An Exploratory Analysis of the Leisure Experience of Individuals in a Simulated Golf Environment

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Technology is having an impact on individuals and their leisure. Technological advancements have led to the development of simulated leisure environments. Little is known about how individuals experience leisure in a simulated setting. This study examines the simulated leisure experience in a virtual golf setting.

This study utilized interviews, observations, and natural field interviews in collecting data. Multiple researchers were utilized at each stage of data collection and analysis. Findings suggest that individuals experience virtual golf differently than they experience traditional golf. Players experienced differences in anticipation, preparation, constraints, passivity, etiquette and fidelity. In addition, subjects indicated a general lack of trust with the technology of the golf simulator.

Keywords: Leisure experience, simulated leisure, virtual golf

Introduction

Norm Westbury eyed the pin placement of the flag on the par 3, 7th hole at Pebble Beach. He checked the distance and the wind direction, and lofted a good-looking 5-iron shot. As he watched the ball sail through the air, Westbury gave it a little body English to keep it from fading, and then smiled as the ball bounced to within 10 feet of the cup. The Niagara Falls sales executive then neatly tapped the putt home for a birdie as the gallery cheered its appreciation. This golf hole was played all electronically, without Westbury ever leaving home or having to pay a greens fee.

This precursor may seem far-fetched, but this golfing scenario is not far from reality. Laver (1989) suggested that technological developments of every kind have been so rapid in this century that we have had to accept more changes in our lifetime that once were spread over many generations. The sudden and ever accelerating burst of growth in high-technology and high-skills services, and in the new products they are creating may bring about profound and unexpected changes in the way we live, work and recreate witnessed since the nineteenth century transition from an agricultural to industrial society (Neef, 1998).

Technological innovations for recreation have tremendous significance for leisure (Godbey, 1997; and Smith, 1993). New materials have improved the aerodynamics of sail and motorboats, wind and snow surfing boards, kites, hang gliders, skis, mountain bikes, sail bikes and golf clubs (Femme & Actuell, 1996). For example, at the beginning of the 1990s the introduction of carbon fiber used in the production of leisure boats made
them lighter, faster and safer (Menanteau, 1996). New materials are also used for the production of shoes, and for skiing, hiking and camping equipment (Pereira, 1993).

Another area in which new materials are used for sporting activities is the development of synthetic surfaces (Samuel, 1996). Dry slope skiing facilities have been popular in Europe for years (Bergschneider, 1994) as have indoor rock climbing walls. There are synthetic sport surfaces suitable for a wide range of sports such as: tennis, basketball, cricket, handball, volleyball, hockey, ice-skating and golf. No recreation activity has enjoyed more stable growth over the past 40 years than golf (Kelly, 1987). Currently, golf is the fastest growing sport in the United States and is enjoyed by all demographics of the population (PGA of America, 1996).

Technological advancements have also led to the simulation of many of our natural leisure environments. We now have artificial indoor rock climbing walls, artificial wave parks and wave machines, indoor skiing slopes, artificial man-made white water rivers and golf simulators. Slouka (1995) further pondered this technological progress:

What are we to make of this large-scale tinkering with the human mind and its time-tested orbit? What should those of us in RL (real life) make of the dizzying proliferation (and ever-increasing sophistication) of cyberspace communities? Or the fact that an entire generation of computerjugen is now spending its leisure time in electronically generated space experiencing what cyberspace theorists like to call “lucid dreaming in an awake state”? Or that cyberization – the movement to animate everyday objects in order to make them more responsive to our needs – is making rapid progress? In a word, how seriously should we be taking all this? (p. 8)

Technology has had a significant impact on individuals’ leisure experience in the past several decades and will continue to do so well into the future. One recent aspect of the technological impact on leisure has been the introduction of virtual reality. Virtual reality is a computer-created sensory experience that completely immerses a participant to believe and barely distinguish a “virtual” experience from a “real” one (Franchi, 1994). One example of virtual reality’s impact on leisure is indoor golf simulators. These simulators make it possible to play any combination of holes or to use the system just to practice driving and putting. In addition, these simulators provide the opportunity to play a variety of courses.

Researchers have been employing the need for “context” in leisure research and have recognized an underdeveloped understanding of the contextual meaning of leisure (Coalter, in Jackson & Burton, 1999). Henderson (1991) further proceeded to reiterate that to be able to understand individuals’ leisure experiences, “It is the context that becomes particularly evident in an analysis of leisure” (p. 8). In addition, much of the research in recreation and leisure studies is atheoretical (Samdahl in Jackson & Burton, 1999) and this study ultimately seeks to propose a theory encapsulating the simulated leisure experience. The purpose of this study is to examine the leisure experience of individuals using an artificial golf simulator and to propose a theory explaining the simulated leisure experience. Accordingly, the research questions are: (a) what are the characteristics of the leisure experience of an artificial golf simulator; (b) how do
individuals experience leisure in an artificial golf simulator; and (c) can a theory be developed that explains the experience of leisure in an artificial environment?

