

# Mapping the Online Gambling e-Servicescape: A Conceptual Model

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## Abstract

A conceptual model is proposed that examines the potential influence of an online casino's atmospheric cues and functional qualities on consumer behavioral response. A stimulus-organism-response (S-O-R) model, often used to frame other servicescape research, is adapted as the basis of the theory that the online casino environment will influence the organismic effects of cognitive and affective states, which in turn influence gamblers' approach or avoidance behavioral intentions. Theorized elements of the virtual stimulus include high and low task-relevant cues, financial trust, and gambling value. Personal and situational factors, as well as demographic characteristics, are proposed to moderate the relationship between the servicescape and organismic responses. Propositions and research implications are presented.

*Keywords:* online casino, gambling, iGaming, atmospherics, servicescape, theoretical model

## Introduction

Since online gambling first arrived in 1995<sup>1</sup>, it has grown exponentially as a leisure activity around the world. Just as the Internet has permeated the lives of so many in the past decade and a half, Internet gambling has likewise grown. From just 15 online gambling sites in 1996, there are now approximately 2,650 online gambling sites in existence, generating an estimated \$30 billion worldwide, a number that continues to grow exponentially (H2 Gambling Capital & Odobo, 2013; Stewart, 2011). Online gambling is now available remotely through the Internet, interactive television, and Internet-capable mobile phones - it is quite literally in the palm of one's hand. It is no surprise, then, that the Internet has become the subject of attention as the future of gambling media. Operators view this online platform as an advantageous way of conducting business, while gamblers, too, consider online casinos to be an attractive option. Gambling online allows for consumption from one's own home, a temporal and spatial convenience. The online medium also allows for both value (quick price comparison on sports betting odds, poker rake, blackjack payouts, etc.) and hedonic consumption possibilities (Eroglu, Machleit, & Davis, 2001). As the economy has suffered, consumers' interest in leisure spend has declined, so operators' ability to attract consumers without the need for travel expenses has become a distinct advantage.

Despite this, there is a distinct lack of research focusing on the user experience within the e-servicescape of online gambling websites. It is worthwhile, therefore, to assess the value of the online gambling environment in determining gamblers' satisfaction. This conceptual paper contributes to the extant literature by theorizing the influences of online casino components on customer satisfaction and behavioral intention. Much research has been conducted on the economics and policy-making surrounding the

<sup>1</sup> The first instance of a wager being placed over the Internet occurred with the online sale of lottery tickets in Liechtenstein (Romney, 1995).

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online gambling market (e.g., Abarbanel, 2012; Fiedler & Wilcke, 2012; Philander, 2011) and on social impacts of online gambling (e.g., Braverman & Schaffer, 2010; Dragicevic, Togas, & Kudic, 2011; Griffiths, Wood, & Parke, 2009). These studies do not, however, extend to measure the gambler's satisfaction with an online gambling environment.

Several theories have been advanced regarding the role of a physical environment, or servicescape, in psychological and behavioral consumption outcomes (Bitner, 1992; Mehrabian & Russell, 1974; Wakefield & Blodgett, 1996) and others have extended these theories to the physical servicescape of casinos (Lucas, 2003; Lam, Chan, Fong, & Lo, 2011). There also exist theories for atmospheric qualities of online retail and service environments (Eroglu et al., 2001; Harris & Goode, 2010; Williams & Dargel, 2004). No theory, however, has yet been developed to explore the online gambling e-servicescape.

An online casino interaction provides a more extreme example of psychological feedback than other e-servicescape interactions. When a person orders a football online, for example, the servicescape they encounter deals with the steps necessary to place the order. Once the order is placed, the interaction with the servicescape ends and there is a delay while the football is shipped to their door at which point the consumer can assess their satisfaction with the product. When purchasing a song on iTunes, as an example of an electronic product, there is a much shorter delay while the song downloads before consumption can occur. With online gambling, however, the process is a continuous purchase and consumption activity. A player makes their deposit into their gambling site account, and they select an amount to withdraw from that account with which to "sit" at a game. The purchase process itself is the consumption of the gambling "product," a process that repeats itself with each wager. Consequently, the stimuli that impact organismic responses and behavioral intentions require consideration of not only the interface to deposit funds and get to the gambling activity, but also the activity itself.

A similar setting exists with video and social online games, which can include some games with a pay-as-you-play format. In video gaming, however, the player experiences segments of the purchased game before buying additional segments, while in gambling the purchase effect is immediate. Gambling is also differentiated in that it requires risking one's money on an event for which the outcome is uncertain – a risk that could result in reward. In video gaming, this risk/reward construct does not exist, the player is simply paying for the entertainment value of the video game. Consider Zynga's Farmville and Zynga Poker products; Farmville is a video game with pay-as-you-play aspects, while Zynga Poker involves gambling with play money chips. With Farmville, players can use real money to purchase Farm Cash, with which they can conduct microtransactions to purchase in-game special items that appear in their interface. Similarly in Zynga Poker, players can gain free play chips at regular intervals, but if they run out they can use real money to purchase play chips. If those chips are lost, the player must either purchase more chips or wait until free chips are available. This provides a situation like an online gambling slot machine; this game, however, takes money in but never pays any out. In real money online gambling, the difference is that consumers are placing real money wagers, with monetary rewards that can be cashed out for their face value. The gambling setting is a unique case in which to consider a consumer's interaction with the e-servicescape, and the focus of this theoretical paper is solely on real money online casino gambling.

