

An Exploration of Strategic Decision Making in Golf: Take a Chance, It's Worth the Risk

Erik Gnagy, Marlene Dixon, Evelyn Clingerman,
and John Bartholomew

University of Texas at Austin

The present study explored the experience of strategic decisions during competitive play for three male professional golfers. Guided philosophically by existential phenomenology, semistructured interviews were conducted. The participants described the experience and meaning of strategic decision-making. Through an interpretive analysis, the following five common components emerged: (a) assessment (b) affect (c) conservative alternative (d) competitive environment and (e) commitment. For these golfers, strategic decision-making can be described as an informed choice guided by experiences of both positive and negative affect, which were associated with the opportunity to experience optimal performance or to demonstrate superior skill relative to their opponents.

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The study of human decision-making is a complex endeavor. As such, the field of decision research is rife with disagreement (Starmer, 2000). Subsequently, the disagreement leaves some to claim that human decision-making is far too complex a phenomenon for any one model to explain (Sugden, 1986). This is particularly challenging when decisions must be made under risk or uncertainty. Models of decision-making in these scenarios typically fall into one of three categories: normative, descriptive, or prescriptive. Normative models are designed to indicate what the “rational” decision maker should choose. Descriptive models are designed to indicate what is happening in the decision making process—with an emphasis on why individuals might deviate from normative standards. Lastly, prescriptive models are intended to indicate how to improve decisions. Decision-making in sport has followed similar research practices. Thus far, most of the decision-making literature in sport has focused on normative and prescriptive models testing decision accuracy or *correctness* of individual decisions (Catteeuw et al., 2010; Macquet, 2009); the development of expert decision-makers (Baker, Côte, & Abernathy, 2003a, 2003b;

Gnagy, Dixon, and Bartholomew are with the Department of Kinesiology and Health Education, University of Texas at Austin, Austin, TX. Clingerman is with the Nursing Department, University of Texas at Austin, Austin, Texas. Address author correspondence to Erik Gnagy at erik4ku@yahoo.com.

Berry, Abernathy, & Côte, 2008); effects of arousal on speed and accuracy (Fontana et al., 2009), effects of fatigue (Royal et al., 2006), conflict (Chen, Wang, & Zhang, 2011), practice (Poolton, Masters, & Maxwell, 2006), and knowledge (McPherson & Kernodle, 2003).

Research in golf has followed a similar path, investigating the presence of framing effects (Sachau, Simmering, & Adler, 2012), as modeled by Prospect Theory (Kahneman & Tversky, 1979); or by testing the “correctness” of strategic-decisions (Kirschenbaum & O’Connor, 1999). Presumably, in golf the correctness of strategic decisions is determined by whether or not a golfer chooses a strategy that involves an appropriate amount of risk/reward. These risk/reward decisions are frequently dichotomized and discussed in the context of two contrasting strategic approaches, one being “aggressive” or approach-oriented, and the other being “conservative” or avoidant-oriented. Golfers’ use of the word “aggressive” describes a strategic approach that calls for hitting a shot that presents a high risk/reward choice, i.e., the reward of landing close to the pin despite the risk of a nearby hazard. In contrast, conservative shots are choices that minimize risk but also reduce one’s chance for achieving a score below par. Conservative strategies underlie most golf instruction and are associated with the “smart” or correct way to play.

Kirshenbaum and O’Connor (1999) report the results of two studies examining strategic decisions of golfers. In the first study, the authors concluded that 80% of participants implemented an inappropriate strategy that was overly aggressive. They posit that these strategies flowed from the participants having inappropriately positive illusions of their ability and excessively positive expectations of success. The second study demonstrated that participants who followed a more conservative approach were more likely to achieve a lower score. Thus, these authors recommend that golfers should choose to play a more conservative style, or “smart golf” (Kirschenbaum, Owens, & O’Connor, 1998). As such, this research compares decision making to a “known standard.” Further attempts at establishing objective standards of “correct” decisions are based on extensive outcome data, i.e., number of strokes to finish a hole from different positions on the course as a function of type of shot attempted (Broadie, 2008, 2012). These statistics have been used to create prescriptive models to guide decision-making (Broadie, 2014). A potential limitation to these strategies is that they lead to a set of avoidant goals. That is, the focus centers on avoiding punishment rather than seeking reward. These forms of goals have been associated with poor performance in sport (Lochbaum & Got-tardy, 2015). Thus the adoption of such avoidant strategies could potentially lead to suboptimal performances (e.g., higher scores), considering that highly competent professional golfers have the prerequisite skills necessary for employing more aggressive or approach oriented strategies. In fact, Bois and colleagues (2009) found that professional golfers who scored higher on performance-approach goals and lower on performance-avoidance goals were more likely to make the cut than those with higher scores on performance-avoidance goals. Given these findings, it appears that success in professional golf may require golfers to successfully execute shots that statistics deem too risky.