**Review of Literature**

*The Leisure Experience*

Hull, Michael, Walker and Rogenbuck (1996) articulated the importance of the role of the leisure experience, “Experience is an important part of what recreationists say they want” (p.299). Rossman and Schlatter (2000) further proposed that facilitating leisure experiences is the most important goal in the delivery and provision of recreation and leisure programs. Lee (1999) noted that the shift in examining the leisure experience has moved the emphasis of leisure services from the mere delivery and provision of recreation and leisure programs to facilitating leisure experiences. Therefore brief reviews of empirical studies investigating the leisure experience follow. However, it is important to note that the authors did not conduct the review of literature until the present study was completed in order to avoid what Glaser (1978, 1992) refers to as forcing “full conceptualization” on the data versus allowing the data to “emerge” into a grounded theory.

Shaw (1985) combined the techniques of the time budget with interviews to test certain definitions and characteristics of the leisure experience. Sixty married couples were studied in which all activities over two weeks were to be classified as work or leisure. Shaw found that the best discriminators of the leisure experience were enjoyment and relaxation followed by freedom of choice and intrinsic motivation. Shaw noted that the study only focused on everyday activities and that extra-ordinary or peak experiences might produce other characteristics of the leisure experience.

Gunter (1987) analyzed 140 self-report essays on the leisure experience. He administered a survey to students in five classes in a university setting and asked two questions: (a) describe your most memorable leisure experience, and (b) what are your most common and meaningful types of leisure activities engaged in during normal daily/weekly routines. Gunter subsequently found eight properties to be characteristic of the leisure experience: separation, choice, pleasure, spontaneity, timelessness, fantasy, adventure and self-realization.

Hull, Stewart, and Yi (1992) argued that a recreation experience was not static, (as implied in previous studies on the leisure experience) and that it varies over the course of the experience. The purpose of the study was to examine properties of experience patterns over the duration of a leisure experience. The experience patterns of 90 hikers were assessed (4 different mood measures, 2 satisfaction measures and 1 landscape scenic beauty measure) at 12 different times during a moderate day hike. Hull et al., found that hikers differed in their on-site experience during the leisure episode. Some hikers’ experience patterns varied predictably over the course of the hike and thus seem dependent upon site characteristics while other hikers experiences were constant and seemed independent of site characteristics.

Lee, Datillo, and Howard (1994) studied 16 informants using a self-initiated tape recording method as part of the experience sampling method (ESM) where participants wore electronic beepers and had self-report booklets in which to answer a series of questions each time the pager beeped. Lee et al., found the following to be properties of the leisure experience: fun/enjoyment, relaxation, escaping, communication with nature
as well as several stressful and unpleasant experiences including: exhaustion, apprehension, nervousness, disappointment, frustration, guilt, and rumination.

Most recently Esteve, Martin and Lopez (1999) developed a self-report measurement tool assessing what people feel when they are involved in leisure activities. A sample of 335 subjects were administered the instrument containing nine scales: perceived freedom, intrinsic motivation, goal-orientation, relation to work, active-passive participation, optimal incongruity, social interaction, perceived competence and discretionary time available. The scales showed high internal consistency and confirmatory factor analysis supported the hypothesized internal structure. Multi-dimensional scaling techniques revealed 3 higher order underlying dimensions: effort level, social interaction and purpose.

The nature of the leisure experience has only been studied on what can be referred to, as “traditional or non-simulated” activities or experiences and the nature of the leisure experience has not been studied in artificial or simulated settings. Mannell and Iso-Ahola (1987) argue that “underlying the more usual practice of not focusing on specific activities is the assumption that factors such as the range of activities, the frequency of participation, and the quality of involvement are more important to understanding the impact of leisure on people than the specific activities in which they engage” (p.316). Although the purpose of this study is not to specifically investigate the impact of leisure on people the importance of examining specific activities, in this case simulated golf can be challenged both theoretically and empirically.

Barker’s (1968) behavioral setting theory defines a behavioral setting as: (a) a specific set of time, place and object props; (b) an attached standing pattern of behavior; and (c) both clusters are necessary and interdependent. For example person A’s behavior is more similar to B’s behavior in setting X than it is to A’s own behavior between two different settings. Also Shaw (1985) noted that her study only focused on everyday activities and that extra-ordinary or peak experiences might produce other characteristics of the leisure experience. Though this study does not examine peak experiences, the logic follows that a simulated leisure experience may be different from a non-simulated leisure experience, hence the impetus for this study.

