

Why Do People Choose to Live in Golf Course Communities?

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EXECUTIVE SUMMARY: A substantial proportion of golf courses constructed in recent years are associated with real estate projects. An underlying premise of these developments is that the course creates a premium for the lot values and facilitates a more rapid sale of these lots. The study posed three research questions: (i) Did residents believe that they were paying a premium to live in a golf subdivision and, if so, how much did they estimate that premium to be? (ii) What proportion of households included at least one person who was a regular golfer on the subdivision's course? and (iii) What features of the development persuaded residents to pay the premium to live there if many of them were non-golfers?

All 707 homeowners in the subdivision were surveyed and 466 (66%) responded. In response to the first research question, most of those whose homes abutted the course recognized they paid a proximate premium. The most striking feature of the responses was their range. Nearly 59% of residents estimated the premium they paid to be 20% or less, while there were 15% who believed they paid a premium of 40% or more. However, over 60% of those who did not live adjacent to the golf course believed that they paid no premium whatsoever to reside in the golf community.

Only 29% of respondents reported that a member of their household played golf regularly (once a month or more) at the subdivision course. Responses to an open-ended question revealed that proximity to, or a view of, the golf course was the most common reason for choosing the subdivision, being cited by almost one-quarter (24.3%) of respondents. However, when respondents were asked to rate eighteen factors on an importance scale in terms of their influence on their decision to purchase their home, "View of the golf course" was ranked fifth by those living adjacent to the golf course but eighteenth by those not living on the golf course, while the respective rankings of the two groups for the item "Proximity to golf course/country club" were sixth and fourteenth. The features deemed to be most important were relatively generic in that they could be applied to any residential area.

KEYWORDS: real estate development, golf courses, open space.

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In the 1990s, 3,090 new golf courses were constructed in the United States. This average of over 300 per year tapered in the first three years of the new century when 559 new courses were built, but this still equates to a new course opening somewhere in the United States approximately every second day (National Golf Foundation, 2004). In the 1980s and 1990s, approximately 35% and 46%, respectively, of new courses were associated with a real estate development (Mulvihill et al. 2001). More recently, a writer in a respected financial publication reported, "More than three-quarters of the courses under construction today are part of larger real estate projects" (Laing, 2003, p. 3).

A developer's primary purpose in including a golf course in a residential development is to create a premium for the lot prices through providing this amenity (Muirhead et al. 2001). Given this rationale, it would be reasonable to assume that a substantial proportion of property buyers in such developments play golf. However, there have been frequent anecdotal observations in the popular literature suggesting that this is not the case.

Firth (1990) stated, "only one in ten fairway homes is owned by a golfer" (p. 16) in New England golf course communities. Solano (1991) commented that, in the golf communities with which he was familiar, typically only 30% of residents played the game. McElyea, Anderson, and Krekorian (1991) stated, "only about one-third of golf-frontage homebuyers in non-retirement projects play golf regularly" (p. 17), while Gimney and Benson (1992) reported a lower figure: "It has been found that as few as 20% of residents in developments play golf" (p. 130). Belden (1993) reported that up to 80% of buyers in new golf course developments didn't actually play the sport and Muirhead and Rando (1994) generally concurred, stating that the "typical" percentage of households buying golf memberships at a course within a golf community is in the range of 20% to 30%.

Kanters and McDonald (1999) offered useful insight into the phenomenon when they investigated the factors which best predicted resident satisfaction in a golf community in North Carolina. Their factor analysis suggested a six factor structure, two of which were "Presence of the Golf Course" and "Natural Environment & Open Space." However, a step-wise regression of each factor on a composite measure of satisfaction revealed that neither of these were statistically significant predictors of satisfaction. The significant predictors were "Community Atmosphere," "Accessibility" and "Cost of Living."