In addition, decision-making research has consistently demonstrated that these statistically driven models of decision-making do little to describe actual behavior (Hogarth, Portell, & Cuxart, 2007; Rothenstreich & Hsee, 2001; Weber & Johnson, 2009). This is especially true when the decision is dependent upon level of

skill—which varies across types of shots for each golfer and across competition. This variation across competitive days is of particular note. Most professional golfers are physically equipped for hitting high risk/reward (i.e., aggressive) shots. Thus, their decision to select and execute a given shot may be more dependent upon whether their experience of the decision making process enabled them to create a mindset facilitative of optimal skill execution. A good example of this is when Phil Mickelson chose a high-risk shot on the par 5, 13th hole at the 2010 Masters. After he won the tournament the media asked him about the shot and Phil replied: “I kept saying that if I trust my swing, I’ll pull it off.” In addition, when asked what the difference was between a great shot (i.e., high risk) and a seemingly less risky or “smart shot,” Phil replied, “I mean a great shot is when you pull it off. A smart shot is when you don’t have the guts to try it” (Golf.com, 2010).

This reference to having the “guts” to try it, illustrates that these decision-making processes can be a source of stress. In fact, evidence suggests alleviating stress may be a primary source of motivation when making a choice among certain options (Nichols, 2007; Nicholls & Polman, 2008). Golfers in these studies stated that the process of making decisions, such as, course management, club selection, and where to aim were significant sources of stress. Furthermore, the findings suggest that in hindsight these individuals attributed their unsuccessful performance to incorrect (i.e., aggressive) decisions. In failure, these golfers expressed regret for attempting a shot more directly aimed at the pin, when they believed it would have been more appropriate or correct to aim at the middle of the green. Additional evidence demonstrates that anxiety resulting from the stress of making these decisions has an impact on the golfers’ strategic decisions. Giacobbi, Foore, and Weinberg (2004) found that golfers often cope with stress by implementing conservative strategies such as: playing safe over water, taking a safe club, playing smart, staying away from water, playing conservative off the first tee, and to play smart when others are watching. One participant said, “I’ll be really conservative to cope with more or less anxiety of all those people watching me [on first tee]” (p.176).

These results demonstrate that the view of whether a decision is correct is often based on the result rather than the nature of the decision. As such, there is a clear need to better understand the experience of strategic decision-making. Given the paucity of existing research, the aim of the current study was to explore the experience and meaning of strategic decision-making for professional golfers. Specifically, this study asked golfers to describe their experience of choosing to play high risk/reward (i.e., aggressive) shots during professional competition. To achieve this, qualitative methods informed by existential and interpretive phenomenological practices were used to gather data through unstructured interviews. Qualitative methodologies are posited to be valid and efficacious methods when little is known about a specific phenomenon (McKague & Verheof, 2003). Qualitative methods informed by Interpretive Phenomenology do not attempt to discover a single ‘truth’ that exists apart from the human being, nor do they attempt to explain or predict human behavior. These methods do not ask questions as to why a phenomenon exists or presents itself, but rather asks the question, what is it like (Polkinghorne, 1989)? The primary goal is to simply understand what a phenomenon is like, as it presents itself to the individual. Furthermore, these qualitative methods closely resemble methods used by the field of applied sports psychology consulting (Dale, 1996; Fifer, Henschen, Gould, & Ravizza, 2008; Orlick, 1989).

It has been recommended that researchers whose methods are informed by phenomenology make explicit the philosophical assumptions that undergird their methodological procedures (Caelli, 2001; Lopez & Willis, 2004). This act of transparency adds to the trustworthiness of the study (Tobin & Begley, 2004; Denzin, 2009). The philosophical principles guiding this study were based upon Hermeneutic or interpretive phenomenology (Heidegger, 1962; Laverty, 2003). Hermeneutics, which is a science of interpreting texts, is an approach that emphasizes the interaction between preunderstanding and interpretation (Denzin & Lincoln, 2005). This process called the 'hermeneutic circle' includes moving between parts of the text and the whole. This process is comprised of a decontextualization of the text as it is interpreted and organized into smaller more manageable segments to a recontextualization as the segments are interpreted related to the whole or the context of the text (Polkinghorne, 1989; Sadala & Adorno, 2002). According to Koch and Harrington (1998), interpretations resulting from the Hermeneutic circle depend upon both the researcher's and the participant's background understandings as a part of the interpretive process. This process emphasizes another important philosophical stance, which is that of equalizing power. According to Fossey and Colleges (2002), to improve the quality of interpretive methodologies it is necessary to ensure that the participants are authentically represented in the process. As such, the participants are considered co-researchers with equal power, thus, are included in the various stages of the process (e.g., data collection, analysis, and presentation). This principle is consistent with the humanistic tenet of equalizing power, which in sports psychology often refers to the athlete as the expert (Dale, 1996; Poczwadowski, Sherman, & Ravizza, 2004).

