we note that the electronic devices that occupy daily life are nothing without information content and the instructions for what to do with that content. So, given the size of the information economy (See Table 1), the rising importance of the

FIGURE 1.  
THE THREE COMPONENTS OF ALL PRODUCTS



information component of many products, and the ubiquity with which we already observe information products, we now highlight some of the marketing challenges.

#### UNIQUE CHALLENGES FOR INFORMATION PRODUCTS

At its heart, the services revolution in marketing succeeded because it argued that services had different properties than tangible goods, which is to say on both the firm side and the consumer side they had properties offering challenges that therefore required special attention. For example, the intangibility of services makes services difficult for consumers to think about while the perishability of services makes services difficult for marketers to manage. Managing information products likewise present unique challenges to marketers, especially those stuck in a product-centric world. For example, the problem of

sampling digital content can present a tricky situation when the sample contains the product itself (see Li, Jain, & Kannan, 2019).

So how is information different from goods or services? Table 3 uses a variety of constructs from the marketing literature (see Freiden et al., 1998) to highlight differences among goods, services, and information. The rows of the Table 3 are drawn from both the services marketing literature (tangibility, separability, heterogeneity, perishability, ownership), but also from digital marketing. As Table 3 illustrates, information products share some similarities with goods and some similarities with services. Yet, the complete makeup of information products' characteristics reveals a distinct type of product offering. In our view, to label an information product as a good or as a service grossly oversimplifies its marketing challenges.

We see the leap from goods marketing to services marketing as being part of a longer-term progression towards a higher level of abstraction in the economy. Looking back in economic history mankind proceeds from hunting and gathering to agriculture, and then from agriculture to goods manufacturing, with increased complexity and abstractness involved in exchange. The transition from a goods-oriented to a service-oriented economy likewise increased the level of abstraction since exchange that deals with objects is easier to conceptualize than exchange dealing with acts, deeds, or performances. Finally, as we go from services to information, the level of abstraction increases yet again. Information is even more abstract and intangible than are traditional services.

Exchanges involving information are often defined as services (Vargo & Lusch, 2004). However, such a label masks the mathematical or abstract nature of information products. The concept of product abstractness illustrated by the example of a particular benefit a consumer receives with a photograph: the ability to capture, save, and share a moment or experience. Marketing tangible good products, such as a camera sold in a retail store, relies on well-accepted management philosophies, such as efficient supply chain management and retailing principles. Here, the tangible product is concrete and not particularly abstract, meaning greater physical resources need to be devoted to moving the good along the supply chain until it reaches the end consumer. The lack of abstractness can also enable consumers to determine the quality of the product more

easily. Instead of a consumer purchasing and using a camera to achieve the sought-after benefit, now a service provider in the form of a photographer can perform the service to capture, save, and share a moment. For the service provider, some marketing management principles may include managing the perishability and inseparability of an offering through efficient scheduling or the degree of customization available for each customer. The primary benefit sought to capture, save, and share a moment can be achieved with an information product offering, such as that offered by Instagram. Instead of a consumer purchasing a tangible product or hiring a service provider, the sought-after benefit can be achieved with easy-to-use downloadable software that is constructed, at its most basic level, with a series of bits in its program code. This information product then uses tangible media, in the form of a consumer’s mobile device, as well as other information products, such as social media sites, to achieve the sought-after benefit.

The notion of abstractness underlies what we refer to as the SMP properties: information products are more *scalable*, *mutable*, and *public* than services or goods. Products possessing these unique characteristics create many marketing challenges. The following sections elaborate on the SMP properties in a higher level of detail.

**SCALABLE INFORMATION PRODUCTS**

In simplest terms, scalability is an ability to grow (Varadarajan et al., 2010). In computer

**TABLE 3:  
Characteristics of Three Types of Products: Goods, Services, and Information**

<b>Goods</b>	<b>Services</b>	<b>Information</b>
Tangible	Intangible	Intangible but need tangible media
Homogeneous	Heterogeneous	Homogeneous
Separable consumption	Inseparable consumption	Separable consumption
Can be inventoried	Cannot be inventoried	Can be inventoried
Owned or rented	Rented not owned	Owned or rented
Can be patented	Cannot be patented	Can be patented
Easy to price	Hard to price	Hard to price
Cannot be copied	Cannot be copied	Can be copied
Can be shared	Cannot be shared	Can be shared
Use = consumption	Use = consumption	Use ≠ consumption

science, it is most often used in the sense of multiple orders of magnitude; the ability of a solution to function in the face of inputs or outputs that change by a factor of 10, 100, 1,000 and so on. Information products are in effect infinitely renewable due to the low marginal cost of reproduction and copying. This is true for good-like information products (musical files) as it is for service-like information products (useful apps). Focusing on the latter for now, since service processes can be encoded as algorithms, self-service technology often requires minimal firm involvement. For instance, Facebook has slightly in excess of 43,000 employees and over 2.4 billion active users as of September 30, 2019 (<https://zephoria.com/top-15-valuable-facebook-statistics/>). Simple arithmetic reveals around 55,800 users per employee. Clearly Facebook's information service scales. How is this possible? To answer this question, we need to contemplate the non-intuitive meaning of low marginal costs.

*The meaning of low marginal costs.* The cost of copying a CD is currently on the order of \$.0001. While this sum is not zero, we note that even if we do this one million times, we end up with a total cost of one hundred dollars. In addition to reproduction, the cost of other sorts of manipulation of information products is also falling precipitously. Of course, this does not include the fixed cost of producing the information product, but the strategic distinction between fixed and marginal costs is critical, and in our view, information products can be usefully characterized as having a ratio of marginal to fixed cost that approaches zero. We note that in fact, the classic economic dictum that the producer sets a price such that marginal revenue is equal to marginal cost leads, in the case of information products, to a fundamental problem. Clearly, we must look elsewhere than the classical dictum.

In the physical, non-digital world, both intangible services and physical goods tend to have non-zero marginal costs, especially services. A traditional inseparable service requires the joint physical presence of service provider and service consumer, and by implication production tends to be costly to schedule or modify. Much is often made of the fact that air transportation service between two

cities has a zero marginal cost for the next customer in the sense that managers would prefer to fill a vacant seat at any price (Pfeifer, 1989). The airline example can be misleading because in this case the service cost function is merely a step function of quantity demanded, not a flat function. The cost function is in fact only flat within the fixed capacity of a specific aircraft. This argument is also made with hotel registration and with various other fixed capacity assets, such as stadia or theaters. The break-even point for filling an empty hotel room might be close to zero, but it is a very expensive proposition to add capacity above the capacity limits of the hotel. A more typical and therefore more illustrative example of the cost to serve would be the classic haircut. The marginal cost of cutting one more head is substantial. The cost function for tangible goods products necessarily involves non-zero marginal cost as well. The thing itself must be manufactured and distributed with a concurrent expenditure of raw materials and energy. It is only with information that we see marginal costs truly near zero. The zero marginal cost of copying an information product elevates the importance of demand factors above cost factors for pricing decisions and multiplies the impact of secondary phenomena, such as network effects. We will discuss this under the topics of externalities and standards.

*Network externalities.* The value of purchasing an information product often depends on the number of other purchasers, a phenomenon referred to variously as a consumption or network externality. For example, a larger customer base may lead to economies of scale for the producer (Economides, 1996), or may induce other firms to sell complements or other after-market add-ons (Kotabe, Sahay, & Aulakh, 1996). In addition, if the product requires some sort of additional investment on the part of the consumer, perhaps training or learning, this training becomes more valuable as more consumers buy the same product (Schilling, 1998).

This latter point is important in both consumer marketing (B2C) and in many business-to-business (B2B) situations. A firm that invests time and training in a particular software system may become locked-in (Hill 1997). This is one of several reasons why markets with



network externalities tend to be winner-take-all, a critical strategic observation. In general, the presence of network externalities tends to work towards a single standard. This phenomenon can be described as a bandwagon effect (John, Weiss, and Dutta 1999; Katz and Shapiro, 1992; Shapiro & Varian, 1999), as exhibiting a tipping point (Frels, Shervani, & Srinivasan, 2003; Shapiro & Varian, 1999), or herding in the case of fads or fashion (Bikhchandani, Hirshleifer, & Welch, 1998). An important property of such markets is path-dependence (Schilling, 1998) meaning that the winner is sometimes determined on the basis of seemingly inconsequential historical events that lead to a small initial advantage. Clearly any tactics that tend to generate early leads in market share are called for in the presence of network externalities. Such tactics include being the first mover, penetration pricing, free trial, and early, heavy advertising spending to create awareness. Tactics such as these can also solve the chicken-and-egg problem (Dhebar & Oren, 1985; Srinivasan, Lilien, & Rangaswamy, 2004) inherent when there are no adoptions yet.

*Standards.* It is precisely the arbitrariness of the mathematical (bit) representation of an information product that leads to the importance of standards in this arena. Standards are necessary for production, encoding, distribution, decoding, and final delivery of information products. Niches exist and competitive advantage can be derived in all of those processes. Autodesk's product AutoCad has become the standard for producing engineering and architectural designs. It is possible that you are now reading this article thanks to an encoding-decoding standard from Adobe known as PDF. If so, the PDF file could well have been delivered to your desktop using the Ethernet standard originally developed, and famously not commercialized by, Xerox PARC.

Standards are inevitably as much a marketing question as an engineering problem, a fact made clear by the classic Betamax versus VCR battle of the 1980's. After reviewing a number of other historical standards battles, Shapiro and Varian (1999) list seven key company assets: an installed base of users, intellectual property rights, ability to innovate, first-mover advantages, manufacturing capabilities,

strength in complements, brand name, and reputation. Often customer-facing standards appear in the form of a metaphor, an understudied marketing phenomenon. In adopting a standard, a customer must frequently make an investment in it. In the case of consumer markets, this investment may be in the form of time spent learning (Johnson, Bellman, & Lohse, 2003; Zauberaman, 2003). In the case of businesses, the issue may pertain more to the nature of the assets required for the adoption of the standard (Rindfleisch & Heide, 1997). In either B2C or B2B markets, the existence of complementary products (Schilling, 1998) may be crucial. If the standard is owned by the firm, these investments create a barrier to imitation to other firms (Hill, 1997).

In summary, owing to the unique properties of information, scaling up production likely involves low marginal costs, network externalities become highly important, and setting standards for information products becomes a crucial managerial task.

#### MUTABLE INFORMATION PRODUCTS

The manipulation of information products takes place within the logical world of computers rather than in the physical world. Such manipulation includes a wide variety of activities such as storage, sorting, repurposing, aggregation, disaggregation, organization, distribution, packaging, reformatting, indexing, and connecting. Information products make it possible to do any of these things at a low cost. It also leads to the optimality of more dynamic and discriminatory pricing policies, a generalization that encompasses the use of auctions.

Mutability is due to extreme abstractness or intangibility – call it the essential lightness of information products. It allows for a freedom of design that is unconstrained by the physical world. On the one hand, this frees the firm to develop such products in a way that focuses on customers. On the other hand, both firms and customers are encumbered by increasing complexity. The firm has to manage a growing amount of intellectual property, while the impact of complexity, roughly the inverse of ease-of-use, encumbers the customer as well.

The design challenge is to innovate and bring the customer along, metaphor and all, for the ride. Versioning, bundling, and menu cost strategies are some ways for marketers to cope with the mutability of information products.

*Versioning.* The malleability of information allows firms to inexpensively create different versions of an information product, offering each one at a different price (Varian, 1997). A simple example of this occurs in the financial services sector where a firm might provide free data on the stock market with a certain time delay, while selling the same stream of data with minimal delay at a higher price. We pick as a second example, Adobe, a connection platform company that offers various versions of its software with different capabilities at different prices. The ability to write PDF files is sold at a relatively high price, while the Acrobat product that only reads PDFs is offered completely free. This means that Adobe generates revenue from content producers, who will tend to be less price-sensitive. Content readers, on the other hand, are given a free information product, which allows Adobe to generate demand in the market for PDF files and thus encourage providers to buy the write-capable version.

One motivation for versioning is the fact that an information product is an experience product (Wijnhoven, 2002) and as such, there is a "conceal versus reveal" dilemma. In order to evaluate an information product, the consumer must see it. But once he or she has seen it, he or she no longer needs to purchase the product. Versions can be used to get around this dilemma by allowing the consumer to sample and develop trust in the seller. Another way out of the problem is to turn the information product into a service. An example of turning the sale of software into a service is the case of application service providers, frequently known as ASPs. Instead of buying software, buyers can lease it one use at a time from another firm's servers.

Versioning is logically related to the notion of repurposing information, where the fixed cost of development can be spread out over various product line offerings derived from the same initial investment. In the film industry you can have different versions of a movie created for

television, video, and theatres. In the music business, a song will appear in various forms on CD, DVD, or as a music video. From the basic investment required to create a database of words and definitions, Merriam-Webster produces books, a Web site, CD-based products, and games.

This ability to create economies of scope from the development of information products has led Meyer and Zack (1996) to transfer lessons learned in the production and manufacturing of physical products to the realm of information products. Thus, according to those authors, information product design should utilize common architectures and subsystems. Information products generally have two categories of direct inputs: other information products and human creativity (Benkler, 2002). Both should be optimally managed, nurtured, and leveraged.

Given the low cost of manipulating an information product, it is feasible to produce versions of products designed for a single individual. Information products are prototypical examples of trends based on this strategy, alternatively called mass-customization (Wind & Rangaswamy, 2001), one-to-one marketing (Peppers & Rogers, 1993), or personalization (Goldsmith, 1999). Another feature of information products that is related to versioning, which describes how the 'producer' of the information creates different versions for users, stems from the unique ability of users to create information products themselves or co-create them in an alliance with the producer. This 'user-generated content' adds another aspect to information products that make them unique and different from goods and services. Examples include games and Facebook applications, help for other users, advertising and branding ideas, media uploads and digital content to YouTube, reviews, or wikies (see Krumm, Davies, & Narayanaswami, 2009). Consequently, consumers can take an active role in product and branding management not only for goods and services, but for purely information products as well.

*Bundling.* The basic phenomenon of bundling has been studied for more than 40 years, first in economics and then in marketing, and forms a

core sub-topic that often appears in writings on pricing (Nagle & Holden, 1995). The advantage of bundling comes into play under certain distributions of consumer valuation or under certain cost structures (Stremersch & Tellis, 2002). The relevance of bundling to the marketing of information products lies largely in the fact that separate information products can indeed be bundled with minimal or no additional cost to the seller. For example, in a market characterized by high levels of consumer uncertainty or risk, a firm might choose to bundle separate information products so as to reduce the perceived risk of the elements in the bundle (Sarin, Seigo, & Chanvarasuth, 2003). However, the classic motivation to bundle occurs when a negative correlation exists in reservation prices.

The fact that one can easily manipulate information products implies that it should be possible to create extremely large bundles, and Bakos and Brynjolfsson (1999) have demonstrated the effectiveness of bundles containing large quantities of products. What's more, the flexibility of information products that are ordered and delivered over electronic networks implies that customers themselves might be allowed to design their own bundles (Hitt & Chen, 2003).

While much of the economic analysis of bundling assumes a monopolist trying to maximize profit over a single time period, an often missed benefit of bundling is that of entry deterrence (Nalebuff, 2004). Bundles allow companies with more products to compete more effectively against companies with only a subset of those products. Moreover, a marketer of product A and product B can make it more difficult for a rival firm to compete in the market with only one of these products. In addition, this advantage makes it possible for the incumbent firm to defend market share more easily without relying on a lower price than competitors.

Finally, we could point out that one competitive disadvantage of open electronic selling and distribution of goods on the Internet is that costs and prices become more transparent to the customer and to the competition (Sinha, 2000). Bundling can mitigate this problem by making the costs of the individual information products

in the bundle more difficult to impute. Not only do information products lend themselves to bundling, but also are easily unbundled if that presents an advantage, a tactic known as price partitioning.

*Menu Costs.* A general property of electronic commerce whether the item being sold is an information product or not, is the relatively low cost of changing prices, usually termed *menu costs*. While low menu costs can apply to purely physical goods or services, we will discuss this topic for two reasons. First, information products are ideally suited to electronically-mediated selling, where menu costs are lowest. Second, the low marginal cost of producing an information product makes it ideal for frequent price changes as its cost tends to be entirely sunk (Nagle & Holden, 1995), given the vanishing ratio of marginal to fixed cost.

We can then characterize two implications of low menu costs. First, we note that frequent price changes are feasible allowing management to adapt rapidly to changing consumer demand or preferences, or to changes over time in the value of a product (Biswas, 2004). Second, lowered menu costs create opportunities to implement price discrimination across segments or individuals at a reduced cost. Working against the ability to offer the same item at different prices is the above-mentioned transparency of electronic media. Amazon discovered this problem (Garbarino & Lee, 2003) when it became known that it was charging different amounts to different customers, and it ended up having to offer refunds to some customers.

The ease with which digital DNA can be modified implies an important shift from managing products to managing product ecologies with their associated dynamics and complexities. In addition, the high degree of abstractness of information, its lightness and transportability, allow for easier participation between larger numbers of stakeholders than might be feasible with goods or services. One example of this ecological perspective is Android. There are users (i.e., consumers), app developers, open source contributors, handset makers, mobile service providers, Google, and so forth. Each of these stakeholders co-creates value. A large number of stakeholders exist in many goods and service markets whenever

there is specialization, but information technology and costless mutability allows for more complex exchange patterns among larger numbers of players. In general, the number of stakeholders is likely to be greater for information products than for traditional goods or services, thus creating more complex exchange systems than marketers are accustomed to.

Thus, the mutability of information products enables marketers to use unique strategies not common for tangible goods, and only partially so for services. Different versions of the product may be created while avoiding the problems of bloated product lines that can beset tangible goods companies. Marketers can create unique bundles of information products and alter prices easily to adapt to changes in the marketplace, consumer tastes, or competition.

#### **PUBLIC INFORMATION PRODUCTS**

Information offerings are public products in the economic sense. They have two key properties: they are non-rivalrous in demand and non-excludable in supply (Sinha & Mandel, 2008). The former property means that the consumption of the product by one consumer does not preclude its consumption by another consumer. Non-excludability is the inability of firms to control the supply, another implication of the low/zero marginal cost of copying such products.

