

Goal Orientation of Recreational Golfers

Daniel Sachau

Minnesota State University

Luke Simmering

Wal-Mart Corporation

Warren Ryan

Minnesota Golf Association

Max Adler

Golf Digest

Over 2,400 active, adult, recreational golfers completed a golf-related goal orientation questionnaire. This measure included a six-item task orientation scale and a six-item ego orientation scale. The scales were reliable and the factor structure of the questionnaire was consistent across gender, age, and ability groups. Golfers scored considerably higher on task orientation than ego orientation. Players scoring high on task orientation were more likely to take a golf fitness course, practice at a range, practice at a simulator, practice at home, and read about golf than players who scored low on the scale. Golfers who scored high on the ego orientation scale played more golf and had a somewhat lower handicap than golfers who scored low on the scale. The benefits of task and ego orientations are discussed.

Keywords: Golf, goal orientation, task orientation, ego orientation, golf performance, recreational athletes

I don't like the glamour. I just like the game. —Ben Hogan

Researchers have documented consistent differences between athletes who are primarily motivated by the desire to master their sport and athletes who are motivated by the desire to appear more competent than others. The purpose of this study is to test whether recreational golfers are motivated, as Ben Hogan might have put it, by the glamor of winning or the mastery of the game.

Nicholls (1976, 1978, 1980) and later Duda (1989, 1992, Duda & Nicholls, 1992) use the terms task and ego¹ orientation to describe the respective preferences

Sachau is with Minnesota State University, Mankato, MN. Simmering is with Wal-Mart Corporation, Bentonville, AR. Ryan is with the Minnesota Golf Association, Edina, MN. Adler is with *Golf Digest* magazine, Wilton, CT.

for mastery and status goals. The authors found that athletes who score high on task orientation are likely to believe that success comes from effort rather than just ability (Duda & Nicholls, 1992; Treasure & Roberts, 1994). They show higher levels of intrinsic interest (Duda, Chi, Newton, Walling, & Catley, 1995), they focus on cooperation (Duda, Fox, Biddle, & Armstrong, 1992), and they are more likely to use problem solving coping strategies (Ntoumanis, Biddle, & Haddock, 1999) than athletes who score low on the scale.

Athletes who score high on ego orientation are more likely to believe that success is the result of basic and stable abilities (a.k.a. *entity* model of ability), and are more likely to believe that the purpose of sport is to enhance one's social status (Duda, 1989). Ego oriented athletes are also prone to higher levels of competitive trait anxiety (Biddle, Wang, Kavussanu, & Spray, 2003), are more likely to avoid practice (Duda, et al., 1992; Lochbaum & Roberts, 1993), and ignore instructional feedback (Cury, Famose, & Sarrazin, 1997).

Goal Orientation of Golfers

A small number of researchers have examined the goal orientation of golfers. Steinberg, Singer, and Murphey (2000) studied beginning golfers performing a putting task. The authors found that when instructors gave students mastery goals, the students showed greater interest in the task and persisted longer than students who were not given mastery goals. In a study of 147 secondary school students who performed a similar putting task, Spray, Wang, Biddle, and Chatzisarantis (2006) noted that young golf students who were in an experimentally manipulated task involvement condition (told their goals were to "learn and master the techniques of golf putting") performed better than students in an ego involvement condition (told that their goal was to "outperform other students in the school in golf putting").

Surveying 140 collegiate golfers participating on 30 golf teams, Kuczka and Treasure (2005) found perceptions of a task oriented team climate was negatively related to claimed self-handicaps (excuses for upcoming performance). That is, the more players thought their team was task oriented, the less likely the players were to self-handicap.

Oh (2001) surveyed 166 recreational golfers at three golf clubs and found that golfers who scored high on task orientation experienced greater levels of flow. Flow is the state of being engrossed in an activity (Csikszentmihalyi, 1990).

Finally, Dewar and Kavussanu (2011) surveyed 200 male recreational golfers at various golf clubs. The authors note that task involvement (a measure of state task orientation) was positively related to happiness and excitement, and negatively related to dejection. Ego involvement was negatively correlated with happiness when golfers performed poorly but was unrelated to happiness when they performed well. Ego involvement was positively related to dejection and anxiety when golfers performed poorly, but unrelated to these variables when they performed well. In other words, task oriented golfers enjoyed the game. Ego oriented golfers were susceptible to negative emotions if they performed poorly but found little joy in playing well.

The purpose of this study is to further examine the goal orientation of active, recreational golfers. In so doing, a golf-related goal orientation measure was created, and that measure was used to examine whether recreational golfers are generally

more motivated by task or ego goals. The study also examined how golfers with task and ego orientations are engaged in the game, and examines the relationship between goal orientation and golf skill. There has not been a large-scale test of task and ego orientation of active golfers, so this study is intended to serve as a snapshot of the recreational golfer.

Measuring Goal Orientation

Two popular measures of goal orientation in performance settings are the Task and Ego Orientation in Sport Questionnaire (TEOSQ) (Duda, 1989; Duda & Nicholls, 1992), and the Perceptions of Success Questionnaire (POSQ) (Roberts, Treasure, & Balague, 1998). Researchers have relied heavily on these measures and they were used as the basis for creating new task and ego orientation scales in this study. Because the focus of the study is on avid recreational golfers, whose average age is 54 years, the POSQ was modified to more closely reflect the language of golf and older athletes. Certainly, the POSQ or TEOSQ would have been useful tools in this study, but it is instructive to experiment with another measure of goal orientation. The danger in relying too heavily on any one measure is that the measure can be treated as if it is identical to the construct it is designed to assess. For instance, if researchers only used the International Personality Item Pool (IPIP) to measure conscientiousness, then researchers might start to think that conscientiousness is only what the IPIP measures. Items from two commonly used goal orientation scales were borrowed and modified based on the belief that task and ego orientation are latent constructs that can be assessed with an assortment of measures. In creating a new measure, there were a variety of issues to consider relating to the nature, independence, and number of dimensions.