Methodology

Grounded Theory

This study utilized the grounded theory methodology developed by Glaser and Strauss (1967), and Glaser (1978). The grounded theory methodology is a research approach that emphasizes the theory-generative phase as opposed to the theory-verification phase of induction. In this research approach, a phenomenon of interest is identified the leisure experience of individuals in a simulated leisure environment for this study. All aspects of the researchers’ initial data were compared and conceptualized in terms of commonalities. In the early stages of the analysis, each datum was coded into as many categories as possible to preserve the conceptual richness of each category. Throughout the analysis, “memos” (the researcher’s hunches and theoretical ideas) were recorded. These memos or guiding assumptions were intended to provide a conceptual linkage between the categories and concepts that emerged during the study and helped ensure that these categories and concepts were grounded in the data.

Once the conceptual structure began to emerge, additional data sources were sampled that were intended to further illuminate the nature of the structure (theoretical
This process was then repeated until the categories were saturated. At this point the researchers increasingly drew upon the theoretical memos and began to attempt to conceptualize more abstract categories that subsumed the descriptive categories, yet were “grounded” in them. It is usually at this point a “core” category is conceptualized that encompasses all other descriptive and conceptual categories. No apparent “core” category emerged in this study and the researchers ended up using the grounded theory approach as a means to develop initial properties of the simulated experience.

Data Collection Strategies

Four data collection strategies were employed in this study: documents analysis interviews, observations and natural field group interviews. Qualitative methods were chosen since they best compliment the grounded theory approach (Glaser, 1978, 1992); emphasize the importance of conducting research in natural settings and are free from pre-determined conceptual categories (Lee, 1999). Figure 1 presents a diagram conceptualizing the methodology for this study and can be found at the end of this section.

In order to understand the overall golf experience the researchers observed golfers at a public golf course and to then gain a richer understanding of the golf experience the researchers followed a specific foursome over the course of 18 holes. Two individuals who had previously played simulated golf were then interviewed (1 was a subject in this study, the other an observer). These subjects were interviewed in an effort for the researchers to learn more about the simulated golf environment and how individuals experience leisure in this environment. Notes from these interviews were coded and categorized and then used to develop protocol for observing subjects participating in the golf simulator. The information from these interviews, along with field notes from the observations were used to develop the initial topics of the natural field group interview (Fontana & Frey, 2000; and Frey & Fontana, 1991). The four subjects for this study were then interviewed prior to their simulated golf experience and were primarily asked questions pertaining to their expectation of the virtual golf experience. These same four subjects were then observed and videotaped participating in an indoor simulated golf experience.

During the simulated golf experience the researchers discovered potential documents to be used for analysis. The researchers found that after every shot in the golf simulator, the screen projected a “pop-up” table or menu that detailed the statistics from the shot including the distance the ball traveled, the remaining distance to the pin, and the location of the ball on the course (e.g., fairway, rough, hazard). The four subjects were interviewed as a group immediately following the simulated golf experience using the field natural format. Upon completion of the natural field group interviews, all notes were coded and categorized according to the canons and procedures of grounded theory methodology (Glaser, 1978; Glaser & Strauss, 1967).

Subjects

The subjects for this study were selectively sampled for the purpose of observation for several reasons. The subjects are within a close proximity of the researchers and research settings. In addition, the accessibility of the subjects is high.
The researchers deliberately sought two subjects that were representative of the average golfer (the average golfer is defined as shooting a 101 or having a 29 handicap). These two participants will be referred to as Blue and White. The two other golfers were selected because of their unique cases. One of the golfers is a low handicapper representing the above average golfer (Black) and the other a high handicapper representing the below average golfer (Red). Golfers with different ability levels were also selected to examine potential differences in the experience of simulated golf by ability level. Pseudonyms were used to protect the identity of the participants and to ensure their anonymity as well as to maintain the confidentiality of their actions.

**Context**

The artificial environment for this study was a virtual golf simulator located in a concrete and aluminum siding, multi-purpose sports facility in the Midwest. The indoor golf simulator was located on the second floor of this facility in the corner of the sports bar. The simulator consists of a dark room about 12 feet deep by 15 feet wide and about 10 feet tall with a computerized image of a golf course projecting on the canvas in the front of the room. The video projection screen projects images that are directed by a computer program. The computer is located in the room, approximately five feet from the hitting area. The hitting area consists of different textures and heights of artificial turf. There was a green artificial turf mat, similar to mats at a driving range where subjects hit from. To the side of the mat was taller artificial turf painted both green and white (players were supposed to hit from the taller green turf replicating a shot from the rough off of the fairway and hit from the white when their ball was in a sand trap). The computer directs the player where the ball should be placed on the turf based on the players’ previous shots. The walls all around were black and a bright screen was in front of the golfers. The area is dimly lit so images on the screen can be viewed with clarity, as in a movie theater. There is a staging area located directly behind the room, where players and observers can view the game. The staging area consists of several tables and stools, a dartboard and billiards table. A ten foot long counter top separates the simulator and the staging area and the entrance to the simulator is an open area next to the counter top that is approximately five feet wide.