The public property of information products means that any firm trying to generate revenue from them shares many of the same challenges faced by a firm attempting to generate revenue from the air, the classic example of a public product. Despite substantial research on the economics of piracy, it remains unclear if piracy is a detriment or a benefit for firms (Givon, Mahajan, & Muller, 1995). Nor is it clear why the case of piracy in film, for example, involves criminalization and yet it is implicitly encouraged in fashion (Sprigman & Raustiala, 2006).

From our point of view, we note that the most successful case studies involve firms leveraging the public property of information products while simultaneously turning their offering into a service. Examples of this servitization

approach abound. Musicians often give away recorded music, but then charge for live concerts. Game makers give away the game while using a service platform to control access to other players. There is also an opposite strategy of tangibilization. Some musicians offer free concerts, but charge for recorded versions. Film studios generate revenue from selling toys associated with a movie. The ease with which information products can be servitized or tangibilized makes this an interesting strategy area. Consequently, marketing information products that easily can be copied and shared and that can morph back and forth between something that looks like a good vs. something that looks like a service requires new thinking and new strategies, as illustrated by Papies, Dominik, and van Heerde (2017).

#### **CONCLUSIONS**

We begin our conclusion by suggesting again that information products take their place along with tangible goods and intangible services as part of the marketing canon. Just as the services revolution showed marketers that products are not just goods, we propose that the information revolution reveals that products consisting of information are not quite the same as goods or services. Moreover, the abstractness associated with information products creates unique challenges for buyers and sellers hence opportunities for marketers that are not present with either goods or services.

We have proposed that information products are taking on a larger role in the economy and that a growing number of market offerings -- be it a tangible good product or a service product -- now feature an information component. Note that this trend calls into question the very tangibility of goods. The category of 3D printer will further blur the distinction between information and tangible good, leading to manufacturers needing to use the strategies we have outlined above. Those changes are important, but the blurring of the distinction between service and information will be just as important.

Services more often are delivered as e-services, and human-delivered service is more often enhanced via information technology. As

algorithms get better, new automated offerings will invade professional services. We note that Philip Parker has created an algorithm to write books, IBM's Watson service will be used in medical, legal, and other professional fields, and even teaching will see the automation of essays.

Since information products include software, which is information that operates on other information, the life of an information product can take on an autonomous trajectory, modifying itself with experience. A distinction has historically been made between codifiable knowledge and tacit or implicit knowledge (e.g., Nonaka 1994), sometimes called know-how. The classical example of know-how is riding a bicycle. Advances in algorithms have now demolished this distinction as robots are capable of riding bikes. Machine learning is being applied in many contexts, either as a supplementary service (in the context of a recommendation agent for an e-tailer) or sometimes as a core service (automated essay grading).

What is interesting about these examples is that the service as originally developed by the firm may be quite different from the service as experienced by the buyer, who benefits from the machine learning. Nor will it be straightforward for the marketer, or the customer for that matter, to predict the eventual outcome of the service. We note that more than 75 years ago Alan Turing (1936) proved that it is impossible in general to know the outcome of a program.

Just as the introduction of the concept of services as a product alongside tangible goods was met at first by skepticism on the part of both practitioners and academics, we expect that the concept of information as a product will meet a similar fate. The difficulty in arriving at a universally accepted definition of information contributes to the difficulty in viewing information as a product. Consequently alternative points of view or perspectives on this topic can arise. Healthy discussion of this topic can only benefit marketing theory and marketing practice. Over time, we predict that as more and more of the economy becomes based on information products as we have defined them, the idea that

goods and services as products contain an informational component and that purely informational products (even those that have a tangible good or service element in them) will become part of the marketing canon.

Consequently, marketers and managers of all stripes should determine if their products are primarily informational in nature. If so, they should consider marketing and management in a unique way that focuses on the SMP properties and emphasizes the strategic techniques we discuss here. Marketing in the future must focus more on managing externalities and standards, with marketers using tactics such as versioning, bundling, price partitioning, dynamic changes to menu costs, autonomous software offerings, servitization, and tangibilization strategies.

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# THE RELATIONSHIP AMONG FAN-BASED LEAGUE BRAND ASSOCIATIONS, BRAND EQUITY, AND BEHAVIORAL INTENTIONS

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*This research draws on the brand architecture and the brand associations literature to examine the relationship among league brand associations, league brand equity, and behavioral intentions and to develop a multi-item scale for the fan-based brand association (FBBA) model. The study tests a model where league brand equity plays a mediating role between league brand associations and behavioral intentions, such as attending and/or watching games on TV or online. The data from 600 National Football League (NFL) fans are analyzed using the partial least square structural equation modeling. The results suggest that all brand association dimensions used in this study are valid measures of the FBBA model. In addition, the league brand equity is a significant mediator between league brand associations and behavioral intentions. This suggests that the league managers, in collaboration with team managers, head coaches, and players, can build a strong league (brand equity) that can influence fans' behavior.*

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## INTRODUCTION

Brand associations have been widely investigated in the prior literature (e.g., Cheng-Hsui Chen, 2001; Faircloth, Capella, & Alford, 2001). Aaker (1991) defines brand association as anything that is linked in memory to a brand. Brand associations play a critical role in developing brand equity (Ross, Russell, & Bang, 2008). Brand equity refers to 'the differential effect of brand knowledge on consumer response to the marketing of brand' (Keller, 1993, p. 2). Brand equity has received a significant amount of attention from the sport management literature because building strong brands is crucial to distinguish leagues and teams from their competitors (Couvellaere & Richelieu, 2005; Kaynak et al., 2008). Brand equity is associated with positive financial and behavioral outcomes (Keller, 1993), which ultimately creates value for customers (Tong & Hawley, 2009). This is particularly important in the context of sport management, as fans develop an emotional connection with their teams or the sport they are interested in (Biscaia, Correia, Ross, Rosado, & Maroco 2013). The estimated size of the sport industry was \$539.7 billion in the U.S.

and \$1.3 trillion globally in 2018 (Plunkett Research, 2019). Considering the value of the sports industry and the level of competition, teams and leagues need to build strong brands supported by fans.

Brand equity has been studied in various ways. Some studies have operationalized it as a multi-dimensional construct and used an indirect measurement approach by measuring constructs such as brand associations, brand awareness, perceived quality, and brand loyalty as dimensions of brand equity (e.g., Cifci et al., 2016; Pappu, Quester, & Cooksey, 2005). Other studies have used a multi-item scale to directly measure brand equity and proposed a causal relationship between brand equity and its dimensions (e.g., Faircloth et al., 2001; Girard, Trapp, Pinar, Gulsoy, & Boyt, 2017). While indirect measures intend to identify the sources of brand equity, direct measures focus on customers' responses to the marketing efforts of brands (Tong & Hawley, 2009). However, studies that focus on the brand equity of sport teams (e.g., Bauer, Sauer, & Schmitt, 2005; Bauer, Stokburger-Sauer, & Exler, 2008; Biscaia et al., 2013; Gladden & Funk, 2002; Ross, 2006; Ross, James, & Vargas, 2006; Ross et al., 2008) and leagues (e.g., Kunkel, Funk, & King, 2014; Kunkel, Funk, & Lock, 2017) used an indirect approach to measure brand equity and did not investigate the causal relationship

between brand associations and brand equity. Therefore, this study contributes to the brand equity theory by identifying the conceptual relationship between brand associations and brand equity in the sport management context.

Despite the intangible and unpredictable nature of professional sports, teams have been successful in building strong brands and loyal fan-bases (Kunkel et al., 2017). A strong brand refers that consumers associate certain positive attributes specifically with that brand (Kunkel et al., 2014), and it is key in creating positive perceptions among consumers and gaining a competitive advantage against rival brands (Kaynak, Salman, & Tatoglu, 2008; Kunkel et al., 2014). In sport brand architecture, a league (franchisor) serves as an umbrella brand over its individual teams (franchisees) and provides a platform for teams to compete (Kunkel et al., 2014; Aaker & Joachimsthaler, 2000). Also, the league provides support for teams' success by coordinating marketing activities that help to build a strong team brand (Pitt, Napoli, & Van Der Merwe, 2003). In turn, fans' perceptions of individual teams positively influence their perceptions of the league (Kunkel et al. 2017). This type of brand structure indicates an interdependence between the league and team brands, such that each one is impacted by other's actions (Kunkel, Funk, & Hill, 2013; Kunkel et al., 2017). For example, teams affiliated with a strong league brand can benefit from positive brand associations towards the league because a strong league can influence fans' behavioral intentions, such as attending or watching games (e.g., Biscaia et al., 2013; Kunkel et al., 2017), and brand associations play an integral role in attitude development (Gladden & Funk, 2002).

The first objective of this study is to provide a deeper understanding of the value of brand equity in the sport league context by examining the mediating role of league brand equity on the relationship between the brand associations and the behavioral intentions from the fans' perspective. To the best of our knowledge, this study is the first to investigate such a relationship in the sport league context. Second, this study provides a valid and reliable multi-item scale for the Fan-Based Brand Associations (FBBA) model based on the brand associations and brand architecture literature. A

multi-item scale for league brand associations contributes to the sport league branding literature by providing a tool for future studies to investigate the multiple dimensions of each brand association (Kunkel et al., 2014). In addition, this research contributes to the theoretical understanding of brand associations of sport leagues and helps league managers in developing strong and successful brands.

The National Football League (NFL) is used in this study for three reasons. First, most of the prior studies on the impact of the sport brand equity focus on soccer teams or leagues (e.g., Bauer et al., 2005; Biscaia et al., 2013; Kunkel et al., 2014; Kunkel et al., 2017), and the generalizability of the scales developed on these studies across different sports is questioned (Biscaia et al., 2013). Second, Kunkel et al. (2017) suggest using fans of established and open competition leagues for future studies. Founded in 1920, the NFL is one of the oldest and most popular sport leagues in the U.S. In 2017, 57% of adults identified themselves as NFL fans (Jones, 2017). However, there is still a big competition for attracting fans among the four major professional sport leagues (NFL, NBA, MBL, NH) in the U.S. Lastly, the NFL's annual revenue increased from about \$6 billion in 2004 to \$14 billion in 2017 (Kaplan, 2017), which indicates that the NFL is still growing. Therefore, the NFL provides a good context to develop measures for brand associations and brand equity to examine their relationships and their influence on fans' behavioral intentions.

## BACKGROUND AND CONCEPTUAL FRAMEWORK

### Consumer-based Brand Equity

Brand equity has received a significant attention from the academics and practitioners as it positively influences success of a brand (Cifci et al., 2016), consumers' commitment and brand choices (Cobb-Walgreen, Ruble, & Donthu, 1995), and consumers' purchase intentions and loyalty (Aaker & Jacobson, 1994). The power of the brand lies within what customers learn, feel, hear about the brand, and how they respond over time (Keller, 2013). Brand equity, as a key indicator of a brand's health, is built through the effective

management of the brand promise and brand experience (Aaker, 1991). Aaker (1991) initially conceptualized brand equity as a multidimensional concept, consisting of brand awareness, brand association, perceived quality, and brand loyalty. Keller introduced the consumer-based brand equity (CBBE) model based on two vital dimensions – brand awareness and brand (image) associations (Keller, 1993). He further categorized brand associations as attributes, benefits, and attitudes. CBBE focuses on relative psychological and behavioral values of a brand name from the customer's perspective and refers to the value that consumers associate with a brand (Aaker 1991; Keller, 1993). Consistent with these two conceptualizations, several studies used an indirect measurement approach to operationalize brand equity. The indirect approach measures brand equity through its dimensions (Baalbaki & Guzmán, 2016), such as brand awareness, perceived quality, brand loyalty, brand association and brand personality, organizational association, and trust (e.g., Aaker, 1996; Pappu et al., 2005). However, these studies have failed to investigate the causal relationships among drivers of brand equity and overall brand equity (Girard et al., 2017), and mainly focused on identifying the sources of brand equity rather than measuring customers' responses to brands' marketing efforts (Tong & Hawley, 2009).

On the other hand, other studies treated constructs like brand association, brand awareness, and perceived quality as antecedents of the brand equity and included an overall brand equity measure to examine the direct relationship between brand equity and its antecedents (e.g., Broyles, Schumann, & Leingpibul, 2009; Cheng-Hsui Chen, 2001; Faircloth, et al., 2001; Girard et al., 2017; Yoo, Donthu, & Lee, 2000). Despite the differences between the operationalization of brand equity, previous literature concluded that brand equity influences consumers' purchase decisions, satisfaction, and loyalty (Broyles et al., 2009; Ross, 2006) by establishing a strong emotional bond between consumers and the brand (Aaker, 1996; Couvelaere & Richelieu, 2005). Such a bond becomes more apparent in the sport context, as the emotional bond between fans and their favorite sport tends to be strong (Biscaia et al., 2013).

### **The Importance of League Brand Associations as an Antecedent of League Brand Equity**

Researchers developed frameworks to examine sport brand equity and empirically investigated the relationship between brand equity and its drivers (e.g., Gladden & Funk, 2002; Ross et al., 2006; Biscaia et al., 2013). Brand associations have been used as one of the main drivers of sport brand equity. However, these studies mainly focused on team brand associations and equity rather than the league. Relevant sport branding research and the brand associations dimensions used are summarized in Table 1.

One of the conceptual frameworks to present the multidimensional nature of sport brand equity was offered by Gladden, Milne, and Sutton (1998). The model includes four brand equity dimensions: brand awareness, brand associations, perceived quality, and brand loyalty. The authors also included three groups of brand equity antecedents (team-related, university-related, and market-related attributes). The team-related attributes consisted of [team] success, head coach, and star player. Gladden et al. (1998) stated that team-related attributes play a critical role in the creation of team brand equity. In a related article, Gladden and Funk (2002) introduced the team association model (TAM) to enhance the understanding of team brand associations. The TAM included product-related and non-product-related attributes, benefits, and attitudes as dimensions of team brand associations, where attitudes were hypothesized to mediate the formation of strong attributes- and benefits-based brand associations. Following a four-step procedure, they determined 16 brand associations and offered a measurement scale.

Bauer et al. (2005) modified the TAM and offered consumer-based brand equity in a team sport (BETS). They used brand awareness and brand associations as measures of brand equity and operationalized sport brand associations with attributes and benefits but did not integrate attitudes. In addition, Bauer et al. (2008) offered a measurement scale for BETS. It was argued that brand awareness would be high for the teams in popular sports like soccer, as the

**TABLE 1:**  
**Summary of Prior Research on Sport Brand Associations**

Authors	Model	Brand Associations	Dimensions to Measure Brand Associations
Gladden and Funk (2002)	Team Association Model; Sport Team	Product-related	Success, Star Players, Head coach, Management
		Non-product-related	Logo design, Stadium, Product delivery, Tradition
		Brand Benefits	Pride in place, Fan identification, Peer-group acceptance, Nostalgia, Escape
		Brand Attitudes	Importance, Knowledge, Affect
Bauer et al. (2005)	Brand Equity in Team Sports; Sport Team	Product-related	Athletic success, Star player(s), Coach, Management
		Non-product-related	Logo, Stadium, Stadium atmosphere, Regional importance
		Brand Benefits	Fan identification, Interest of family and friends, Nostalgia, Escape
Ross et al. (2006)	Spectator-Based Brand Equity: Sport Team	Brand Associations	Brand mark, Rivalry, Concessions, Social interaction, Team play, Commitment, Organizational attributes, Non-player personnel, Team success, Team play
Bauer et al. (2008)	Brand Image and Fan Loyalty: Sport Team	Product-related	Team, Head coach, Success, Star player, Team performance
		Non-product-related	Logo and club colors, Stadium, Club history and tradition, Stadium, Fans
		Brand Benefits	Identification, Peer-group acceptance, Escape from it all, Socialization, Emotions, Nostalgia, Entertainment
		Brand Attitudes	Unique, Trustworthy, Positive, Likeable
Ross et al. (2008)	Spectator-Based Brand Equity: Sport Team	Brand Associations	Commitment, Team history, Logo, Organizational attributes, Rivalry, Nonplayer personnel, Stadium, Socialization, Success, Team characteristics
Biscaia et al. (2013)	Spectator-Based Brand Equity: Sport Team	Brand Associations	Brand mark, Concessions, Social interaction, Commitment, Team play, Organizational attributes, team success, Stadium
Kunkel et al. (2017)	Consumer-based League Brand Associations: Sport League	Brand Associations	Atmosphere, Community pride, Competition, Diversion, Education, Excitement, Game representation, Logo design, Management, Nostalgia, Performance, Player development, Rivalry, Socialization, Star player, Specific team, Tradition

fans were highly involved with that team. Thus, brand awareness may not have a significant effect on brand equity. Hence, the authors focused on brand associations and measured the favorability, uniqueness, and strength of each brand association. They examined the importance of brand associations for fan loyalty in the sport team industry in Germany and found that team brand associations play a significant role in fostering loyal fan behavior.

Ross et al. (2006) criticized previous models (TAM and BETS) for being derived from a manufactured good perspective rather than a spectator perspective and introduced the team brand association scale (TBAS). Furthermore, Ross et al. (2008) proposed and tested the spectator-based brand equity (SBBE) model using a sample of the National Basketball Association fans. They showed that the team brand associations and team brand awareness were relevant constructs of the SBBE model. Later, Biscaia et al. (2013) tested the SBBE model in the Portuguese Soccer League and showed that it was a valid tool for assessing the

brand equity of professional soccer teams. The results indicated a significant relationship between the brand associations dimensions and the second-order construct of brand association, as well as a positive effect of brand associations on satisfaction and fans' behavioral intentions. Then, they modified the brand awareness construct and renamed it as internalization and claimed this was conceptually more appropriate. Based on the results of Bauer et al. (2008) and Biscaia et al. (2013), this study focusses on brand associations.