Traits and States

There is no clear consensus as to whether task and ego orientation are states or traits (Payne, Youngcourt, & Beaubien, 2007). After a lengthy discussion of this issue by researchers, it is safest to say that goal orientation is not entirely a trait. Athletes may favor one type of goal than the other, but certainly both kinds of goals can be made salient via experimental manipulation (Steele-Johnson, Beauregard, Hoover, & Schmidt, 2000), by the behavior of managers (Butler, 1987; Vandewalle, Brown, Cron, & Slocum, 1999), by practice and competition (van de Pol, Kavussanu, & Ring, 2012), or by the behavior of parents and coaches (Duda & Balaguer, 2007; Ntoumanis & Biddle, 1999). Nicholls accounts for this by making a distinction between goal *orientation*, which is an athlete's long term preference for goals, and goal *involvement*, which is similar to a goal state. Perhaps an individual has a different orientation with regard to another sport or in other domains of his or her life, but for this study, the assumption was made that an experienced, adult golfer's orientation is relatively stable.

Independence of Dimensions

Another question researchers face is whether task and ego orientations are independent dimensions. Dweck (1986, 1989) originally proposed learning (task) and

performance (ego) orientations as opposite ends of the same continuum. Nicholls (1984, 1989) described the two as orthogonal. The orthogonal model suggests that an athlete could score low on both, high on both, or high on one and low on the other. The most popular measures of goal orientation include subscales for each orientation. A recent meta-analysis shows that learning and performance orientations are mildly positively related suggesting they are not opposite ends of the same continuum (Payne et al., 2007). In this paper the two are treated as separate and scores are collected for each participant on both scales.

Number of Dimensions

Some researchers have developed more complex models of goal orientation by incorporating the notion of fear of failure (Atkinson, 1964). They have split performance (ego) goals into prove and avoid (Day, Yeo, & Radosevich, 2003; VandeWalle, 1997) or approach and avoidance dimensions (Elliot, 1994; Elliot & Harackiewicz, 1996). The distinction is that some athletes who score high on performance orientation are primarily concerned with demonstrating competence. Others who score high on performance orientation are concerned about avoiding the appearance of incompetence. Because the focus of this study was on the goal orientation of experienced recreational golfers, a two component model was used. Fear of failure may not be an important aspect for recreational golfers. Unlike children who are required to be in school, and who are strongly urged (sometimes forced) to participate in sports, adult, recreational golfers can choose not to participate. In addition, there are few settings where there are highly visible and costly opportunities for failure.

Greater Task or Ego Orientation?

Beyond developing a new measure, a second goal of the study is to test whether recreational golfers are more highly focused on task or ego goals. One could argue that most golfers are focused on mastery. This argument would be supported by the millions of dollars that are spent each year on golf books, golf magazines, golf instructional media, and golf equipment. Further, golf is one of the few recreational activities performed outside an academic setting which has enough participants to support a legion of professional instructors. There are over 27,000 professional golf instructors in the United States (PGA.com, 2013).

One might also argue that most golfers are focused on ego goals. Certainly, the game has elements that direct players' attention to defeating others. Tournaments, trophies, and prize money reinforce the value of winning. Betting has a long history in the game. Advertising and nationally televised golf tournaments glamourize winners.

Goal Orientation and Golf Participation

One issue that has been of interest to researchers is the effect of goal orientation on the enjoyment of practice, play and competition. The distinction between task and ego orientation was first noted by researchers who were studying the dynamics of

intrinsic and extrinsic motivation. There are strong parallels between task orientation and intrinsic motivation, and between ego orientation and extrinsic motivation (Harackiewicz, Durik, Barron, Linnenbrink, & Tauer, 2008; Harackiewicz & Elliot 1993). The assumption among researchers has been that athletes who score high on task orientation will enjoy the sport to a greater extent than athletes who score low. This appears to be true for golf. Task orientation led to higher levels of enjoyment on a putting task (Steinberg, et al., 2000), higher levels of flow while playing (Oh, 2001), and greater enjoyment of a round (Dewar & Kavussanu, 2011). In this study, research on enjoyment is extended by examining how goal orientations are related to golf involvement. More specifically, the prediction was made that golfers who score high on task orientation would play more golf than players who score low on the scale and would be connected to the sport in a wider variety of ways.

Goal Orientation and Performance

One might expect that golfers who score high on task orientation; golfers who are more likely to practice, learn about the game, and accept performance feedback, would perform better than golfers who score high on ego orientation. Early summaries of the literature on goal orientation suggested as much (Duda, 2001). However, a desire to demonstrate that one is more competent than others can be a powerful motivator to improve one's skills. Meta-analyses of goal orientation studies show that ego (or *performance—approach*, depending on the researcher) orientation can be positively related to performance in the classroom (Richardson, Abraham, & Bond, 2012) and workplace (Cellar, et al., 210). In this study, golf handicap index is used as a measure of golf ability and the relationship between goal orientation and ability is tested. Because both task and ego orientation are measured, and both have been demonstrated to be related to performance, the conservative prediction was made that golfers who score low on both task and ego orientation would not be as skilled as golfers who score high on one or both dimensions. Perhaps the absence of either kind of goal orientation undermines performance.

Method

Participants

An e-mail invitation to complete an on-line survey was sent to 9,215 members of the Minnesota Golf Association (MGA). A total of 2,774 golfers started the survey (30% response rate) and 2,458 completed it (89% completion rate). The sample included 2078 males and 360 females with 20 participants not indicating gender. Participants were between 16 and 89 years of age with a mean age of 55.24 years. Participants played an average of 11.5 rounds per month during the golf season.

Golfers participated in exchange for the opportunity to win a raffle for one of ten \$100 gift certificates from a popular golf retailer. Participants were informed that no one from MGA would have access to their responses and no one from the research team would be able to identify who they were. Members learned that the purpose of the study was to “better understand the ways that recreational golfers think about the game.” Members who agreed to participate clicked on a link embedded in the e-mail invitation and were directed to the survey.

