

The Personal and Community Benefits of Disc Golf to Rural America (and Beyond)

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Rural America is changing. Over the past decade there has been an increase in population to nonmetropolitan (rural) areas in the United States which has changed the character of rural communities (Johnson & Beale, 2002). Comprised of small, amenity based communities with a higher quality of life than its metropolitan counter parts (USDA, 2002), these locations are popular to tourists seeking both natural and cultural based resources. Parks and recreation specialists are charged with the task of providing quality recreational opportunities to attract visitors while protecting these valuable resources. They aim to preserve and promote the unique local community character, but they do this with challenges – rural areas tend to be economically deprived. How can recreational specialists continue to provide quality recreational experiences? One means is seen in another growing recreational trend in rural America: disc golf.

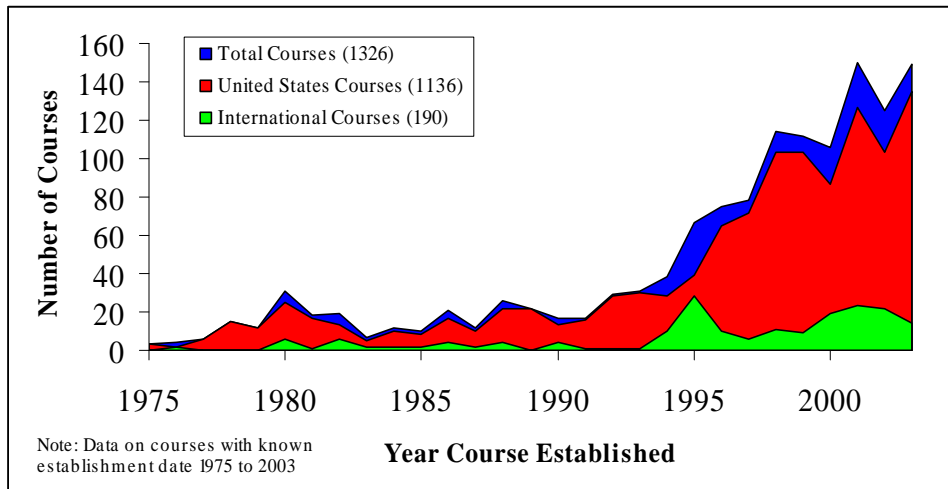
Referred to as ‘Frisbee golf’, disc golf is played similar to its ball brother but is played with specially designed flying discs thrown at metal ‘pole holes’ or elevated baskets which serve as targets. Disc golf can be played by one or more players of any age or gender, taking several hours to complete an 18-hole course. Courses are designed to take into account the natural lay of the land to challenge the player commonly including a variety of obstacles, such as ponds, dog legs, and trees – each planned to alter a throw. Due to their relatively simple design, disc golf courses can be found anywhere, from open fields, to beaches and forests across America – and they are growing, especially in rural America.

### *The Growth of Disc Golf*

Since the inception first formal pole-hole course was established in Oak Grove Park, California in 1975, courses have continued to grow at an average of 17% (approximately 50

courses) between the years 1980 and 1999. Throughout the 1990's, disc golf was considered one of the fastest growing sports in America (Rothstein, 1996) and this trend continues today. Since