In an online environment, atmospheric cues are limited to any visual and auditory cues that an operator can provide on the user's screen, rather than a full sensory environment that makes up a physical servicescape. The audio-visual outlet through which operators can reach customers is in many ways limited when compared to a live casino. Though live and online casinos have comparable functional qualities, the live casino is made up of a holistic atmospheric environment while an online casino's atmospheric cues

and functional qualities are restricted to a virtual interface. Just as the physical environment was found to impact consumption outcomes, and as aspects of an online environment impact shopping outcomes, atmospheric and functional qualities of an online gambling site are herein theorized to impact a gambler's revisit intentions, desire to stay at the online casino, and recommendation to others.

### **Article Objectives**

The purpose of this article is to explore the adaptation of an e-servicescape model to the online gambling environment, examining the atmospheric and functional qualities of an online casino as a real money gambling outlet. The article is a conceptual work aimed at theory advancement and model development. This paper seeks to theoretically address the following questions: How does the holistic environment of an online casino affect gamblers' cognitive and affective satisfaction? How does this, in turn, affect behavioral intentions? The answers to these questions could lead to pragmatic solutions with significant impact for the online gambling industry.

Following the Stimulus-Organism-Response (S-O-R) paradigm first put forth by Mehrabian and Russell (1974) as a theory of environmental psychology, the proposed model draws on expansions of the original model in physical and online environments to describe how the atmospherics of an online casino influence gamblers' affective and cognitive states - states that consequently affect their responses to the site. The S-O-R model posits that the atmospheric cues and functional qualities of an environment (stimulus), through a mediating effect of affective and cognitive states (organism), influence consumers' behaviors (response).

First, a synopsis of physical and virtual servicescape literature is provided. Next, an explanation of the theoretical model is presented to describe the proposed relationship between an online casino environment and gamblers' behavioral intentions. Finally, industry implications stemming from this model are discussed.

### **Delimitation**

The theoretical model proposed here is a broad overview of an online gambling servicescape. Different casino games will likely demand flexibility in the model. A blackjack player, for example, will likely differ in their interpretation of gambling value than will a bingo player. While future studies should intend to re-assign forms of this model to specific casino game types, this article does not.

## **Literature Review**

### **Virtual Environments and Game Space**

Research has been conducted broadly in the virtual environment, investigating overall human-computer interaction. Lombard and Ditton (1997) conceptualized the idea of presence, which describes a user's experience when they interact with a computer-generated environment like an online gambling site. As a medium provides stimulation to more human senses, it increases its ability to produce a sense of presence - the extent to which a mediated experience feels unmediated (Lombard & Ditton, 1997; Steuer, 1992). Lombard and Ditton (1997) identify six distinct conceptualizations of the manifestation of presence, all of which inform the potential effect of an online gambling site on a gambler:

- Social richness – stemming from Social Presence Theory (Short, Williams, & Christie, 1976) and Media Richness Theory (Rice, 1992), social richness describes the extent to which a medium socializes with the user in a sensitive, personal manner.
- Realism – describes the extent to which a medium realistically represents objects,

events, and people (e.g., cards, wagers, and dealer avatars).

- Transportation – transportation takes on three forms: the user is transported to the virtual place, the place is transported to the user, or two or more users are transported to a shared space. Online blackjack, for example, involves the first form of transportation, while online poker involves the third form.
- Immersion – immersion describes the extent to which the senses are engaged in the virtual world.
- Social actor within medium – the degree to which users will illogically ignore the artificial nature of objects in the medium during interaction.
- Medium as social actor – similar to the conceptualization of presence as a social actor within the medium, this final notion of presence describes how users treat the medium itself as a social entity.

Salen and Zimmerman (2004) focus specifically on virtual game space, an application important to online casinos. After all, the online casino offers games on which consumers gamble and standard components of successful game design are thus important to consider when examining casino game design. Salen and Zimmerman's (2004) primary emphasis is on the creation of *meaningful play*, which emerges from the interaction between the player and game, as well as the context in which the game is played. This is a more detailed description of presence for the game play application, as choices made during meaningful play have specific consequences. At the basic level of wagering, these consequences constitute a win or a loss, but there are game-specific consequences as well. In blackjack, for example, the choice to stand instead of hit (or vice versa) affects a dealer's hit card. These consequences are not specific to online gambling, but there are impacts of digital technology that affect gambler perception of the game in both negative and positive ways. In the online environment, the inner workings of the game are hidden, but the networking capabilities are greatly enhanced – of particular importance for online poker, for which improved networking means larger pools of players can be gathered. These effects of online game design and virtual space describe the foundation on which the online gambling servicescape sits.