Procedure and Measures

Task and Ego Orientation. Participants were asked to indicate the extent to which they agreed with 12 statements: “In order to enjoy a round of golf among friends, I need to _____.” 1) learn something new. 2) have the lowest net score in my group. 3) have others see me make good shots. 4) see improvement in my game. 5) play better than the golfers in my group. 6) win (have the lowest score or win the most skins, holes or money in my group). 7) outplay my companions. 8) try my best. 9) make a change to my game that really seems to help. 10) work hard at my game. 11) impress others with my play. 12) learn from my opponents. Participants responded on a five-point scale where 1 corresponded with strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, and 5 = strongly agree.

Task and Ego Choices. Participants were presented with a series of nine pairs of statements. One statement in each pair represented a task oriented outcome and the other an ego oriented outcome. Participants were instructed to, “Click the circle that represents where you stand between the two statements. The circles in the middle represent attitudes that fall between the two extremes.” Golfers responded to the stem, “If I had to choose between the two, I would rather _____” 1) Set a new personal best (low score) vs. Win a local tournament (minimal prize money). 2) Hit pure shots most of the time vs. Win most of the time. 3) Play very well and dominate my opponent vs. Play very well and win a close match. 4) Play poorly but win vs. Play well but lose. 5) Never get better vs. Never win. 6) Be known as a winner vs. Be known as a great shot maker. 7) Have a perfect swing vs. Never lose. 8) Have my opponents fear me vs. Have my opponents respect me. 9) Winning is the most important thing in golf vs. Mastering the game is the most important thing in golf.

Participation. Players were asked how many rounds they play each month during the golf season. In addition, Minnesotans have an abbreviated golf season and participation in the winter reflects a strong interest in the game, so participants were asked to respond to the item, “How do you stay connected to golf during the long Minnesota winter?” Golfers were given a checklist of behaviors and asked to indicate all they perform: 1) Nothing, I like the break from the game. 2) I take a golf fitness course. 3) I visit one of the heated indoor or outdoor ranges. 4) I practice putting in my house. 5) I visit one of the local golf simulators. 6) I read golf magazines and/or golf books. 7) I go to the golf stores in the area. 8) I participate in a fantasy golf league. 9) I meet with a group of my golf buddies and we talk about golf.

Ability. Participants were asked for their USGA handicap index. The handicap index is an inverse indicator of a player’s ability, corresponding closely to the player’s 80th percentile score for the distribution of a player’s scores for 18-hole rounds. The indices range from -2 to 36.4 for men and up to 40.4 women (USGA Handicap Manual, 2013).

Results

A principal components analysis with orthogonal rotation was performed on the 12-item golf goal orientation scale. There were two components with Eigenvalues greater than 1, accounting for 56% of the variance. Six items loaded (factor loadings

greater than .60) on an ego orientation component, and six items loaded on a task orientation component (see Table 1).

Next, principal components analysis was performed separately for males and females. Although factor loadings varied slightly across the two groups, the overall factor structure was the same for males and females. In other words, all of the ego oriented items loaded on the first component and all of the task oriented items loaded on the second component for both groups. Next, separate principal components analysis were performed for older and younger (above and below the median of 55.5) golfers. The factor structure of the two groups was not meaningfully different. The same was true for higher and lower handicap golfers (above and below 12.5 handicap index).

Items that loaded on a component were combined to create an Ego Orientation Scale ($\alpha = .87$) and a Task Orientation Scale ($\alpha = .80$). Alphas would have been lower if any items were deleted from a scale. The means for various demographic groups appear in Table 2. As is evident, although the factor structure did not differ across groups, there were group differences in mean scores. Females and older golfers scored higher on the Task and lower on the Ego scales than did their counterparts. Table 3 contains the intercorrelations of the primary variables in the study.

Task or Ego Orientation

The next question examined was, do active, adult, recreational golfers score higher on Task or Ego orientation? Certainly, the golfers scored higher on the Task

Table 1 Principal Components Analysis and Descriptive Statistics for the Golf Goal Orientation Scale

	Component		<i>n</i>	Mean	SD
	1	2			
play better than the golfers in my group, item 5	.86	.11	2424	2.41	.91
outplay my companions, item 7	.82	.11	2427	2.38	.99
win (have the lowest score; or win the most skins, holes or money in my group), item 6	.82	.12	2427	2.50	.97
have the lowest net score in my group, item 2	.78	.14	2426	2.20	.87
impress others with my play, item 11	.71	.17	2426	2.57	.92
have others see me make good shots, item 3	.61	.19	2425	2.87	1.01
work hard at my game, item 10	.10	.75	2431	3.66	.86
make a change to my game that really seems to help, item 9	.18	.72	2431	3.16	.90
learn from my opponents, item 12	.12	.71	2425	3.47	.86
see improvement in my game, item 4	.34	.66	2429	3.53	.93
learn something new, item 1	.21	.64	2433	2.77	.90
try my best, item 8	-.03	.63	2435	4.23	.69

Table 2 Gender and Age Differences for Goal Orientation Scales

	Task Goal Orientation Scale		Ego Goal Orientation Scale	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
All	20.82	3.63	14.92	4.43
Males	20.71	3.6	15.23	4.4
Female	21.58	3.6	13.19	4.0
Difference	$F(1, 2362) = 17.34, p < .001$		$F(1, 2353) = 63.96, p < .001$	
Younger	20.61	3.6	15.29	4.6
Older (> 55)	21.00	3.6	14.61	4.2
Difference	$F(1, 2364) = 6.63, p < .02$		$F(1, 2354) = 13.77, p < .001$	

Table 3 Correlation of Study Variables

	1	2	3	4
1. Age				
2. Handicap	.35			
3. Rounds Per Month	.11	-.14		
4. Ego Orientation	-.10	-.20	.09	
5. Task Orientation	.04	.09	.06	.39

If $r < -.05$ or $> .05, p < .05$, If $r < -.07$ or $> .07, p < .001$

Orientation Scale ($M = 20.82$) than the Ego Orientation Scale ($M = 14.92$), $F(1, 2348) = 4,047, p < .0001$. Although there are the same number of items in each scale, and all items were rated on the same 5–point scale, one cannot be sure that the Task and Ego items all have the same psychological weight. So participants were given a series of options and asked to choose between an Ego oriented outcome and a Task oriented outcome. Golfers responded on a 4-point scale to the item, “If I had to choose between the two, I would rather ____.” To simplify the presentation of the data, scores were dichotomized. As Table 4 illustrates, golfers were much more likely to choose the task oriented outcome than the ego oriented outcome.