The idea of virtual golf is to hit the ball into the screen aiming for the green, or fairway, just like you do in regular golf. The players took turns driving the ball as the ball made a smacking sound each time it hit the canvas where the virtual golf course was projected. Sensors were on either side of the wall between the players hitting position and the screen with the golf course image. These sensors calculated the velocity, spin and trajectory of the ball, which determined where the ball landed into the virtual golf course.

**Trustworthiness**

Several attempts were made to establish the trustworthiness of the findings in this study. Triangulation was attempted on several fronts. The researchers attempted to triangulate the data by utilizing multiple data sources (documents, observation field notes, and transcripts from interviews and natural field interviews). Investigator triangulation was also achieved as two researchers were used at each level of data collection and analysis. Methodological triangulation was also sought as the researchers used multiple methods (analysis of documents, observations, interviews and natural field interviews) to study this single phenomenon (Janesick, 2000).
video taped whereby the researchers could return to the research setting (via the videotape) to evaluate the trustworthiness of the observation field notes and subsequent findings from the natural field interviews.

The trustworthiness of the constructs was also addressed by the researchers on three levels. Multiple sources of evidence were used (data triangulation). A chain of evidence or a pattern of themes was established from one method to the next as in the grounded theory methodology where data collection and analysis occur simultaneously and themes emerging from one data source or method informed the next. Once observations and interviews were analyzed, “member-checks” in which interpretations by the researchers were discussed with the subjects who were observed and/or interviewed were performed. The internal trustworthiness of the data was also addressed when the researchers discovered that certain conditions (e.g., passivity) were shown to lead to other conditions (e.g., social interaction which lead to abandonment of etiquette) and also when the researchers found that these patterns were replicated in the data.

**Findings and Discussion**

Findings from this study were summarized to examine the leisure experience of simulated golf. Analyses of data from the four data collection methods were grouped into the following themes: anticipation, preparation, constraints, passivity, etiquette, and fidelity.

**Anticipation**

The phenomenology of experiencing leisure begins with the anticipation phase (Clawson & Knetsch, 1966; Rossman & Schlatter, 2000). The same is true for the simulated golf experience. Three days prior to the round of golf, Red stated:

I would have to say that I am looking forward to playing. I think this should be lots of fun. I don’t expect it to be like real golf; in fact I think it will probably be more fun. I’m looking more forward to this more than I would if I was playing a real round.

Other golfers had similar sentiments. White felt that it would be a less stressful experience and one where everyone would have a good time. He also indicated that he was looking forward to the simulated round of golf. Blue also was anticipating a less stressful experience. She was also looking forward to seeing what technological changes had taken place since her previous simulated golf experience five years prior. White stated, “I think this should be fun. I am really looking forward to giving this thing a shot. I have heard a lot about it, but never played it before.” Each golfer highly anticipated the simulated golf outing.

**Preparation**

Although anticipation was high, each of the subjects strayed from their normal preparation for a golf outing. White and Red both usually go to a driving range and hit some practice balls during the week prior to a golf outing. Neither of them did prior to the simulated golf outing. Red stated, “I usually check my bag to make sure I have enough balls. I’m also usually concerned that my golf clothes are clean and ready. I’m probably not going to do that before Saturday (the day of the simulated round).”

The “tee-time” for the simulated golf was scheduled for 9:00 a.m. None of the subjects arrived prior to that time. They pulled into the parking lot and sat outside the building until all players had arrived. They entered the building at precisely 9:00 a.m.
By the time they made it to the golf area, it was 9:04 a.m. Each of the subjects indicated in pre-interviews that they normally arrive to the golf course 30-45 minutes prior to their tee-time to stretch, hit practice balls on the driving range, and putt. That was not the case with the simulated golf outing.

The golf attire also was different than what the participants indicated they would wear in a traditional round of golf. Black said, “I normally wear a polo-style golf shirt and some khaki shorts for a golf outing.” For the simulated golf outing, Black was wearing a sweatshirt that he later tied around his waist, a t-shirt, and some denim shorts. None of the subjects wore golf shoes, which they all indicated they wore for a regular golf outing. Also, White forgot to bring his golf glove. White said, “I really didn’t think about needing it.”