The study reported here addressed three research questions. First, did residents believe that they were paying a premium to live in the subdivision or, where applicable, adjacent to the course, and, if so, how much did they estimate that premium to be? Second, what proportion of households included at least one individual who was a regular golfer on the subdivision's course? To this point, the authors are unaware of any studies that have systematically investigated the extent to which non-golfers reside in golf

course developments. Hence, the intent was to see if the empirical evidence supported the existing anecdotal estimates. The third research question was, what features of the development persuaded residents to pay a premium to live there if many of them were non-golfers? It is widely recognized that golf course developments typically embrace a number of other attributes that appeal to home purchasers which are inextricably linked to the golf development. These include the status, image, and exclusivity of the development (Mulvihill et al., 2001). For example, Solano (1991, p. 56) notes, “The prestige has overwhelmed the sport itself.” More tangible associated benefits are the fitness, dining, other social, and day care opportunities offered at the clubhouse, and the attractively landscaped, park or country-like environment (Dugas 1997). Thus, Mulvihill et al. (2001, p. 6) observe, “Many buyers in golf communities are not golfers; rather they appreciate the aesthetic qualities of the course, the permanent open space, and the perceived exclusivity of the community.” In addition, such communities often are subject to strict planning and building controls. All of these features appeared to be present in the subdivision analyzed.

Study Context and Methods

The subdivision in which the study was conducted is located at the southern extremity of College Station, Texas, a community of approximately 68,000 residents. Substantial residential development in the subdivision commenced in the early 1990s. The development company described the subdivision thus:

Envision surroundings as captivating as your dreams...the natural beauty of oak trees and Texas blue skies; elegant estates beaming with the warmth of families; whispery quiet woodlands, trickling streams and rippling ponds. Imagine the lush green of a carefully maintained 18 hole championship golf course conveniently located between a 1,348 acre master planned community. Then after you have imagined it...experience Pebble Creek.

Extensive deed restrictions exist, “to insure the integrity of the development, while helping to protect property values and provide a harmonious neighborhood environment.” The 18 hole golf course was designed to facilitate residential development along many of its boundaries.

Every household in the subdivision was mailed an envelope containing three items: a letter explaining the purpose of the survey and asking members of the household for their cooperation in completing and returning the document; a copy of the two page survey; and, an addressed, pre-paid envelope in which to return the survey to the investigators. Three waves of surveys were sent out. The effective number of homes surveyed was 707 (after the return of 16 envelopes marked “undeliverable”), of which 466 questionnaires were returned giving a response rate of 66%. Details of the responses are given in Table 1.

Table 1
Responses to Questionnaire Mailings

Wave Number	Number Sent Out	Number Returned	Number Returned (Cumulative)	Return Rate (Cumulative)
Wave 1	723*	297	297	41.5%
Wave 2	415*	111	408	57.5%
Wave 3	297*	58	466	65.9%

* Note, seven surveys were returned as "undeliverable" after the first mailing, six more after the second mailing, and three more after the third mailing, thus, the effective n was 707.

Results

The average length of residence in the sub-division was 50.5 months (just over four years), with a range from less than one month to 132 months (eleven years). Forty-three percent of residents moved to the neighborhood from some other location in the College Station area, 35% came from elsewhere within Texas, and 22% arrived from out-of-state (20% from the United States and 2% from abroad). Respondents ranged in age from 23 to 93 years, with a mean age of 52 years. Forty-eight percent of the surveys were completed by women, and 50% by men. The remaining 2% were completed by a husband and wife together.

The first research question investigated how much of a premium respondents believed they had paid for their home due to its location in close proximity to the golf course. The question asked, "When you moved to Pebble Creek, how much of a premium price did you pay for your house due to its proximity to the golf course?" Respondents were provided with the six categories shown in Table 2. The responses of those who resided in homes abutting the golf course and those who lived elsewhere in the subdivision are reported in Table 2. Of the 71 respondents whose homes abutted the golf course, 18 (25%) declined to respond to this question. Of the remaining 53 respondents, over 15% estimated that they had paid a premium exceeding 40%, while only 5.7% thought the value of their home was not at all augmented due to its location.