Next, a series of logistic regression analyses were performed where choice served as the dependent variable (0 = task choice, 1 = ego choice) and gender, age, Task Orientation score and Ego Orientation score served as the predictor variables. In each case, when controlling for the effects of age and gender, both the Ego and Task Scales were significant predictors of choice. Higher scores on the Task Scale decreased the likelihood that a person would choose the ego option and increased the likelihood they would choose the task option (because ego choice was coded 1, this is indicated by the $EXP(B)$ less than 1.0). High scores on the Ego Scale increased the chance that a person would make the ego choice and decreased the

Table 4 Percentage of Participants Making Task Choice/Ego Choice

Item	Percentage Who Chose	η	Percentage Who Chose	
1. Set a new personal best (low score) T	75%	2,473	25.0%	Win a local tournament (minimal prize money) E
2. Hit pure shots most of the time T	92%	2,471	8.0%	Win most of the time E
3. Play very well and dominate my opponent E	13%	2,470	87.0%	Play very well and win a close match T
4. Play poorly but win E	13%	2,467	87.0%	Play well but lose T
5. Never get better E	16%	2,453	84.0%	Never win T
6. Be known as a winner E	23%	2,469	77.0%	Be known as a great shot maker T
7. Have a perfect swing T	84%	2,467	17.0%	Never lose E
8. Have my opponents fear me E	2%	2,467	98.0%	Have my opponents respect me T
9. Winning is the most important thing in golf E	5%	2,467	95.0%	Mastering the game is the most important thing in golf T

For each choice, the p for the Chi Square was $< .0001$. T = task choice. E = ego choice.

chance of making the task choice (this is indicated by the $EXP(B)$ greater than 1.0). The Ego Orientation scale had a somewhat greater effect on choice than did Task Orientation, but this could be due to the lopsided nature of the choices and the relatively high Task scores. See Table 5. The results of logistic regression are not highly intuitive, so the findings were illustrated by dividing participants into groups comprised of the lower third and upper third of Ego scores, and the lower and upper third of Task scores. The percentage of players who chose the task option, and the percentage who chose the ego option can be seen in Table 6.

Participation

Next, the relationship between goal orientation and off-season golf participation was examined. Two hundred and nine players were removed from the analysis because they indicated that they “move south for the winter and play golf there.” These players were removed because they did not have the same barriers to playing as the others, so their efforts were less telling of underlying engagement with the game. Moving south for the winter was no more likely for task oriented than ego oriented golfers. As Table 7 illustrates, Task scores were significant predictors of off-season participation. Ego scores predicted participation in fantasy leagues. The Task scale was more highly correlated to involvement for most forms of practice and off-season training.

A standard regression was next performed on the number of rounds per month that participants played. The overall model was significant $F(5, 2279) = 30.05, p < .001, (R^2 = .06)$. Age ($\beta = .10, p < .008$), handicap ($\beta = -.245, p < .001$), gender ($\beta = .49, p < .001$), and Ego Scale ($\beta = .06, p < .01$) were significant predictors but the Task Scale ($\beta = .04, p = ns$) was not. The critical point here is that controlling for age, ability, and gender, the higher the Ego score, the greater the number of rounds golfers played.

Golf Ability

Handicap, age, gender, Task and Ego scores were correlated, so the relationship between ability (handicap) and goal orientation was tested by performing a multiple regression analysis wherein handicap served as the dependent variable and Task score, Ego score, age and gender served as the independent variables. The overall model was significant $F(4, 2280) = 312.47, p < .001$. Ego Orientation was negatively related to handicap ($\beta = -.14, p < .001$). Females had higher handicaps than males scores ($\beta = .43, p < .001$), and both age ($\beta = .31, p < .001$) and Task Orientation ($\beta = .10, p < .001$) were positively related to handicap.

Next a 2 (lower third, upper third) Ego scale $\times$ 2 (lower third, upper third) Task scale ANCOVA was performed on handicap index with age serving as the covariate. There were significant main effects for Ego score $F(1, 1381) = 63.92, p < .001$, and for Task score $F(1, 1381) = 32.25, p < .001$; and a significant interaction $F(1, 1381) = 3.92, p < .05$. Age was a significant covariate $F(1, 1359) = 183.73, p < .001$. This analysis is redundant with the regression but helps illustrate the relationship between goal orientation and handicap. See Table 8.

The results of both analyses suggest that players with high Ego scores have lower handicaps and are thus better players than players with low Ego scores. Players with high Task scores have higher handicaps and are thus not as skilled as the

Table 5 Task vs. Ego Choice as a Function of Task and Ego Orientation

	Model		Item	
	Chi Square	Sig.	Nag. R ²	Sig Exp(B)
1. Set a new personal best (low score) T or Win a local tournament (minimal prize) E	153.62	.001	.10	
Age				.001 .98
Sex				.003 .60
Ego Scale				.001 1.126
Task Scale				.001 .93
2. Hit pure shots most of the time T or Win most of the time E	129.87	.001	.13	
Age				.001 .98
Sex				.18
Ego Scale				.001 1.2
Task Scale				.001 .91
3. Play very well and win a close match T or Play very well and dominate my opponent E	77.76	.001	.06	
Age				.001 .97
Sex				.69
Ego Scale				.001 1.09
Task Scale				.05 .96
4. Play well but lose T or Play poorly but win E	76.4	.001	.06	
Age				.005 .99
Sex				.02 .54
Ego Scale				.001 1.11
Task Scale				.001 .94
5. Never win T or Never get better E	76.4	.001	.06	
Age				.001 1.01
Sex				.70
Ego Scale				.001 1.10
Task Scale				.001 .95