Blue, Black, and Red all indicated that playing a virtual round of golf indoors eliminates the weather factor. Blue said, “I didn’t have to worry about getting rained-out or about how cold it was going to be. That was kind of nice.”

Constraints

One of the themes that emerged during the participation phase of the virtual golf experience was that of constraints. Some of the subjects enjoyed the experience and found it to be a less stressful experience than when they played real golf. Red, who had played much better compared to his latest performances on a traditional golf course stated:

When I was there I just hit the ball without worrying about it for a change. When I go up to hit a ball at a regular course I worry about other people watching me. What if I hit in the woods. It’s a much less pressure situation. If I hit in the woods here it’s like it doesn’t matter. It wasn’t slowing anybody down. It wasn’t inconveniencing anybody. I wasn’t keeping anybody back.

White also experienced this feeling of liberation. Instead of feeling more constrained, he experienced almost a reverse constraint that is he felt freer, “I felt a little more free to make mistakes here than I would on a normal course. I mean I pulled my driver out and I haven’t hit my driver all year. I didn’t hit it well but I thought, well why not here.”

The virtual golf experience increases participants’ sense of freedom and helps to reduce individuals’ mental constraints or worries that they would encounter in a traditional golf course setting.

However, the virtual golf experience also provided many physical constraints for the participants. Blue stated that it was like playing night golf, “It was dark, really isolated and not well lit.” When Red first went into the simulator to hit, he was observed stretching his club out in all directions. He later commented that, “I had my club and had to see if my club would reach the ceiling, walls or the screen. I was afraid I was going to hit something.” The hitting area in the golf simulator also had other constraints. Blue stated, “As far as driving the ball, you were limited. I usually like to tee my ball up a lot higher and here you couldn’t.” Black commented that, “There are a lot of limitations out here.” The virtual golf setting clearly imposed some constraints upon the golfers in this study. However, once the golfers realized they could take a full swing without hitting the ceiling or adjacent walls and adjusted to the height of the tee box they seemed to be less constrained by their physical surroundings.
The subjects also felt constrained by other physical conditions of the environment. White stated:

I had a real hard time knowing whether I had a good shot or a bad shot and the only way I could know was the little statistics that popped up on the board/screen. At first it felt like you had a good swing and hit it pretty well and then it only went 20 feet. On a real course you get that immediate feedback, as soon as you hit the ball you know if it’s going to be a good shot or a bad shot. Here there’s a little bit of a lag. And when you see the result, I still didn’t get a sense at all that it was a good shot or a bad shot.

Participants also experienced difficulty with their perception of distance. White commented that:

It was really hard to judge distances. It [the golf simulator] would tell you that you’re 45 feet from the pin but one of the problems is that you can’t tell. There’s no depth perception so when you play golf it’s more of just knowing, at least for me. It’s more than just knowing how far you are to the pin. You can see where the pin is. You can visually see where to hit. I think I probably hit more visually. Or I’m more visual when selecting my club, than when I do at actually looking at, well okay; it’s a 100 or 150 yards out. That plays into it but it’s also just the visual aspect.

Blue and White emphasized that they couldn’t tell if they had a good or bad shot as there was a delay in the transference of the projection of their ball to the screen. White emphasized this point and stated, “You don’t get immediate feedback, it’s just not there.” The virtual golfers also experienced difficulty in judging the distance that they had to go to the pin (although the computer displayed exactly how far their ball was away from the pin). White emphasized this point with the following:

You learn how to play golf more by feel then by statistics so this totally takes away. It decontextualizes the experience because it totally takes away from the feeling, the context of the setting. It removes that and you play golf more on the statistics than what it’s showing you on the screen, the distance and wind direction.

Blue added:

I didn’t particularly care for the over analysis of everything. I think part of the game is human error, and you have to gauge if it’s a 150 yards or a 160 yards and you have to gauge how much of a break there is. I mean it did everything for you except swing the club.

Historically, leisure researchers have found perceived freedom to be essential to leisure but Harper (1986) argues that reducing perceived freedom to whether or not a person freely chooses a leisure activity shrinks the scope and potential implications of perceived freedom. Subjects in this study freely chose to participate in the virtual golf experience. However, as a result of the numerous constraints on the participants’ virtual golf experience, perceived freedom during this simulated experience was in most accounts all but reduced. This notion of “internal” perceived freedom had more of an
impact on the individuals’ leisure experiences than “external” perceived freedom (freely choosing the activity) and is an area worthy of future empirical investigation.