Table 2
Residents' Estimates of Golf Course Proximity Premium by Home Location

Estimated Premium (Code)	Percent Responses	
	On Golf Course (n = 53)	Not On Golf Course (n = 337)
0% (1)	5.70	60.60
1 – 10% (2)	15.10	20.00
11 – 20% (3)	37.70	11.00
21 – 30% (4)	18.90	4.70
31 – 40% (5)	7.50	2.70
Over 40% (6)	15.10	0.90
Average score	3.53	1.71
Difference of means test	$t = -8.98$, significance = 0.00	

Among the 337 respondents to this question who did not live adjacent to the golf course, over 60% believed they had paid no premium whatsoever, thereby indicating that they thought the existence of the course had no impact on the sale price of their home. Less than 10% of non-adjacent residents thought they paid a premium of over 20%.

A difference of means test between those who lived adjacent to the golf course and those who did not, confirmed there was a highly significant difference (.001) between the two sets of estimations of premium paid. The average ordinal score for those residing adjacent to the course was 3.53 (between 11-20% and 21-30%), while the average for other residents was 1.71 (between 0% and 1-10%).

The second research question investigated how many of the subdivision's households contained members who played golf. The question asked, "Do you or any member(s) of your household play golf?" Sixty-four percent of respondents (n = 454) reported that they (or a member of their household) played golf. However, 17% of these households reported no member had played at the sub-division's course, suggesting that 53% of the overall sample of households had a member who played on the sub-division's course. Those who responded that a family member played golf were asked to check which of the seven categories in Table 3 best represented the frequency of play. Table 3 shows that in addition to the 17% who never played the course, 16% played only once a year and a further 21% played less than once a month. Thus, only 46% of golfing households played at the subdivision course once a month or more. They represented 29% of all survey respondents.

Among the 71% of respondent households who did not play the course regularly, it seems unlikely that the convenient opportunity to play golf was the rationale for them paying the substantial premium for their home attributable to the golf course which was reported in an hedonic analysis (in press). Thus, research question three sought insight on the features of the development that were most appealing to residents. Respondents were first asked to "identify two to four factors that were most influential on your decision to live in Pebble Creek."

Table 3
Percentage Play Rate at the Sub-Division's Course
among those who Played Golf

Usage Rate (Code)	Percentage Responses (n= 285)
Almost every day (1)	3.9%
Several times a week (2)	18.9%
About once a week (3)	13.7%
About once a month (4)	9.8%
Less than once a month (5)	20.7%
About once a year (6)	15.8%
Have never played there (7)	17.2%

Results of this open-ended question (Table 4) revealed that proximity to or a view of the golf course was the most commonly cited (by nearly one-quarter of respondents) reason for choosing the subdivision. The “quality” of the neighborhood, and specific characteristics of the house, were the two next most commonly given reasons for choosing Pebble Creek (by approximately 22% of respondents in both cases). Proximity to the elementary school/location in College Station Independent School District (ISD), and the expected resale value of the home, were also both commonly stated incentives for choosing this locale (by 20.6% and 18.3% of respondents, respectively). The only other factors to be mentioned by more than 10% of respondents (n = 465) were the beauty/aesthetics of the neighborhood (12.9%), the safety/security of the neighborhood (12.5%), and proximity to the country club (11.0%).

Table 4
Reasons Given by Respondents for Choosing to Live in Pebble Creek Neighborhood*