(continued)

Table 5 (continued)

	Model		Item	
	Chi Square	Sig.	Nag. R ²	Exp(B)
6. Be known as a great shot maker T or Be known as a winner E	127.81	.001	.08	
Age				.43
Sex				.99
Ego Scale				1.11
Task Scale				.90
7. Have a perfect swing T or Never lose E	163.24	.001	.12	
Age				.97
Sex				.36
Ego Scale				1.11
Task Scale				.88
8. Have my opponents respect me T or Have my opponents fear me E	49.38	.001	.11	
Age				.97
Sex				.59
Ego Scale				1.24
Task Scale				.90
9. Mastering the game is the most important thing in golf T or Winning is the most important thing in golf E	133.04	.001	.17	
Age				.98
Sex				.311
Ego Scale				1.265
Task Scale				.827

Note: Exp(B) scores greater than 1 indicate that as the predictor scores increases by 1 unit the probability of choosing the ego related option increases. Scores between 0 and 1 indicate lower probability of choosing ego related option.

Table 6 Percentage of Participants Making Task/Ego Choice as a Function of Task and Ego Orientation Scores

	Low Ego Score	High Ego Score	All
1. Set a new personal best or low score / Win a local tournament with minimal prize money			
Low Task Score	80/20%	60/40%	70/30%
High Task Score	85/15%	71/29%	78/22%
All	83/17%	66/34%	
2. Hit pure shots most of the time / Win most of the time			
Low Task Score	96/4%	82/18%	89/11%
High Task Score	99/1%	87/13%	93/07%
All	97/3%	85/15%	
3. Play very well and win a close match / Play very well and dominate my opponent			
Low Task Score	91/8%	82/18%	87/13%
High Task Score	93/7%	83/17%	89/11%
All	92/8%	83/17%	
4. Play well but lose / Play poorly but win.			
Low Task Score	91/9%	79/11%	85/15%
High Task Score	91/9%	86/14%	88/12%
All	91/9%	82/18%	
5. Never win / Never get better			
Low Task Score	89/11%	74/26%	82/18%
High Task Score	89/11%	82/18%	86/14%
All	89/11%	78/22%	
6. Be known as a great shot maker / Be known as a winner			
Low Task Score	78/22%	63/37%	71/28%
High Task Score	87/13%	74/26%	81/19%
All	82/18%	68/32%	
7. Have a perfect swing / Never lose			
Low Task Score	84/16%	69/31%	77/23%
High Task Score	91/09%	83/17%	87/13%
All	88/12%	66/24%	
8. Have my opponents respect / Or have my opponents fear me			
Low Task Score	78/22%	63/37%	71/29%
High Task Score	87/13%	74/26%	81/19%
All	82/18%	69/31%	
9. Mastering the game is the most important thing in golf / Winning is the most important thing in golf			
Low Task Score	98/02%	87/13%	92/08%
High Task Score	99.5/0.5%	94/06%	97/03%
All	99/1%	90/10%	

Covarying age made no difference in percentages across analyses. Covarying sex made at most 1% difference within a cell.

Table 7 Logistic Regression for Items Indicating Golf Participation

	Model			Item	
	Chi Square	Sig.	Nag. R ²	Sig	Exp(B)
1. Nothing, I like the break from the game. (7% do)	10.98	.05	.01		
Age				.56	
Handicap				.03	1.03
Sex				.48	
Ego Scale				.37	
Task Scale				.01	.94
2. I take a golf fitness course. (7%)	41.60	.001	.05		
Age				.001	1.031
Handicap				.001	.919
Sex				.04	1.86
Ego Scale				.36	
Task Scale				.02	1.07
3. I visit one of the heated indoor or outdoor ranges. (31%)	67.78	.001	.05		
Age				.18	.99
Handicap				.001	.94
Sex				.67	
Ego Scale				.08	
Task Scale				.001	1.05
4. I practice putting in my house. (37%)	154.76	.001	.10		
Age				.03	.991
Handicap				.001	.94
Sex				.01	.61
Ego Scale				.90	
Task Scale				.001	1.077

(continued)

Table 7 (continued)

	Model		Item		
	Chi Square	Sig.	Nag. R ²	Sig	Exp(B)
5. I visit one of the local golf simulators. (23%)	161.45	.001	.11		
Age				.001	.96
Handicap				.001	.97
Sex				.03	.644
Ego Scale				.65	
Task Scale				.05	1.034
6. I read golf magazines and/or golf books (63%)	101.47	.001	.07		
Age				.22	
Handicap				.00	.949
Sex				.007	.656
Ego Scale				.04	.976
Task Scale				.001	1.08
7. I go to the golf stores in the area (42%)	73.22	.001	.05		
Age				.03	.992
Handicap				.00	.96
Sex				.19	
Ego Scale				.44	
Task Scale				.002	1.046
8. I participate in a fantasy golf league (8%)	67.80	.00	.07		
Age				.001	.97
Handicap				.001	.96
Sex				.48	
Ego Scale				.02	1.048
Task Scale				.66	
9. I meet with a group of my golf buddies and we talk about golf. (25%)	9.79	NS			

Note. Exp(B) scores greater than 1 indicate increased probability of participating. Scores between 0 and 1 indicate lower probability of participating . DF for all analyses = 5

Table 8 Handicap Scores as a Function of Ego and Task Orientation

	Ego Orientation		
	Low	High	All
Task orientation			
Low	13.21	10.84	11.6
High	16.49	12.63	14.9
All	14.24	12.08	

Means adjusted for age covariate.

players with low Task scores. The results did not support the prediction that the absence of any strong goal orientation undermines performance.