**Figure 1. World Growth in Disc Golf**



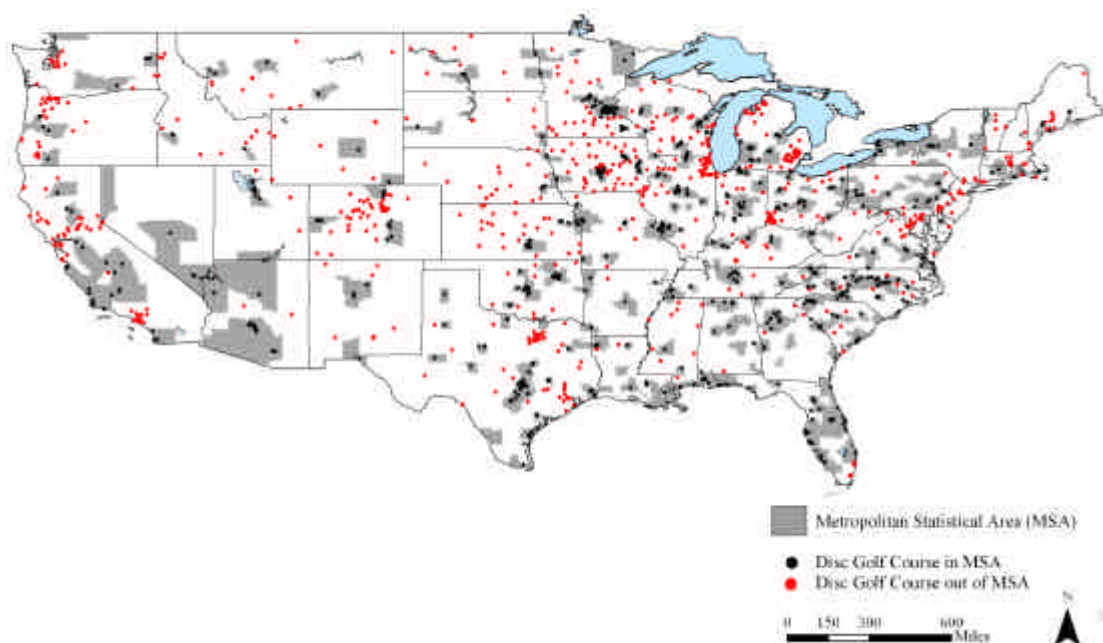
the late 1998, the number courses has doubled. As of July 2004, there were 1,572 courses in the world including all major continents except the Middle East, Africa, and Antarctica. Though most of these courses are in the in the United States (84%) there has been a recent trend in the establishment of international courses. Since 1995, seven new countries created a course including Peru, Mexico, Belgium, Iceland, France, Hungary, and the Czech Republic.

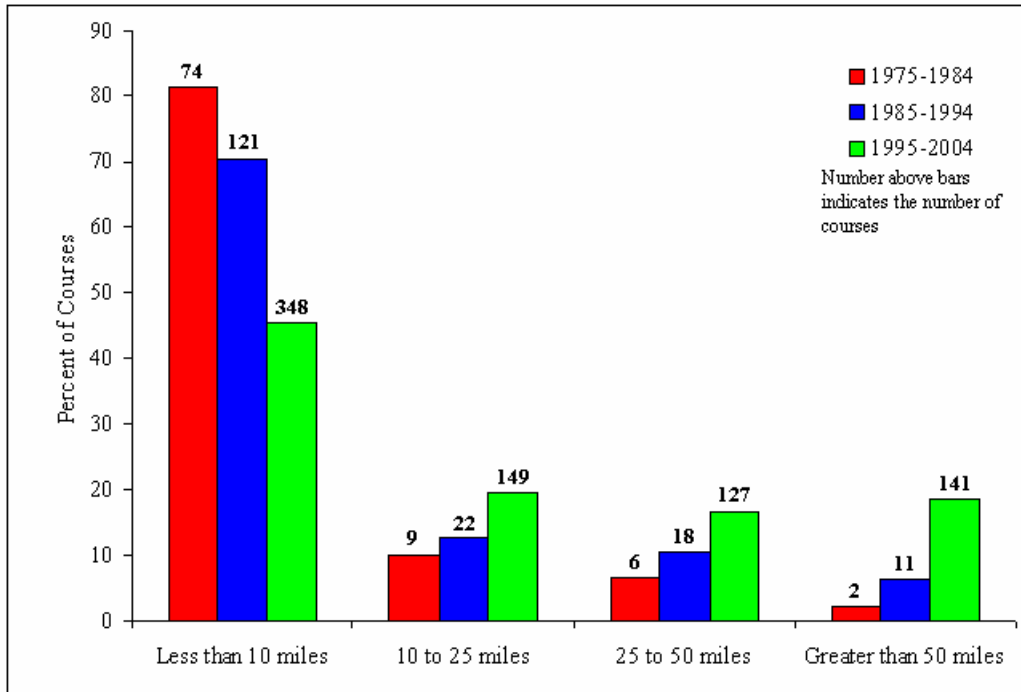
As would be expected with the increase in courses, the number of disc golf players, associations, and professional tournaments has also grown. The Professional Disc Golf Association (PDGA), established in 1976, held 500 tournaments in 2003 with a total pro purse of over one million dollars. Since the inception of the PDGA, there have been 24,100 members with an annual growth rate of 10%. Overall, the PDGA estimates 7 to 10 million people have played disc golf at least once with around 5 million regular players (PDGA, 2004a). As one PDGA member and disc golf professional stated in July 2004, “[Disc golf] really is taking off,

It's getting so there are a lot more players who can go on tour and make a living now. You used to be able to count those players on one hand.” (Benson, 2004).