Factor	Times Mentioned	Percent of Respondents
Neighborhood and neighbors		
Quality of neighborhood (including “nice”)	103	22.2
Beauty/aesthetics of neighborhood	60	12.9
Security/safety of neighborhood	58	12.5
Upkeep of neighborhood/individual properties and yard	39	8.4
Calm/quiet nature of neighborhood	39	8.4
Newness of neighborhood/home	36	7.7
Strict and enforced deed restrictions	33	7.1
Family orientation of neighborhood	25	5.4
Prestige of neighborhood	23	4.9
Trees in neighborhood and on lot	22	4.7
Planned nature and layout of neighborhood	18	3.9
People in neighborhood	15	3.2
Cleanliness of neighborhood	14	3.0
Open spaces in neighborhood	13	2.8
Rural/secluded nature of neighborhood	12	2.6
Existence of sidewalks for exercise	10	2.2
Low traffic volume	10	2.2
House and lot		
Characteristics of house (size, style, builder, quality, etc)	100	21.5
Expected resale value/investment opportunity	85	18.3
Price of property	36	7.7
Characteristics of lot	24	5.2
Location		
Proximity to/view of golf course	113	24.3
Proximity to school/in College Station ISD	96	20.6
Proximity to country club	51	11.0
Location (non-specific)	43	9.2
Proximity to Texas A&M University	25	5.4
Proximity to family members	22	4.7
Not too close to College Station	19	4.1
Proximity to work	13	2.8
Proximity to friends	10	2.2
Other		
Retirement home	10	2.2
Availability/suited time frame in which had to buy	10	2.2

* Only factors mentioned 10 or more times are listed in this table, the full table containing all factors is available upon request from the first author.

However, if responses to the four broad categories shown in Table 4 are aggregated, then it is clear that Neighborhood and neighbors with 530 responses is the dominant reason for choosing to live in Pebble Creek. This compares with 245, 392, and 20 responses for the House and lot, Location, and Other categories, respectively.

After completing the open-ended question, respondents were requested to turn the page and respond to the question, “Please indicate how important each of the following factors was in influencing your decision to purchase your current home.” They were presented with eighteen features and asked to rate each of them on a four-point scale from “not at all important”(1) to “extremely important” (4). Mean results are listed in the left-hand portion of Table 5. The most influential feature, according to the ranking of the mean results, was the safety of the neighborhood. Nearly 67% of respondents rated this feature “extremely important” and another 28% considered it “very important.” The second and third most influential features were the anticipated resale value of the property, and specific characteristics of the lot or house, while the items relating to the beauty and quiet of the neighborhood were ranked fourth and fifth, respectively.

The least influential features on respondents’ decisions to purchase a Pebble Creek home were proximity to friends and/or family (42% “not at all important,” 28% “slightly important”); proximity to shopping areas (30%, 44%); proximity to a park (38%, 36%); proximity to Texas A&M University (47%, 30%); proximity to work (44%, 38%); and, finally, a view of the golf course (67%, 16%).

These ratings were then analyzed based upon the location of the respondent’s residence relative to the golf course. The results are displayed in the right-hand portion of Table 5. The most obvious differences in rankings between the two groups of residents were on the feature “View of golf course” (which was ranked fifth by those living on the golf course (mean score 3.31), but eighteenth by those not living on the golf course (1.30)) and “Proximity to golf course/country club” (sixth (3.17), fourteenth (1.97)). These same two features also received the most disparate scores when differences between regular and non-regular golfers were compared. (Table 6). However, they were ranked only twelfth and sixth, respectively, by regular golfers (compared to eighteenth and seventeenth by non-regular golf players).

Discussion

The first research question was concerned with residents’ estimates of the premium they paid to reside in the golf course development. The most striking feature of the estimates of the proximate premium made by respondents whose homes abutted the golf course was their range (Table 2). Nearly 59% of residents estimated the premium they paid to be 20% or less. While many more underestimated than overestimated, there were 15% who believed they paid a premium of 40% or more for their location adjacent to the course.

Table 5
Influence of Various Factors on Home Purchase Decision,
All Responses and Responses by Location Relative to Golf course