**Passivity**

A theme that emerged during the participation phase, that was somewhat unexpected, was the passivity of the virtual golf experience. Black mentioned that, “You’re moving a lot on a regular golf course. You’re either in the cart or you’re walking. Here you come back and you sit in the chair. It’s kind of the fact that you feel lethargic. You’re just sitting there.” Blue also added that:

I tend to pay more attention if I’m out on a course to watch what the other people are doing. Where here I was watching TV, I was talking to somebody; I didn’t really get into each person’s shot. Where I wouldn’t be that way on a real course, even if you’re with somebody in a cart you would still have a tendency or know how they’re doing for the most part. Whereas here I was just kind of watching everybody else too and didn’t necessarily pay attention to any one person’s shots.

Red also found that it took too long, “I found myself just sitting here. Get up to take a shot and then I would know it would be another 10 minutes until I hit the ball again.” This could be attributed to the fact that the computer was slow. At times, it took between 30 and 40 seconds for the game to reboot and show who the next person to hit was.

Participants’ attention was frequently shifted to the television or other individuals within the facility. It appeared as though there were not as many aspects in the virtual golf setting to occupy the golfers attention and they easily became distracted as a result of the passive nature of their virtual golf experience.

As a result of the passivity of the virtual golf experience, the individuals generally felt apathetic during their experience. White summarized this point best when saying:

I was fairly apathetic. I mean … if I’m on a real golf course I’m either here [gestured with hands low to the ground] or I’m either here [gestured with hands high in the air]. I’m psyched, like I’M BACK! Or I’m either way down. Here there was this real mild or low range of emotions where you were always just in the middle. There was a level of apathy. Yeah sure I hit a nice wedge, that’s pretty cool, I hit a nice shot but it’s a real low range of emotions. Whereas on the golf course I’m either way up or way down.

Black also experienced this same apathy, “Yeah, I sunk a 30 foot putt and I didn’t care.” During a traditional round of golf, Black said that if he sank a putt of that length, “I’d be doing a little dancing.” The subjects showed little emotion during the activity. There was little to no response to hitting a good shot or a bad shot. The participants also didn’t experience some of the actual frustration of traditional golf. There were no vulgarities or angry reactions. Respondents were asked about the frustration they experienced and White replied:

It was pseudo frustration. On a real course, as you guys know, I throw clubs, I swear a lot, a lot of four letter words coming out and here I think one time I went ahhhh! But that was about it. It was kind of fake frustration for me.
Red attempted to explain the lack of frustration when saying, “The environment wasn’t conducive for true anger. I didn’t really blurt out the words or throw anything. I think it seemed so much more relaxed. It really wasn’t the type of thing where you get mad.”

Red, Blue, Black and White did not express their full range of emotions while playing virtual golf. The elation of a good shot and disappointment of a bad shot were absent from this experience whereas both states of emotions would be expressed by these golfers in a traditional golf setting. The passivity of this simulated golf experience led the subjects in this study to be easily distracted, focusing their attention on other aspects of their environment while not in the hitting area of the golf simulator. Lee, Dattilo and Howard (1994) also found this in their study of the nature of the leisure experience and referred to this condition as rumination. This occurs when an individual’s attention is diverted from the immediate activity and they think about something else.

**Etiquette**

In the traditional golf setting, etiquette is a large aspect of the game. Individuals appeared to be quiet at first while people were hitting and then it seemed as if any etiquette conventions normally adhered to in the traditional golf setting no longer applied in the virtual golf setting. Red attempted to explain this shift in etiquette by commenting:

I think what happened is that I was hitting one time and noticed that people were talking. You know I might have been quiet up until that point, but then thought this isn’t really something where you need to be quiet. People just kind of quit being quiet. They just kind of started talking. Nobody said that it bothered him or her.

White added that, “The social conventions that I think kind of happen on a golf course, with not walking across people’s lines in their puts just didn’t apply in this setting.” There was numerous times during the round of golf that general rules of golf etiquette were violated. Players spoke during other players’ turns, players didn’t know when to hit, and participants were not concerned with the putting line of the other players. White stated, “I was thinking nobody’s being quiet and everyone’s just walking around when you are up, especially with putting. You would never do that on a real course.”

Although etiquette appeared to be abandoned within this simulated setting, Wagstaff (1995) presents several scenarios in which indoor rock climbers, climbing outdoors for the first time, were not aware of the proper outdoor climbing etiquette. This could also likely apply to individuals learning how to play on an indoor golf simulator if results from this study are any indication.