### **The Servicescape**

The intangibility of a service product creates difficulty in measuring how well the product is delivered. Bitner's (1992) foundational work posited that the service firm's physical environment, or servicescape, had a significant impact on consumer behavior. A consumer's holistic evaluation of the servicescape's environmental dimensions tie to their cognitive, emotional, and physiological internal responses, which in turn affect their approach or avoidance behavior (such as desire to stay, spend money, and re-patronize the establishment). Wakefield and Blodgett (1996) argued that servicescape was more important to the consumer as they spent longer periods of time in the environment, and that no matter the strength of a service, a company would not be maximizing profits if they did not also provide an enjoyable physical environment.

The concept of servicescape has also been expanded to a casino context, where a relationship has been found between the elements of atmosphere and a slot player's satisfaction with their overall gambling experience (Johnson, Mayer, & Champaner, 2004; Suh & Erdem, 2009). Within a physical casino environment, ambient conditions, casino navigation, cleanliness, interior decor, and seating comfort have all been found to have a significant effect on customer satisfaction (Lucas, 2003; Lam et al., 2011). Other atmospheric aspects found to affect customer satisfaction include theme, employee uniforms, and noise level (Johnson et al., 2004), as well as employee knowledge

(Cockrill, Goode, & Emberson, 2008).

As the Internet grew more popular as a retail medium through the late 1990s and early 2000s, researchers began to apply the traditional servicescape model. Eroglu et al. (2001) adapted the theoretical S-O-R model to a retail e-space, and later empirically confirmed their new theory (Eroglu, Machleit, & Davis, 2003). Williams and Dargel (2004) converted the servicescape model to a “cyberscape,” utilizing the flow construct from motivational psychology, while Hopkins, Grove, Raymond, and LaForge (2009) confirmed that Bitner’s (1992) standard servicescape dimensions are present and influential within a virtual setting. Further research has also investigated trust dimensions (Harris & Goode, 2010), cultural influences on emotional responses to online cues (Davis, Wang, & Lindridge, 2008), and specific sound preferences (Fiore & Kelly, 2007). Davis et al. (2008) found that arousal mediates expression of pleasure for those in collectivist cultures, while arousal and pleasure are distinctly separate responses for those in individualistic cultures. Fiore and Kelly (2007) determined that sound is an effective means of overcoming the physical barriers between the consumer and the retail environment. The online gambling environment, however, is a unique setting. It encompasses the virtual environment researched in retail literature, but its product is a service with intangible components. That is, it is the online gambling experience itself that is the product sold. Because of this, the theoretical model encompasses aspects of prior models of the e-servicescape as well as stimuli specific to the gambling product.

### Description of Theoretical Model

Drawing on the extant literature and history of online gambling, a theoretical model was created to describe the unique features of an online gambling e-servicescape. Figure 1 consists of a visual representation of the proposed model for depicting the relationship between environmental cues in an online casino context and consumers’ responses. The model draws on the S-O-R paradigm, and suggests that the environmental elements of the online casino (stimulus) influence consumers’ affective and cognitive states, which lead to an influence on behavioral intentions. Personal and situational factors and demographic characteristics serve in a moderating role for the S-O relationship.

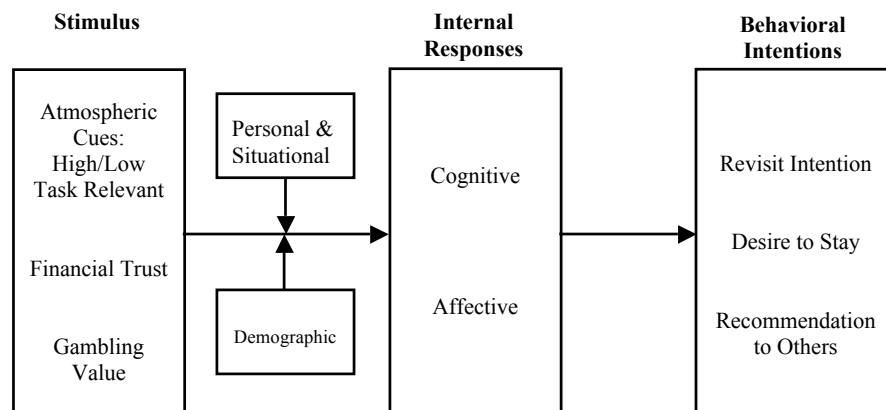


Figure 1. Conceptual model of consumer responses to online casino atmospherics

### Stimulus: Elements of Online Casino Servicescape

The stimulus in this framework is defined as the influence that arouses an individual, which affects the organism’s internal responses (Eroglu, Machleit, & Davis, 2001). In the



online casino context, the stimulus is the holistic environment comprising the relevant atmospheric cues visible and audible to the online gambler, and the functional qualities of the site, including the financial security of the casino and the consumer's perceived gambling value.