Factor	All Responses				Responses By Location Relative to Golf Course						Difference of Means Test Results (t, significance)
	On Golf Course		Not On Golf Course		On Golf Course		Not On Golf Course		Mean*	Rank	
	n	Mean*	Rank	n	Mean*	Rank	n	Mean*			
Proximity to work	451	1.79	17	68	1.54	18	380	1.83	16	2.58, 0.01	
Specific characteristics of lot or house	456	3.40	3	70	3.66	1	383	3.35	3	-4.02, 0.00	
Prestige of Pebble Creek area	456	2.49	10	67	2.52	11	386	2.48	10	-0.42, 0.68	
Proximity to Texas A&M University	454	1.82	16	69	2.07	15	382	1.78	17	-2.14, 0.04	
Safe neighborhood	458	3.60	1	71	3.61	2	384	3.60	1	-0.02, 0.99	
View of golf course	455	1.61	18	70	3.31	5	382	1.30	18	-16.75, 0.00	
Proximity to CSISD schools	454	2.21	11	69	1.80	16	382	2.28	11	3.64, 0.00	
Zoning restrictions in neighborhood	454	3.00	6	70	3.14	7	381	2.97	7	-1.40, 0.16	
Proximity to shopping areas	455	1.99	14	70	2.19	13	382	1.96	15	-1.93, 0.06	
Trees on lot	459	2.66	8	70	2.84	9	386	2.63	8	-1.72, 0.09	
Proximity to friends and/or family	450	2.03	13	69	2.16	14	378	2.01	12	-1.07, 0.28	
Open spaces in neighborhood	456	2.65	9	70	2.74	10	383	2.63	8	-0.94, 0.35	
Anticipated resale value of property	456	3.41	2	71	3.13	8	392	3.38	2	3.08, 0.00	
Proximity to golf course/country club	456	2.16	12	70	3.17	6	383	1.97	14	-8.68, 0.00	
Beauty of neighborhood	457	3.36	4	71	3.51	3	383	3.33	4	-2.24, 0.03	
Good neighborhood for children	455	2.95	7	69	2.35	12	383	3.06	6	4.70, 0.00	
Proximity to park	453	1.96	15	68	1.69	17	382	2.00	13	2.54, 0.01	
Quiet neighborhood	460	3.35	5	71	3.41	4	386	3.33	4	-0.85, 0.39	

* 1 = Not at all important, 2 = Slightly important, 3 = Very important, 4 = Extremely important

Table 6
Influence of Various Factors on Home Purchase Decision,
by Frequency of Golf Participation (regular v. others)

Factor	Regular Golfers		Non Regular Golf Players		Difference of Means Test Results (t, significance)		
	n	Mean*	Rank	n		Mean*	Rank
Proximity to work	128	1.63	18	312	1.84	15	2.45, 0.02
Specific characteristics of lot or house	131	3.40	2	314	3.39	3	-0.08, 0.93
Prestige of Pebble Creek area	131	2.66	9	315	2.41	10	-2.68, 0.01
Proximity to Texas A&M University	131	1.85	15	312	1.79	16	-0.71, 0.48
Safe neighborhood	131	3.57	1	316	3.61	1	0.59, 0.56
View of golf course	132	2.19	12	312	1.35	18	-7.11, 0.00
Proximity to CSISD schools	129	1.84	16	314	2.38	11	4.76, 0.00
Zoning restrictions in neighborhood	131	3.06	7	312	2.96	7	-0.98, 0.33
Proximity to shopping areas	131	2.05	14	313	1.96	14	-1.00, 0.32
Trees on lot	131	2.70	8	317	2.63	9	-0.72, 0.47
Proximity to friends and/or family	129	2.09	13	310	2.00	13	-0.80, 0.43
Open spaces in neighborhood	130	2.59	11	315	2.67	8	0.85, 0.40
Anticipated resale value of property	131	3.31	4	315	3.44	2	1.82, 0.07
Proximity to golf course/country club	132	3.28	6	313	1.68	17	-17.48, 0.00
Beauty of neighborhood	131	3.40	2	315	3.34	5	-1.01, 0.32
Good neighborhood for children	129	2.60	10	315	3.08	6	3.97, 0.00
Proximity to park	128	1.65	17	314	2.09	12	4.57, 0.00
Quiet neighborhood	131	3.30	5	318	3.36	4	0.95, 0.34

* "Regular" play defined as once a month or more, "non regular" includes occasional players and non-players

* 1 = Not at all important, 2 = Slightly important, 3 = Very important, 4 = Extremely important

The estimates of respondents who were not on the golf course were dramatically different, with 60% believing they paid no premium and a further 20% perceiving their premium to be 20% or less. Unlike those whose homes abutted the course, most of these respondents' homes did not offer a view of the course. Further, unlike a park or public open space, they do not enjoy access to the golf course unless they actually play golf, for such purposes as walking, jogging, sitting, playing with the children, etc. The golf course is not community open space and casual use of it by non-golfers is aggressively discouraged.