**Fidelity**

Fidelity of the experience (the extent to which the simulated leisure experience replicates the real leisure experience) is a theme that was prevalent in this study. The virtual golfers in this study did not perceive that they were experiencing golf. “This wasn’t golf to me”, said White, “It didn’t feel like I was golfing. Never once did I actually think I was golfing.” Red added that, “I don’t think it’s something that true golfers would do. It’s raining so I’m going to do this. I don’t think you have the same expectations, and I’m not sure you should.” White replied:

I think part of the problem was comparing this to real golf. I guess I had the same expectation that it would be more like golf. I mean if I was playing Nintendo golf I wouldn’t have compared it to real golf. You’re not using the same skill sets, and
so that was probably part of my disappointment here because I was comparing it to real golf.

Blue also added, “its hard for me to compare it to golf, its entirely a different experience.”

Fidelity of the environment (the extent to which the simulated leisure environment replicates the real leisure environment) was another theme that emerged during the participation phase. The subjects in this study indicated the virtual golf simulator did not closely approximate conditions on a real golf course. Black felt the golf simulator tried to approximate real conditions:

They made efforts with the seagulls and ducks but they could also go a step further. The sand was just painted a different color than the rough. If they actually had sand that you were hitting out of, get real grass out here, or fake trees. They could make greater steps or take greater strides but I don’t think they’ll ever be able to make it like a real golf course.

Red felt the activity might seem more realistic if some of the computer-generated conditions were applied to the simulated area. He said, “If the hitting area actually had wind blowing, like the screen says it is, it might seem more realistic.” White took it a step further and suggested that it would seem more realistic if it was located outdoors.

There were also several anomalous findings that the researchers had difficulty interpreting. One example was that the virtual golfers in this study felt that the simulated golf technology was not reliable. Each subject felt a degree of mistrust of the golf simulator, which could perhaps be somewhat, expected given the early life cycle of this technology and its resulting low fidelity. Red was not convinced of the accuracy of the golf simulator when projecting his shot into the screen, stating:

I was satisfied with the contact I made but not with how the computer portrayed my shots. You think you hit the ball well and then you see a slice on it and think how did that turf read a slice on it. When I hit the ball, if anything I thought it was going to hook. You know, so that was kind of discouraging because every time you went up there and say what’s the point of hitting a good shot? It’s probably not going to give me an accurate reading anyways.

Blue also felt the golf simulator contradicted her own sense of how she usually plays, saying:

I think I usually drive better. My long game is usually better than my short game and it was opposite here. That kind of contradicted my own sense of my abilities because I didn’t think the short game was hard at all. Because when I chipped I was getting onto the green and I usually don’t do that and I was hitting only 60-70 yard drives and I don’t do that either.

However, more surprisingly was the feeling that the subjects’ real golf game could be jeopardized or hurt by virtual golfing. White stated:

If I was playing tomorrow I don’t know that I would want to play this. You don’t know what kind of habits your doing. If this thing is rewarding you for certain
things that aren’t transferable to the golf course it could potentially have an adverse affect.

Red further added:
I’m at the point where my game is kind of shaky as it is. I don’t have consistency with anything. I don’t really have a feel for how far I hit certain clubs. I can’t consistently hit a ball where I need to and coming here might not be good for somebody like me. When I hit that 9 iron a 110 yards over the green I have to tell myself that if I was on a real course I don’t know if that would happen. If I go out there thinking I hit my 9 iron 110 yards or so I better get out my wedge and then hit that 20 yards short. So in terms of distance and feel and accuracy and that I don’t think it’s really good.

Two out of the four golfers in this study can be described as average (average defined as shooting 101, or 29 strokes over par) and one was below average. It is likely that these golfers would have experienced the same inconsistencies with their shots while playing on a traditional golf course. The main difference however, is that on the real golf course they would have received immediate feedback whether they had a good shot or not; straight down the fairway or sprayed off to the left or right of the fairway. In the virtual golf setting there was delayed feedback as there was a lag in the golf simulator’s projection of their ball into the screen. Their mistrust in the computers’ portrayal of their shot into the virtual golf screen led them to doubt the computers ability to accurately simulate their shots. This, in turn, caused the players to feel that virtual golfing could have an adverse effect on their playing ability. This finding contradicts most of the research on simulation technology as simulators are typically used to practice and refine skills before having to put them to the test in a real setting (Globus, 1997).

Conclusions

The themes that comprise the leisure experience phases of virtual golf are different than those of traditional golf. The anticipation phase of the virtual golf experience has a robust existence. However, the preparation component of simulated golf varies from that of traditional golf. This may be due to the relative short history of the activity and participants have not learned how to prepare for it. It also may be due to the fact that virtual golf has some advantages in regards to accessibility, and therefore the degree of preparation may not be as great. The findings in this study suggest the primary reason that participants did not prepare at a high level was because they perceived virtual golf to be more of a social event opposed to an activity or a competition (between themselves or with others) when playing “real” golf. The activity of playing golf was not taken as seriously, therefore subjects did not feel the need to practice and prepare for the activity. As a result of the exploratory nature of this study, a simulated leisure theory was not developed but the grounded theory methodology was useful when developing themes of the simulated leisure experience.