### Atmospheric Cues (High/Low Task-Relevant Cues).

The relevant atmospheric cues an online gambler experiences are quite different in the virtual environment than they would be in a brick and mortar casino. Many ambient conditions, such as temperature, air quality, and odor (as defined by Bitner, 1992), are non-transferrable to the online environment. Walther's (1992) media richness theory of lean and rich media types describes lean media as characterized by clear-cut, unambiguous information. Rich media features more emotional, vague, ornamental qualities (Walther, 1992). Eroglu et al. (2001) draws on this theory to create high and low task relevant cues for online retail shops. The conceptual model here adapts these ideas to define high task relevant cues as any visual or auditory cues that appear on the computer screen which actively facilitate and enable a player to participate in the gambling activity. Low task relevant cues, on the other hand, are defined as any information, visual or auditory, that is inconsequential to the consumer's gambling action.

Consider a gambler who visits an online casino and wishes to play blackjack. There are several individual tasks that occur prior to a blackjack hand completion. First, the player must select blackjack as their game of choice from the game options available, and open a table. A sample online casino lobby with navigation to blackjack is shown in Figure 2. They must then chose a seat at the table and add money to their balance from their online account. To play the hand, they must first place their bet. After this, the cards are dealt and based on those cards, the player must choose if they want to buy insurance, hit, stay, double down, split, or surrender. Depending on the player and/or dealer decisions, additional cards may be shown. When the hand is over, the player's win is added to, or their loss is deducted from, their monetary balance at the table. A screenshot of a sample blackjack hand is shown in Figure 3.



Figure 2. Sample online casino lobby with navigation to blackjack, bwin Casino (ElectraWorks Limited, 2012a).



Figure 3. Sample online blackjack hand, bwin Casino. (ElectraWorks Limited, 2012b).

High task-relevant cues in this situation include any content that is specifically relevant to the gambling task: the signage indicating a click-through to blackjack, the text or image indicating an available seat at the table and the value of the cards, and the navigation aids to add money from one's account to their table balance, to place a wager, and to select decisions in the hand. Ease of navigation in a physical casino environment was found to be a significant driver of servicescape satisfaction (Lam, Chan, Fong, & Lo, 2011; Lucas, 2003), and similarly, navigation through the virtual landscape is posited to be significant to online gamblers.

Low task-relevant cues in this situation describe any content not directly related to the gambling task. This includes any colors, images, or background patterns, decorative images (e.g., avatars of the dealer or players), font styles, music, sounds, white space, icons (e.g., casino chips), indicators of a secure transaction, and pop-ups alerting the player to other available games.

Though low task-relevant cues do not directly affect accomplishment of the gambling task, they can contribute toward making the online gambling experience more enjoyable. Low-task relevant cues can trigger familiarity with gambling in a brick and mortar casino of the same brand family, or provide extra confidence with an unknown casino brand. These types of cues generate a mood and brand image, with visual design concepts from print imagery and auditory concepts from live gambling settings being potentially applicable to the online environment, as well. Williams and Dargel (2004) discuss design concepts under the measurement of vividness, the way in which the environment transmits information to the senses. More vivid displays of information, like high-quality photographs, may require longer upload times for viewing, which may detract from the customer's satisfaction with the speed of their navigation through the site. The site designer must weigh the depth of information vividness within the constraints of desired upload speeds to ensure the optimal use of low task-relevant cues. Some current online gambling sites offer players the option to play high, medium, or low quality graphics depending on what their computer configuration can handle, which may suggest that speed is of more importance than image quality.

Some low task-relevant cues, like pop-up ads for other available games on the casino network, are informative and catch the gambler's attention, but they can also be a distraction for those deep in thought or those seeking to use gambling as a leisurely escape. Williams and Dargel (2004) consider interruptions like pop-up ads to be a nuisance that leads to dissatisfaction with the virtual environment. Other low-task relevant cues may

serve as a form of social network, allowing players to find friends, identify themselves to others, communicate in chat boxes, and so forth, much in the same way video game applications are able to do.

Paralleling Eroglu et al.'s (2001) postulations on atmospheric cues concerning e-servicescape in retail settings, the author proposes the following proposition:

*P1. The online gambling site's task-relevant information is associated with the consumers' internal response (level of satisfaction) to the gambling environment.*

### **Functional Qualities – Financial Trust.**

The financial trust of an online casino refers to the extent to which consumers view their financial transactions with the site as secure or safe, much like the necessity for financial trust in a brick-and-mortar casino. Unlike a retail e-servicescape, in which the consumer's financial transaction typically ends with the purchase of a product and their relationship with the company deals with the product, the gambler's relationship with an online casino is almost exclusively a financial one. The service itself that the gambler is experiencing involves the exchange of money, so consumer trust in the security of that exchange is tantamount. The gambler must also trust that their money will be available should they wish to cash out any portion of their account balance. Many online poker players, for example, were stunned to find that when the United States Department of Justice shut down Full Tilt Poker without notice, there was doubt that account balances would be paid back to their owners (Richtel, 2011).