Lastly, it is important that the interpretation of the participant's experience, in the strictest sense, remain true to the voice of the participant in that the researcher refrains from imposing his/her presuppositions or theoretical positions. Staying at the level of the lived-experience or staying true to the participant's voice by incorporating the language of the participants in the creation of themes is a common practice for establishing trustworthiness (Larkin et al., 2006; Colaizzi, 1978; Dale, 1996; Lincoln & Guba, 1985). In addition, phenomenological methods stay true to the participant's voice by allowing them to describe their experiences naturally without the use of questions that may lead them to answer in ways the researcher deems significant. This is a process that asks broad open-ended nonleading or judgmental questions, which authentically encourages the emergence of newer concepts and experiential themes. It is a constructivist approach, which presumes that humans construct meaning as they interact with the lived-world (Golafshani, 2003). Therefore, rather than rely on a group of expert coders, or a computer analysis of content, the researcher and the participant are both considered an integral part of the interpretive process forming the Hermeneutic circle (Koch and Harrington, 1998). Furthermore, Tobin & Begley (2004) state that triangulation methods are epistemologically incongruent with qualitative methods because the underlying premise suggests the existence of a single reality or truth that can ultimately be confirmed. It is also argued that the use of triangulation may in fact exacerbate subjectivity rather than reduce it (Krane, Andersen, & Strean, 1997). Lastly, Giorgi (2006) argues that triangulation is an empiricist approach, not a phenomenological one and that the data should be justified by new data (interviews) rather than the opinions of experts.

Finally, the analysis and results are written in such a way as to provide in-depth descriptions, which will enable the readers to judge the quality of the study (Crist, & Tanner, 2003; Diekelmann & Ironside, 1998; Elliott, Fischer, & Rennie, 1999). This presentation of the findings should facilitate transferability, enabling both sports psychology consultants and researchers to apply the results to additional decision-making contexts. Finally, implementing the existential phenomenology methodology has the potential to deeply affect the readers who identify with and contrast their own personal experiences with the phenomena of strategic decision-making.

Methods

Procedures

This study was approved by the University of Texas at Austin Institutional Review Board for Research with Human Subjects. The participants were contacted by telephone to determine a convenient time and location for the interview. The interviews took place in an environment that was void of potential distractions. The interviewer clarified the purpose of the study and confirmed the participant's verbal consent. The interview was unstructured and began with the question, "Can you tell me about times in which you've taken an aggressive approach while playing competitively and describe your experience?" Follow up probes were used as needed as well as questions asking the participants to describe additional experiences with aggressive play. The duration of the interviews ranged from approximately 70–90 minutes.

Researcher Background

Consistent with hermeneutics the researcher's background is an integral part of the interpretation of data. In this case the primary researcher's background includes being a member of the Professional Golfer's Association of America (PGA), with an extensive history in applied sport psychology across a range of sports, including golf. While this experience cannot be removed from the analysis it should assist in understanding the golfers' experience (Burton et al., 2006).

Analysis

Utilizing methods consistent with the practice of applied sports psychology, in-depth interviews were conducted with individuals who have first-hand experience making strategic-decisions in golf. The interviews were audio taped and transcribed verbatim by the investigator. The data analysis consisted of an interpretive analysis informed by Hermeneutic procedures and recommendations from Colaizzi (1978), Côte et al., (1993), Dale (1996), and Tesch, (1990). These procedures followed an iterative process utilizing idiographic and nomothetic analysis, which includes decontextualizing and recontextualizing the data. Decontextualizing of the data involves removing individual units of meaning from each transcript. Meaning units, which Tesh (1990) defined as "a segment of text that is comprehensible by itself and contains one idea..." (p. 116) are organized into similar groups. This process helps to condense the data into a more manageable form for interpretation (Phillips-Pula, Strunk, & Pickler, 2011). When recontextualizing the data the researcher checked

for consistency between individual groupings of meaning units and the transcript as a whole. In addition, recontextualizing also included the nomothetic analysis where the researcher looked for convergence among the meaning categories for all the participants (Sadala & Adorno, 2002).

The convergence of the categories of meaning units constitute the structures or “essences” that are the essential components revealing the experience and meaning of the phenomena as described by the participants (Valle & Halling, 1989). This method was chosen because it accommodates an idiographic approach that allows the data to speak for itself maintaining the connection between the nomothetic interpretation and the individual participant’s subjective experience. In addition, “in vivo” coding (Côte, Salmela, & Abderrahim, 1993), which is the use of language offered by the participants, was used when feasible to generate titles for each group of meaning statements in an effort to remain true to the voice of the participant’s (Fossey et al., 2002). Although the grouping of the individual meaning statements demonstrates some convergence within the data they are not intended to represent a parsimonious theoretical model explaining the phenomena. Rather the groupings are intended to reveal the common components or structures of the lived experience, in a manner consistent with phenomenology (Allen-Collinson, 2009). Lastly, trustworthiness was established through member checking. Member checking is a process through which the researcher shares the interpretation of data with the participant, in which case the participant attests to the researcher’s authenticity of interpretations and conclusions (Lincoln & Guba, 1985). Member checking is an efficacious technique for achieving *authenticity, reciprocity, and coherence* (Fossey et al., 2002).