Prior studies on team branding provided a good understanding of team brand associations; however, only a few studies focused on identifying brand associations in the league context and investigating their impact on fans' behaviors. For example, Kunkel et al. (2014) modified and integrated previous team brand association models (e.g., Gladden & Funk, 2002; Ross et al., 2008) to measure league brand associations. They identified 17 brand associations for leagues, each measured with a single item. Kunkel et al. (2017) used the

league brand associations and their measures developed by Kunkel et al. (2014) to investigate the role of league brand [associations] on the relationship between the team brand [associations] and team-related behavior. The results revealed that the league brand associations can influence team-related behavior; therefore, teams affiliated with a strong league brand benefit from the positive brand associations that consumers form towards the league.

Previously stated findings highlight the importance of leagues and their potential benefits for the teams. A strong league brand can serve as a quality signal and offer competitive advantage and benefits for both leagues and teams (Erdem, Swait, & Valenzuela, 2006). In addition, teams are a part of leagues; as such, the teams and leagues are interconnected and mutually dependent on each other (Kunkel et al., 2014). The Women's United Soccer Association (WUSA) is a good example of the co-dependence architecture of the league and its associated teams, where the team brands of WUSA suffered from the failure of the league brand (Southall, Nagel, & LeGrande, 2005). The failure of the WUSA has led to the suspension of its operations, leaving the WUSA teams without a league to compete in (King, 2009). Despite the emphasized value of the league in the sport branding literature, to our knowledge, no study has investigated the role of league brand equity on the relationship between league brand associations and league-related fan behaviors. Therefore, this study focuses on the league brand associations, not the team-related associations and fan behaviors, because we aim to investigate the role of the umbrella brand on fans' behaviors toward that brand.

Previous branding studies showed that brand associations are key for building brand equity (Cheng-Hsui Chen, 2001), and brand equity is at least partially driven by brand associations (Faircloth, et al., 2001). This suggests that positive brand associations should lead to stronger brand equity. However, the sport branding literature has not investigated the relationship between brand associations and brand equity as separate constructs. Thus, we hypothesize that:

**H<sub>1</sub>:** League brand associations positively influence league brand equity.

### Outcomes of the League Brand Equity

Brand equity influences consumers' behavioral outcomes, such as purchase decisions, satisfaction with the brand, and brand loyalty (Broyles et al., 2009; Girard et al., 2017). In the sport team context, Gladden et al. (1998) offered five team brand equity outcomes (national media exposure, corporate sponsorship, individual donations, atmosphere, and merchandise sales) that would affect the perception of a team. Ross (2006) modified the Gladden et al. (1998)'s framework and suggested excluding atmosphere as an outcome of brand equity, replacing corporate support and individual donations with revenue solicitation, and including team loyalty and [brand] extension opportunities as possible brand equity outcomes. Further, Bauer et al. (2005) confirmed that brand equity has a positive effect on purchase intentions, price sensitivity, and loyalty.

Prior literature on sport branding showed that brand associations also play an integral role in the development of attitudinal and behavioral actions, such that positive associations are formed if the sport brand satisfies consumers' personal and social needs and these associations influence team allegiance and behavior (Funk & James, 2006). However, unique team brand associations are mostly linked to better performance and higher team loyalty (Bauer et al., 2008; Funk & James, 2006; Ross et al., 2006; Ross et al., 2008). Biscaia et al. (2013) are one of the first studies to investigate the influence of team brand associations on fans' behavioral intentions. Behavioral intentions in the sport context refer to the team-related behavior that fans show, such as spending on merchandise, watching and/or attending the games (Biscaia et al., 2013; Kunkel et al., 2017). Following Biscaia et al. (2013)'s call for testing the reliability of their results about the positive relationship between the brand associations and fans' behavioral intentions, Kunkel et al. (2017) explored the impact of team and league brand associations on team behavioral intentions. However, they operationalized each behavioral intention as a single-item construct and measured the

behavioral intentions in terms of quantity (e.g., how many games you intend to attend), while Biscaia et al. (2013) grouped all behavioral intentions under one multi-item construct and measured the likelihood of the behavioral intentions (e.g., how likely are you going to attend future games). Therefore, Kunkel et al. (2017) did not confirm the reliability of the Biscaia et al. (2013) findings. Furthermore, Kunkel et al. (2017) investigated how the role of league brand associations influence fans' team-related behavioral intentions rather than intentions towards the league. Their findings show that team brand associations influence team-related behavioral intentions. The league brand associations are also expected to influence the behavioral intentions of the fans towards the league, considering the co-dependent brand architecture between a league and its associated teams. Therefore, to support the previous findings and extend the literature to a new context, we hypothesize that:

**H<sub>2</sub>:** League brand associations positively influence fans' behavioral intentions.

For reasons discussed herein, brand associations help consumers to make a purchase decision by signaling quality, as they are positively related to brand equity (Erdem et al., 2006; Yoo et al., 2000), which in turn contributes to fans' behavioral intentions, such

as attending games. Although the impact of brand associations on fans' behavioral intentions is examined in the sport branding literature (e.g., Biscaia et al., 2013; Kunkel et al., 2017), the mediating role of brand equity by using direct measures on the relationship between league brand associations and fans' behavioral intentions has not been investigated. Exploring this relationship is very important because direct measures of league brand equity assess fans' responses to leagues marketing efforts (Tong & Hawley, 2009). Therefore, we hypothesize that:

**H<sub>3</sub>:** The influence of league brand associations on fans' behavioral intentions is mediated by league brand equity.

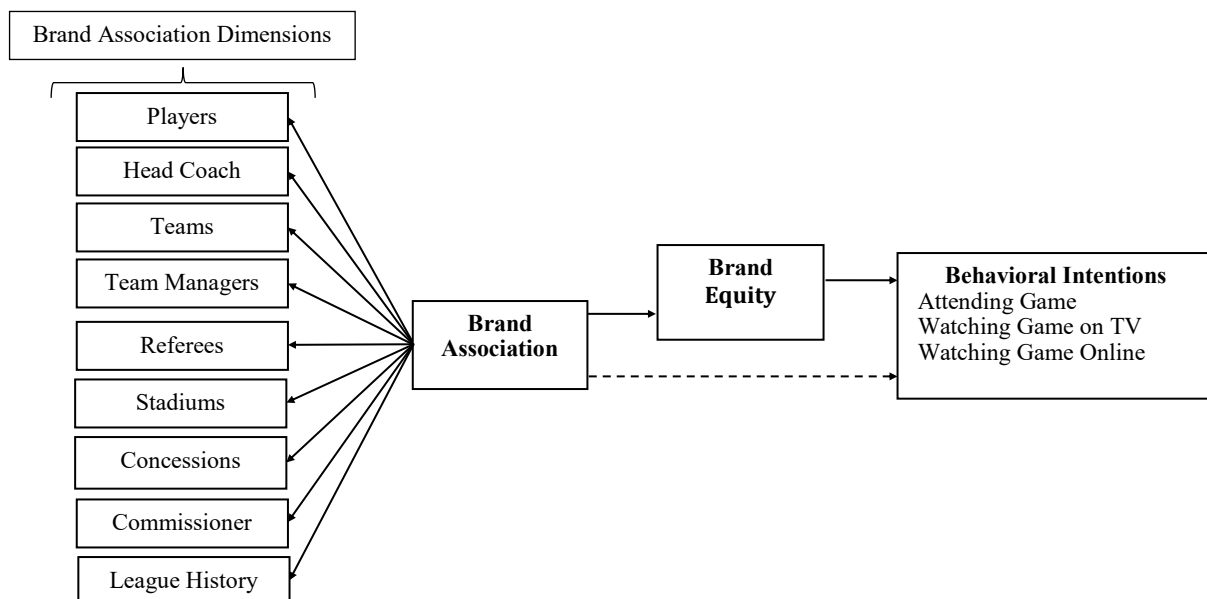
The proposed model is illustrated in Figure 1.

**METHODOLOGY**

**Scale Development**

We developed a survey by using Malhotra and Groves (1998)'s framework to provide valid and reliable multi-item measures for the FBBA dimensions based on the brand associations and brand architecture literature. While single-item measures may be adequate for assessing tangible constructs such as age, gender, and

**FIGURE 1:**  
**Proposed Model for Fan-Based Brand Associations for NFL**



ethnicity, multi-item measures are better for capturing the essence of more complex constructs with a degree of precision that single-item measures cannot attain (DeVellis, 2016). In terms of predictive validity, multi-item scales perform better than single-item scales under most conditions (Diamantopoulos et al., 2012). Furthermore, in the absence of multiple items, it is not possible to measure content validity and reliability for internal consistency of constructs, unless multiple measures from the same participants are gathered for test-retest reliability (Churchill, 1979). Churchill (1979) advised that “marketers are much better served with multi-item than single-item measures of their constructs, and they should take the time to develop them” (p.66). Therefore, single-item measures should be used with caution and limited to special circumstances in empirical research (Diamantopoulos et al., 2012). Kunkel et al. (2014) also suggested the use of multi-item measures for future research.

We initiated the scale development by identifying the main constructs of the study. In line with the previous literature (e.g., Bauer et al., 2008; Biscaia et al., 2013; Kunkel et al., 2017), only the attributes of league brand associations were used as the independent variable and the effect of league brand awareness was controlled by surveying the existing NFL fans only. Behavioral intentions, such as game attendance, watching the games on TV and online, were used as the dependent variable. Finally, (overall) league brand equity construct was added to investigate its mediating role between the independent and the dependent variables.

After identifying the constructs, we compiled the measurement scales from the relevant literature. The measurement items for brand associations were adapted from the sports team branding literature (Bauer et al., 2008; Biscaia et al., 2013; Gladden & Funk, 2002; Ross, 2006; Ross et al., 2008). We modified these scales to construct valid measures for the league brand associations. Since prior league brand associations used single-item scales to measure constructs, they were not included. We used seven of the eight main attributes (players, head coaches, team success, team management, stadium, concessions, and league history)

which are identified in the literature as the attributes of the FBBA model. We did not include the logo in our study because the NFL logo is well known among the fans, and Kunkel et al. (2017) found that logo had no significant effect on fans’ perception of the league brand. League commissioner and referees were included as additional dimensions of the league brand associations. These dimensions are relevant because, as a governing body, league (NFL) commissioner develops the game rules and promotes the league brand (Kunkel et al., 2017). Further, referees oversee the implementation of the game rules to assure the improvement of the game quality. Thus, fans’ perceptions of the referees and league commissioner should be considered in the development of a comprehensive FBBA model.

The overall brand equity measures were adapted from branding literature (Girard et al., 2017; Yoo & Donthu, 2001; Yoo et al., 2000) and items were modified to reflect league brand equity. The behavioral intentions scale was adapted from Biscaia et al. (2013) and the items were modified to include NFL games in the wording, as Biscaia et al. (2013) focused on team-level intentions. The questions were developed to clearly state that NFL games represent any game in the league and not the games of a particular team to reflect the league level intentions. Further, options for watching games on TV and/or following online were added as fans’ behavioral intentions to represent the audience that might not attend games in stadiums. All scale items, except behavioral intentions, were measured on a seven-point scale ranging from 1 = strongly disagree to 7 = strongly agree. Behavioral intentions were measured on a seven-point scale ranging from 1 = not likely at all to 7 = extremely likely. In addition, data on gender, age, education, income, and type of media used to follow games were collected as control variables.

We conducted a pretest during scale development to test and refine the measurement items. First, we asked college football coaches and players to respond to each item and provide comments, revisions, and suggestions on the questionnaire. Second, a panel of 3 academics, who were experts on branding and scale development, were asked to provide feedback for the initial scale. Third, we asked a group of

NFL fans to review the survey and provide feedback. Based on the feedback provided by the experts and the fans, some items were removed, and the wording of some items was edited to clarify the statements. The final scale included 7 items for players; 5 items for the stadium, league history, referees, team success, and commissioner; 4 items for head coach, team management, concessions; and 3 items for brand equity and behavioral intentions (See Appendix A for the final scale).

### Sampling Procedure and Data Collection

The final survey was administered online to U.S residents that were NFL fans via Amazon Mechanical Turk (MTurk). MTurk rates (payment to the participant without the fees) are determined based on how much time the survey is expected to take. It is shown that higher payment increases the performance of MTurk workers on the tasks asked (Paolacci & Chandler, 2014). Therefore, we paid a relatively higher rate (\$0.40) to MTurk workers for the survey that was expected to take less than 10 minutes and did not involve complicated cognitive tasks. We limited our sample to high reputation workers to recruit better quality of respondents by paying extra fees to MTurk. The survey participation was limited to the U.S. residents only. Previous research showed that data collected from MTurk are as reliable as consumer panels (e.g., Paolacci, Chandler & Ipeirotis, 2010). Identifying an adequate sample size is important to ensure the statistical power of the test for the proposed model. Prior literature offers using power analysis for determining the sample size (Cohen, 1988). Using the recommended criteria, power analysis determined a minimum sample of 184. Therefore, we believed that a sample of 600 respondents would be sufficient for this research.

Two questions (one screening and one identification) were asked at the beginning of the survey. The first (screening) question aimed to screen out respondents that were not NFL fans and the second one identified the respondents that have attended at least one NFL game in a stadium. Biscaia et al. (2013) show that stadium and concessions are significant

predictors of brand association. Given the intangible, experiential, and entertainment nature of sports (Underwood, Bond, & Baer, 2001), examining fans' perception of stadium-related brand associations could provide a more holistic understanding of league brand equity. However, fans that never attended an NFL game would not be able to answer the stadium and concessions-related questions. Therefore, stadium and concession questions were asked only to those respondents that indicated that they attended at least one NFL game. Demographic questions and questions about which media fans use to follow NFL games were included at the end of the survey.

We did not force response in any the survey questions to avoid random selection of answers from the respondents as much as possible. As a result, out of 600 surveys, 41 were deemed unusable because respondents skipped more than half of the questions. Therefore, the final sample size was 559 (effective response rate of 93.17%). There were 314 (56.3%) male and 245 (43.7%) female respondents, where 21.7% had an associate or junior college degree, 14.3% had a graduate degree, 21.5% had a high school degree, and 42.4% had a bachelor's degree. Moreover, 93.4% watch the games on TV, and 44.9% follow the games online. While 268 (47.9%) respondents have never attended an NFL game, 291(52.1%) have attended at least one NFL game. Specifically, 47.1% of these respondents attended 1-3 games, 5.5% attended 4-6 games and 1.4% attended 7 or more games, regularly. Table 2 shows a summary of the descriptive statistics.

## RESULTS

The analysis was conducted using Smart-PLS 3.2.1. In line with the literature (Bauer et al., 2008; Biscaia et al., 2013; Ross et al., 2008), we modeled brand association as a second-order construct (SOC) with the reflective-reflective measurement approach, since first-order constructs (FOCs) (players, head coaches, referees, team success, [team] managers, stadiums, concessions, commissioners, and league history constructs) were used as the dimensions of the SOC. Additionally, brand equity was used as a mediator and behavioral intentions were used as the dependent variable in the master model. Finally, the media used for



**TABLE 2:**  
**Selective Demographic Profiles of Respondents**

Gender	n	%	Age	n	%	Ever Attended a Game	n	%
Female	245	43.8	≤30	192	34.4	Yes	291	52.1
Male	314	56.2	31-50	282	50.4	No	268	47.9
Total	559	100	51-70	77	13.8	Total	559	100
			>70	8	1.4			
			Total	559	100			
Income	n	%	Education	n	%	Average Attendance	n	%
≤ \$20,000	68	12.2	≤ High School	121	21.7	0 Games	134	46.0
\$20,001-40,000	137	24.5	Associate/Junior	121	21.7	1-3 Games	137	47.1
\$40,001-60,000	122	21.8	Bachelors	237	42.3	4-6 Games	16	5.5
\$60,001-80,000	99	17.7	Graduate	80	14.3	7-10 Games	1	0.4
\$80,001-100,000	63	11.3	Total	559	100	More than 10 games	3	1.0
>100,000	70	12.5				Total	291	100
Total	559	100						

following games, attendance, gender, age, education, and income were used as control variables for behavioral intentions. We split the sample into two sub-samples based on their attendance to an NFL game to capture the difference between these fans. Out of 559, 291 of respondents attended an NFL game, and 268 respondents never attended an NFL game and follow the league via other channels, such as online and TV. To make the differentiation clear, we name fans who attend games as “stadium fans” and fans who do not attend the games as “screen-only fans.” The model for the stadium fans included stadiums and concessions dimensions of brand association. These two dimensions were excluded from the second model.

**Model 1: Testing the FBBA model and hypotheses using Attendance Dataset**

The reliability and validity of each construct and measures were assessed before testing the hypothesized relationships in Figure 1. Outer loadings were examined to check indicator reliability. All 44 items for nine FOCs were above the threshold (0.40) recommended by Hair, Hult, Ringle, and Sarstedt (2014), which suggests sufficient levels of indicator reliability. In addition, brand equity and behavioral

intentions with three items were used in the first model.

Measurement reliability was tested using the composite reliability scores. All composite reliability scores were above the recommended threshold (0.70), indicating no reliability issues (Hair et al., 2014). Analysis of average variance extracted (AVE) was used to test the convergent validity. The results indicated that all AVE values, but team success (0.40), were higher than 0.50, which confirmed the convergent validity of all constructs except team success (see Table 3 for composite reliability and AVE values). We dropped two items (team success 3 and 4) from the model to fix the convergent validity issue of team success construct, which resolved the issue by increasing the AVE to 0.545. Following that, Heterotrait-Monotrait Ratio (HTMT) was used to test the discriminant validity. The results provided support for the discriminant validity between FOCs and latent variables, and among all FOCs except team success (see Table 4). This result led to the omission of team success construct and its measures (team success1, 2, 3, 4, and 5) from the model.