Part of this trust also stems from the reputability and fairness of the game; the consumer must have faith that the odds innate in card and dice games and the odds stated for slot games are accurately transmitted in the online space. That is, the computer-generated game could cheat the customer by using odds more favorable to the casino, but the gambler must trust that the business operation is honest. Salen and Zimmerman (2004) recognize the automation of complex systems, and the hidden inner workings of the game when it exists in a computer-generated environment. When a player does not have access to the internal game mechanics, there is a potential of diminishing a player's experience in the game (Dunnigan, 2000; Salen & Zimmerman, 2004). Consumer trust in a gambling game may be affected by the hidden aspects of the game, exhibited differently for live and online games. In a live blackjack game, for example, the consumer must trust that the casino is providing a standard deck of cards, but they can see a tangible shoe filled with the cards in use. In an online casino, consumers cannot see the physical deck of cards and must trust that the internal blackjack algorithm is built around a standard deck of cards.

Certain aspects of secure exchange-facilitating qualities of the online servicescape have cropped up in empirical research (Harris & Goode, 2010). Ease of payment processing has been demonstrated to serve as a key dimension by which consumers evaluate websites (Chen & Chang, 2003). Several theorists have emphasized the importance of consumers' perceived security in financial transactions online (Schiffman, Sherman, & Long, 2003; Szymanski & Hise, 2000; van Iwaarden, van der Wiele, Ball, & Millen, 2002). Szymanski and Hise (2000) found the perceived security of the site (for all private information, not just financial) to be a significant driver of customer satisfaction. van Iwaarden et al. (2002) expanded Parasuraman, Zeithaml, and Berry's (1988) seminal work on SERVQUAL – a scale for assessing service quality including the concept of assurance, or ability for employees in a service setting to instill trust – to an online environment. The authors reiterate consumer concerns with the security of their financial and other personal information. Harris and Goode (2010) suggest that



consumers are more concerned with financial security issues in an online context than they normally are in an offline context.

In addition, the professionalism of the user interface may have an impact on consumer trust in the online gambling site. This concept ties to the low task-relevant atmospheric cues – a website with low-quality graphics and design may suggest an untrustworthy site to a gambler, who would not feel comfortable patronizing the site. Conversely, a high-quality site design may increase a player's confidence in the integrity of the game and the financial exchange.

Given the established importance of trust in websites' financial transactions, the author proposes:

P2. *Online gamblers' trust in financial transactions is associated with their internal response (level of satisfaction) to the gambling environment.*

### **Functional Qualities – Gambling Value.**

Consumers derive satisfaction in gambling from their perceived gambling value (Lucas, 2003). Literature on slot players demonstrates that time on device serves as a critical proxy for gambling value and customer satisfaction (Klebanow, 2006; Lucas, 2003; Lucas & Singh, 2008), reinforcing the importance of Wakefield and Blodgett's (1996) conclusions that servicescape was more important to the consumer as they spent longer periods of time in the environment. The value of time on device, or game-level playtime afforded per buy-in, is one of several components of satisfaction with a gambling servicescape.

Mayer, Johnson, Hu, and Chen (1998) theorized that gambling customers bring a unique preference to their servicescape: the perceived opportunity for a gambling win, which plays a key role in their satisfaction with their service encounter. Ultimately, many more players will lose than will win, due to the inherent objective probability in gambling activities. Gamblers' perception of this probability varies greatly, and gamblers tend to overestimate their ability to control the outcome of games through non-rational faculties (Keren & Wagenaar, 1985; Wagenaar, 1988). A customer's perceived control and possibility for a win drives involvement, or ongoing interest, in the casino's service environment. It is this involvement that may also affect a customer's excitement with the experience and therefore affect their overall satisfaction (Wakefield & Blodgett, 1996). In general, online retail literature supports the positive relationship between consumers' perception of value and satisfaction (Gupta & Kim, 2010).

Gambling value also encompasses more tangible aspects of the gambling product, such as variety of games being offered, range of stakes, and house advantages. In poker, for example, there are a number of variants gamblers enjoy playing, such as Texas Hold 'Em, Omaha, Seven Card Stud, and many more. Further, players play a wide range of stakes, from penny ante games to high stakes of thousands of dollars or more. If the gambler seeks to play a specific game for some given amount of money, but that game is not offered at the site or all the seats are filled with no new tables opening, their satisfaction will decrease (consumers' plans and purposes are discussed more in the moderators section). The house advantage in poker is a unique one, in that players are playing against one another, rather than against the house; the casino earns their money through rake, a fee charged to players based on either the pot or on time played. The rake schedule varies by casino operator, and those operators offering the most value offer the most potential customer satisfaction.