As seen in Figure 1, the growth of disc golf is strongest within the United States. Geographically, 54% of American courses are in non-urban areas (based on 2000 U.S. Census Metropolitan Statistical Areas which have at least one urbanized area of 50,000 or more inhabitants). Prior to 1998, there were slightly more urban area courses, with four urban courses to every three non-urban course. Since then, non-urban courses have been growing at nearly 1.5 times the rate of their urban counterpart and currently over half of all courses are in non-urban areas. In fact, since the first trimester of courses were created in the between 1975 and 1984 courses have been steadily moving away from city boundaries and into the country, with the largest increase in course located over 50 miles from cities (see Figures 2 and 3). The result is

### Figures 2 and 3. Relationship of Disc Golf Courses to Metropolitan Centers





disc golf is being introduced into, and embraced by, rural communities.

### *The Course Condition*

To help understand the current surge in disc golf, particularly in rural America, we asked a sample of 225 disc golf stewards/contacts around the United States, randomly selected from the PDGA database, to complete an on line disc golf survey. Stewards were asked to rate their perception of course use, community improvement, and personal reasons for playing disc golf. Course stewards were selected as they are the first line of contact for a new disc golf player and often can provide highly detailed information about their course(s).

Courses across the country ranged between 3 and 5,000 users per week, with an average of over 250. Courses within ten miles of a city with over 25,000 people had over four times higher use numbers (approximately 450 to 100) than more rural courses further away, which is expected from the higher population base urban areas provide. Use seems consistent even when

an area supports several proximal courses. Our data sampled seven courses in the Dayton-Cincinnati region of Ohio, an area approximately 50 miles across, that averages over 200 people per course per week. Three of these courses have over 1,000 visitors and one over 5,000. Similarly, Houston, Texas reported having four courses all of which have a range of use between 500 to 700 visitors.

When there aren't as many local course options, the disc golf player is willing to travel. Even keeping in mind that course stewards may be a more specialized group of disc golf players willing to travel slightly further than the ordinary weekend player, over half reported they were willing to travel over 50 miles on a given weekend to play on a favorite course. Eighty percent are willing to travel 26 or more miles. The bottom line is if there is a course, people will play. If there isn't a local course, people are willing to drive to find one. This is good for rural communities which are geographically dispersed: If you build a course, players will come.

### *Who is the Disc Golfer?*

Unlike many sports, a first time golf player doesn't have to be young, though many start playing in high school or college. There appears to be a second wave of disc golfers leading the current growth of the sport with half of those responding to our survey playing for less than 10 years. Of these, there was approximately the same number of players (40%) less than 30 as between 30 and 50, suggesting disc golf can be played by anyone at any stage of life. Perhaps the best testament to the popularity of the sport comes from the three respondents reporting playing disc golf for less than a year. Despite being new to the sport, each immediately embraced the sport and helped create a local course – and these players were aged between 40

and 70! In our sample, nearly all stewards were male (96%) and Caucasian (95%) which is similar to the published PDGA demographics (PDGA, 2004a).

### *Why the Recent Growth and Popularity?*

We know more people are playing disc golf today than ever before. We know they are willing to travel and even pay to play. But the question remains, “Why is disc golf so popular?” The small body of literature on disc golf suggests disc golf provides much more than meets the eye. It provides players with tangible and intangible benefits. Recreational benefits come from the work of (Driver, Brown, & Peterson, 1991) and suggest that an activity at a given setting creates psychological outcomes or experiences which serve as the motives for to participation.

#### **Table 1. Community Benefits of Disc Golf**

##### Economic

- Low cost of construction maintenance, and play
- Attracts players to the local community

##### Community Health

- Provides a low impact and safe means of exercise for all age groups and genders
- Mental strategy is involved in negotiating obstacles
- Reduction of mental fatigue

##### Environmental

- Aesthetic enhancement of park
- Low resource impacts

##### Safety

- Crime deterrent as the park is utilized by more people

##### Education

- Schools may introduce the course into their curricula for physics, physical fitness, ecology, planning, and others.