There are several conclusions that can be made regarding the participation phase of virtual golf. One of these is that constraints exist in virtual golf. These constraints are primarily perceived as physical limitations. Some of the sociological constraints that may exist in a traditional round of golf may not be present in a simulated round. One constraint that is more evident in virtual golf is that of passivity. This activity relies on
technology that is not adequate to provide timely feedback to participants. Another primary reason for the subjects’ apathetic feelings was due to the stagnant positioning of the players and lack of mobility within the round of simulated golf.

Another constraint that plays an important role in the experience of this activity was lack of fidelity. The simulated golf round did not provide high fidelity in relating the virtual golf experience to that of a traditional golf experience. Players feel as though they are participating in an activity other than golf. In addition, the computer does not provide a realistic golfing atmosphere for the golfers. Not only is the environment unrealistic, but it is also difficult to interpret. Subjects had difficulties determining distances, knowing how hard to hit the ball, and had trouble lining up putts. Players also struggled to understand the layout of the course. Hazards, course layout, and the flagstick were not easily viewable. These are important components in golf and the lack of fidelity in communicating that type of information to players can greatly damage the quality of the experience.

There are also several assertions that can be made based on the results from this study. The first deals with the increased accessibility of virtual golf simulators. Golfers can now play any time of day (at night), any time of year (during the winter), and in any weather (rain, snow, etc.). These environments are also more accessible to individuals with disabilities (Broida & Germann, 1999) or the elderly who may otherwise be unable to golf on traditional golf courses; and spectators who may not feel comfortable or may be prohibited from observing on a regular golf course. These environments are also more accessible to beginners or novices who may not feel comfortable or who may not have the necessary skills to be able to golf on a traditional golf course. These golf simulators also reduce the human element of the experience as one subject indicated, “It [the golf simulator] did everything for you except swing the club”, which can lead to a less satisfying leisure experience and to leisure boredom for the individual.

The main assertion and implication from this study deals with the optimal leisure state or peak experience of leisure known as flow (Csikszentmihalyi, 1975). Flow has been described as the optimal goal of leisure and occurs when the individual’s skills match those of the environment, there is an intense concentration on the task at hand, and all other environmental forces are blocked out. When this occurs the individual experiences a state of flow in which they are so immersed in their experience that they lose track of all their surroundings and re-emerge from the experience more rejuvenated and energized than they were prior to the experience. Participants in this study would most likely not be able to achieve this optimal leisure state and future research should examine the implications of simulated leisure environments for flow.

Virtual golf is a novel and intriguing concept. However, the results from this study indicate that it is not the same activity as traditional golf. With the increased demand for golfing facilities, virtual golf will find a place in society. In response to year-long waiting lists for tee times and enforced tyrannical tempos on golf courses, Japan has increasingly relied upon golf simulators that have turned empty warehouses into golfing centers (Puttre, 1993). However, in order for the simulated golf to thrive, participants must be aware of the facets of simulated golf and understand that it is not the same experience as traditional golf. Simulated golf is more accessible than traditional golf and it may be an ideal place for the inexperienced golfer to learn the game (Globus, 1997). Future studies should be implemented examining different levels of golfers and different
virtual golf facilities. Additional studies should also be undertaken that will compare and contrast the virtual and traditional golf experience. This study resulted in producing more questions than it did answers for the researchers.

As simulated leisure environments become increasingly accessible and popular, future research should re-examine leisure motivation and satisfaction; are motives and satisfactions different in these simulated leisure settings? If so what are the implications? Is it possible to achieve “flow” in these simulated leisure settings? What are the properties of the simulated leisure experience? What exactly is the difference between the perception of art as experienced in a museum and its perception through a video, a CD-ROM or a multi-media machine? Similarly, what are the differences between reading in print or reading through a computer or a CD-ROM? What are the implications for serious or casual leisure (Stebbins, 1996, 1997)? What are the implications for leisure involvement, commitment or specialization (Bryan, 1977; Buchanan, 1985; and Havitz & Dimanche, 1990)? What are the implications for Iso-Ahola’s (1986) theory of substitutability for leisure behavior? Would individuals substitute simulated leisure for their traditional leisure activities? Why or why not? Under what conditions? Is it possible to develop a simulated leisure theory? The continued demand and development of these simulated leisure settings advances several philosophic implications and is going to become a fruitful area of inquiry for leisure researchers for years to come.

References


Scott Forrester……………. Brent Beggs is a doctoral candidate working on his dissertation research focusing his attention on the study of …………….…. 