From this discussion and literature review, the following proposition is derived:

P3. *Gambling value is associated with the consumers' internal response (level of satisfaction) to the gambling environment.*

### **Internal Responses: The Organism**

While the servicescape does not directly cause consumers to behave in specific ways, presence in the servicescape can elicit emotions and beliefs, which in turn can influence behavior. The internal responses are thus interdependent mediators of an organism's response to the servicescape (Bitner, 1992). In the theoretical model, the mediators are treated as interdependent but not considered as a single factor with multiple dimensions.

#### **Cognitive Responses.**

An organism's cognitive state describes activity that goes on in their mind concerning acquisition, processing, retention, and retrieval of information (Eroglu et al., 2001). As Bitner (1992) describes, the environment can serve as a form of nonverbal communication, and consequently contributes to the mind's acquisition of information. For an online casino setting, the cognitive state involves the manner in which the consumer interprets information presented to them on their computer screen, including their comprehension of, and attitudes and beliefs about, the information.

The cognitive state also concerns the consumers' internal mental processes in using environmental cues to categorize the brand. With online casinos, consumers gamble in a location that may geographically be far from the associated brick and mortar casino, or in a wholly virtual casino environment. In these cases, cues that denote trustworthiness are likely to be sought after (Williams & Dargel, 2004). In gambling, social responsibility is a hot-button issue. It is possible that sites that display approval ratings from groups like eCOGRA (a non-profit player protection organization), or hold licenses from the gamblers country of residence, could generate higher consumer trust. Web forums like twoplustwo.com and poketfives.com, both large online poker forums, allow players to gather and crowd-source information to discuss value spots and site trustworthiness.

#### **Affective Responses.**

The e-servicescape may elicit affective responses in addition to the organism's cognitive responses. Bitner (1992) uses the Pleasure, Arousal, Dominance emotional state model (Mehrabian & Russell, 1974) to describe the organism's affective state, primarily focusing on the pleasure and arousal dimensions. Environments that consumers find to be pleasurable are more likely to be those where they spend more time and more money. Along the same lines, environments that consumers find to be arousing are more likely to be those which generate more customer satisfaction, unless the arousing environment is also found to be unpleasant. Bitner (1992) also refers peripherally to the dominance dimension of Mehrabian and Russell's (1974) model, noting that some environmental qualities can contribute to consumers' perception of personal control. A sense of control, as previously described, contributes toward satisfaction with the gambling activity. New gamblers, in particular, may feel more control over their outcomes when they choose an online environment over a live gambling environment, where others are present to watch them learn and potentially make mistakes. Eroglu et al. (2001) are quick to point out, however, that the sense of control quickly diminishes as technical issues present, like slow download times, an inability to reach customer service, difficult site navigation, or missing/inactive links.

The S-O-R paradigm describes the organism's combination of cognitive and

affective attitudinal states as intervening in the relationship between the site's stimuli and behavioral responses. The organismic states are affected by the online casino's environment, and then in turn contribute toward the formulation of attitudes about the e-servicescape, and how satisfactory or unsatisfactory they found the online gambling experience to be. Hence, the following propositions:

- P4. The gambler's internal responses mediate the relationship between the perceived holistic online gambling environment and their behavioral intentions.*
- P4a. The gambler's internal responses mediate the relationship between the perceived atmospheric cues and their behavioral intentions.*
- P4b. The gambler's internal responses mediate the relationship between the perceived financial trust and their behavioral intentions.*
- P4c. The gambler's internal responses mediate the relationship between the perceived gambling value and their behavioral intentions.*

#### **Moderators: Personal & Situational and Demographic**

While the environmental stimuli play a large role in consumers' internal responses to the e-servicescape, there are certain individual characteristics that serve as moderators in the S-O relationship.

##### **Personal & Situational Moderators.**

A number of personal and situational factors can have an impact on the way consumers react to the e-servicescape they experience, much in the same way they do for a brick and mortar casino servicescape. As applies to this theory, personal and situational moderators are each treated as single factors with multiple dimensions. Mehrabian and Russell (1974), for example, noted that personality traits could influence how a person will react in a given environment. One such personality trait is arousal-seeking – those with the trait enjoy and seek out high levels of stimulation. Conversely, non-arousal-seeking personalities would show a strong dislike for a highly stimulating environment. Similarly, some consumers are better at screening environmental stimuli than others. That is, high levels of stimulation affect them less than those consumers who cannot screen stimuli as well. In an e-servicescape, consumers with high technology anxiety may dislike a virtual environment with many system requirements and plug-in needs. Gambling, by nature, places risk at the forefront of activity, so risk-taking personalities may demonstrate different attitudes toward their satisfaction with online gambling than would risk averse personalities.