Responses to the second research question suggested that only 29% of residents in the subdivision played golf regularly. This suggests that over 70% of residents did not purchase their home because of the opportunity to play golf conveniently on a high standard (compared with other courses in the area) championship course even though it is likely that they paid a substantial premium for their home in order to live in a golf community. This is consistent with the anecdotal estimates cited in the introduction, most of which were in the 20% to 30% range. However, none of the authors of these anecdotal estimates defined what they meant by the term "golfer." The National Golf Foundation defines a golfer as an individual aged 18 or over who played at least one round in a year on a regulation length course (NGF 2004). Using this definition, the proportion of households in the Pebble Creek development with a member who was a golfer would be either 64% (who played golf anywhere in the past year) or 52% (who played golf on the development's course at least once in the past year).

It may be presumptuous to assume that all the 71% of households with no regular golf members received no golf utility in return for the premium they paid. For example, it is possible that some infrequent players paid the premium to facilitate access for others, such as hosting visiting family members or business associates who are golf enthusiasts.

Using their definition of a golfer which was cited above, the National Golf Foundation reported that there were 26.2 million golfers in the U.S. in 2002 (NGF 2004). The U.S. Census Bureau reports that there are 106.4 million households in the U.S. (Census Bureau 2003). If it is assumed that no households have more than one member who is a golfer, then the proportion of U.S. households with a golfing member would be 24.6%. (Alternate assumptions using more than one golfer per household would lead to lower proportions). When compared to this approximated proportion, the 64% or 52% of households with a golfing member in this development is between two and three times the national average. Viewed in this context, it could be argued that the golf course is successful in attracting an unusually high number of golfing households to the development, even though there may also be a substantial number of non-golfing households present.

The results reported in Table 2 indicated that many respondents, especially those whose home did not abut the course, appeared to be unaware of paying a premium to live in the golf subdivision. There

remained, however, a substantial number of residents who knowingly paid a sizeable premium to live in the golf development, even though there were no household members who played golf or who played sufficiently frequently to justify the premium. It was noted in the introduction that there are features other than the golf course which are perceived by some home purchasers to justify payment of a premium. The third research question was intended to elicit insights into features of the development that were most important in the decision to live there.

When asked in an open-ended question to list the two to four reasons that most influenced their decision to live in Pebble Creek, the most cited reason was proximity to/view of golf course. Given that 29% of households had a member who played golf at the course regularly, it was no surprise that this feature was cited by 24.3% of respondents. The second most cited reason, quality of neighborhood, is a nebulous “catch-all” response which conceivably could embrace all 58 features listed in Table 4! Proximity to school/in College Station ISD was cited by 20.6% of respondents, but after that there was a substantial frequency gap to the only other features to be cited by more than 10% of respondents: beauty/aesthetics of the neighborhood (12.9%); security/safety of the neighborhood (12.5%); and proximity to country club (11.0%).

The literature review suggested that prominent features in the decision to live in golf communities were, prestige, status, image, and exclusivity. The latter three terms did not appear among the reasons given for choosing to live in Pebble Creek and prestige was cited by less than 5 percent of respondents. Prestige largely embraces the notions of status (which refers to individuals’ reputations) and image (which refers to an entity’s physical representation). The notion of exclusivity probably did not emerge because, unlike some golf communities, Pebble Creek is not gated so there is no way of excluding non-residents who want to enter and explore the area.