The direct and indirect (through brand equity) effects of brand association on fans' behavioral

**TABLE 3:**  
**Construct Reliability and Validity Scores (Model 1)**

Construct	Composite Reliability	Average Variance Extracted (AVE)	Construct	Composite Reliability	Average Variance Extracted (AVE)
Brand Association	0.943	0.674	League History	0.882	0.601
Brand Equity	0.879	0.708	Players	0.905	0.580
Behavioral Intentions	0.770	0.531	Referees	0.919	0.694
Commissioner	0.908	0.665	Stadiums	0.898	0.639
Concessions	0.883	0.741	Team Management	0.917	0.735
Head Coaches	0.884	0.656	Team Success	0.764	0.400

**TABLE 4:**  
**Heterotrait-Monotrait Ratio (HTMT) (Model 1)**

		1	2	3	4	5	6	7	8	9	10
1	Brand Equity										
2	Behavioral Intentions	0.912									
3	Commissioner	0.510	0.414								
4	Concessions	0.629	0.613	0.525							
5	Head Coaches	0.610	0.641	0.738	0.604						
6	League History	0.623	0.614	0.619	0.616	0.862					
7	Players	0.520	0.707	0.486	0.476	0.825	0.889				
8	Referees	0.404	0.506	0.746	0.52	0.802	0.673	0.662			
9	Stadiums	0.717	0.688	0.669	0.812	0.817	0.826	0.759	0.672		
10	Team Management	0.588	0.585	0.844	0.561	0.898	0.779	0.745	0.768	0.776	
11	Team Success	0.731	0.782	0.766	0.592	0.991	1.012	1.053	0.846	0.911	0.973

intentions were tested. The adjusted  $R^2$  value was analyzed for evaluating the explained variance of an endogenous variable (behavioral intentions) by all the exogenous variables (brand association and brand equity) with a path to it. The  $R^2$  value of 0.25 for an endogenous variable was considered weak, while 0.50 was considered moderate and 0.75 was considered substantial (Hair et al., 2014). The  $R^2$  value for fans' behavioral intentions was moderate ( $R^2 = 0.582$ ). In addition, effect sizes of the significant path coefficients were used to assess the relative importance of each exogenous variable as a predictor of its related endogenous variables. First,  $f^2$  was assessed and recommended thresholds to assess  $f^2$  values were 0.02 for a small effect, 0.15 for medium effect, and 0.35 for large effect (Hair et al.,

2014). Based on these thresholds, the results indicated that the effect of brand association on brand equity was large ( $f^2 = 0.511$ ), whereas the effect of brand association on fans' behavioral intentions was small ( $f^2 = 0.113$ ), and the effect brand equity on fans' behavioral intentions was medium ( $f^2 = 0.191$ ).

Subsequently, the significance level of the path coefficients in the structural model was evaluated through running the bootstrapping (Hair et al., 2014). The results suggest that the direct effects of brand association on brand equity, brand equity on fans' behavioral intentions, and brand association on fans' behavioral intentions ( $b = 0.582, p = 0.000$ ;  $b = 0.374, p = 0.000$ ;  $b = 0.274, p = 0.001$ , respectively), and the indirect effects of brand

association on fans' behavioral intentions ( $b = 0.217, p = 0.000$ ) were all positive and significant, supporting  $H_1, H_2,$  and  $H_3$  respectively. Since both the direct and the indirect effects of brand association on fans' behavioral intentions were significant, we conclude that brand equity partially mediates the relationship between these variables. The results also revealed that players, head coaches, referees, team management, stadiums, commissioner, league history, and concessions ( $b = 0.825, p = 0.000; b = 0.876, p = 0.000; b = 0.809, p = 0.000; b = 0.873, p = 0.000; b = 0.862, p = 0.000; b = 0.772, p = 0.000; b = 0.849, p = 0.000; b = 0.685, p = 0.000,$  respectively) were subcategories of brand association (Figure 2). The analysis of control variables showed that media used for watching games and attendance ( $b = 0.302, p = 0.000; b = 0.118, p = 0.006,$  respectively) had significant impact on NFL fans' behavioral intentions, but gender, age, education level, and income ( $b = -0.016, p = 0.711; b = -0.023, p = 0.593; b = 0.062, p = 0.190; b = 0.061, p = 0.199,$  respectively) had no significant impact on fans' behavioral intentions.

### Model 2: Testing FBBA model and hypotheses using No Attendance Dataset

In the second model, two attendance related dimensions – stadiums and concessions – and attendance variable as a control variable were excluded because they were not relevant for the screen-only fans. The reliability and validity tests were conducted. All 35 items for seven FOCs were above the threshold (0.40), which suggested sufficient levels of indicator reliability. In addition, brand equity and behavioral intentions were measured with three items in the model. Similar to Model 1, composite reliability scores, AVE, and HTMT confirmed the reliability, convergent validity, and discriminant validity of all constructs except team success (Table 5 and 6). Hence, team success construct and its measures (team success1, 2, 3, 4, and 5) were omitted from the model.

The adjusted  $R^2$  for behavioral intentions was significant but weak ( $R^2 = 0.444$ ). The effect of brand association on brand equity was medium ( $f^2 = 0.193$ ), yet it had no effect on behavioral intentions ( $f^2 = 0.000$ ). On the other hand, the

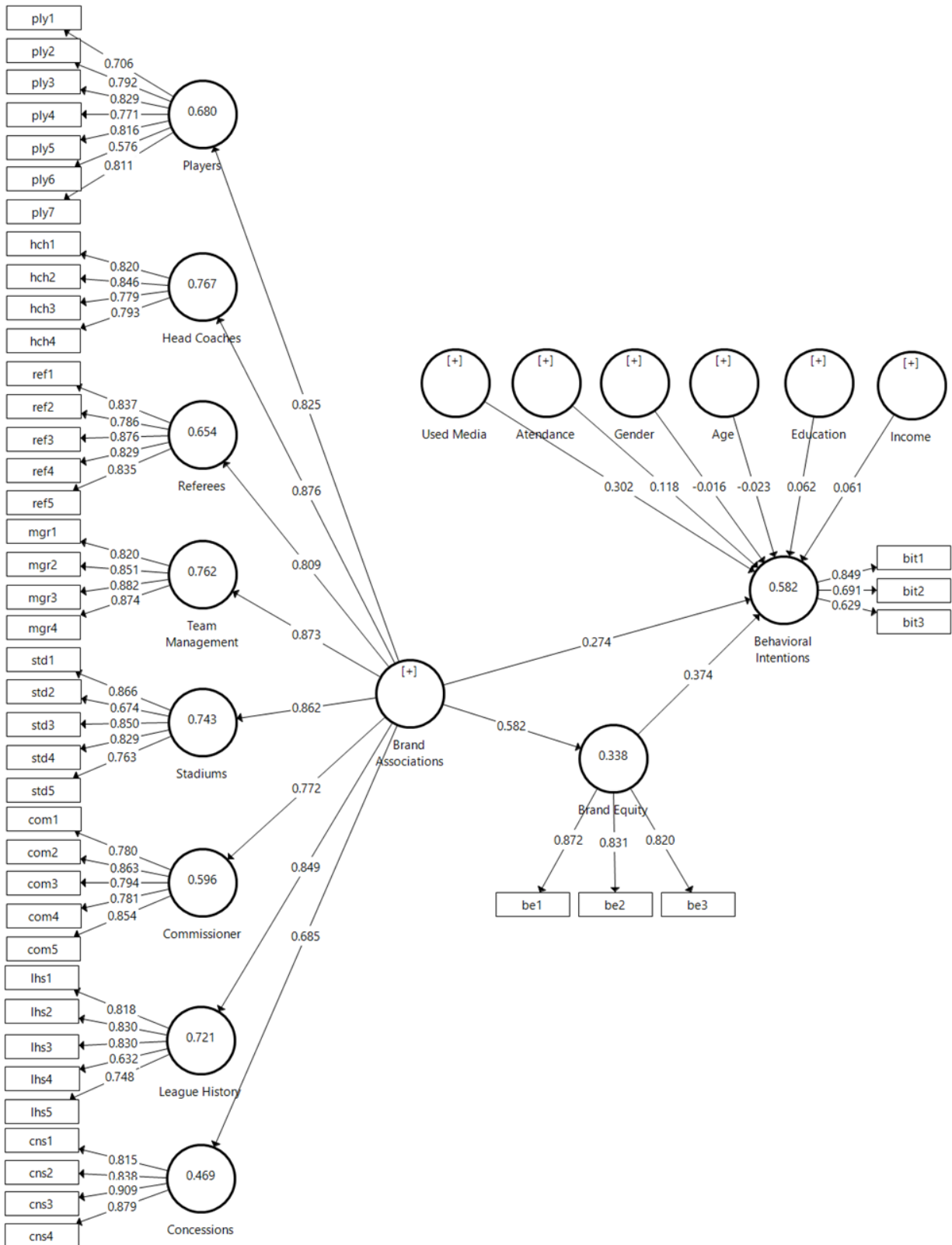
effect of brand equity on behavioral intentions was large ( $f^2 = 0.400$ ).

The results also showed that the direct effects of brand association on brand equity and brand equity on behavioral intentions, as well as the indirect effects of brand association on behavioral intentions, were positive and significant; however the direct effect of brand association on behavioral intentions ( $b = 0.402, p = 0.000; b = 0.527, p = 0.000; b = 0.212, p = 0.000; b = -0.011, p = 0.895,$  respectively) was not significant. These results provided support for  $H_1$  and  $H_3$ , but not for  $H_2$ . Since the indirect effect of brand association on behavioral intentions was significant but the direct effect was not, we conclude that brand equity fully mediates the relationship between these variables. Table 7 provides a summary of the hypotheses and their associated findings for both models. The results also revealed that players, head coaches, referees, team management, commissioner, and league history ( $b = 0.877, p = 0.000; b = 0.877, p = 0.000; b = 0.773, p = 0.000; b = 0.892, p = 0.000; b = 0.732, p = 0.000; b = 0.868, p = 0.000,$  respectively) were the subcategories of brand association (Figure 3). Analysis of control variables showed that gender and used media to follow games had significant and positive impact, but age had negative impact on behavioral intentions ( $b = 0.122, p = 0.012; b = 0.252, p = 0.000; b = -0.112, p = 0.039,$  respectively). Education level and income ( $b = 0.019, p = 0.731; b = 0.016, p = 0.722,$  respectively) had no significant impact on behavioral intentions.

### Comparison of the Stadium Fans vs. Screen-only Fans Models

Both models presented in this study reveal similar results, even though they use a different subset of the sample. The main difference between the results of the two models is the mediation effect of the league brand equity. While Model 1 (stadium fans) shows a partial mediation effect of league brand equity, in Model 2 (screen-only fans) league brand equity fully mediates the relationship between league brand associations and fans' behavioral intentions. This finding indicates that brand associations will not lead to a significant change in behavioral intentions for screen-only

**FIGURE 2:**  
**Results of the PLS Structure Model for FBBA – Attended the Game (Model 1)**



**TABLE 5:**  
**Construct Reliability and Validity Scores (Model 2)**

Construct	Composite Reliability	Average Variance Extracted (AVE)	Construct	Composite Reliability	Average Variance Extracted (AVE)
Brand Association	0.963	0.505	League History	0.880	0.597
Brand Equity	0.856	0.664	Players	0.924	0.637
Behavioral Intentions	0.742	0.504	Referees	0.913	0.677
Commissioner	0.926	0.714	Team Management	0.902	0.697
Head Coaches	0.870	0.628	Team Success	0.795	0.446

**TABLE 6:**  
**Heterotrait-Monotrait Ratio (HTMT) (Model 2)**

		1	2	3	4	5	6	7	8
1	Brand Equity								
2	Behavioral Intentions	0.963							
3	Commissioner	0.514	0.339						
4	Head Coaches	0.531	0.487	0.63					
5	League History	0.398	0.356	0.596	0.894				
6	Players	0.329	0.451	0.463	0.898	0.954			
7	Referees	0.261	0.286	0.62	0.743	0.641	0.619		
8	Team Management	0.506	0.424	0.817	0.926	0.824	0.800	0.705	
9	Team Success	0.557	0.634	0.695	1.007	0.98	0.996	0.768	0.976

**TABLE 7:**  
**Summary of Hypothesis and Findings**

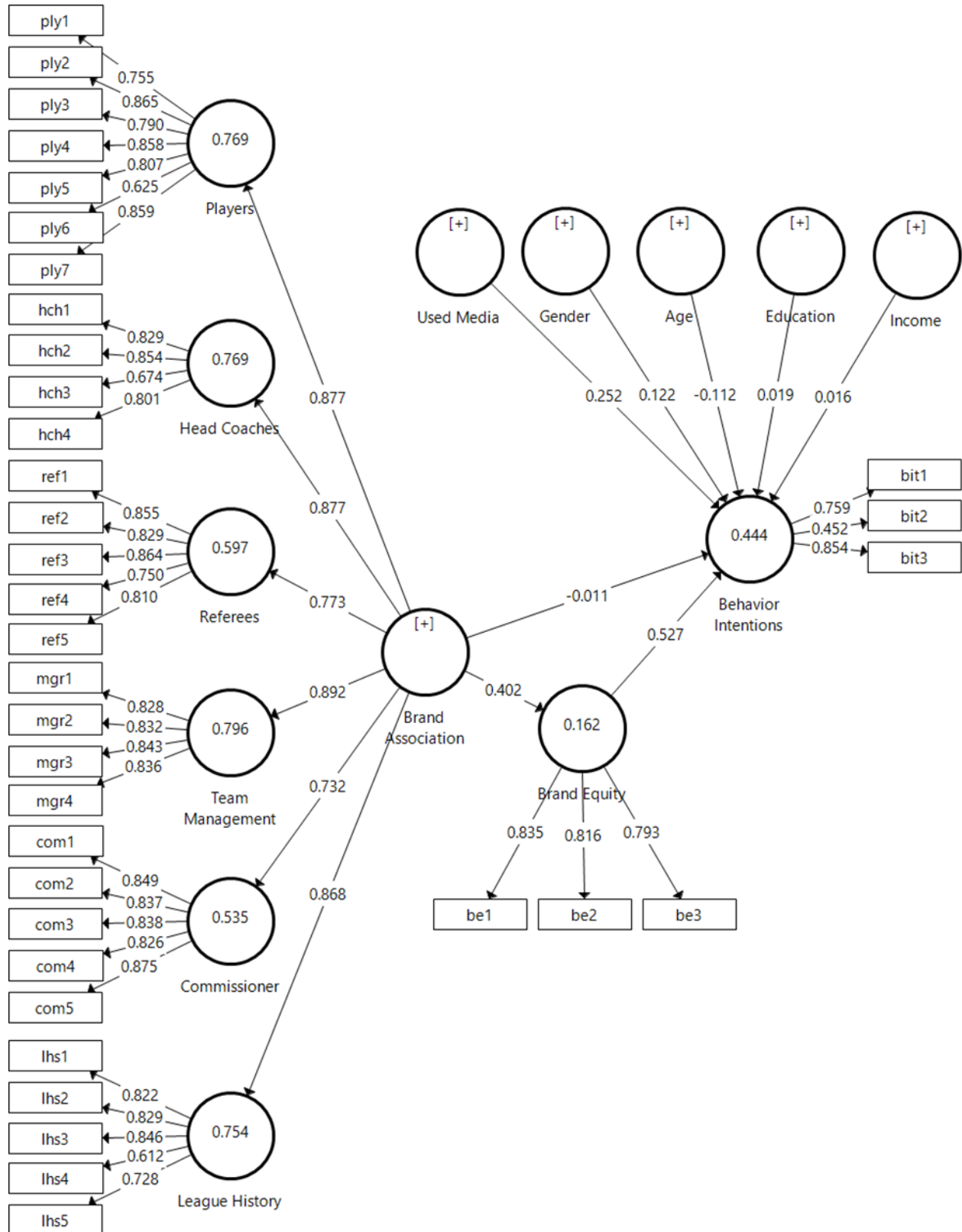
Hypothesis	Model 1	Model 2
H <sub>1</sub> : Brand associations positively influence brand equity	Supported	Supported
H <sub>2</sub> : Brand associations positively influence behavioral intentions	Supported	Not supported
H <sub>3</sub> : The positive influence of brand associations on behavioral intentions is mediated by brand equity	Supported	Supported

fans without strong brand equity. Considering that 48% of the respondents were screen-only fans, we can argue that for league brands, building league brand equity is a key factor on fans' behavioral intentions towards the league. To investigate other differences, if any, between the screen-only and stadium fans, we conducted a post hoc analysis by performing a series of independent-samples t-test. Results of the post hoc analysis showed that the two types of fans display differences in terms of behavioral intentions, level of agreement about the brand associations dimensions and control variables. Table 8 illustrates the mean scores of

three behavioral intentions, six common league brand associations dimensions, and four common control variables in two models for screen-only and stadium fans and the results of the independent-sample t-test.

Based on the mean differences in behavioral intentions of the stadium and screen-only fans, stadium fans have higher intentions to attend future games ( $p = 0.000$ ) and watch games online ( $p = 0.046$ ). However, there is no difference between the stadium and screen-only fans regarding intentions to watch games on TV ( $p = 0.181$ ). Further, the results indicate

**FIGURE 3:**  
**Results of the PLS Structure Model for FBBA – Never Attended the game (Model 2)**



**TABLE 8:**  
**Independent-samples T-test Results**

<b>Behavioral Intention</b>	<b>Attendance</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>t-value</b>	<b>p-value</b>
Attend games	No	3.60	2.01	-9.190	0.000
	Yes	5.09	1.80		
Watch games on TV	No	6.24	1.31	-1.340	0.181
	Yes	6.37	1.15		
Watch games online	No	4.58	2.11	-2.000	0.046
	Yes	4.92	1.90		
<b>Brand Associations</b>	<b>Attendance</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>t-value</b>	<b>p-value</b>
Players	No	6.02	1.02	-3.068	0.002
	Yes	6.26	0.79		
Head Coaches	No	5.40	1.02	-2.491	0.013
	Yes	5.61	0.91		
Referees	No	5.26	1.19	-2.382	0.018
	Yes	5.48	1.05		
Team Management	No	5.38	1.12	-2.699	0.007
	Yes	5.62	1.01		
Commissioner	No	4.88	1.36	-2.787	0.006
	Yes	5.17	1.09		
League History	No	5.81	1.07	-2.361	0.019
	Yes	6.01	0.92		
<b>Control Variables</b>	<b>Attendance</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>t-value</b>	<b>p-value</b>
Gender	No	0.47	0.50	-4.371	0.000
	Yes	0.65	0.48		
Age	No	36.05	11.57	-1.898	0.058
	Yes	37.96	12.11		
Education	No	3.35	1.03	-3.342	0.001
	Yes	3.63	0.93		
Income	No	2.90	1.46	- 5.941	0.000
	Yes	3.65	1.55		

that stadium fans show a higher level of agreement with all six dimensions of the league brand associations, compared to screen-only fans. Finally, comparison of control variables indicates that males attend games more than females ( $p = 0.000$ ), and the education and income levels of stadium fans are higher than screen-only fans ( $p = 0.001$  and  $0.000$ , respectively). However, there is no difference between stadium fans and screen-only fans in terms of age ( $p = 0.058$ ) (please see Table 8 for details).