##### Community Involvement

- Formal and informal games and tournaments bring community members together
- Families and friends can share time together

The result of this participation leads to a changed condition. In other words, the act of playing disc golf at a given course may provide personal, economic, health, social, and environmental benefits. When taken in a broader context, the presence of a disc golf course may lead to additional community-based benefits (see Table 1).

Arguably, the number one factor, from a management perspective, to developing a disc golf course is cost. Here disc golf excels over other sports. Courses are easily constructed, costing a local community approximately \$500-\$1,000 per hole. Our survey indicated the cost to develop a course averaged under \$8,000, with some courses costing nothing to create. These courses are object-oriented, when players use trees, light poles, fire hydrants, and other objects as holes. By one estimate, a full course, with pole-holes, hardened tees, and multiple hole placements still costs a mere fraction of the cost involved in the creation and maintenance of a lighted tennis court (Tutlen & Conkell, 1999). Even the play of disc golf is extremely affordable, with only an \$8 disc needed for basic play (Altymer, 1996) and the most expensive disc golf gear costs well under the cost for a set of beginner set golf clubs. From the upkeep side, disc golf is even easier. It involves little maintenance other than routine park maintenance, such as trash removal and cutting grass (Wilmington Disc Golf Proposal, 2000). The director of the Kershaw County Parks Department, which maintains a course in Camden, South Carolina, comments the course “is not a big maintenance problem, it really takes care of itself” (American City & Country, 2003).

On the economic plus side, disc golf courses can create revenue for communities. This can be a particular benefit to rural communities and in time courses can pay for themselves. In Georgia, members of the Augusta Disc Golf Association have created a course at Wildwood Park which will soon be the home to the world headquarters of the PDGA disc golf



championships. The draw of this event brings with it an estimated economic impact of \$1.8 million in the community (Staff reporters, 2004). The typical disc golf course will not come near that figure, but there is still room for a positive economic impact. It can come in two ways: events or user fees. A typical tournament can draw anywhere between 30 and 100 participants into a community for a day or a weekend. User fees can be added to courses, though this is generally done on private courses. Some communities have instituted a nominal fee, such as \$1, for out of county users. Our survey indicates many people are even willing to pay a nominal fee to play at their favorite course. 62% felt \$1-5 was reasonable, with no more than assuming all proceeds go for upkeep and maintenance. Ten percent was willing to pay over \$11 and 12% would not pay to play. There were no differences in willingness to pay by urban proximity of course or length of time playing disc golf.

In many cases, communities note that the presence of a disc golf course has been related to environmental improvement. The PDGA reports in the creation of the De Laveaga Disc golf Course in Santa Cruz, CA, a site was chosen that was used as an illegal dump and haven for ATV use. Thousands of tons of trash were removed from the site, and the course continues to sustain itself as trash free and limited ATV use (PDGA, 2004b). The PDGA even maintains an Environmental Committee to educate players in the impact of courses and provide consultation in the design and course maintenance. Schmidt (1995) suggests that it is common for a disc golf course to revitalize an underused park with deteriorating facilities. This can have the positive effect of reducing crime and vandalism. A salient example can be found in a city park in Richmond, Virginia. Prior to the course development, a local park was a hangout for drug deals – an unsafe area for locals to play. After the course was established crime decreased and the park was transformed (Tuten & Conkell, 1999). Another new course was developed in

Northeastern Illinois, built on a little used park in hopes to deter vandalism by “bring[ing] traffic in the park [which] will push out the bad traffic” (Jader, 2004).

Like ball golf, disc golf has social benefits. Though it can be played alone, disc golf is a group activity. Families can play together as part of a local park trip, family outing, or picnic. Many local disc clubs emerge and hold weekly contests and mini-tournaments. These weekly leagues provide a means for new and old members alike to share experiences. Additionally, these clubs not only serve as a surrogate steward for the course, helping in routine maintenance and organizing events, but players form social bonds through the love of the sport. In Tulsa, Oklahoma, the success of their disc golf courses can be attributed to their local disc golf club, a state-accredited, nonprofit organization. The club is comprised of “a lot of players that cared about (the sport) and kept with it regularly” (Wylie, 2004). Two thirds of all courses we sampled had an associated local disc golf club, and they averaged 44 members with a maximum of 650.