Participants

The participants were a group of professional golfers. At the time of the interview the three participants had been playing sub-PGA professional golf for an average of 3.9 years. However, the participants have subsequently combined for a total of two official PGA tour starts and forty-five Web.com tour starts and two mini-tour victories. Thus, at the time of the interviews they would be classified as developing, professional players. To maintain the anonymity of the players they have been given the following pseudonyms (Jack, Ben, and Byron). Although this is a small sample, according to Pollio, Henely, & Thompson (1997) three participants may provide adequate data for thematic analysis. In addition, each participant provided several examples of their experiences with strategic decision-making to the point at which data were reaching redundancy. Lastly, the use of three participants allowed for the presentation of both the idiographic and nomothetic analysis of the data.

Consistent with interpretive phenomenological methods, specifically those informed by Heideggerian philosophy, it is appropriate to begin with a summary description of the participants. This idiographic approach, allows for a greater understanding of the individual’s lived experiences of strategic decision-making. The following are the players’ self-descriptions of their preferred style of play. As will be clear from their quotes, this sample represents a group of golfers who are thoughtful about strategic-decisions in golf and display a range of aggressiveness in thought and action. As such, they provide an ideal opportunity to study decision making in golf. Throughout each of the interviews the players were asked on

multiple occasions if they considered themselves to be an aggressive player, their responses were:

Jack: I don't play fully aggressive but I'd say...I'm closer to playing aggressive more consistently than I am conservative more consistently...I'm definitely not... just 'all out' all the time but...I definitely feel better about it when I am taking a few chances a round.

Ben: I would say I'm a situational player. I would say it's how I feel at the time – how the shot looks to me – it's just how I feel...I don't know if I would say I'm aggressive – I would just say that I'm not conservative. I'm not reckless – I'm definitely not too conservative, though. I would say I'm a well balance mix of both.

Byron: I am probably very calculated. I'll play aggressive but I kinda pick the spots that I want to be aggressive...that's why when I set out this year my goal was to hit more aggressive shots cause I knew that I was a little more calculated than some guys.

The players were also asked to describe the meaning of aggressive play, which resulted in the following quotes:

Jack: It means to be willing to... take a risk and... that will ultimately better your score and position in a golf tournament... for me it's more fun and sometimes more rewarding to take a few chances here and there... doesn't mean that your all out on every shot it just means that there are certain points in everybody's round where sometimes a risk is needed to be taken in order to potentially finish the best that you can...there's going to be plenty of times it doesn't work out but that's all part of the...the fun is you don't know.

Ben: Manning up. Just hitting the shots that you know you are capable of in the situations when you need them. That is what it means. It is not playing outside of your capabilities. You see a shot you know you are good at and you go for it. End of discussion.

Byron: It is one of those shots where you are a little out of your comfort zone cause you don't do that all the time, especially in tournaments... I'm going to have to take some chances and I recognize that's what my competition does and it's just what I have to do to compete.

These self-definitions and the expressed meanings of aggressive play clearly depict a shared belief that aggressive play is a necessary part of the game if a player wants to compete with and beat his or her opponents. In addition, the data are replete with statements that connote that aggressive play means to "take a chance" and that it is a "risky play" and that the decision is one with potentially negative consequences. However, although these players share a common belief regarding the utility of aggressive play, that belief is reinforced through different mechanisms for each and is expressed uniquely throughout the process as they assess the situation and ultimately make the commitment to attempt the shot.

Jack, as many of his quotes will reveal, has a tendency to make the decision based on an impulse, a strong feeling that it's the right shot for the moment and that he can "pull it off." Ben's decisions appear to be driven by a need to pursue the goal despite any fear and a determination to demonstrate that he can "do it better" than his fellow competitor. Ben has also developed a belief that, over the long run, his scoring average will be better if he chooses to "go right at it" when he feels right or the situation falls within a predetermined decision rule. Lastly, Byron as he stated, is more calculated, utilizing more decision rules but with an understanding that although playing aggressive may be "out of my comfort zone" if he trusts his technique and mental process it's worth the risk.

Results

From a philosophical perspective it is important that the analysis maintains the individuality of each player while integrating the data into a collective description of the phenomena presented. Going forward the paper will present the data as it unfolded through the iterative process of reading the individual transcripts and extracting meaning statements to identify the common components that make up the participant's experience of strategic decision-making. This also allows the readers to make their own judgment of these data.