## DISCUSSION

This research investigates the effect of the fan-based league brand association on fans' behavioral intentions, as well as the mediating role of league brand equity on the relationship

between league brand associations and fans' behavioral intentions. The findings reveal that stronger league brand associations lead to stronger league brand equity, which in turn increases fans' tendency to watch and/or attend the games.

## Research Implications

This study contributes to the sport branding literature in several ways. First, the positive relationship between league brand associations and league brand equity indicates that league brand associations are antecedents of league brand equity. This result confirms that positive league brand association leads to stronger league brand equity. Second, while Model 1 indicates a partial mediation effect of league brand equity on the relationship between league brand

associations and behavioral intentions, Model 2 shows a full mediation. As a result, we can argue that league brand equity is a significant mediator between league brand associations and fans' behavioral intentions. Hence, when brand equity measures are included in sport brand equity research, it can lead to a better understanding and a holistic perspective of the league and team branding. As a result, this research supports and extends the existing sport branding literature by emphasizing the importance of the mediating role of league brand equity on the relationship between league brand associations and fans' behavioral intentions.

Third, we analyzed the same model using two different types of fans: fans attend games (stadium fans) and not attend games (screen-only fans). Although both models using different types of fans show similar results, stadium fans have higher brand associations, behavioral intentions, as well as education and income level, compared to screen-only fans. This implies that stadium fans are more involved with the sport than screen-only fans, given that income was also controlled as a potential variable. Fourth, this study also widens our understanding of league brand associations by providing a valid and reliable multi-item scale for the FBBA dimensions. Although there are several team brand associations frameworks and measurement scales available in the extant literature, there is a need for a robust framework and multi-item scale for league brand associations. The multi-item scale developed for the FBBA contributes to the theoretical understanding of sport leagues' brand associations and helps to test the relationship between league brand associations, league brand equity, and fans' behavioral intentions. Hence, the results of each specific dimension of the league brand association should be evaluated carefully. For example, although the stadium and concessions are not one of the strongest predictors in the team brand association research (e.g., Biscaia et al., 2013), our results indicate that they are one of the strongest predictors of league brand association for the stadium fans. This finding is consistent with Kunkel et al. (2017) and emphasizes the value of stadiums and concessions for a strong league brand association. Although fans might not

particularly care for the stadiums or concessions in terms of team brand associations, they put more value into them if league brand associations are evaluated. This could be due to the fact that fans' experience with stadiums and concessions is more associated with the "league experience" rather than the experience with the particular team, considering fans are attending games in different venues when they are attending away games. Further, the significant differences between the level of brand associations of stadium fans and screen-only fans provide further support for the validity of the developed multi-item scale, since it is expected that those investing the time and effort to attend the games in the stadium would have a higher level of involvement with the sport/league than those who only watch on TV or online. Moreover, all other brand association dimensions derived from team brand association studies were significant predictors of league brand association in both models. These results suggest that team brand associations and league brand associations are consistent with each other.

Finally, we developed two additional brand association dimensions (league commissioner and referee). The results show that these two dimensions are significant predictors of the second-order league brand associations. These results indicate that the league commissioner, who serves as the governing authority of the league and is responsible for developing the game rules that make the games exciting and having fair outcomes, is an important measure of league brand associations. In other words, the better the league commissioner can govern the league, the higher the league brand associations will be. Similarly, referees, who oversee implementation of the game rules developed by the commissioner, fairly and consistently for all games, are also another important measure of the league brand associations. This indicates that a league that has better referees will have higher league brand associations compared to other leagues. These findings are consistent with the purpose of the commissioner and referees, as they should work together to assure the improvement of the overall quality of the games, which in turn will increase the overall quality of the league. When the games are



perceived high quality and fair by the fans, they could increase the positive associations related to that league.

### Managerial Implications

The findings of this study have several managerial implications for both league and team brands. First, the FBBA model can help the league managers to develop brand associations that will attract new fans and retain existing fans. For example, players are among the most important factors that both types of fans associate with the league brand. Therefore, the league managers can adjust the policies, such as the drafting process and salary cap, to allow teams to hire more star players. Second, brand associations affect fans' behavioral intentions via brand equity. Specifically, brand equity is more important for screen-only fans. Considering stadium fans have higher behavioral intentions than screen-only fans, attracting screen-only fans is very important for both league and team success. Thus, league managers should collaborate with the players, team management, and head coaches to create positive associations, which will help to improve the league's brand equity. In addition, the league managers can place a high standard for consistency with referee decisions, and the quality of stadiums and concessions.

Third, the league brand associations identified in this study, except commissioner and referees, are similar to those identified in team branding literature (e.g., Biscaia et al., 2013; Ross et al., 2008, Gladden & Funk, 2002), indicating that both leagues and teams have common brand associations. Given brand architecture of master brand and sub-brand relationship of sport leagues and the teams (Aaker & Joachimsthaler, 2000; Kunkel et al., 2014; Kunkel et al., 2017), and their co-dependence (Kunkel et al., 2013), improving these brand associations can lead to stronger team and league brand equity, which ultimately influence fans' behavioral intentions. Therefore, team and league managers should work together to develop strategies to build positive brand associations that would benefit the teams and the league as a whole.

### Limitations and Future Research

While the findings of this study provide some insights about the relationships among the FBBA model in creating a strong league brand and brand equity, the findings must be interpreted with some caution due to some limitations of the study. First, the FBBA model was developed for the NFL and the study was conducted in the U.S. with the NFL fans. Future studies using different sport leagues and fans from other countries are needed for validation of the measurement scale, as well as further testing of the proposed model. Second, although the FBBA model has explained a significant amount of the variability in the league brand equity ( $R^2=0.314$ ), only attribute-based brand associations were used in this study. Future research can explore and identify the benefit-based dimension(s) of brand associations, such as pride and nostalgia. Third, although the focus of the FBBA model was the league level brand associations and equity, it did not include team-based constructs as control variables. Future studies can include team-based constructs to control the variance explained by teams. Lastly, future studies can use an agreement scale (i.e., beliefs) instead of importance scale to determine the league brand association dimensions, as well as to compare the results with the corresponding importance measures (i.e., value curve analysis or gap analysis). Despite these limitations, the influence and interrelationships among the brand association, brand equity, and behavioral intention constructs can provide valuable insights for any sport league in developing more successful marketing and branding strategies to create a strong league brand.

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## APPENDIX A: Measurement Scale

Measurement of Research Constructs, Means and Standard Deviations  
(Items in *italics* were dropped to improve discriminant validity in the final model.)

Item Code	Item Description	Mean	Std. Dev.
	<b>Players</b>		
ply1	Players' behavior on the field contributes to the NFL's image.	6.14	1.18
ply2	Players in the NFL contribute to the quality of games.	6.23	1.10
ply3	I like to watch star players in the NFL.	6.03	1.19
ply4	Players are an important part of the NFL's success.	6.38	1.12
ply5	The NFL has high-quality players.	6.10	1.14
ply6	Player behavior off the field affects the NFL's image.	5.99	1.34
ply7	NFL players are exciting to watch.	6.16	1.14
	<b>Head Coaches</b>		
hch1	NFL head coaches are able to motivate their players for maximum success on the field.	6.14	1.18
hch2	The NFL has excellent head coaches.	5.62	1.19
hch3	NFL head coaches are well known by fans.	5.53	1.17
hch4	I like NFL head coaches.	5.63	1.24
	<b>Referees</b>		
ref1	NFL referees are consistent in their calls during games.	5.22	1.37
ref2	NFL referees are fair/impartial in their calls.	5.24	1.38
ref3	NFL referees' calls are consistent with the game rules.	5.31	1.33
ref4	NFL referees have a good knowledge of the game rules.	5.98	1.29
ref5	The NFL has a reputation for good officiating.	5.12	1.40
	<b>Team Success</b>		
tms1	<i>NFL teams play enjoyable football.</i>	6.08	1.14
tms2	<i>NFL teams have star players that help win games.</i>	6.18	1.10
tms3	<i>Every NFL team can beat any other NFL team.</i>	4.53	1.84
tms4	<i>Every NFL team can win the Super Bowl.</i>	4.29	1.99
tms5	<i>NFL teams are evenly matched.</i>	4.40	1.62
	<b>Team Management</b>		
mgr1	The management of NFL teams does a good job running successful teams.	5.50	1.19
mgr2	The management of NFL teams works together to create a successful league.	5.60	1.27
mgr3	The management of NFL teams shows great respect for their league.	5.47	1.29
mgr4	The management of NFL teams works together to protect the league's image.	5.47	1.30
	<b>League History</b>		
lhs1	The NFL has a rich history of memorable games.	6.21	1.16
lhs2	NFL Super Bowl games have many memorable advertisements.	5.92	1.34
lhs3	The NFL is known for great Super Bowl games.	6.02	1.22
lhs4	The NFL is known for great tailgate parties.	5.76	1.34
lhs5	The NFL is full of memorable Super Bowl half-time shows.	5.68	1.42
	<b>Commissioner</b>		
com1	The NFL commissioner treats every NFL team the same.	4.79	1.57
com2	The NFL commissioner works with teams to improve the quality of NFL games.	5.26	1.37
com3	The NFL commissioner develops strategies to create a strong league.	5.13	1.41
com4	The NFL commissioner does not discriminate among teams.	4.90	1.60
com5	The NFL commissioner does a good job of maintaining the integrity of the league.	5.07	1.46
	<b>Stadium</b>		
*std1	NFL stadiums are designed for fans to enjoy the game.	5.83	1.18
*std2	NFL stadiums have convenient parking.	4.74	1.54
*std3	The architecture of NFL stadiums is attractive.	5.78	1.25
*std4	NFL stadiums have unique character	5.72	1.32
*std5	NFL stadiums have convenient access for public transportation.	5.14	1.47

<b>Concessions</b>			
*cns1	There are specific foods at NFL games I like to eat.	5.18	1.56
*cns2	Concessions at NFL games are excellent.	5.12	1.41
*cns3	I enjoy eating at the stadiums.	5.33	1.45
*cns4	Eating and drinking at the games is something I like to do.	5.59	1.37
<b>Brand Equity</b>			
be1	NFL games are more than just a game for me.	4.69	1.76
be2	Even though there are other fun sports to watch, I prefer NFL games.	5.38	1.63
be3	Attending NFL games are worth the price.	4.72	1.75
<b>Behavioral Intentions</b>			
bit1	I intend to attend NFL games.	4.37	2.04
bit2	I intend to watch NFL games on TV.	6.31	1.23
bit3	I intend to watch NFL games online.	4.76	2.00

\*Items dropped from model 2 due to irrelevance.

**Measurement of control variables.**

<b>Item Code</b>	<b>Item Description</b>
Used Media	How do you watch NFL games? (Select all that apply)
	*Attend games
	Watch games on television
	Watch games online
*Attendance	How many NFL games do you usually attend during the season?
	None
	1-3 games
	4-6 games
	7-10 Game
	More than 11 games
Gender	What is your gender?
	Male
	Female
Age	What is your age?
Education	What is your highest level of education?
	Less than high school
	High school graduate
	Associate or junior college degree
	Bachelor’s degree
	Graduate degree
Income	What is your total annual household income?
	Less than \$20,000
	\$20,001 to 40,000
	\$40,001 to 60,000
	\$60,001 to 80,000
	\$80,001 to 100,000
	More than \$100,000

\*Items dropped from model 2 due to irrelevance.

# NARCISSISM VERSUS MACHIAVELLIANISM AND THE ROLE OF SELF CONTROL TOWARDS SOCIAL DESIRABILITY

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*Due to increasing attention given to negative personality traits and their impact on various marketing outcomes, we aim to focus on two constructs: Narcissism and Machiavellianism. A presentation of key works in both narcissism and Machiavellianism are shown, alongside analyses of their effects with regard to social desirability with the moderating impact of self-control. We found that although both, narcissism and Machiavellianism, positively impact social desirability, the presence of self-control in these personalities weakens their social desirability to a significant extent. Through better understanding the behaviors of consumers with the two similar, but knowingly different, personality traits in the presence of self-control, marketers are able to target consumers more effectively. Further theoretical and managerial contributions are discussed.*

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## INTRODUCTION

Among the multiple socially aversive personalities mentioned by Kowalski (2001), Machiavellianism and narcissism personality constructs have received substantial research-based attention across a variety of academic areas, including clinical and social psychology (e.g., Christie & Geis, 1970; 2013; Lee & Ashton, 2005), as well as marketing (e.g., Hunt & Chonko, 1984; Sinha & Mandel, 2008). While these traits have been examined from various research perspectives, one topic of interest for researchers has always been the similarity and the differences between the two constructs (McHoskey, 1995; Paulhus & Williams, 2002).

Machiavellianism and narcissism are similar in multiple aspects. McHoskey (1995) found a high correlation between the two personalities, defining peculiar similarities between them, such as interpersonal manipulation – both being more task-oriented compared to person-oriented; and interpersonal circumflex – a two-dimensional love dominance axis space, both falling in the same location. McHoskey (1995) also found a positive correlation between Machiavellianism and the entitlement and exploitative aspects of narcissism, although

there was a negative correlation between Machiavellianism and the adjustment aspect of narcissism. While each of these aspects share some degree of similarity with regard to exploitation, manipulateness and self-inflated sense of self, key differences do exist (Lee & Ashton, 2017).

There has also been an ongoing debate as to whether there is a positive or negative association between the two constructs (Jonason, Li, & Teicher, 2010; McHoskey, Worzel, & Szyarto, 1998; Paulhus & Williams, 2002; Rauthman & Kolar, 2013.) Although multiple studies have looked at the similarities between the constructs, differences between them have been rarely addressed. It is for this reason that this study seeks to further detail the *contextual specific* differences of these two robust personality characteristics. The importance of this study stems from its clarifying nature on the consistently mixed outcomes of both the Machiavellian and narcissism literature, and sheds further light on the implications for marketing, such as consumer behavior as well as upper echelon behavior (i.e., behavior of top management teams in the firm). It is our hope that by contributing towards a deeper understanding the nature and behaviors of individuals that exhibit one or both of these personality traits can aid marketing, as well as business professionals, to better target these types of individuals, exponentially increasing in numbers due to the use of social media

applications (e.g., Vander Molen, Kaplan, Choi, & Montoya, 2018; Preotiu-Pietro, Carpenter, Giorgi, & Ungar, 2016). Some researchers have even gone to the extent of calling it *narcissism epidemic* (e.g., Twenge & Foster, 2008).

This study further seeks to examine the theoretical differences that exist in the extant literature between Machiavellianism and narcissism, and seeks to understand their empirical relationship with other constructs. Specifically, we also examined the unique relationship that exists between Machiavellianism and narcissism, as they pertain to the frequently associated construct of social desirability (Kajzer, D'Arcy, Striegel, & Van Bruggen, 2014; Triki, Cook, & Bay, 2017) along with the role of self-control. This relationship is known to have very important managerial implications from different perspectives of marketing, as discussed in the managerial implication section. The remainder of the article is organized as follows: starting with introduction to both Machiavellianism and narcissism, followed by the major differences between them, and finally their relation to social desirability and self-control, explained through methodology and results. The contribution and limitations of the paper are discussed at the end.

### MACHIAVELLIANISM

Machiavellianism is defined as “a strategy of social conduct that involves manipulating others for personal gain, often against the other's self-interest” (Wilson, Near, & Miller, 1996; p.285). Simply stated, this definition largely describes a manipulative individual. The term “Machiavellianism” was dubbed by Richard Christie, which comes from the name of the writer “Machiavelli,” who is well known for his political outlook in the book named *The Prince* (Christie & Geis, 1970). After R. Christie's book, multiple researchers showed interest in this term and the statistical aspect of this personality trait. In one study conducted by Preziosi and Gooden (2003), 41.4% of responders scored above the neutral point on the Machiavellianism scale, suggesting that they were “high Machiavellians” and 58.6% scored below the neutral point suggesting that they were “low Machiavellians.” The most popular scale that has been used to measure

Machiavellianism is the Mach IV scale by Christie and Geis (1970), which is based on the dominant traits demonstrated by a Machiavellian personality and widely accepted in the marketing literature (Al-Khatib et al., 2005; Hunt & Chonko, 1984).

Further describing this personality, an individual known for their immorality and for manipulating others, both for selfish gains, is high in Machiavellianism (Christie & Geis, 1970). He/she is usually characterized as being cynical, unprincipled, and manipulating others for self-gain and life success (Jones & Palhaus, 2009). They are known to be engaged in aggressive, manipulative, exploitative, and devious behavior for achieving personal, as well as business objectives (Calhoun, 1969, p. 211). For them, the needs, feelings, or rights of others are secondary.

To understand Machiavellians, it becomes important to study the characteristics, which further enhance the traits of Machiavellianism. Looking at their manipulative and amoral behavior, Machiavellians score low in ‘Honesty’ - being truthful, as well as ‘Humility’ - people who have moderate or accurate view of themselves (Baumeister & Exline, 2002; Emmons, 1999; Lee & Ashton, 2005). They deceive and disregard others, thus maximizing their own interests (Hodson, Hogg, & MacInnis, 2009). According to Christie and Geis (1970), individuals high in Machiavellianism are known for the following four characteristics: (a) lack of interpersonal affect in interpersonal relationships, (b) lack of concern with conventional morality, (c) lack of gross psychopathology, and (d) low ideological commitment.