When 18 features were presented to respondents, the seven ranked most important in their decision to purchase a home at Pebble Creek, among those whose homes were not on the golf course, were: (i) safe neighborhood; (ii) anticipated resale value of property; (iii) specific characteristics of lot or house; (iv and v) beauty of neighborhood and quiet neighborhood; (vi) good neighborhood for children; and (vii) zoning restrictions in neighborhood. Again, prestige was not cited as a prominent attribute, ranking only tenth among the eighteen features. The golf course specific features view of golf course and proximity to golf course/country club were relatively unimportant, being ranked eighteenth and fourteenth, respectively. Even among households containing a regular golfer these items ranked only twelfth and sixth, respectively. With the possible exception of the item relating to the beauty of the neighborhood, it appears to the authors who are familiar with the area that if a similar survey was administered in other subdivisions in the area it is likely that the same features would be cited as most important. Hence, they are relatively generic.

These results are generally consistent with those reported by Kanters and McDonald (1999) who investigated predictors of community golf course residents' satisfaction. Conceptually, there appears to be a strong relationship between the two studies in that people presumably rank as being most important those features which they perceive as most central to the satisfaction they will derive from the purchase. Kanters and McDonald (1999) reported that the only factors that were significant predictors of resident satisfaction were community atmosphere, accessibility, and cost of living, while the presence of the golf course, and natural space and environment factors, were not significant. They observed that the significant factors are somewhat generic factors in that they could apply to any residential area and that the presence and quality of a golf course seems to have little effect on a resident's perception of satisfaction. Although the nature of golf course communities suggests that the golf course be used as a marketing tool to sell homes, the results of this research appear to contradict the attention to the planning, design, and marketing of the golf course as an important factor for long-term resident satisfaction (p. 78).

Since the most important factors are relatively generic, these findings do not resolve why people pay a premium to live in a golf course development. There are two conceptual frameworks that appear to offer insight into this issue. The first is the distinction made in the marketing literature between the qualifying and determining attributes of products. Qualifying attributes are those elements that must be present for a purchase to be considered, i.e., the generic features. In this sense, they are the most important attributes because if they are not present at a given threshold level, then the brand (in this case, the subdivision) is discarded from consideration in the purchase decision process. Determining attributes are those that differentiate among the remaining brands (subdivisions) that qualify as having the basic generic qualifying features. The difference between qualifying and determining attributes was illustrated in a different context by Lovelock (1984): Most travelers rank "safety" as their number-one consideration in air travel. But since major U.S. airlines are generally perceived as equally safe, safety is not usually an attribute that influences consumer choice between several major domestic carriers (p. 74).

In this case, like the airlines, the determining attributes may be features that are ranked further down the list but that have some prominence. Beauty/aesthetics of neighborhood ranked sixth on the open-ended question, while, among the eighteen features listed in Table 5, beauty of neighborhood, open space in neighborhood, and trees on lot were ranked fourth equal, eighth equal and eighth equal, respectively. This may suggest that aesthetics/beauty and open space were determining attributes that justified any premium paid by those whose homes were not on the golf course.

A second conceptual framework that may assist in explaining the source of the premium is the adaptation of Herzberg's job satisfaction theory (Herzberg, Mausner, & Snyderman, 1959) to the context of leisure which

was first suggested by Howard and Crompton (1980). They adapted Herzberg's theory to a recreation facility context suggesting there are "hygiene" or "maintenance" features, which consist of basic infrastructure items that are potential dissatisfying elements, since if they do not attain an expected threshold standard, people will be dissatisfied. However, these basic necessity features do not excite people and do not explain the success of one environment compared to others. It is another set of features termed "motivators" that create an appealing ambiance and atmosphere that are the key to generating enthusiasm and commitment to an environment. This thesis was suggested by Kanters and McDonald (1999) as a possible explanation for their findings, and it has also been proposed as an explanation for tourists' levels of satisfaction (Crompton 2003).

The cost of constructing a good quality regulation-size golf course, exclusive of land costs, is likely to range between \$4 million and \$10 million (Mulvihill et al., 2001). The data reported here suggest that the presence of a golf course does attract a disproportionate number of golfers to a development. Nevertheless, regular golfers at the subdivision course were represented in only 29% of households. Given the construction costs of courses and the suggestion that aesthetics/beauty/open space rather than the golf course may be a key determining attribute for many, it is worth postulating whether it may be beneficial in some cases for developers to invest in creating or preserving attractive open space rather than a golf course. It has been reported that, "Exit interviews with homebuyers in a cross-section of large master-planned [golf] communities have shown that golf, while important, ranks well behind less capital-intensive features such as open space and trails in defining the community" (Mulvihill, et al., 2001, p. 26).