The initial analysis resulted in the identification of twenty-three categories of meaning or essences, for which most were given titles drawn from participant statements. Further examination of the meaning statements revealed a decision-making process consisting of five interrelated, higher order components (assessment, affect, conservative alternative, competitive environment, and commitment). The following will provide a brief description of the components within the process. In the interest of staying true to the voice of the golfers, single exemplar quotes will be provided where there is strong convergence among all three participants' experiences and multiple quotes will be used where slight differences emerge. Again, this presentation of the data are done in a manner that allows for the reader to adopt meanings and significance through their own exploratory analysis (Bain, 1995, Van Manen, 1997).

Assessment

The assessment included categories of meaning statements titled: taking a risk, preround strategy, rules of engagement, weighing the options, and justified decision (see Figure 1). The decision to attempt an aggressive shot is sometimes made a priori, guided by a predetermined decision rule or an impromptu choice that is guided by a "feeling" or the decision has been justified through a series of rationalizations. Regardless, it is clear that the process includes an exploration of alternatives, which are gradually narrowed to the choice to attempt the aggressive shot. Therefore, in the end, the thought or urge to go after the reward outweighs any potential risk. Clearly, the decision to play aggressively involves an assessment of the situation.

However, the in-the-moment assessment may be influenced by feelings formed before the beginning of play. For example Ben states, "a lot of times it is before the round, I'll be like, I'm going after it today." The data suggests that these feelings

Meaning Statements	Essences	Component
It feels risky		
Worth the risk	Taking a Risk	
It's a recognized risk		
It's before the round		
You have to shoot a low score	Pre-Round Strategy	
The mind set in the first round		
Wasn't a penalty of more than one shot		
Can you pull it off six out of ten times	Rules of Engagement	Assessment
Given situation wedge, 9, 8 iron		
I know all the possibilities		
Weighting the options	Weighing the Options	
Weight the odds		
My average is lower		
I feel like I perform better	Justified Decision	
What I have to do to compete		

Figure 1 — Examples of Meaning Statements, Essences, and Components

stem from preestablished beliefs that aggressive play is a necessary means to shooting low scores. According to Jack, “sometimes those chances are necessary to take if you want... to shoot that score you’re going to need to shoot.”

However, the decision making process does not end before play begins. There is also deliberation within the moment, when a player is standing over a shot and the option to play aggressively moves from a general, preround goal to an in-the-moment decision. It is during this process of assessment that the players must contend with the thoughts of potential negative outcomes. For instance Jack explained, you definitely have to weigh. . . obviously you know what the positives are that’s why you came up with it. . . but then you also have to weigh. . . the negatives you don’t dwell on the negatives but you have to know what can happen if it doesn’t work out. Interestingly, the weighing of options was described as a process of shifting attention between alternative outcomes; however, participants acknowledge that they do not want to focus on the negatives too intently. To cope with his divided attention Byron relied on visualization to control his focus in the “better hit it straight” situation.

During the assessment all three players suggested that they use basic decision rules to as a reference point for making aggressive decisions. Jack stated:

I'll say... can I pull this shot off seven out of ten times, if I can pull this shot of seven out of ten times then it's probably worth the risk depending upon what that risk is, it's different in every situation.

In contrast, Ben's rule included a limited acceptable amount of risk rather than a perception of his ability. Ben stated:

I pretty much will go for something if the penalty for a miss is not more than a shot. If there is out of bounds – if it is a par 5 and it's out of bounds – like ten feet left of the premium spot, then I'm not going to aim at the premium spot because it is not worth the risk. If I miss by 10 yards and I have hit it out of bounds, that is no good. But if it's some rough or a red hazard or something like that and I can make eagle if I go for it, or if I miss I will have an easy up and down or something like that I'll go for it.

Finally, Byron's rules were governed by the particular club required for the shot or by his standing in the tournament. Byron stated, "For the most part there are kind of certain given situations... wedge, 9, or 8 iron pretty much every time go at the pin regardless of the score even if I'm shooting you know 63."

Although each of these players stated that they have a set rule that guides their decisions, the rules are not followed dogmatically. These players find alternative means to justify taking an aggressive approach. Whether it is by deeming that the situation calls for an aggressive shot, or by reducing the amount of perceived risk through rationalizing, they find a way to reinforce the behavior. For example, Ben states:

Just realizing when I would go after those shots, you know how small I actually missed by if I do miss... it made me feel like alright... if I'm off, okay I'll miss but worst case you know I'll have a chip or like a 25 footer whereas, before when I would aim away from the flags... my good shot would be to 20 feet and I would hit it right at where I was looking. And I was like, that is terrible, you shot a lot of 71's doing that.

The decision-making process was also driven by the following three components, affect, competitive environment, and conservative alternative, which all appear to further reinforce the decision to play aggressively.

Affect

The affect component includes the categories of meaning statements titled: amazing feeling, momentum, and everything's clicking (see Figure 2). Choosing to attempt an aggressive shot and then executing the shot successfully is an exhilarating experience which is captured in Byron's quote:

It is a little bit of a rush cause you know there is risk there and it is a recognized risk and when you pull it off it's a great feeling... it's a little bit of a momentum changer just like in any sport there is momentum in golf too.