Machiavellians are well known for their anti-social behavior, as well. Two of the main behaviors they show are (a) lying and cheating (Lewicki, 1983) and (b) betrayal (Elangovan & Shapiro, 1998). Machiavellians have been reported to be telling more lies (Kashy & DePaulo, 1996) to dishonor deals they have made (Forgas, 1998), and to withhold important information which is beneficial to them (Sakalaki, Richardson, & Thepaut, 2007). They are also known to cheat more in their term exams (Shafer & Wang, 2010) compared to others. Machiavellians have also been known to

express pleasure at same-sex friends' misfortunes in a romantic relationship (Abell & Brewer, 2018). Known for their betrayal behavior, Machiavellians are known to engage in more unethical behavior like kickbacks or bribes (Hegarty, 1995). Jones and Paulhus (2009) suspect that Machiavellians portray their betrayal characteristic only when that can lead to success; otherwise they will not.

These characteristics of Machiavellianism have further been studied to explore other aspects of life and their relationship with the personality. Gemmill and Heisler (1972) studied the relationship between Machiavellian-oriented individuals and several job-related variables. They found positive relationships between high Machiavellians and more job strain, less job satisfaction, and less perceived opportunity for formal control. Hegarty and Sims (1978) found that individuals high in Machiavellianism behave less ethically compared to individuals low in Machiavellianism (Singhapakdi & Vitell, 1993; Singhapakdi & Vitell, 1990; 1991). In terms of gender, Rayburn and Rayburn (1996) hypothesized that males are more Machiavellian-oriented than females. They also found intelligence is negatively related to Machiavellianism (Rayburn & Rayburn, 1996).

Machiavellian consumers have been consistently studied in various forms in the field of marketing. Hunt and Chonko (1984) had once mentioned, "Marketing has its own share of Machiavellianism" (p.40). They further went on to conclude that younger marketers are more Machiavellian compared to older marketers. Singhapakdi et al. (1993) mentioned that the ethical perceptions of marketers are based on their Machiavellian characteristic. Dugan et al. (2019) stressed on importance of Internet marketing and its positive effect on sales performance, but Machiavellian characteristic weakening this relation. Further, Chaudari et al. (2017) found that Machiavellian consumers' characteristics affects their willingness to pay in store. Albeit many more, one can conclude from these studies that Machiavellianism has been prevalent in the marketing field since ages, and it needs to be studied further.

Table 1 highlights the brief literature review of research done on Machiavellianism.

## NARCISSISM

Narcissism can be defined as the gratification from egotistic admiration of an individual's own attributes, characterized by the self-enhancement of multiple characteristics, including physical attractiveness, intelligence, leadership ability, and other characteristics that would be socially favorable to possess (Bleske-Rechek, Remiker, & Baker, 2008; Grijalva, Harms, Newman, Gaddis, & Fraley, 2015; Grijalva & Zhang, 2016; Muris et al., 2017). Narcissists have also demonstrated extreme aggressive behaviors, such as defense mechanism to threats against their own sense of self-esteem (Byrne & O'Brien, 2014; Bushman & Baumeister, 1998). Narcissistic individuals are also characterized by poor coping ability when threats to their inflated sense of ego are present, and as such, are unlikely to self-select themselves into scenarios that would foster such threats (Bushman & Baumesiter, 1998).

While myriad research posits narcissism as a detrimental character trait, positive attributes have also been identified (Errasti, Amigo, & Villadangos, 2017; Nevicka, Baas, & Ten Velden, 2016). Threats to narcissists' egos has shown to increase their creative ability, as well as increased motivation towards competing tasks that allow them to demonstrate their competence. In addition to creative performance, narcissism has also been positively linked to the outgoing and socially vibrant personality that is common among extraverted individuals (Muris, Merchelbach, Otgaar, & Meijer, 2017). While increased leadership capability has also been linked to narcissism, these results were based on self-reports of narcissists, and as such, have limited credibility (Grijalva et al., 2015).

In a moral context, narcissism tends to have a negative relationship with ethical decision making (Antes et al., 2007) and positive relationship with counterproductive work behaviors (CWBs) (O'Boyle, Forsyth, Banks, & McDaniel, 2012), with certain moderators such as materialism (Grijalva & Newman, 2016; Antes et al., 2007; Bergman,



**TABLE 1:**  
**Major Findings from Previous Machiavellianism Research**

Article	IV	Moderator/ Mediator	DV	Finding
Abell Lyons and Brewer (2014)	Maternal and Over Paternal Care and Over- protection	Machiavellianism (Mediator)	Friendship Quality	Low maternal care and high paternal overprotection are positively related to Machiavellianism which negatively impacts adult friendship quality
Andrew et al. (2008)	Machiavellianism		Agreeableness and Empathy	Low Machiavellians portray high Agreeableness and empathy levels compared to low Machiavellians
Bodey and Grace (2007)	Self-efficacy, Machiavellianism, perceived control, and risk-taking	Consumer attitude toward complain- ing (Moderator)	Consumer propen- sity to complain	Two groups have different relation- ships with the outcome variables
Czibor and Bereczkei (2012)	Machiavellianism			High Machiavellians were more sensi- tive to social context signals and con- sidered their partner behavior more than low Machiavellians
Dussault Hojjat and Boone (2013)	Machiavellianism	History of inti- mate behaviors (Moderator)	Mate attraction strategies, and intimacy	High Machiavellians had greater like- lihood of using deceptive tactics and faced lower levels of relationship intimacy compared to low Machiavel- lians
Giammarco et al. (2013)	Dark Triad per- sonality traits		Perceived ability to deceive	Machiavellianism, Psychopathy and Narcissism were highly correlated with the perceived ability to deceive, in that order
Jones and Paulhus (2010)	Dark triad - Machiavellianism, narcissism, psy- chopathy		(a) Short vs. long- term relationship focus, (b) Use of mate retention tactics, and (c) Rates of infidelity	Psychopathy was associated with short-term relationship focus and us- ing mate retention tactics. Machiavel- lians reported different tactics for short versus long term relationship
Lang (2014)	Fear of fusion, diffuse identity, and use of primi- tive defenses		Machiavellianism	Fear of fusion and primitive defense usage successfully predicted Machiav- ellian interpersonal tactics
Liu (2008)	Machiavellianism	Demographic Variables (Moderator)	Knowledge shar- ing willingness	Machiavellianism is negatively corre- lated with Knowledge sharing willing- ness. Demographic variables did not moderate the relation
O.Boyle and McDaniel (2012)	Dark Triad Meta-analysis	Authority In group collectiv- ism (Moderator)	Job performance and counterpro- ductive work be- havior (CWB)	High Machiavellians portrayed re- duced quality of job performance compared to low Machiavellians. Dark triad was positively associated with CWB and this association was moderated by authority and culture
Rauthmann (2011)	Dark Triad		Self-Monitoring (acquisitive: per- ceptiveness, im- pression manage- ment; protective: protective variabil- ity, protective social referencing)	Narcissism was related to acquisitive, Machiavellianism to protective, and psychopathy to both forms of self- monitoring
Wilson et al. (1996)	Machiavellianism		Long term versus short term gains	Machiavellians are more interested in short term gains compared to long term gains

Westerman, Bergman, Westerman, & Daly, 2014).

With regard to counterproductive work behaviors (CWBs), or detrimental voluntary behaviors that risk the health of an organization and its members, narcissism was the dominant predictor of CWBs compared to Machiavellianism (Forsyth et al., 2012). This effect appears to be moderated by in-group collectivist culture, which is less likely to tolerate violations of social exchange and places a substantial emphasis on reciprocity norms (Van Dyne, Vandewalle, Kostova, Latham, & Cummings, 2000). Specifically, the presence of this collectivist culture element appears to weaken the relationship between narcissism and CWBs (Grijalva & Newman, 2016).

In a social media context, studies have shown that narcissists have consistently demonstrated an overt engagement in social media platforms (Errasti et al., 2017; Gnambs & Appel, 2018). Although the relationship between intelligence and narcissism has shown no consistent or significant positive/negative results, this relationship appears to be moderated by a variety of factors, including age, sex, and the type of intelligence measure utilized (O'Boyle, Forsyth, Banks, & Story, 2013). A moderating effect of culture was also found; specifically, a stronger effect of narcissistic behavior is present in power-distant cultures. From a gender perspective, research has shown that women are less likely to be narcissistic than men and demonstrate fewer of the socially undesirable characteristics of this personality trait, though the literature is mixed with regard to the salience of such gender differences (Gnambs & Appel, 2018; Grijalva et al., 2015).

In the consumption context, narcissistic consumers are known to consume more luxurious brands (Fastoso et al., 2018; Kang & Park, 2016) and give more importance to store image, as compared to product price (Naderi & Paswan, 2016). Belk, Mayer, and Bahn (1982) mentioned that one way of disclosing the consumer self-concept is based on their purchase decisions. Explaining this further, Sedikides et al. (2007) mentioned that the narcissistic personality overshadows the decision making process due to one's

conspicuous nature. Another research promotes the importance of selfie-marketing, due to the ever-increasing number of narcissistic consumers towards social media (Fox et al., 2017). These research studies show how narcissism has become an important criterion in marketing research to further understand the consumption behavior due to the growing number of narcissistic consumers. Table 2 briefly highlights some of the relevant literature review of narcissism.

### KEY DIFFERENCES BETWEEN NARCISSISM AND MACHIAVELLIANISM

In contrast to Machiavellianism, which may be indicative of more malicious interpersonal behavior, narcissists often demonstrate a sense of vulnerability, which is often reflected in their inadequacy, insecurity, and defensive tendencies against threats to their fragile grandiosity (Miller, Dir, Gentile, Wilson, Pryor, & Campbell, 2010). Despite these relatively undesirable characteristics, a meta-analysis conducted by Muris et al. (2017) found that narcissists demonstrate a greater capability for engaging in amiable and tactful interactions and relationships when compared to Machiavellians. These results were not necessarily original, as a similar examination of this phenomenon was conducted by Rauthmann and Denissen (2014), which yielded the same outcome. Along with the difference past research found in their engaging behavior, these two personalities also differ in some other aspects, which have been summarized in Table 3 and are described in detail here.

#### Emotional Intelligence

Narcissistic and Machiavellian individuals differ in the trait of emotional intelligence, or the way they perceive themselves on emotional ability. Petrides et al. (2011) compared how these two personalities score on this trait. They found that narcissists are positively correlated with this trait versus Machiavellians who are negatively correlated. This finding was supported by recent research conducted by Nagler et al. (2014), whereby narcissists demonstrated a positive relationship with socio-emotional intelligence, and Machiavellians once again demonstrated a negative relationship

**TABLE 2:**  
**Major Findings from Previous Narcissism Research**

Article	IV	Moderator	DV	Finding
Antes et al. (2007)	Narcissism Cynicism Big 5 Personality	Metacognitive reasoning strategies Social behavioral patterns	Ethical Decision Making (EDM)	Narcissism consistently negatively related to EDM
Gnambs & Appel (2018)	Meta-analysis	Power distance	Narcissistic behavior in social media	Positive relationship of narcissistic personality and social media use
Grijalva et al. (2015)	Meta-Analysis	Extraversion	Relationship between narcissism and leadership	Narcissism displayed positive relationship with leadership emergence, self-reported leadership effectiveness, suggests midrange level of leadership narcissism optimal
Grijalva & Zhang (2016)	Meta-analysis	Big 5 Personality Task performance Intelligence Leadership Attractiveness Likability	Relationship between narcissism and self-enhancement	Narcissists self-enhance particularly for agentic characteristics more so than communal characteristics
Lee & Ashton (2005)	Big 5 Personality HEXACO Personality		Dark Triad (Psychopathy, Machiavellianism, Narcissism)	Dark Triad strongly negatively linked to HEXACO's Honesty-Humility factor; Narcissism positively linked to Extraversion
Muris et al. (2017)	Meta-analysis		Inter-correlations among Dark Triad Gender differences Linkage to Personality Psychosocial Correlates	Dark Triad highly inter-correlated; High narcissism linked with social difficulties, lesser greed-avoidance and modesty
Nevicka, Baas, & Ten Velden (2016)	Ego Threat	Negative Feedback Threat to Uniqueness	Intentions to complete challenging task Creative performance Anagram task performance	Narcissism associated with increased desire to perform tasks that demonstrate abilities and creative performance
O'Boyle et al. (2013)	Meta-Analysis	Sex Age Sample type Measure of GMA	Relationship between Dark Triad & GMA	No relationship demonstrated
Rauthmann & Denissen (2014)	Dark Triad Behavior	Physical attractiveness	Mate attraction	Narcissists more effective at attracting mates due to their approach-oriented behaviors (e.g., self-assuredness, charm).
Rhodewalt & Morf (1995)	NPI	Positivity Complexity Vulnerability	Self-images Antagonism Hostility	NPI linked with positive self-images and low self-complexity; high NPI scorers linked with self-aggrandizing, hostility, and perceptions of support during periods of stress
Twenge et al. (2008)	Meta-analysis	Assertiveness Agency Self-esteem Extraversion	Cross-Temporal NPI Scores	Narcissism has increased by 30% among American college students from 1979-2006

**TABLE 3:**  
**Comparison of Narcissistic and Machiavellian Personalities**

<b>Criteria</b>	<b>Narcissism</b>	<b>Machiavellianism</b>
Emotional Intelligence	Positive Association	Negative Association
Self-Leadership	Positive Association	No Association
Perception	Underrate other to enhance self	Do not Underrate others to enhance self
Perceived as	Less Favorable and antisocial	Either liked or Socially Unaccepted
Aggression	Positive Association	No association
Limited Empathy	No relation	Negatively Related
Dimensions	Measure is multi-dimensional	Measure is One-Dimensional
Relationship	Variety of relationships	No association
Job Performance	No change	Reduction in quality
Impulsivity	Positive Association	No Association

with this construct. These findings corroborate much of what is known about both narcissists and Machiavellians, such that Machiavellians and their externally oriented mindset has a lesser focus on feelings, whereas narcissists can leverage emotional intelligence to maintain their inflated sense of self by behaving accordingly when interacting with others.

### **Self-Leadership**

Self – Leadership can be described as developing a sense for one’s own capabilities, forecasting, and utilizing both the awareness and control over one’s emotions to their benefit (Bryant & Kazan, 2012). When it comes to this trait, narcissists were found to be positively correlated with this scale, particularly with regard to constructs, such as goal setting, self-observation, constructive thought patterns, and natural reward strategies, visualizing successful performance, and evaluating beliefs. This is likely due to narcissists being intrinsically motivated for goal-achievement via a high need for achievement as a means of receiving positive attention from others to support their inflated self-view (Furtner, Rauthmann, & Sachse, 2011). However, Machiavellians were negatively associated with self-leadership, since they are more prone to utilize others to achieve their goals for them, as opposed to being overly self-leading in achieving certain goals (Furtner et al., 2011). In their respective managerial roles, Machiavellians have shown a strong, negative association with corporate social and environmental reporting (Shafer & Lucianetti, 2016), and are negatively related to corporate

ethics and social responsibility (Ang & Leong, 2000). Narcissism in CEOs is positively related to CSR activities (Al-Shammari et al., 2019), thus further supporting the marketing activities in the firm.

### **Enhancing Self**

To enhance one self, narcissists are known to engage in applauding themselves while derogating others (Morf & Rhodewalt, 2001; Rauthmann, 2011). This stems from the sense of entitlement that narcissists feel; to the extent that they are willing to sacrifice others and their relationships as a means of maintain a positive self-image (Morf & Rhodewalt, 2001). Comparatively, although Machiavellians also view others unfavorably, they have not been known for underrating others to enhance themselves (Paulhus & Williams, 2002; Rauthmann, 2011). Rather, Machiavellians often utilize others to accomplish their goals, and as such, diminishing others will act to reduce the effectiveness of this strategy (Furtner et al., 2011).

### **Perceived by Others**

Narcissists are usually liked in initial interactions (Back, Schmukle & Egloff, 2010; Oltmanns, Friedman, Fiedler, & Turkheimer, 2004), but with time they are perceived to be less favorable and antisocial, as their ultimate focus is their own self-focus (Campbell, Reeder, Sedikides, & Elliott, 2000; Rauthmann, 2011). When Machiavellians were studied, there were mixed perceptions about them

(Jones & Paulhus, 2009). On the one hand they are liked (Deluga, 2001; Wilson et al., 1996; Rauthmann, 2011), while on the other hand they are socially unaccepted (Falbo, 1977) and were judged negatively (Wilson et al., 1996; Rauthmann, 2011). This dualistic view of Machiavellians aligns with the notion that Machiavellians have negative views of people in general, which may feed into hostility (Christie & Geis, 1970). However, given that Machiavellians are willing to achieve their goals at the expense of others, they may also exhibit communal and agentic qualities to get ahead and support their long-term strategies (Rauthmann & Kolar, 2013).

### **Aggression**

Narcissistic individuals may show aggression when insulted (Jones & Paulhus, 2010). This aligns with their hypersensitivity towards potential threats to their ego, which prompt narcissists to respond in a manner that is oftentimes overly defensive and aggressive (Bushman & Baumesiter, 1998). Conversely, Machiavellianism has been found to have little relation with direct aggression (Jones & Paulhus, 2009; 2010). Rather, they are careful in portraying their aggressiveness, specifically when they think that aggressive behavior can impact long term outcomes. Given that Machiavellians often leverage others to achieve their desired goals, unlike narcissists utilizing aggression as a potential immediate response, will likely reduce this long-term manipulative strategy.

### **Affective Empathy**

Among the most salient forms of empathy studied with regard to Machiavellians and narcissist includes affective empathy. This form of empathy refers to the ability to understand and experience the emotions of others (Jolliffe & Farrington, 2006). It was found that Machiavellianism was related with a low level of affective empathy, whereas narcissists were not found to have any noteworthy relationship with affective empathy (Jonason & Krause, 2013). The exploitativeness and entitlement aspects of narcissism in particular tend to coincide with less affective empathy and social desirability (Watson, Grisham, Trotter, & Biderman, 1984; Watson & Morris, 1991).

Machiavellians are often found to have a negative relationship with empathy, likely due to empathy being potentially detrimental to achieving their goals, since Machiavellians prefer to achieve their goals at the expense of others (Andrew, Cooke, & Muncer, 2007; Rauthmann & Kolar, 2013).