Developers generally have no interest in operating a golf course because it is a distraction to their core business of creating subdivisions and selling lots. Frequently, they seek to trade title of the course either to golfers to operate as a non-profit organization or to a specialist golf company. However, many residential golf courses today are not viable operating entities and an increasing number of developers find they are required to continue to accept responsibility for operating and subsidizing them because no other entity will accept them (Sargent, 2003). In this context, the supply of open space rather than a golf course may be appealing.

A reviewer of the empirical literature measuring the magnitude of the proximate premium related to parks concluded, "A positive impact of 20% on property values abutting or fronting a passive park area is a reasonable starting point guideline" (Crompton, 2001, p. 29). Further, he noted that the open space premium typically extends several blocks, because those not adjacent to it will pay a premium for easy access to the open space even though they cannot see it from their home. Such casual access is not available on a golf course development so non-adjacent premiums are likely to be minimal.

Interest by developers in pursuing the open space alternative may be reinforced by the increasing challenges of securing permits for golf courses and the procedures needed to prevent or mediate changes to existing open space ecology, wetlands, sensitive aquifers or habitat, and detrimental run-off of pesticides, herbicides and fertilizers (Mulvihill et al., 2001). The magnitude of this challenge was highlighted by a developer who stated, “It took seven years to get all the approvals” (Dugas, 1997, p. 113). In this context of stronger environmental requirements, golf course developers have sought to reposition so they become part of the environmental solution, not the problem. Thus, the pre-eminent guide to golf course developments in residential communities states: “The golf course architect is first and foremost a protector of the environment. It is his ethical duty to preserve the land and the creatures that inhabit it” (Mulvihill et al., 2001, p. 121).

It seems that the commonalities between park and open space lands and golf courses are greater now than they have been in the past. However, it is unclear whether a development featuring aesthetically attractive open space can replicate the cachet, image, and status typically associated with golf developments. Further, golf courses are used by a narrow demographic range of people, during particular times, in a highly structured way (Miller, 2001). These characteristics may contribute part of the premium that abutting homeowners are willing to pay and, again, they may not be replicable if public open space replaced a limited access golf course.

Concluding Comments

The data reported here relate to a single case study so generalizations are not possible until a more substantial body of literature on issues associated with residential golf developments emerges. One of the reviewers of this paper observed that level of access to a golf course in the community may be a factor in deciding to buy a house in a golf course development. Thus, if getting access to the golf course tends to be difficult because demand is high and the supply of courses is low, and living in a golf subdivision includes the perquisite that residents always receive priority access, then the incentive to purchase may be high vis-à-vis the antithetical conditions.

To the best of the authors' knowledge, this is the first non-proprietary study to empirically investigate golf participation rates among households in a golfing subdivision. The authors' definition of a regular golfer (played at least once a month) led to the conclusion that 29% of households had a regular golfer, which was consistent with most of the anecdotal estimates that have appeared in the popular literature. However, without exception, these estimates refer ambiguously to “golfers” without defining what constitutes a golfer. If the National Golf Foundation definition is used (plays once a year), then 64% of households in this study contained a golfer which is widely disparate from the anecdotal reports.

The predominance of generic features cited as being most influential in the decision to purchase a home, leaves unanswered the reasons non-golfers pay premiums to live in a golf development because they could purchase those features in another subdivision without paying the golf premium. It is suggested that such premiums may, at least in part, be attributable to the higher aesthetic/beauty/open space standards which the authors subjectively believed differentiated this subdivision from others in the area. The evidence for this in the respondents' rankings of features was only tentative and better approaches for identifying the rationale for premiums among non-golfers than were used in this study are needed.

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