The momentum Byron refers to results in increased positive affect, which can further reinforce a golfer's decision to continue on with an aggressive strategy.

Meaning Statements	Essences	Component
I was so pleased with myself		
It felt amazing	Amazing Feeling	
It's a little bit of a rush		
Carried that momentum all the way into the clubhouse		
didn't want to take a step backward	Momentum	
i just changed the momentum		Affect
it's a feeling in your body		
Feel you can pull it off	Every Things Clicking	
You just have a feeling		

Figure 2 — Examples of Meaning Statements, Essences, and Components

For Jack, positive experiences from earlier in the round (i.e., hitting good shots or achieving low scores) which he described as “everything was clicking that day”, creates an impulse to play aggressively:

When things are going well I definitely get that impulse... you know sometimes surge of confidence to go ahead and try things that I might not otherwise try if say the round wasn't going for the best... I don't necessarily think it's an aggressive play while it's happening it just seems like the right play.

However, the urge to play aggressively may not be limited to positive affect, it appears that negative affect may also reinforce aggressive decisions. For Ben experiencing an undesirable outcome while making the choice to play a more conservative shot can lead him to play more aggressively later in a round. Ben stated:

I get pissed off, and pissed off for me is good. You kind of let go of all the fear and you're like all right this is what I'm going to do....you get more resolute with all of your decisions...I've had tournaments where I'll hit a conservative shot into a bad spot and end up making a bad score, and that will actually fuel me to make more sound, more aggressive, more resolute decisions, and I'll actually play the rest of the tournament better because of that one shot that I didn't hit the way I wanted to, and I didn't get the results that I wanted to. That will actually give me more resolve.

Although Ben describes a situation in which he attempted a conservative shot and had a bad outcome, there is a consensus among all three players that playing conservatively is a less than optimal alternative. In fact, each of them appears to hold a negative view of conservative play. This view may further reinforce decisions to play aggressive, which is why attitudes toward conservative play are a component of the decisional process.

Conservative Alternative

The component conservative alternative includes the categories: regret, taking foot of the pedal, less than optimum, avoiding disaster, and rules for conservative (see Figure 3). The following quotes are answers to specific questions regarding how the players would feel if they played completely conservative.

Jack: If I shot the same score I shoot 72 just trying to hit the fairway hitting my three wood and two irons...and making a bunch of pars and I shoot 72 with three birdies and an eagle and five bogies and... I would have more fun and it would be more exciting to me (laugh) to have it the latter way.

Ben: To never go for it, I've played rounds like that and it just sucks. I can't take it. I've given myself no chance to have a good upside and little chance to have a bad round, but what are you trying to prove, that you can finish 50th?

Meaning Statements	Essences	Component
It just feels terrible		
End up regretting it	Regret	
not how you play if you're going to be successful		
I've given myself no chance to have a good upside		
Take the foot of the pedal	Taking Foot of The Pedal	
Need to do something to find confidence in my swing		
My standards are lower		
I'm not trying to hit the perfect shot	Less Than Optimum	Conservative Alternative
Not giving yourself best percentage chance for making birdies		
Playing not to have a disaster		
You're more worried about avoiding trouble	Avoiding Disaster	
You're playing not to make a mistake		
Got a 5 shot lead		
Under really tough conditions	Rules for Conservative	
Not feeling confident		

Figure 3 — Examples of Meaning Statements, Essences, and Components

Byron: The experience...if you don't shoot a low score, say you turn in a 72. You immediately go back to those situations and you think, I had wedge in my hand and I hit it right where I wanted to and I had 15 feet and missed the putt. Why don't I go right at the pin and hit it where I want to and I have a four footer? Now, instead of 72 I could shoot 68.

The experiences described by all three players indicate that conservative play is less enjoyable, provides little upside, and can lead to feelings of regret. Jack stated, "I can...maybe I actually take the foot of the pedal too much, play too conservatively and end up end up regretting it."

Feelings of regret are associated with the understanding that playing conservatively significantly limits one's opportunity for obtaining the very rewards they are seeking. Conservative play is also associated with the negative mindsets such as, avoiding disasters, taking a step backward, or an overall lack of confidence. For example, Bryon said:

The only way you're going to do that [play conservative] is if you're just not feeling that good about your swing...so you're more worried about avoiding the trouble then going for the birdies if you're feeling good about your swing you're going for the birdies.

Although each of these players describe conservative play as an overall negative experience each of these players do agree that it is an appropriate strategy at times. However its utility was limited, thus a conservative approach should be regulated to extremely tough conditions. For example, extremely fast greens, tall rough, in strong wind conditions or when their execution had been poor. In addition, their rules for playing conservatively were governed by an avoidance mentality, such that they were consciously attempting to prevent any possible negative outcomes. Jack stated:

Sometimes it's necessary to not take too many chances but most of the time it's under really tough conditions...those are the times when it's okay to play conservative and get it on the green and not shoot yourself in the foot and let everybody else shoot themselves in the foot by taking chances when the conditions are tough.

