ABSTRACT

CATEGORIZING FUN: IDENTIFYING HIERARCHY IN CALIFORNIA AMUSEMENT PARKS

By

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The purpose of this study is an attempt to categorize any and all elements found in amusement parks to ascertain if central place theory can be applied to parks much like it is applied to cities. Results indicate that an amusement park will contain a core group of functions that are identifiable in any other amusement park. The style and layout of amusement parks is similar in regards to rides and shows, however, a park's location plays a role in the amount of each element present. This thesis disentangles the complexities of amusement park commercial arrangements to showcase inherent similarities and differences that might not occur through a simple visual observation alone. This is done through statistical analysis of park operations and locations.

CATEGORIZING FUN: IDENTIFYING HIERARCHY IN CALIFORNIA AMUSEMENT PARKS

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CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

The tried and sometimes true method of central place analysis is a fitting microscope with which to investigate amusement parks in California. Amusement parks, along with other retail establishments provide consumers with a wide variety of entertainment options with which to occupy their time and money. These options can include roller coasters and Ferris wheels; however there is much more contained within the confines of an amusement park that warrants investigation from a geographical perspective. This study examines theme parks in Northern and Southern California to analyze and catalogue the types of entertainment found within each park. Central place theory is useful in defining relationships shared among amusement parks. My research examined whether or not theme parks display similarities in design and layout of the features contained within. By examining the inner workings of the parks, the study sought to determine if one particular amusement park in California acts as primary center, dominating other nearby and faraway parks. To answer the questions posed above this study examined how theme parks are designed by evaluating two key hypotheses:

1. All parks display a similarity in spatial arrangement and locations of attractions. This mixture of attractions will denote a schematic for theme park design.

2. The variety, number, and style of attractions determine the highest order theme park based on central place theory. Establishing their orders can be achieved by classifying the attractions contained within the parks.

This study investigated the features available in amusement parks and quantified the findings to determine if visiting one theme park will result in the same experience in visiting any other amusement park.

Background

Theme parks provide non-homogenous services for a consumer base with preferences that are equally varied. These services include providing dining options to consumers, offering numerous styles of merchandise for sale, providing a wide range of rides to suit any taste, and entertaining everyone simultaneously. The primary attractions at theme parks are the rides, and it suits management to monitor ride capacity and line length throughout the day to appease customers who may not have the patience to spend time in line (Ahmadi 1997). Those customers preferring to avoid lines can find a host of other entertainment opportunities such as playgrounds, live-action shows, and animal acts. These other opportunities serve to regulate congestion between rides by keeping people moving through the park to other destinations (Lowenthal 2002). Each and every park seeks to offer patrons a sampling of the services mentioned above in many different configurations. When comparing parks to one another, however, one may have an advantage over another due to the amount and style of available entertainment, rides, and other recreation opportunities. How the consumers operate within these environments will determine which park is attended based on the needs of park patrons (Kemperman et

al. 2003). This study identified which parks contain the greatest variety, in both number and type of consumer attractants, to discern whether parks can be deemed higher order centers or lower order centers.

Retail establishments need to place themselves at socially and spatially optimal locations for a business to thrive and survive (Hamilton, Macleod and Thisse 1991). Parks compete with one another to control as many consumers within as many marketing segments as possible. Sometimes a certain business will dominate a market for years with impunity (Fyall, Callod and Edwards 2003). Market pioneers have the advantage of developing broad lines, while later entrants are left to exploit a niche that is initially missed by the pioneer. Even later entrants have a harder time still establishing an entrance, as much of the market has already been picked over by everyone else. The late entrant must devise a successful niche strategy that quickly breeds highly loyal customers (Lambkin 1988; Robinson, Fornell and Sullivan 1992; Kalyanaram, Robinson and Urban 1995). When considering the amusement industry, other parks may enter the market and provide services for consumers not satisfied with the initial park.

Case in point is the development of the burgeoning theme park market in Florida in the 1990s. In central Florida, Disney once enjoyed a lock on the market, but with strong competition from Universal, times have since changed. To maintain profits, both Disney and Universal have to be sure to maintain consumers who are repeat visitors, establishing brand loyalty. For a time, Disney World held the upper hand because of prior dominance coupled with deep pockets (Braun and Soskin 1998). In keeping up with a constantly morphing consumer base, continual scrutiny of market segments may

determine who will control the market. Disney World failed to maintain primacy with the consumer base in the Florida theme park market. When a retailer controls a specific market primacy is established with any alternatives ceasing to exist (Emerson 1972). Universal was able to present itself to consumers as a viable alternative to the environment offered at Disney World. To succeed, Universal sought to exploit certain segments of the market that Disney failed to address, such as young adults who prefer thrill rides to kiddy rides.