Similarly, as is the case with ball golf, disc golf provides a means of low impact activity. Disc golf can be played by anyone of any age or gender. Players can match their pace to their capabilities making the sport a lifetime activity. Along with the physical aspects of the game – walking a course (no carts here) and throwing the disc – many courses are in park settings. The ability to recreate in a highly aesthetic setting has its own associated psychological and physical benefits (Ulrich, 1983). Finally, the simple act of ‘being away’, especially from one’s work environment, can help reduce the stress of every day life and alleviate mental fatigue (Kaplan, Kaplan, & Ryan, 1998). This is especially poignant at disc golf courses in rural settings that have abundant natural resources.

In West Virginia, a new disc golf course was been established near West Virginia University. This course provides an example of how a community has come together during the

construction of a course. The creation of the course involved collaboration among multiple partners including the town of Fairmont which provided the land, Marion County Park and Recreation Committee, a nonprofit organization which handled paperwork, donations, and oversaw the course creation, the Seth Burton Memorial Fund, the major funding body, and the Marion County Disc Golf Group, a local group dedicated to the promotion and understanding of disc sports. In addition, other local schools and community organizations (such as the Boy Scouts) have helped put on local tournaments, used the course in physical education classes and for summer camp activities (Stalnaker, 2003). Through these types of partnerships opportunities community relationships can be strengthened. This is just one of many examples where communities have come together around disc golf (Tuten & Conkell, 1999).

### *Benefits of Disc Golf*

Though the literature suggests these benefits, the recreation manager is left unsure if a disc golf player is realizing these benefits and how important these benefits are relative to each other. As seen in Table 2, our survey suggests on a personal level, people play disc golf for four primary reasons: to be in nature, get exercise, be with other people, and challenge. These are similar to the expected benefits of ball golf, but at a fraction of the cost in course development and equipment.

Additionally, what sets disc golf apart from ball golf is its intimacy with nature. Many courses are a part of the landscape and designed with the terrain and natural obstacles. Ball golf courses, on the other hand, are designed and terraformed. In many cases if it were not for the pole holes a passer-by wouldn't even realize they were in a disc golf course. This is why many course stewards are willing to show a new disc golfer the ins and outs of a course. This not only

helps orient the new golfer to the course, but increases the social interaction between golf members while promoting the sport. Both of these factors, social cohesion and maintenance of

**Table 2. Community and Personal Benefits of Disc Golf**

<b>Personal Benefits<sup>†</sup> (n=225)</b>	<b>Mean±SD</b>	<b>Community Benefits* (n=225)</b>	<b>Mean±SD</b>
Enjoy nature	5.3 ± 0.9	The course provides a good means of low impact activity	4.7 ± 0.7
Exercise - physical fitness	5.2 ± 1.1	The course is an improvement to the area	4.5 ± 0.8
Be with other people	5.0 ± 1.1	The community is better because of this course	4.5 ± 0.8
Achievement	5.0 ± 1.1	This course is of low cost to maintain	4.4 ± 1.0
Escape daily routine	4.8 ± 1.2	This course was a low cost to create	4.2 ± 1.1
Meet/observe other people	4.8 ± 1.1	The course enhances the aesthetics of the area	4.2 ± 1.0
Seek stimulation	4.8 ± 1.2	This course brings families together	4.1 ± 0.9
Teaching - sharing skills	4.7 ± 1.3	The community is more active because of this course	3.9 ± 1.0
Tranquility - privacy	4.6 ± 1.3	There are low resource impacts related with this course	3.8 ± 1.2
Slow down mentally	4.6 ± 1.3	This course brings the community together	3.6 ± 1.1
Escape physical pressures	4.5 ± 1.4	This course brings money into the local economy	3.5 ± 1.2
Physical rest	4.1 ± 1.4	Crime has been reduced because of this course**	3.3 ± 1.1
Escape role overloads	4.1 ± 1.5	This course plays a role in area school curricula	3.0 ± 1.4
Learning - discovery	4.1 ± 1.5		
Family togetherness	4.0 ± 1.6		
Independence - autonomy	4.0 ± 1.6		
Introspection	3.9 ± 1.5		
Nostalgia	3.6 ± 1.6		
Agreeable temperatures <sup>‡</sup>	3.6 ± 1.6		
Security	3.3 ± 1.5		

<sup>†</sup> Scale 1-6: 1 (Not important to me) to 6 (Extremely important to me)

<sup>‡</sup> Significant difference between groups, p<0.05 (Non-MSA= 3.8±1.4 vs. MSA=3.4±1.7)

\* Scale: 1 (Completely Disagree) to 5 (Completely Agree)

\*\* Significant difference between groups, p<0.05 (Non-MSA= 3.2±1.1 vs. MSA=3.5±1.2)

landscape character, help explain why rural communities are quickly establishing courses.