Discussion

A new 12-item golf-related goal orientation measure was developed that included 6 ego oriented items and 6 task oriented items. These scales had reasonably high reliability and predicted choices between task and ego oriented outcomes. The scales were designed specifically for adult, recreational golfers but could be modified to accommodate adult participants in other sports. The results of the study support the general premise that there are at least two goal orientations and these orientations can be assessed with a variety of measures and techniques whether those orientations are called mastery/competitiveness (Spence & Helmreich, 1983); learning/performance (Dweck, 1986; Dweck & Leggett, 1988); mastery/performance (Ames, 1992); or task/ego (Nicholls, 1984).

There were minor gender and age differences for Task and Ego Scale scores (female and older golfers scored higher on task orientation and lower on ego orientation than their counterparts), but the factor structure of the scales did not differ by gender or age. In other words, the scales are equally applicable for males and females, young and old.

Golfers in this study were considerably more likely to be task oriented than ego oriented. This was evident from within-subjects analysis of Task and Ego scores and an analysis of choices golfers made between task and ego oriented outcomes. Relatively few studies on goal orientation have examined which of the two motives is stronger.

The Task and Ego Orientation Scales were positively correlated to each other but differentially correlated with task vs. ego choice. High scores on the Ego Scale were associated with increased likelihood that players would make an ego choice (positive correlation) but high scores on the Task Scale were associated with a reduced likelihood (negative correlation). This provides support for the discriminant validity of the scales.

Task and Ego scales were also differently related to golf involvement. During the golf season, golfers who scored high on the Ego Scale played more golf than golfers who scored low on the scale. In the off-season, players who scored high on

the Task Scale were more likely to take a golf fitness course, practice at a range, practice at a simulator, practice at home, read about golf, and visit golf stores than players who scored low on the scale. Thus, players who scored higher on the Task Scale were more likely to participate in activities that involve learning how to play the game better. Golfers who scored high on the Ego Scale were more likely to participate in a golf fantasy league. Although one should not make too much of the solitary result for fantasy league participation, it is an intriguing idea that success or failure in a fantasy golf league would not reflect a player's personal golf abilities and this may be appealing to the players who score high on the Ego Orientation Scale. This is a topic for further research.

Finally, golfers who scored high on the Ego Scale and lower on the Task Scale had lower handicaps than their counterparts. This was true even when statistically controlling for age (younger golfers have higher Ego scores and play more golf). Contrary to some of the earliest research on goal orientation, an extrinsic focus, characterized by high ego and low task orientation was associated with greater ability. The results did not support, as predicted, that the absence of any strong goal orientation undermines performance. In retrospect, it may have been wise to add items to the Ego Orientation scale that reflect the motive to avoid the demonstration of inability (fear of failure). Score on an ego-avoidance scale (Elliot, 1994; Elliot & Harackiewicz, 1996) may have been negatively related to ability.

Limitations

The primary limitation of the study is a reliance on self-reports. Although there is little reason to believe that participants misrepresented their handicaps, there is the possibility that the task oriented items have higher social desirability than the ego oriented items and the results of the study may be biased in the direction of task orientation.

It is also noteworthy that throughout the study, effects sizes were relatively small. Some of this was due to data heavily skewed toward task orientation and task oriented choices. In other words, players were not highly attracted to the ego choices so it is difficult to explain variance where there is relatively little variance to be explained. Perhaps ego orientation is manifested in subtler ways on the course than the ways described in this paper. Nonetheless, the study is a starting point for examining the goals of recreational golfers.

One question which was not answered is how the population of active golfers (all the participants in the study were members of the Minnesota Golf Association), might compare with the occasional golfer. It would be worthwhile to contrast the goal orientation of occasional golfers, who typically play 2 or 3 rounds per year, with the golfers in this study who play, on average, 11 rounds per month. It is possible that the high task orientation of the sample reflects a greater, more enduring interest in the game.

Implications

Although early researchers on the topic have suggested it, ego orientation is not always dysfunctional. Players who were focused on appearing competent and beating other golfers, played more frequently and were somewhat more competent than the players who were not as concerned about these motives. There may

be an advantage to fostering both a task *and* ego orientation in golfers who hope to succeed in organized competitive golf. Perhaps a strong desire to demonstrate competence helps players develop a hardened edge in competition. Consider these quotes by well-respected golfers:

"Show me a golfer who doesn't have a mean streak and I'll show you a weak competitor." Lee Trevino

"The cardinal sin in match play is to get complacent. The way to avoid that is to be cruel. You want to step on your opponent's throat and enjoy it while you're doing it. Don't let them up. Beat them as badly as possible." Doug Sanders

"I'm devoid of killer instinct, something a great player has to have...Terrible character flaw." Gary McCord

An interesting possibility, and one that could limit the correlation between handicap and task goal orientation, is the possibility that a very strong task orientation could be dysfunctional when playing a game where the connection between ability and performance seems to be inherently fickle. More research needs to be done on this topic but Tom Weiskoff's quote illustrates the point:

"The perfectionist who tries to play golf for a living usually ends up saying hell with it. I'm a perfectionist, and I had some success, but only because I was persistent and had some talent. In the end the game ate me up inside, and I retired earlier than a lot of guys do. Perfectionists are determined to master things, and you can never master golf."—Tom Weiskopf

In conclusion, golf has a huge following and many players take the game very seriously. There were over 500 million golf rounds played last year (The National Golf Foundation, 2012). More than 4 million U.S. golfers are members of regional golf associations. Ultimately, the picture one gets from this study is that active, recreational golfers are more concerned about developing their skills than demonstrating their skills. Perhaps this is because golf magazines, instructional books, television shows, and golf associations (USGA, PGA, R&A) are doing a good job supporting the game. The golf industry appears to be promoting a healthy culture of learning and competition.