Situational moderators for a virtual environment include mirrors of those known to a physical environment, as well as those distinct in a virtual setting. Bitner (1992) postulated that consumers enter their environment in a specific mood state, which can affect how they might normally react to a given virtual environment. In addition, an individual's purpose for being in that environment, and thus the personal relevance that site has, may affect how they view their virtual surroundings. These moods and purposes may vary day-to-day, or even hour-to-hour (Bitner, 1992). Individuals also respond differently based on their expectations of the online site. Consumers are likely to negatively respond to the virtual environment if their experience does not match up to their expectations. In an online casino setting, operators can attempt to ensure expectations are met by providing certain cues. Useful navigational aids, for example, allow gamblers to easily achieve their search goals. Operators cannot always ensure expectations are met – due to the inherent probabilities of gambling, a customer's expectation of a monetary win cannot be guaranteed. There are also certain

technological situational factors that the operator cannot control, such as the reliability of the gambler's Internet provider or their computer. Operators can, however, make attempts to limit certain technological factors from their end. For example, by using servers that permit reliability and suitable bandwidth to avoid slow download times, and creating sites that limit the use of plug-ins, which can interrupt feelings of consumer control and lead to dissatisfaction.

### **Demographic Moderators.**

Williams and Dargel (2004) note that some demographic factors, like gender, age, and social class, affect the valence of various servicescape cues. It is differences between demographic groups that define these groups as moderators in the S-O relationship. Different demographic segments, for example, approach avatar creation – designing a graphical representation of the user's online image – in different manners (Ducheneaut, Wen, Yee, & Wadley, 2009). To accommodate individual preferences, online gambling sites can allow consumers to customize aspects of their environment to create user profiles that are to their liking. Consumers can select from different skins for their casino, such as certain table colors, images in the online casino lobby, and card design. Some sites are already embracing this type of personalization. PokerStars, the world's largest online poker site, for example, has a selection of table designs from which players can choose, and they also permit players to upload an image as their avatar at the table. Once a substantial number of profiles have been created, the casino can look to identify profile specifications typically associated with different demographic factors (treated as individual factors), and can offer personalization suggestions to new players exhibiting those characteristics. Such a customization system is important for the virtual gambling environment, as a consumer's satisfaction with their online appearance is one of the keys to their overall satisfaction with the experience (Ducheneaut et al., 2009).

The propositions on demographic moderators are as follows:

- P5. *Personality traits (e.g., arousal-seeking, stimuli-screening, and risk aversion) moderate the relationship between the perceived online casino servicescape and internal responses.*
  - P5a. *Personality traits (e.g., arousal-seeking, stimuli-screening, and risk aversion) moderate the relationship between the perceived atmospheric cues and internal responses.*
  - P5b. *Personality traits (e.g., arousal-seeking, stimuli-screening, and risk aversion) moderate the relationship between the perceived financial trust and internal responses.*
  - P5c. *Personality traits (e.g., arousal-seeking, stimuli-screening, and risk aversion) moderate the relationship between the perceived gambling value and internal responses.*
- P6. *Situational factors (e.g. mood state, purposes, expectations) moderate the relationship between the perceived online casino servicescape and internal responses.*
  - P6a. *Situational factors (e.g. mood state, purposes, expectations) moderate the relationship between the perceived atmospheric cues and internal responses.*

- P6b. *Situational factors (e.g. mood state, purposes, expectations) moderate the relationship between the perceived financial trust and internal responses.*
- P6c. *Situational factors (e.g. mood state, purposes, expectations) moderate the relationship between the perceived gambling values and internal responses.*
- P7. *Demographic characteristics moderate the relationship between the perceived online casino servicescape and internal responses.*
- P7a. *Demographic characteristics moderate the relationship between the perceived atmospheric cues and internal responses.*
- P7b. *Demographic characteristics moderate the relationship between the perceived financial trust and internal responses.*
- P7c. *Demographic characteristics moderate the relationship between the perceived gambling value and internal responses.*

### **Behavioral Intentions**

Readiness to perform a given behavior has long been a focus of interest in consumer behavior and marketing research. Based on the level of satisfaction with the service experience, consumers form a judgment for extending their stay at the establishment as well as revisiting the establishment in the future. Stimulus attributes and subsequent gambler responses within the online casino environment are expected to indicate behavior intentions with three major components: site revisitation, desire to stay at the site, and the likelihood of recommending the site to others. Because there already exist extensive literature reviews in hospitality research supporting these theoretical behavioral intention components, the description here is abbreviated with the intention of parsimony.