Competitive Environment

The fourth component of the experience of aggressive play is the competitive environment, which includes the categories: guys are good, trying to win, and the situation is right (see Figure 4). These external or environmental determinants also play an instrumental role in the assessment and ultimately the decision to play aggressively. Specifically, these determinants involve the perception that their competition is really good and that to compete they may have to take some of the same chances that their fellow competitors are taking and "pull them off" if they want to win. For instance one golfer said, "you know guys are good, you have got to be good too...I'm trying to beat everybody. I'm not trying not to lose."

Quotes within this component reveal a strong desire to win, which means doing better than the competition. Thus, perceptions of the capabilities of their opponents

Meaning Statements	Essences	Component
I was tired of getting my butt kicked by guys	Guys are Good	Competitive Environment
Winner of the tournament is going to be someone that's taking some chances		
Guys are going to be taking it low		
To have a chance to win	Trying to Win	
If you want to win the golf tournament		
I wanted to win		
I was near the lead	Situation is Right	
Situation requires something special to happen		
It's all about your tournament standing		

Figure 4 — Examples of Meaning Statements, Essences, and Components

are clearly impacting their decisions to play aggressively. Common situations promoting aggressive play were, early in the tournament, being a few shots back from the lead, or just standing over a shot that set up well to them, compelling them to go for something great.

Commitment

The final component, commitment, is also the final stage of the process where the players affirm their decision and go forward with executing the shot. Commitment includes the categories: confidence, getting comfortable, zoning in, not worrying about trouble, going for it, swinging aggressively, and disasters can happen (see Figure 5). The categories getting comfortable, zoning in, and not worrying about trouble describe processes that include a narrowing of focus, visualization, and a shifting of attention toward the intended goal.

Byron: I commit to, okay this is what you're gonna do, this is what you've committed to do, so now try and get a good visual, visualize it, set up to it and go through your normal routine and then just make the aggressive swing. My focus is a little sharper...I feel like I'm in my shot a little bit more because it needs a little more attention you know.

Lastly, a large part of the commitment process is found within the category disasters can happen. Disasters can happen demonstrates the player's acceptance of negative consequences. It is an understanding that the choice brings potential negative consequences into play, but they accept those consequences for the possibility that they can achieve and experience the reward of a great shot.

Meaning Statements	Essences	Components
I know I'm capable		
Confidence that you need	Confidence	
Have a lot of confidence		
You have to be comfortable		
Feel more comfortable	Getting Comfortable	
Comfortable going at it		Commitment
Your focus gets narrowed		
I really focus on it	Zoning In	
My focus is a little sharper		
I would not care about what trouble was around		
Without worrying	Not Worrying About Trouble	
You're not thinking about mistakes		
I'll go for it		
I let it fire	Going For It	
You go for it		
It was struck aggressively		
Swing like a kid	Swing Aggressively	
Make an aggressive swing		
I've accepted all of them		
It was a disaster, that can happen	Disasters Can Happen	
You totally accept it you're okay with it		

Figure 5 — Examples of Meaning Statements, Essences, and Components

Ben: Before I hit an aggressive shot, I have already accepted any outcome that could happen. When I'm weighting the options, and I'm like okay you know, if I want to win this golf tournament do I need to go for this? Do I need to be aiming right at this thing? If the answer is yes and you need to pull off a good shot, then that gives me all the acceptance that I need whether I hit the shot well or not.

These results demonstrate that the decision to play aggressively involves an assessment of the situation. This assessment characterizes aggressive play as an

acknowledged risk that includes decision-making processes that are influenced by preexisting beliefs and in-the-moment experiences such as, incidental and integral affect. The weighting of these processes ultimately results in a decision that the golfer must commit and therefore accept all possible outcomes.

Discussion

The purpose of this study was to explore the experience and meaning of strategic decision-making in golf, specifically high risk/reward decisions. Despite its relative importance, research in this area is scant. Given this, the present findings serve as a positive first-step in expanding the field's knowledge of decision-making for professional golfers. These golfers' descriptions of their experience of choosing to play aggressively revealed their personal motivations or what it meant for them to play aggressively. For Jack, aggressive play increases his enjoyment of the game and provides that chance that something very good may come about. For Ben, it means demonstrating superior competence, "manning up" and playing to win. Byron picks his spots to play aggressively because he knows that his competition is going to take some risks, so if he wants to perform better than they do, he will have to take some chances as well and "do it better."

These data clearly indicate that these golfers are not adhering to a clear, statistically driven model of decision-making. These golfers described being motivated by personal meaning, how they felt in the moment, and a drive to win. Given these motives, it is not surprising that Kirshenbaum and O'Connor (1999) found that many golfers deviate from "smart" decisions due to overly positive expectations. However, these authors also acknowledge that golfers are likely to be more motivated to hit a great shot than to obtain the lowest score or that they may be following a heuristic and simply selecting the club that is the most associated with tee shots. It is evident that numerous variables are influencing this process beyond that of mere probabilities. Clearly, golfers do not behave "rationally" and in fact change preferences frequently, which may possibly render these models obsolete (Starmer, 2000).