Note

1. Goal orientation researchers generally fall into of one of three major camps of researchers who offer slightly different explanations for the underlying mechanisms of goal orientation. These camps are represented by the work of Dweck, Elliot, and Nicholls. Keeping the various models straight can be a bit dizzying as the labels for the goal dichotomy depend on investigators who study them. The terms mastery and competitiveness (Spence & Helmreich, 1983); task and ego (Nicholls, 1984); learning orientation and performance orientation (Dweck, 1986; Dweck & Leggett, 1988); as well as mastery and performance (Ames, 1992) have been used to describe the motives (Hulleman, Schrager, Bodmann & Harackiewicz, 2010). A full description of these models is beyond the scope of this paper, but a good summary can be found by Payne, Youngcourt, and Beaubien (2007). Useful meta-analyses on goal orientation have been written by Utman (1997; 24 studies), Rawsthorne and Elliot (1999; 30 studies), Day, Yeo, and Radisevuch, (2003; 127 studies), Hulleman et al. (2010, 243 studies), and Cellar et al. (2011, 102 studies).

References

- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology*, 84(3), 261–271. doi:10.1037/0022-0663.84.3.261
- Atkinson, J. (1964). *An introduction to motivation*. Princeton, NJ: VanNostrand.
- Biddle, S.J.H., Wang, J., Kavussanu, M., & Spray, C.M. (2003). Correlates of achievement goal orientations in physical activity: A systematic review of research. *European Journal of Sport Science*, 3(5), 1–19. doi:10.1080/17461390300073504
- Butler, R. (1987). Task-involving and ego-involving properties of evaluation: Effects of different feedback conditions on motivational perceptions, interests, and performance. *Journal of Educational Psychology*, 79, 474–482. doi: 10.1037/0022-0663.79.4.474
- Csikszentmihalyi, M. (1990). *Flow: The psychology of optimal experience*. New York: Harper and Row Publishers.
- Cury, F., Famose, J.P., & Sarrazin, P. (1997). Achievement goal theory and active search for information in a sport task. In R. Lidor, & M. Bar-Eli (Eds.), *Innovations in sport psychology: Linking theory and practice. Proceedings of the IX world congress in sport psychology: Part I* (pp. 218–220). Netanya, Israel: Ministry of Education Culture and Sport.
- Cellar, D.F., Stuhlmacher, A.F., Young, S.K., Fisher, D.M., Adair, C.K., Haynes, S., . . . Riester, D. (2011). Trait goal orientation, self-regulation, and performance: A meta-analysis. *Journal of Business and Psychology*, 26(4), 467–483. doi: dx.doi.org/10.1007/s10869-010-9201-6
- Day, E., Yeo, S., & Radosevich, D.J. (2003, April). Comparing two and three-factor models of goal orientation: A meta-analysis. Paper presented at the 18th annual Society for Industrial and Organizational Psychology Convention, Orlando, Florida.
- Dewar, A.J., & Kavussanu, M. (2011). Achievement goals and emotions in golf: The mediating and moderating role of perceived performance. *Psychology of Sport and Exercise*, 12(5), 525–532. doi:10.1016/j.psychsport.2011.05.005
- Duda, J.L. (1989). The relationship between task and ego orientation and the perceived purpose of sport among male and female high school athletes. *Journal of Sport & Exercise Psychology*, 11(4), 318–335.
- Duda, J.L. (1992). Motivation in sport settings: A goal perspective approach. In G.C. Roberts (Ed.), *Motivation in sport and exercise* (pp. 57–92). Champaign, IL: Human Kinetics.
- Duda, J.L. (2001). Achievement goal research in sport: Pushing the boundaries and clarifying some misunderstandings. In G. Roberts (Ed.), *Advances in motivation in sport and exercise* (pp. 129–182). Champaign, IL: Human Kinetics.
- Duda, J.L., & Balaguer, I. (2007). The coach created motivational climate. In S. Jowett & D. Lavallee (Eds.), *Social Psychology of Sport* (pp. 117 – 130). Champaign, IL: Human Kinetics.
- Duda, J.L., Chi, L., Newton, M.L., Walling, M.D., & Catley, D. (1995). Task and ego orientation and intrinsic motivation in sport. *International Journal of Sport Psychology*, 26(1), 40–63.
- Duda, J.L., Fox, K.R., Biddle, S.J.H., & Armstrong, N. (1992). Children's achievement goals and beliefs about success in sport. *The British Journal of Educational Psychology*, 62(3), 313–323. doi:10.1111/j.2044-8279.1992.tb01025.x
- Duda, J.L., & Nicholls, J. (1992). Dimensions of achievement motivation in schoolwork and sport. *Journal of Educational Psychology*, 84, 1–10. doi:10.1037/0022-0663.84.3.290
- Dweck, C.S. (1986). Motivational processes affecting learning. *The American Psychologist*, 41(10), 1040–1048. doi:10.1037/0003-066X.41.10.1040
- Dweck, C.S. (1989). Motivation. In A. Lesgold & R. Glaser (Eds.), *Foundations for a psychology of education*. Hillsdale, N.J.: Erlbaum.
- Dweck, C.S., & Leggett, E.L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95(2), 256–273. doi:10.1037/0033-295X.95.2.256