Segmentation is defined as the breaking up of larger markets into smaller subgroups displaying homogenous qualities that can then be more easily exploited than tackling an entire market. Niche marketing, which is often confused with segmentation, is the carving out of a small portion of a certain market where the consumers are not having their needs met (Shanj and Chalasani 1992; Freeman 1992; Pacyniak 2002). Targeting consumer niches as illustrated in the example above is a necessity for achieving success in any market (Shaw 1982; Pickholz 1988; Kalyanaram, Robinson and Urban 1995; Khermouch 1997; Johnson 1999; Neal and Wurst 2001). Early entrants into a market, in this case, Disney World, tend to enjoy competitive advantages over later entrants, such as Universal. The later entrant can supersede the pioneer, however, by utilizing skilled application of business practices as was the case in Florida (Hotelling 1929; Fik 1988; Dudey 1990). The competition for consumers among retailers or in this case theme parks, depends on how much consumers know about their surroundings, and how much these consumers know about each park's offerings. As stated earlier this study sought to classify the offerings of each park in the survey.

Literature Review

There were very few articles and books related directly to park function and operation. There were of course many reading options related to what creates an amusement park such as rides and attractions. In addressing the hypotheses proposed earlier, research was primarily focused on finding similarities among existing retail establishments to relate directly to amusement parks. These sources included diverse topics such as central place theory, classification of landscapes, historical agricultural fairs, shopping centers, and park design practices.

Central Place Theory

Central place theory is a model of the relationship among the number, size, and distributions of market towns or central places, with the market area of each center equating to that of all other such centers at the same level in the hierarchy. The boundary between any two market areas at a given level is a sharp division halfway between two adjacent towns. The theory states that consumers seek to minimize the actual distances they travel to meet their needs of a particular order and will thus patronize the closest establishment offering a desired product (Christaller 1966). This static model, however, does not include two salient factors in consumer behavior: Class of consumer, and the combining of wants into one shopping trip. Christaller's model abstracts away, ignoring the inverse relationship between disposable income and a measure of distance related friction. A consumer possessing more disposable income and transportation options will not need to conform to travelling to certain centers for certain goods where a consumer in

a lower class with lesser options will conform. Additionally, consumers seek to maximize their travels by making multiple purchases on a single trip, not always choosing the closest center to shop in for a particular good (Hartman 1950; Hart 1954; Berry and Garrison 1958a; Clark 1968; Lentnek, Harwitz and Narula 1981).

Even so, central place theory can be used as an effective means to explain the creation of spatial patterns of consumers patronizing central business districts in a generalized manner. There exists a need to address the sheer number of choices and alternates that are available to each consumer, always keeping in mind that no two consumers are alike (Rushton 1969; West, Von Hohenbalken and Kroner 1985). In classic central place theory, the goods and services that consumers seek will generally occur in homogeneous sectors where a hierarchy is constituted based on the level or order of a good available for consumption. Larger centers will have more functions than smaller centers, and increasing the number of functions available should increase the size of the center. The goods carried and not carried at each center define hierarchical levels of urban centers. Centers of a higher order will offer all of the goods that lower level centers have plus additional items not available elsewhere (Berry and Garrison 1958b; Berry 1959; Christaller 1966; Davies 1972; Papageorgiou and Brummell 1975; Blommestein, Nijkamp and Van Veenendaal 1980; Mulligan 1984; West, Von Hohenbalken and Kroner 1985; Parr 1987). In much the same way, the amusement park can be examined to analyze separately the functions that create the final product for consumers.

Consumers are indecisive, and it can be complicated to define their habits or decide where their loyalties lie in relation to a brand, store, or product. Business owners have a need to study consumer habits and trends to realize a return on investments and stave off competition. Geographers and marketers have attempted to create models that predict consumer behavior, thus serving as a means for evaluating store locations and the quantity of sales to be expected. In a perfect world, consumers would be evenly distributed across a plane wherein both firms and their patrons possess perfect information related to product needs and wants (Horton and Reynolds 1971; Burnett 1976; Hubbard 1978; Gayler 1980; Kohsaka 1986; Allaway et al. 1994; Justman 1994). People will not always follow the most obvious path to meet a certain goal because of a lack of information related to ones surroundings or the combining of multiple tasks in seemingly random fashions to meet a larger goal (Klingbeil 1980). Identifying urban centers and the differences in services between these centers has garnered much attention following the preliminary work of Berry mentioned earlier.

A measure of attractiveness is one utility measure for consumers, but it differs widely across consumer groups and is never stable. The attractiveness of a center may have to be taken into account to portray the level of influence one center has over another more accurately (Clark 1968; Cadwaller 1975; Papageorgiou and Brummell, 1975; Timmermans, Nijkamp and Van Veenendaal 1984). Qualifying the needs of consumers is of obvious importance not only to regional planners but to geographers as well. Central place theory provides researchers with a strong foundation as the spatial hierarchy of shopping centers and regional counterparts is noted based on the

homogeneity of the consumer base utilizing the centers and the distances traveled to centers by each consumer group or market segment (Blommestein, Nijkamp and Van Veenendaal 1980).