#### **Revisit Intentions.**

Previous studies have shown that servicescape satisfaction impacts a casino patron's intention to revisit (Kim & Moon, 2009; Lam et al., 2011; Lucas, 2003). Other studies in the hospitality field, particularly those focusing on travel and tourism, have extensively studied behavioral intentions and empirically established a correlation between satisfaction related attributes and intention to revisit the destination (Baloglu, 2000; Baloglu, Pekcan, Chen, & Santos, 2004). Revisit intentions that may also be tied to irrational beliefs about gambling and the gambler's locus of control with the activity. If a gambler who repeatedly revisits one specific online casino because they consider it to be lucky or that it pays out more favorably (gambling value), this is captured by the corresponding functional quality in the theoretical model.

#### **Desire to Stay.**

When referring to service as an experience-based 'product,' the level of satisfaction – including servicescape attributes as well as atmospherics – could influence the stay of the visitor at a service-oriented destination (Baloglu, 2000). For the purposes of this article, the visit is attributed to the virtual site visit and it is anticipated that the abovementioned factors described in the proposed model are likely to influence the desire to stay. Past studies have revealed a connection between satisfaction and desire to stay, and have indicated the need to further explore the response (Wakefield & Blodgett, 1999). Like revisit intentions, a gambler may desire to stay at a site not because its high and low task-relevant atmospheric cues are attractive, but because they perceive their



odds of winning to be higher at a given site. Again, this stimulus is captured by the theoretical model's other components.

### **Recommendation to Others.**

Word-of-mouth recommendation to others serves as a strong representation of customer satisfaction (Fornell, 1992). The relationship between the two has been demonstrated empirically in several works in the hospitality industry and is considered an important outcome of e-marketing (Lucas, 2003). Positive word-of-mouth recommendations not only improve the brand image, but also to enhance reputation compared to other online casinos, a very strong characteristic in an industry requiring trust.

Based on the support for these measures of behavioral intention, the author proposes:

- P8. Overall satisfaction with the online gambling experience will have a positive relationship with revisit intentions.*
- P9. Overall satisfaction with the online gambling experience will have a positive relationship with desire to stay in the online casino environment.*
- P10. Overall satisfaction with the online gambling experience will have a positive relationship with consumers' intent to recommend the site to others.*

### **Discussion**

The conceptual model described here is a network of the stimulus, organism, and response. By definition, the various characteristics are linked. The online servicescape may be easily navigable, but if the navigation leads to the wrong information, the customer is unlikely have a positive response. The quality of the information provided is inextricably linked to the clarity of text and graphic content. Returning to the blackjack example, aesthetic action button design for a "stand" action would not be attractive to a gambler if clicking on the button then triggers a "hit" action instead.

The proposed model permits for extended theory-building, as well as empirical testing of the model using theories and paradigms from other disciplines, with applications in gambling. Research in consumer behavior in online gambling is sparse, and this research only begins to fill the significant gap. Extensive research has been conducted in the psychology of consumption and of gambling, which can be used to enhance the understanding of consumers' reactions and responses to online gambling. A comparison of those online players who have experienced the physical casino environment and those who have never visited a live casino also presents an interesting inquiry.

This is a broad look at the online gambling servicescape, which permits for more detailed inquiry into specific channels of the environment and their relationship with consumer satisfaction and response, such as the effect of sounds of slot machines and casino chips or of specific colors. Information pertaining to specific characteristics of a physical casino servicescape may also apply to the online casino servicescape model, including operational efficiency, interior décor, and crowding. Lam et al. (2011), as an example, argued that cleanliness and ambience are important contributors to the physical casino servicescape in that they help to improve gambling's somewhat controversial social image as a sinful business. This argument may also apply in an online setting, in that a clean design may encourage a more positive view of the online casino environment. In addition, knowledge of servicescape preferences can be incorporated

into problem gambler identification algorithms, improvement of which benefits a company's CSR mission by demonstrating active interest in advances in responsible gambling practices.

Whether a casino business operates both online and brick-and-mortar establishments or if the online casino is a stand-alone gambling portal, knowledge of servicescape dimensions is crucial. For those casino operators with both a traditional and online presence, further research could reveal if memories of the physical servicescape experience influences responses to an online servicescape, and vice versa.

Opportunities abound for investigating further specific aspects of the online gambling environment. The number of jurisdictions regulating online gambling is quickly increasing, and thus the world market for the activity is rapidly growing. The economic implications of these variables should also be explored, as the cost of implementing certain servicescape factors may outweigh the financial gains from approach behavioral responses.

Extending theory into the online gambling space ties in to greater applications, too. Knowledge gained about the online gambling environment can be applied to social gaming, as in the Zynga Poker example provided in the introduction. Other service products that blend in-person services with real-time service experience technology offerings, such as sports team fan sites and fantasy sports leagues, may also find aspects of the online gambling e-servicescape model to be useful. This knowledge can also be combined with the technology interface experience in other service industries, such as in-room hotel technologies or self-serve kiosks at restaurants.

Applications of servicescape research in an online gambling environment provides a notable new realm into which researchers can extend current paradigms, as well as inform online casino operators of avenues for improving gambler satisfaction. Future studies could focus on compiling empirical evidence to document the impact of the application of such theorized models.

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