### **Relationship**

When it comes to engaging in relationships, many researchers have found that both narcissists and Machiavellians demonstrate a preference for short-term relationships (Jonason, Li, Webster, & Schmitt, 2009; Jonason, Valentine, Li, & Harbeson, 2011). However, more recent literature suggests that there are differences with regard to how narcissists and Machiavellians treat both short-term and long-term relationships (Forster, Ozelsel, & Epstude, 2010). Jonason, Luévano, and Adams (2012) found evidence that narcissists are linked to short-term relationships, whereas Machiavellians are not strongly associated with a particular relationship style (Jonason, Luévano & Adams, 2012). This supports the findings associated with how narcissists are perceived by others, such that they are liked by others during initial interactions, but due to their inevitable antisocial behaviors, these relationships are generally short-term (Back et al., 2010; Oltmanns et al., 2004; Rauthmann, 2011). Also in line with the literature pertaining to Machiavellianism and perceptions of others, relationships can be long-term but generally only when such an extended relationship benefits a long-term strategy for the Machiavellian (Rauthmann & Kolar, 2013). In the circumstance in which a Machiavellian determines a relationship provides little value to their goals, it is reasonable to assume that the Machiavellian would then place little effort into maintaining such relationships.

### **Job Performance**

O'Boyle et al. (2012) conducted a meta-analysis comparing the personalities of narcissism and Machiavellianism in terms of which personality is associated with reduction in quality of job performance via the lens of Social Exchange Theory. They found that Machiavellianism personality demonstrated an

inconsistent decline in job performance with an increase in counterproductive work behaviors. This finding likely stems from Machiavellian focus on achieving success via political manipulation, as opposed to direct attention to their work, something organizations are eventually prone to identify (Molm, 2010). In the case of narcissism, there was no significant relationship identified for narcissism and workplace performance, though they were linked with substantially higher levels of counterproductive work behaviors. These performance findings are likely due to the mixed nature of narcissism, as these individuals self-promote which could lead to short-term success, but their actual performance has been mixed in previous literature due to the context-specific nature of this relationship (Hogan and Kaiser, 2005; Campbell, Hoffman, Campbell, & Marchisio, 2011; Penney & Spector, 2002). In regards to salesperson's performance, Machiavellian salespeople are more productive, but at the same time, receive lower managerial ratings (Ricks & Fraedrich, 1999) whereas narcissistic salespeople are not as concerned with performance, but showed positive associations with sales satisfaction and level of comfort with ethically questionable sales behaviors (Soyer et al. 1999).

### **Impulsivity**

Relevant literature portrays the role of impulsivity as being mixed with regard to its desirability. Specifically, impulsivity has been linked with having positive aspects, such as fast information processing and spontaneity (Dickman & Meyer, 1988; Vigil-Colet & Morales-Vives, 2005), as well as negative outcomes, such as personality disorders and drug use (Barratt, Stanford, Kent, & Felthous, 1997; DeWit, 2009). When narcissists and Machiavellians were compared on impulsive behavior, it was found that narcissists were associated with impulsivity whereas Machiavellians were not (Jones & Paulhus, 2011).

Other than the criteria mentioned above on which Machiavellians and narcissists differ, there are many other behavioral differences which have been studied between these personalities. So much so that Paulhus and Williams (2002) mentioned in their article that

these two personalities are overlapping but distinct constructs. Although many such aspects wherein Machiavellians differ from narcissists have been studied, there are certain aspects on which research is yet to be done, including social desirability.

### **Social Desirability**

Social desirability in the literature has been defined as a "need for social approval and acceptance and the belief that this can be attained by means of culturally acceptable and appropriate behavior" (Crowne & Marlowe, 1964, p. 109). Social desirability is known for showing traits of two components – impression management ("purposeful presentation of self to fit into a situation or please an audience") and self-deception ("motivation to maintain a positive self-concept") (Latkin et al., 2017, p. 134). The impression management component is a stable characteristic of social desirability, which constantly needs social approval resulting in socially desirable misreporting (DeMaio 1984). This is due to their motivation to have a positive image and a need for strong approval. The self-deception component is known to be an item characteristic of social desirability, wherein the subject is aware of certain activities or attitudes being socially undesirable, but they view it to be positively biased. In other words, this component of social desirability is strongly influenced by characteristics of a specific item (Groves 1989). Thus, the authors posit that those high on the social desirability scale would be seen as engaging in defensive or self-protecting behaviors (Crowne & Marlow, 1964). This nature of socially desirable personality is viewed as troublesome in multiple situations to themselves and to the community, due to their intrinsic characteristic of underreporting socially undesirable behavior and over-reporting socially desirable behavior (Krumpal, 2013). Thus, it becomes crucial to identify the personalities that show the traits of social desirability. Table 4 provides a brief literature review on relevant past research performed on social desirability.

In the extant literature, there have been mixed results with regard to social desirability's ties to Machiavellianism and narcissism. Triki et al. (2017) found that Machiavellians were more

**TABLE 4:**  
**Major Findings from Previous Social Desirability Research**

Article	IV	Moderator/ Mediator	DV	Finding
Adams et al. (2005)	Social Desirability Social Approval		Self-reported Physical Activity	Social desirability and social approval influence self-reported physical activity selectively
Burton (1999)	Gender Machiavellian orientation, Social desirability		respondent's orientation toward corporate social responsibility	Social desirability does not have a significant impact on the CSR orientation of respondents
Davis, Thake and Vilhena (2010)	social desirability bias		self-reported consumption, hazardous use, and harms	Social Desirability bias under-estimates the use of harmful or hazardous self-consumption
Dalton and Ortegren (2011)	Gender	Social Desirability	Ethical Decision Making	Social desirability attenuates the effect of gender on ethical decision making
Chung and Moroe (2003)	Social Desirability bias	Religiousness Gender	ethical decision-making	High ethical decision-making results in high social bias. Religious women had the highest bias compared to any other interaction
Dunn and Shome (2009)	cross-cultural differences between Chinese and Canadian business students	social desirability bias	assessment of the ethicality of various business behaviors	Canadians have higher social desirability bias compared to Chinese.
Hult, Keillor and Lafferty (1999)	Validating CETSCALE	Gender and Culture	Social Desirability Bias	Higher social desirability bias was exhibited by U.S. subjects compared to those in Japan and Sweden
Kluemper (2008)	Trait Emotional Intelligence	social desirability and core-self evaluations	coping, stress, and life satisfaction	the incremental validity coefficients between trait EI and the three criteria is reduced in the presence of core-self evaluations and social desirability
Herbert et al. (1995)	Self-report of dietary intake	social desirability or social approval	risk Estimates in epidemiological studies.	Self-report of dietary intake reduced in the presence of social desirability bias
Joinson (1999)	self-consciousness, social anxiety, self-esteem, and social desirability	Anonymity Media	Reported Score by Survey Takers	Participants reported low survey scores when they were asked to take anonymous surveys and when Internet was used as medium compared to paper

likely to present themselves in the best possible way, leading to a positive correlation between social desirability and Machiavellianism. In Kajzer et al. (2014) and Mudrack (1993), the opposite result, a negative correlation, was found in their research.

The same scenario occurs when observing social desirability and narcissism. Raskin, Novacek, and Hogan (1991) found no association between narcissism and social desirability, while Sedikides et al. (2004) found that narcissism was independent of social

desirability, and Campbell et al. (2000) found that narcissists tend to self-enhance and have socially desirable responses. Adding to the mixed findings, previous literature has suggested that narcissists are sensitive to threats to their inflated sense of self (which engaging in socially desirable behaviors may mitigate), but also prone to impulsive behaviors which may result in them lashing out to such threats in manner that is less socially desirable (Byrne & O'Brien, 2014; Bushman & Baumeister, 1998; Jones & Paulhus, 2011).

Depending on their independent depositions, it is possible that a narcissist would be prone to a “Group Think” (Janis, 1972) phenomena within a focus group context if their views were not in alignment with those of others in a manner that could invite criticism and corresponding challenges to their ego (in the case of the narcissist) or mitigate goal achievement via group buy-in (in the case of Machiavellians). While due to differing reasons, such circumstances could ultimately prevent either a narcissist or Machiavellian from expressing their genuine thoughts (Albrecht, Johnson, & Walther, 1993; Carey, 1995; Hollander, 2004).

Social desirability has been studied from different perspectives of marketing, as well. For example, consumers with higher social desirability chose apples labeled as “local” more than apples labeled as “organic” (Costanigro et al., 2011). Further, another research found that women are more loyal towards companies compared to men, due to social desirability bias (Melnik et al., 2009). In a special issue on social desirability, Fisher (2000) mentions its importance and calls for discipline’s collective ability to work on this variable. Further, when it comes to more familiar brands, the question why they are sold more than unfamiliar brands, boiled down to social desirability being the most powerful mechanism, which explained the familiarity-like phenomenon (Rindfleisch & Inman, 1998). Thus, social desirability takes a front seat when it comes to certain purchase decisions made by consumers, increasing the importance for further research.

While the aforementioned studies have observed narcissism, Machiavellianism, and social desirability in different forms, they have never been utilized in the same study. With that, we are proposing that the explanation could lie in the combination of these constructs, and as such, we address the following hypotheses based on the narcissistic and Machiavellian nature:

- H<sub>1a</sub>:** There is a positive relationship between Machiavellianism and social desirability.
- H<sub>1b</sub>:** There is a positive relationship between narcissism and social desirability.

## Self-Control

Self-control is the ability to thwart impetuous feelings that can inhibit an individual’s resolve (Metcalfe & Mischel, 1999). Extant literature would also note that self-control “is a stable personality trait associated with the capacity to resist temptation, maintain self-discipline, and break harmful habits” (Limerick and Peltier, 2014, pg. 149). Through this monitoring and resistance of feelings and inhibition of actions, those with higher levels of self-control will be better able to regulate emotions and resist behaviors (Baumeister, 2002; Baumeister et al., 2012). The concept of self-control has been examined in the context of narcissism, and to a lesser extent, Machiavellianism as well. Self-control appears to facilitate the delayed gratification that is associated with long-term goals and projects, whereas a lack or limited self-control facilitates shorter-term and opportunistic gratification (Jonason & Tost, 2010).

Many marketing studies have kept self-control as the central piece of their research. For example, Haws et al. (2016) explained how consumer research has frequently connected spending decisions to self-control. Self-control has also been observed in the consumer eating behaviors frequently (e.g., May & Irmak, 2014). More so, one study concluded that self-controlling consumers pay for video rentals on a per unit basis compared to packages, intending to make it costlier and thus, in a way, controlling for their intentions to watch such videos (Wertenbroch, 1998). Past self-control research has always emphasized on how “purchase of vices generates regret” and that it is beneficial to consumers to choose virtue over vice (Keinan & Kivetz, 2008). Haws et al. (2016) concluded that self-control is one of the most influential variables in consumer decision-making and suggest that this variable should be further intervened for marketing related research.

Most of the marketing research related to these constructs has been summarized in Table 5.

Similar to social desirability, there have been mixed results in the extant literature pertaining to self-control and the concepts of narcissism and Machiavellianism. For example, in a two-



**TABLE 5:**  
**Major Findings of Variables in the Field of Marketing**

Article	IV	Moderator/ Mediator	DV	Finding
Dugan et al. (2019)	Internet Marketing	Machiavellianism	Sales performance	Internet marketing has positive effect on sales performance but Machiavellian characteristic weakens this relation.
Chaudari et al. (2017)	Machiavellian consumers	Rational and emotional Response	Willingness to buy	Person and store characteristics impact the willingness to pay at stores mediated by rational and emotional responses
Kang and Park (2016)	Luxurious brand	Narcissistic consumer	Buying behavior	Narcissistic consumers purchase more luxurious brands which enhance their self-image
Fastoso et al. (2018)	Narcissism	Self-congruity	Counterfeit proneness	Narcissists prone to consuming high-prestige products and are thus attractive targets for luxury brands
Naderi and Paswan (2016)	Narcissism		Store image Product price	“narcissistic consumers ascribe more importance to store image than to product price, whereas price is more critical in non-narcissists' decision making”
Costanigro et al. (2011)	Local versus Organic apples	Social Desirability	Willingness to pay	Local apples were sold more than organic apples due to the presence of social desirability bias
Melynk et al. (2012)	Gender	Visibility of status and social desirability	Loyalty towards brands	men respond more positively than women to loyalty programs that emphasize status, but only when their higher status is highly visible to others
Haws et al. (2016)	Healthy eating	Self-control	Responsible spending	“self-control is an important and influential individual difference that affects a wide variety of consumer decisions and behaviors”
Bossuyt et al. (2017)	Impulse purchases		Trait of Machiavellianism	There is a dark side to impulse buying for retailers.
Janssen et al. (2016)	Brand disclosure effect	Self-control	persuasion	Self-control plays a crucial role in the effects of brand placement disclosures

part study Jonason and Tost (2010) found Machiavellianism to be negatively linked to self-control in one of their two studies, and found no evidence for a significant relationship with narcissism in either study. It is noted by the authors that this discrepancy is something that deserves attention in future research. In contrast, studies have demonstrated a clear negative link between narcissism and self-control (Harrison, 2010; Vaughn, DeLisi, Beaver, Wright, & Howard, 2007). Due to the mixed literature and call for further exploration of this issue, based on the nature of narcissistic and Machiavellian personalities discussed, we propose the following hypotheses:

**H<sub>2a</sub>:** Self-control will weaken the relationship between Machiavellianism and social-desirability.

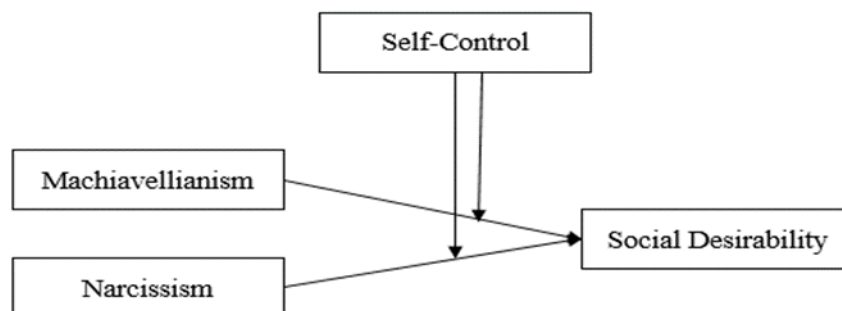
**H<sub>2b</sub>:** Self-control will weaken the relationship between narcissism and social-desirability.

Figure 1 explains the conceptual framework for the article.

## METHODOLOGY

A sample of 741 respondents was recruited using Amazon's Mechanical Turk. Amazon's Mechanical Turk (MTurk) was used as a

**FIGURE 1:  
Conceptual Framework**



platform for our study because MTurkers are considered more heedful to the stipulations, as compared to the student population. A study by Hauser and Schwarz (2016) showed that MTurk participants perform better with attention checks than a pool of college students. Based on this, the survey presented to the respondents was adequate after careful considerations of the strengths and weaknesses of the platform (Hulland & Miller, 2018). The concepts that were presented in the manuscript are not specific to a particular subset of the population, and therefore, warranted greater participant diversity (Goodman & Paolacci, 2017). In addition, when the data were collected, there were several attention checks that allowed for the prior removal of inattentive MTurk workers (Kees et al., 2017; Pass et al., 2018). As Buhrmester, Kwang, and Gosling (2011) suggest, compared to student sample, MTurk samples are far more varied, and the data obtained from MTurk participants can be compared to reliability of data obtained using other collection methods in certain tasks amenable to online data collection (Buhrmester, Kwang, & Gosling, 2011).

The average age of the respondents was 31 years, wherein individuals ranged from 18 to 72 years old. About half (50.7%) of the respondents were male.

The Trimmed Machiavellianism (Rauthmann, 2013) scale was used in this study, which is comprised of five items, including “Anyone

who completely trusts anyone is asking for trouble” and “Most people are basically good and kind” (Reverse Coded). The Trimmed Mach scale was chosen due to it not being as broad as the MACH-IV and is “indicative of a cynical view of people in general” (Rauthmann, 2013. p. 395). In the investigation of the Trimmed Mach scale, the scale was found to have comparable construct and criterion validity to that of the more common MACH-IV scale (Rauthmann, 2013).

The most dominant measure of narcissism by far is the Narcissistic Personality Inventory (NPI) developed by Raskin and Terry (1998). The full 40-item scale of this measure assesses aspects such as superiority, self-sufficiency, authority, vanity, exploitativeness, entitlement and exhibitionism (Muris et al., 2017). Several variations of this measure have subsequently been introduced, with the most notable feature among them being a reduced number of items that assess the several aspects of the measure. Among these measures is the NPI-16, which has demonstrated notable validity evidence, including predictive, internal, discriminant, and face (Ames, Rose, & Anderson, 2006). Narcissism is comprised of 16 dichotomous questions, such as “I am an extraordinary person” or “I am much like everybody else.”

Social desirability was measured using the Fischer and Fick (1993) Form XI -10item scale that includes items, such as “I am always courteous, even to people who are

disagreeable” and “I can remember ‘playing sick’ to get out of something” (reverse coded).

Self-control was measured using 13-item Self-Control Scale by Tangney, Baumeister, and Boone (2004). They indicated how much they agreed (1 = not at all, 5 = very much) with statements like, “I refuse things that are bad for me,” “I am good at resisting temptation,” and “I do certain things that are bad for me, if they are fun.” (reverse-coded). The items were then averaged to create the value of self-control. In their meta-analysis of self-control, de Ridder et al. (2012) noted that the scale has been shown to have “reliability (Cronbach’s  $\alpha = 0.89$ ) and good test–retest reliability ( $r = 0.89$  over 3 weeks)” (pg. 80).

Table 6 shows all the correlations between the variables, along with descriptive statistics.

**ANALYSES AND RESULTS**

**Machiavellianism**

Results from PROCESS Model 1 (Hayes, 2013) indicate a significant main effect of Machiavellianism on Social Desirability ( $t=2.75$ ,  $SE=0.11$ ,  $p<0.01$ ), suggesting that those higher on the Machiavellian scale had higher social desirability scores in support of Hypothesis H1a. There was also a significant main effect of self-control on social-desirability ( $t=7.30$ ,  $SE=0.13$ ,  $p<0.01$ ), suggesting that as self-control increased, so did social desirability. These results are demonstrated in detail in Table 7.