Although the current study was not designed to test or reveal extant theory, the present findings are relevant to several areas of research. The data expands upon the findings of Nicholls & Polman (2008) and Giacobbi, Foore, and Weinberg (2004), which revealed that emotional experiences, resulting from perceived stress or the anticipation of award influence decisions. Further examples from the data suggest that approach/avoid achievement motivations are a factor that contribute to the decision making process. It was clear, that when these golfers choose to implement an aggressive strategy, the "mindset" was "playing to win." In contrast, when choosing a more conservative strategy, the mindset was associated with "avoiding disaster," which is obviously an avoidant goal approach. Examples of the deleterious effects of avoidance goals on performance have been demonstrated empirically (Lochbaum & Gottard, 2015). Lastly, the decisions were affected by external sources of information. Features of the golf course (i.e., hole design) and their fellow competitors played an influential role in the process. These three golfers clearly perceived that their competition was going to be attempting difficult shots and "pulling them off" which, according to them would require them to do the same if they wanted to "do

it better” than their competition. Furthermore, Byron stated that he once saw all of his competitors attempt to hit their drivers into a more difficult portion of the fairway, which in turn assured him that he needed to do the same. Byron’s decision reflects the use of the availability heuristic (Tversky and Kahneman, 1974) where decisions are influenced by the ease of which reinforcing examples come to mind.

The descriptions of these golfers provide evidence outside of research laboratory settings, demonstrating that competitive athletes engage in the use of heuristics (i.e., mental shortcuts) while making strategic decisions. The results are consistent with evidence suggesting that affect serves as a decision heuristic (Slovic, Finucane, Peters, & MacGregor, 2002). Clearly these golfers often made decisions based on “how they feel” in the moment rather than on objective probability expectancies. According to Clore & Huntsinger (2009) positive affect may serve as a “go” sign imploring the individual to rely on their intuitive judgment. Jack demonstrated this when he shared that he often felt the “impulse” to attempt an aggressive shot. In contrast, Ben’s account of playing more aggressively or more “resolute” when angry supports the findings of Lerner and Keltner (2001), who suggest that anger may lead to risk seeking behavior.

Decision-making in golf is a complex process, influenced by a myriad of factors. As such, it is unlikely that a parsimonious model will ever explain, predict, or prescribe what the “correct” decision is in golf. Further complicating this endeavor is that the use of “correct” or “smart” is often perceived to be a function of the execution and the outcome rather than the actual decision. This contention along with present findings demonstrates a unique feature of a golfer’s decisions, which is that the golfer’s decision and execution are inextricably linked. Clearly the experience of making the decision is modulating both the decision and subsequent execution of the decision. These findings should provide fodder for future research that might be designed to disentangle these factors.

Conclusions

This study, however, is not without its limitations. As a qualitative study, this research is limited in that it is unable to determine causal links. Likewise, it is unable to determine the temporal flow of decision-making. However, given the scarce available research, the selected qualitative approach was the ideal starting point and the results suggest this process is dynamic with numerous factors interacting and mutually influencing one another.

These results are also limited by the use of retrospective accounts of lived experience. Specifically, the broad nature of the question allowed the participants to share experiences that were both unique to them and possibly biased by their ability to recall distant events. Although this is limiting, as previously stated there is evidence that suggests elite level athletes are quite adept at recalling past experiences (Nieuwenhuys et al., 2011; Orlick & Partington, 1988). Future research could address both these issues by interviewing golfers immediately following a competitive event, or even collecting decision making during the round through self-talk methodologies. In addition, to potential participant bias, the results of this study were limited by the researcher’s biases. However, in the phenomenological approach these biases are not only unavoidable, but are considered an integral part

of the hermeneutic circle (Laverly, 2003). According to Heidegger ones preunderstandings and historicity are a part of the interpretive process and thus help the research look deeper into the experience identifying the underlying essences resulting in a shared understanding of the experience (McConnell-Henery, Chapman, & Francis, 2009). Furthermore, the use of extensive quotes and a detailed outline for the interpretive procedures allows for transparency, so that the reader can ultimately judge the quality of the findings (Fossey et al. 2002).

Clearly what emerged from these golfers' descriptions is a complex decision making processes. The identified components demonstrate that although each of the three experiences are unique, there is also convergence among the experiences. This convergence does not predict or explain behavior nor is that a purpose of this qualitative investigation. Furthermore, the results were not analyzed in an effort to construct a parsimonious model reducing the experience of aggressive play to a few testable constructs. However, these findings should allow for innovation of quantitative methods that can more explicitly test the theoretical constructs that are germane to these golfers' lived-experiences.

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