- Elliot, A.J. (1994). Approach and avoidance achievement goals: An intrinsic motivation analysis. Unpublished doctoral dissertation, University of Wisconsin-Madison.
- Elliot, A.J., & Harackiewicz, J.M. (1994). Goal setting, achievement orientation, and intrinsic motivation: A mediational analysis. *Journal of Personality and Social Psychology*, 66(5), 968–980. PubMed doi:10.1037/0022-3514.66.5.968
- Harackiewicz, J.M., Durik, A.M., Barron, K.E., Linnenbrink, E.A., & Tauer, J.M. (2008). The role of achievement goals in the development of interest: Reciprocal relations between achievement goals, interest and performance. *Journal of Educational Psychology*, 100(1), 105–122. doi:10.1037/0022-0663.100.1.105
- Harackiewicz, J.M., & Elliot, A.J. (1993). Achievement goals and intrinsic motivation. *Journal of Personality and Social Psychology*, 65(5), 904–915. doi:10.1037/0022-3514.65.5.904
- Hulleman, C.S., Schrager, S.M., Bodmann, S.M., & Harackiewicz, J.M. (2010). A meta-analytic review of achievement goal measures: Different labels for the same constructs or different constructs with similar labels? *Psychological Bulletin*, 136(3), 422–449. PubMed doi:10.1037/a0018947
- Kuczka, K. K., & Treasure, D. C. (2005). Self-handicapping in competitive sport: Influence of the motivational climate, self-efficacy, and perceived importance. *Psychology of Sport and Exercise*, 6(5), 539–550.
- Lochbaum, M.R., & Roberts, G.C. (1993). Goal orientations and the perception of the sport experience. *Journal of Sport & Exercise Psychology*, 15, 160–171.
- National Golf Foundation. (2012). Retrieved 11/9/2013 from <http://www.ngf.org/pages/golf-participation-us>.
- Nicholls, J.G. (1976). When a scale measures more than its name denotes: The case of the Test Anxiety Scale for Children. *Journal of Consulting and Clinical Psychology*, 44(6), 976–985. PubMed doi:10.1037/0022-006X.44.6.976
- Nicholls, J.G. (1978). The development of the concepts of effort and ability, perception of academic attainment, and the understanding that difficult tasks require more ability. *Child Development*, 49(3), 800–814. doi:10.2307/1128250
- Nicholls, J.G. (1980). The development of the concept of difficulty. *Merrill-Palmer Quarterly*, 26(3), 271–281.
- Nicholls, J.G. (1984). Conceptions of ability and achievement motivation. In R. Ames & C. Ames (Eds.), *Research on motivation in education: Student motivation* (Vol. 1, pp. 39–73). New York: Academic Press.
- Nicholls, J.G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review*, 91(3), 328–346. doi:10.1037/0033-295X.91.3.328
- Nicholls, J. (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard University Press.
- Ntoumanis, N., & Biddle, S.J.H. (1999). Affect and achievement goals in physical activity: A meta-analysis. *Scandinavian Journal of Medicine & Science in Sports*, 9(6), 315–332. doi:10.1111/j.1600-0838.1999.tb00253.x
- Ntoumanis, N., Biddle, S.J.H., & Haddock, G. (1999). The mediating role of coping strategies on the relationship between achievement motivation and affect in sport. *Anxiety, Stress, and Coping. International Journal (Toronto, Ont.)*, 12(3), 299–327. doi:10.1080/10615809908250480
- Oh, S.Y. (2001). Flow in golf: Motivation, orientation and challenge determinants. Dissertation, College of Forestry and Consumer Science, West Virginia University.
- Payne, S.C., Youngcourt, S.S., & Beaubien, J.M. (2007). A meta-analytic examination of the goal orientation nomological net. *The Journal of Applied Psychology*, 92(1), 128–150. PubMed doi:10.1037/0021-9010.92.1.128
- PGA.com. (2013). About PGA.com. Retrieved 11/10/2013 from <http://www.pga.com/pga-america/pga-information/about-pgacom>.

- Rawsthorne, L.J., & Elliot, A.J. (1999). Achievement goals and intrinsic motivation: A meta-analytic review. *Personality and Social Psychology Review*, 3(4), 326–344. doi:10.1207/s15327957pspr0304_3
- Richardson, M., Abraham, C., and Bond, R. (2012) Psychological correlates of University students' academic performance: A systematic review and meta-analysis. *Psychological Bulletin*, 138(2) 353-387.
- Roberts, G.C., Treasure, D.C., & Balague, G. (1998). Achievement goals in sport: Development and validation of the perception of success questionnaire. *Journal of Sports Sciences*, 16(4), 337–347. PubMed doi:10.1080/02640419808559362
- Spence, J.T., & Helmreich, R.L. (1983). Achievement-related motives and behaviors. In J.T. Spence (Ed.), *Achievement and achievement motives: Psychological and sociological approaches* (pp. 7–74). San Francisco: Freeman.
- Spray, C.M., Wang, C.K., Biddle, S.J.H., & Chatzisarantis, N.L. (2006). Understanding motivation in sport: An experimental test of achievement goal and self-determination theories. *European Journal of Sport Science*, 6(1), 43–51. doi:10.1080/17461390500422879
- Steele-Johnson, D., Beaugregard, R.S., Hoover, P., & Schmidt, A.M. (2000). Goal orientation and task complexity effects on motivation, affect, and performance. *The Journal of Applied Psychology*, 85(5), 724–738. PubMed doi:10.1037/0021-9010.85.5.724
- Steinberg, C., Singer, R.N., & Murphey, M. (2000). The benefits to sport achievement when a multiple goal orientation is emphasized. *Journal of Sport Behavior*, 23(4), 407–423.
- Treasure, D.C., & Roberts, G.C. (1994). Cognitive and affective concomitants of task and ego goal orientations during the middle school years. *Journal of Sport & Exercise Psychology*, 16(1), 15–28.
- USGA. (2013). *Handicap Manual*. Retrieved 11/12/2013 from <http://www.usga.org/Rule-Books/Handicap-System-Manual/Handicap-Manual/>.
- Utman, C.H. (1997). Performance effects of motivational state: A meta-analysis. *Personality and Social Psychology Review*, 1(2), 170–182. doi:10.1207/s15327957pspr0102_4
- van de Pol, P.K.C., Kavussanu, M., & Ring, C. (2012). The effects of training and competition on achievement goals, motivational responses, and performance in a golf-putting task. *Journal of Sport & Exercise Psychology*, 34(6), 787–807. PubMed
- VandeWalle, D. (1997). Development and validation of a work domain goal orientation instrument. *Educational and Psychological Measurement*, 57(6), 995–1015. doi:10.1177/0013164497057006009
- Vandewalle, D., Brown, S.P., Cron, B., & Slocum, J. (1999). The influence of goal orientation and self-regulation tactics on sales performance: A longitudinal field test. *The Journal of Applied Psychology*, 84(2), 249–259. doi:10.1037/0021-9010.84.2.249