Through social interaction disc golf players learn not only about the course itself but about the locale and can extend the word-of-mouth marketing of the course and charter community. In interacting with the natural landscape of the course a community can exhibit and sustain its natural character. Together, disc golf can help foster a sense of place and community.

In almost every case, the course steward felt the disc golf course did, in fact, improve the greater community while increasing community activity with relatively low resource impacts.

They verified that courses, in general, are of low cost to create and maintain. However, the

suggestions that a disc golf course can improve safety, bring in money, and play a role in school curricula are not universally supported. Though all polled somewhat agreed with these community benefits, the large variation in responses suggests these factors need to be taken in context to the greater community. That is, if there is little crime in an area, a course will not have much effect in reducing what isn't there. If there is poor marketing of events or a course has no associated no tournaments it will not generate as much economic stimulus to the community. Lastly, the sample of disc golf courses in this study may not have included many in or near schools to be an active part of curricula.

Many of the community benefits are related to other use variables. The more weekly players using a course, the greater chance for environmental impact and increased community activity. Similarly, a user fee decreases weekly use and family togetherness. The more local disc club members, the larger the decrease in crime. Several benefits are more likely in metropolitan courses. Newly established courses in metropolitan areas are more likely to improve the aesthetics and overall condition of the locale. This is not the case in rural areas where presumably the pre-course aesthetics and landscape character is perceived at a higher quality than metropolitan areas.

### *Suggestions for Communities*

If a recreation manager is considering creating a disc golf course, we make the following suggestions (Table 3): The PDGA website (<http://www.pdga.com>) contains a consortium of information on design, principals of ethics, and contacts to nearby professionals to aid you in the process of course creation. PDGA professionals can provide invaluable information on design, costs, and barriers to implementation. Colleges seeking to create a course may be interested in

the PDGA’s Matching Baskets Program where funds are provided on a per pole-hole basis, up to nine holes.

Despite the low cost of disc golf, there are still some costs including pole holes, tees, and signs for course layout and orientation. These can be offset by applying for grants, such as the Innovation Grant Program or federal or state grants promoting public health or recreation. In applying for grants letters of support from the community, environmental impact, management, and budget should be included. A number of sources can help with this, including the PDGA, Innova Discs (<http://www.innovadiscs.com>), and DiscLife (<http://www.discslife.com>) which contain sample proposals and estimated costs.

Establish a local disc golf club and seek out organizations that are willing to spend their

**Table 3. Suggestions When Creating a New Course**

1. Involve a PDGA professional
2. Apply for funding
3. Include the community
4. Keep it local
5. Remember benefits
6. Have fun!

time, talents, and even money to improve the quality of the course while maintaining its local character. Locals can include interested disc golf players, businesses, non-profit

organizations, and schools, among others. Involve them early in the planning process and include their knowledge and ideas in the planning process. Local partners can help make the course a success for years to come by organizing events and promotions.

Consider the benefits people seek while playing disc golf. They play to be in nature, with friends and family, as a source of exercise and challenge. This means adopting a sustainable management plan to maintain the naturalness of the park while promoting its local character. Try to involve interesting park features, such as waterways and scenic vistas that make your course stand out from the rest.

Lastly, remember to have fun. The first rule of disc golf is to encourage good spirit and fellowship among all who play disc golf while sustaining the environment. Disc golf is a fun, challenging and affordable sport that can be played by people of all ages and skill levels while fostering a sense place and community. Many communities are experiencing its growth and benefits, maybe yours will to.

### **Notes:**

The author would like to thank the help of the Professional Disc Golf Association for support and access to their database in the creation of figures in this manuscript.

### **About the author:**

Jason M. Siniscalchi is a doctoral candidate in Parks, Recreation, and Tourism at West Virginia University. He aside from disc golf, his research interested includes GIS modeling human factors of the rural-urban interface.

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