Results also revealed a significant and negative Machiavellianism and self-control interaction ( $t=-4.36$ ,  $SE=0.31$ ,  $p<0.01$ ) on social desirability in support of Hypothesis H2a, or in

**TABLE 6:**  
**Correlations (Reliabilities Presented on the Diagonal)**

	Mean	SD	Machiavellian	Narcissism	Social Desirability	Self-Control
Machiavellian	3.82	1.16	<b>0.72</b>			
Narcissism	0.37	0.27	0.42**	<b>0.86</b>		
Social Desirability	4.21	0.82	-0.31**	-0.19**	<b>0.67</b>	
Self-Control	3.28	0.69	-0.25**	-0.25**	0.39**	<b>0.85</b>

\*\* Correlation is significant at the 0.01 level (2-tailed).

**TABLE 7:**  
**Direct and Moderation Effects of Self-control on Social Desirability and Machiavellianism/narcissism Relationship**

	$\beta$	se	t	p	LLCI	ULCI
<b>Intercept</b>	1.77	0.44	4.01	0.00	0.90	2.64
<b>Self-Control</b>	0.91	0.13	7.30	0.00	0.67	1.16
<b>Machiavellianism – H<sub>1a</sub></b>	0.30	0.11	2.75	0.01	0.08	0.51
<b>Interaction – H<sub>2a</sub></b>	-0.14	0.03	-4.36	0.00	-0.20	-0.08
	$\beta$	se	t	p	LLCI	ULCI
<b>Intercept</b>	2.39	0.24	10.16	0.00	1.93	2.86
<b>Self-Control</b>	0.58	0.07	8.73	0.00	0.45	0.72
<b>Narcissism – H<sub>1b</sub></b>	1.17	0.53	2.22	0.03	0.14	2.20
<b>Interaction – H<sub>2b</sub></b>	-0.45	0.16	-2.87	0.00	-0.76	-0.14

other words, self-control weakening the Machiavellianism to social desirability relationship. We conducted a follow-up Johnson-Neyman floodlight analysis, which indicated that this effect was positive and significant for self-control at  $\leq 1.10$ , as well as negative and significant at  $\geq 2.65$ . The graph of the interaction is presented in Figure 2.

**Narcissism**

Results from PROCESS Model 1 (Hayes, 2013) indicate a significant main effect of narcissism on Social Desirability ( $t=2.22$ ,  $SE=0.53$ ,  $p<0.05$ ), suggesting that those higher on the narcissism scale had higher social desirability scores, supporting Hypothesis H1b. In this model, there was also a significant main effect of self-control ( $t=8.73$ ,  $SE=0.07$ ,  $p<0.01$ ), suggesting that as self-control increased, so too did social desirability.

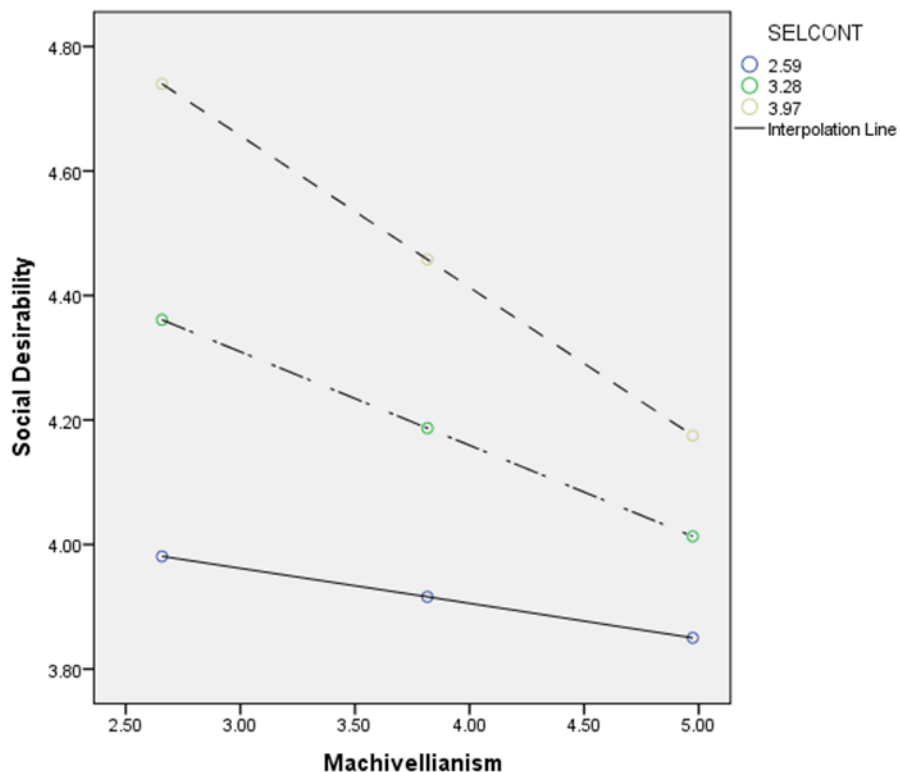
Results also revealed a significant and negative narcissism and self-control interaction ( $t=-2.87$ ,

$SE=0.16$ ,  $p<0.01$ ) on social desirability supporting Hypothesis H2b, which suggests that self-control weakens the narcissism to social desirability relationship. We conducted a follow-up Johnson-Neyman floodlight analysis, which indicated that this effect was negative and significant for self-control at  $\geq 3.01$ . Figure 3 displays the visual interaction of self-control and narcissism on social-desirability.

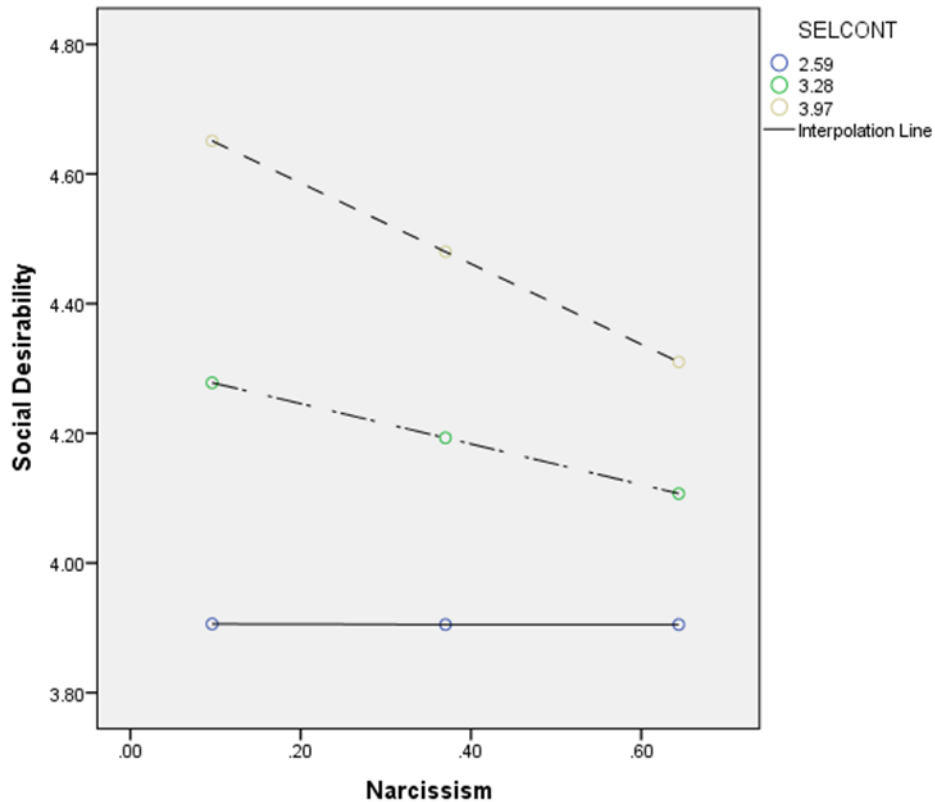
**DISCUSSION**

As much of the literature concerning the linkage between narcissism and Machiavellianism as it pertains to social desirability remains mixed, this study’s results provide dedicated, additional, and valuable empirical information in this domain in favor of the literature that suggests both Machiavellians and narcissists can engage in social desirability, if it can be strategically valuable to each personality trait (for differing reasons). Specifically, the results of this study support some previous literature, yet contrast with others (Campbell et al., 2000; Kajzer et al.,

**FIGURE 2:**  
Interaction of Self-control and Machiavellianism and Impact on Social Desirability



**FIGURE 3:**  
**Interaction of Self-control and Narcissism and impact on Social Desirability**



2014; Mudrack, 1993; Raskin et al., 1991; Triki et al., 2017).

With regard to Machiavellianism, our study found that there is indeed a positive and significant relationship between Machiavellianism and the relevant construct of social desirability. These results are in agreement with Triki et al. (2017), who found that Machiavellianism is positively linked to behaviors that are often linked with social desirability (e.g., engaging in culturally acceptable behaviors).

We posit that these results are intuitive and justified not only by previous literature, but also based on the definition of Machiavellianism. Machiavellians are primarily focused with positioning themselves to reach an optimal outcome that benefits them (Calhoun, 1969; Christie & Geis, 1970; Jones & Paulhus, 2009; Wilson et al., 1996). The results of this study coincide with this definition, such that it may very well be in a Machiavellian individual’s

best interest to concern themselves with social desirability, as this introduces a potential advantage for their objectives. This positive linkage between social desirability and narcissism was also found to be particularly salient among individuals that are especially high in Machiavellianism.

We posit that this result also is in line with previous literature and the definitions of both Machiavellianism and narcissism, such that an individual that is primarily concerned with their own objectives while simultaneously having an inflated sense of ego is even more likely to pay regard to others’ social perceptions (Grijalva et al., 2015; Wilson et al., 1996). This is because these individuals that are stacking both high narcissism and Machiavellianism not only have a very high regard for themselves, but also will engage in self-benefitting behaviors without much care given towards the impact it may have on others (Jones & Paulhus, 2009; Muris et al., 2017).

In similar fashion to individuals high in Machiavellianism, the results of this study found that narcissistic individuals also seem to demonstrate a significant and positive relationship with social desirability. These results are not surprising, as the limited relevant literature also found similar linkages between narcissism and behaviors that are often linked to social desirability (Campbell et al., 2000; Fukunishi, Hattori, Nakamura, & Nakagawa, 1995; Watson & Morris, 1991).

Much of the literature available on both narcissism and Machiavellianism seems to suggest a common theme, such that both traits are comprised of characteristics that are not socially desirable and questionable with regard to their ethics (Christie & Geis, 1970, Bushman & Baumesiter, 1998; Calhoun, 1969; Jones & Palhaus, 2009; Muris et al., 2017, O'Boyle, Forsyth, Banks, & McDaniel, 2012). While such a theme may in fact be true, our findings suggest that both narcissists and Machiavellians might very well engage in actions that are counter to their stereotypical behaviors. By demonstrating behavior that is socially desirable, individuals that exhibit these traits may very well leverage this façade to their benefit. For example, narcissists who are sensitive to threats to their ego (Bushman & Baumesiter, 1998), may demonstrate socially desirable behavior in a focus group context to avoid any negative feelings associated with disagreement by others in the case where their suggestions do not align with others. Machiavellians may also engage in socially desirable behaviors if they believe that this manipulation will benefit them with regard to ultimately achieving their goals (Wilson et al., 1996). For example, in the same marketing focus group context, Machiavellians may exhibit socially desirable behaviors, such as agreeableness, as a means of increasing their charisma with the group, with an ultimate goal of leveraging this charisma as a means to get the group to buy into their preferred response to the questions asked during a focus group.

As it pertains to self-control, our studies coincide with previous literature, such that both Machiavellians and narcissists demonstrate a negative relationship with this construct (Bushman & Baumesiter, 1998; Jonason & Tost, 2010). However, we posit that a lack of

self-control may not necessarily be detrimental to either personality trait, albeit for varying reasons. Referring back to the focus group context, if a narcissist's ego is beginning to feel threatened by others in the group, they could actually purposely display a loss of self-control as a strategic means to exhibit power via its association with the concepts of autonomy and freedom (Hart, Richardson, Tortoriello, & Tullett, 2017).

### MANAGERIAL MARKETING IMPLICATIONS

The results of this study have very important managerial implications, specifically from a marketing point of view. As mentioned in previous research, understanding consumer personality traits helps advance customer relationship management practices (Liu et al., 2015). Every consumer has a personality and every personality consumes differently. It is important to know how they possibly intend to behave, and in the marketing world it is important to predict such behaviors, as advertising is exponentially becoming target-based. This paper shows us how both Machiavellians and narcissists crave for social desirability; thus, designing the advertisements and promotions to these personalities in a socially desirable manner may attract their attention more to such ads, as mentioned in the literature how target-specific ads can be strategically formulated (Lu et al., 2015).

Secondly, sales literature has mentioned the dilemma of selling to friends and how social desirability bias there can harm their performance due to the two roles they have to take while selling to friends (Beeler et al., 2019). Since direct selling is the new trend and salespeople are being encouraged to sell to friends, their social desirability bias puts them to test. As the study demonstrates, self-control does weaken the bond between certain personalities and social desirability. Since narcissistic and Machiavellian salespeople are known to have detrimental effects on customer relationships (Smith, 2017), training them on improving their appetite for self-control will also improve their social desirability bias, further reducing the stress and thus improving sales performance.

Third, the upper echelon leaders are also considered to have various personality traits that eventually trickle down to the overall firm performance, as well as various marketing outcomes (Kashmiri et al., 2019). Another study reports that narcissistic CEOs are usually a huge problem for their firms (O'Reilly et al., 2018). To reduce the overall negative impact of narcissistic CEOs on the firm performance, the board of directors can take the route of understanding their social desirability bias and how that can be put to use towards the betterment of the firm, thus benefiting the firm and the marketing outcomes.

Fourth, we learn that social desirability is highly found among the Machiavellian and narcissistic consumers. This can be of great advantage to the local communities struggling in the nation to market their products. For example, a great way of marketing would include portraying how buying their products would make the consumers socially desirable, thus making them a part of their community. This strategic marketing would not only help consumers want to buy more of local products, but at the same time help the local communities to thrive and profit from their socially desirable message. Although narcissists and Machiavellians are biased towards such messages based on our results, future research should also look into various other personalities, and if this holds true on other grounds as well, social desirability could possibly be the central message of such promotions, where the local communities can benefit from the best possible outcomes.

Lastly, one important criterion where the firms are turning their marketing focus to giving back to the society. All the firms have adopted socially responsible marketing and CSR has become more vital than ever for firms to be a part of. However, how to make that message reachable and acceptable is an important question. One way of doing that is utilizing social desirability to their benefit and creating the environment of social importance, thus increasing the impact and reach.

### CONCLUSION

There has been an ongoing debate in the literature whether there is a significant

difference between narcissists and Machiavellians, or whether they are interrelated concepts (e.g., Kerig & Stellwagen, 2010). Some have even argued them to be distinct, yet intertwining concepts (Stellwagen, 2011). We try to contribute towards this debate by showing that these two traits do not necessarily always differ, and that there are some ways in which they are similar, such as in the case of social desirability. Further, we also provide evidence that these two traits try to manage themselves in a similar pattern (i.e., by having more self-control) in this study. Keeping these findings in mind, we encourage future research to consider the similarity between narcissism and Machiavellianism as a robustness check and to highlight any salient differences, if applicable.

This study helps to advance two bodies of research. First, we examine and compare the two seemingly overlapping personalities. This assessment of comparison should prove useful not only for psychologists studying these constructs, but also for marketers, economists, and other relevant fields that engage in human interactions in which narcissistic and Machiavellian behaviors are usually present. We found significance in multiple categories which involve narcissistic and Machiavellian personalities. First, social desirability and its relationship with narcissists and Machiavellians has been highly debated in literature (Triki et al., 2017; Kajzer et al., 2014; Mudrack, 1993; Raskin et al., 1991). While some believe it to be positive, others suggest that the behavior is negative, and a third party suggests that there is no significant relationship, in general. We found social desirability to be positively related to Machiavellianism, as well as narcissism, thus providing further guidance to researchers and practitioners that may be seeking an objective solution. The present results are also notable, given the importance and debate on agreeableness/antagonism to understanding the Machiavellian and narcissistic behaviors (Muris et al., 2017; Miller et al., 2010). Specifically, our results suggest that it would be beneficial for both researchers and practitioners to assess these traits, while acknowledging the impact of social desirability as one of the possible predictors of these personality traits.

### LIMITATIONS AND FUTURE DIRECTIONS

Previous work has debated about narcissism, Machiavellianism, and their behaviors that are linked with social desirability (Campbell et al., 2000; Kajzer et al., 2014; Mudrack, 1993; Raskin et al., 1991; Triki et al., 2017). The current study has delved into this debate and found the relation these constructs share with each other, in a relatively straightforward and efficient manner. By comparing these relationships, the study has provided some insight into the historically intriguing yet mixed results. We hope that these results will further help the psychologists and marketers, researchers and practitioners alike to explain these traits and their idiosyncratic differences. One variation that would be worthwhile for future research to explore would be to examine whether there is an amplifying effect of narcissism on Machiavellianism and vice versa; as in the present studies, these two constructs were treated as independent.

According to Patsiaouras, Fitchet, and Davies (2016), in the past decade, there has been an increase in tying up marketing with psychology, with many researchers looking at the impact of psychology on consumer behavior, along with marketing (Fullerton, 2007; Schwarzkopf & Gries, 2010; Tadjewski, 2006). This study further enhances the path of connecting marketing with psychology, specifically personalities – Machiavellian and narcissistic, thus helping marketers to differentiate between the two overlapping but not so similar personalities.

One limitation of this study is the self-reporting nature of the survey, as its accuracy has been questioned due to the criterion problem (John & Robins, 1994). Due to this limitation, there is always a possibility of the results being biased. Thus, future research should investigate these differences of Machiavellians and narcissists further to confirm the outcomes by performing lab-based studies or gathering real world data. Future research should also consider replicating this study by collecting data in alternate ways, like pen and paper or surveys shared in community, to further generalize the results confidently.

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