Feature Classification

Retailing is a popular subject for researchers, especially in urban and suburban settings. A study conducted in Edmonton, Alberta in 1985 was designed to test central place theory by defining a hierarchy of shopping centers in the city based on available goods, costs, and the distance to consumers. The classification scheme devised by the researchers noted the existence of neighborhood, community, and regional centers each with more or less goods, as well as style and variety of goods based on the type of shopping center (West, Von Hohenbalken and Kroner 1985). The International Council of Shopping Centers (ICSC) defines a shopping center as retail built environment containing a variety of commercial enterprises managed as a single unit. These centers will typically have at least one department store as an anchor depending upon the type of center. The larger regional centers will contain commonly at least two anchors and a greater assortment of shops on site (ICSC 1999). In researching amusement parks, a hierarchy of park orders based on available rides and entertainment may mirror the neighborhood, community, and regional shopping centers noted above.

Classification of phenomena is not limited solely to cityscapes. A study in California compiled variables related to available labor, produce, area, and distance to city centers to define three principal farm types. The first type of farm is located near a city and its production is determined by the needs of that city. The second farm type is

located further away from cities and its production is determined by available labor and the type of product chosen by the owner of the farm. The third type of farm is also located away from cities, however, the region / climate / soil determines what is produced. Researchers involved in this study were unable to create concise and delineated farm types as much wider diversity between the variables than originally envisioned hampered the creation of clearly defined farm types in the study (Gregor 1979). In classifying theme parks, there will be a number of variables, much like this study in the Pacific Southwest, which will require a carefully planned classification system.

Defining the variables in a study and determining the type of class structure to be used in the process is another popular research topic. When it comes to the classification of phenomena for the purposes of a study, there are general rules to follow. First, choose an agglomerative method of analysis based on the group in question; secondly, pay close attention to the individuals being compared, and finally, form homogenous groups. Choosing the best grouping is not based on a preferred method, but the method that will best fit the analysis (Hudson 1936; Johnston 1968; Anderson et al. 1976; West, Von Hohenbalken and Kroner 1985). When a map displaying studied phenomena is created there are two tasks that must be dealt with to create a readable map. This first task is selecting the factors that will convey the analysis portion of the research, with the second task defined as creating a graphic representation of the chosen factors (Sauer 1921; Board and Taylor 1977).

History

The modeling of an amusement park has its roots in agricultural fairs of yesteryear, the World's Fairs popular in the late nineteenth and early twentieth centuries, and retail built environments of today. The continued success of fairs, as well as the emergence of amusement parks during the middle to late twentieth century, is attributed to their placement along major thoroughfares where traffic and trade were likely to be heavy (Allix, 1922; Kniffen 1951). Today, amusement parks are dependent on the highways and byways that bring people to the park on a daily basis. Early agricultural fairs focused solely on commercial activities with little or no entertainment figuring anywhere into the grounds. Times changed along with the patrons attending the fairs, however, as entertainment gained a foothold and slowly emerged as a viable commercial aspect of the fairs in its own right; many of the visitors now having no interest in agricultural displays. The crowds attending fairs in the 1940s were treated to live concerts in the afternoon and fireworks at night (Kniffen 1949).

The architectural forms utilized today in commercial venues owe their construction style to late nineteenth century World's Fair amusement zones. The operators of the fair recognized the ability to capitalize on patrons by offering commercial enticements in the forms of carnival games and performances along a centralized strip of land. These midway centers of entertainment were dependent on outlandish merchandising for continual commercial success (Rubin 1979). Likewise, amusement parks of today are carefully designed to include economically viable institutions that will attract the greatest number of visitors (Braun and Soskin 1998).

Fairs commonly occurred as one of four different types: the sample, general commodity, livestock, and town market variety. The livestock fairs had two roles for the populace, one being to showcase animals and new technology; the other merchandising what each peasant or farmer may require (Allix 1922). Fairs further sought to educate visitors with exhibits and innovations in farming practices (Rubin 1979). American fairs, similar to those in Europe, offered a wide variety of products and services for the populace and in later years a home to performance artists and fortune tellers. The fair is shaped by its merchandise, attractions, and displays, the pattern being created to house multiple functions. The most important factor of the harvest fair was purely commercial, locating them in areas where trade traffic was likely to be at its heaviest (Kniffen 1949, 1951). Likewise, after careful considerations, Disneyland was located near the then new Santa Ana Freeway, a short twenty-minute drive from Los Angeles (Platt 1955). Locating Disneyland near a metropolitan area would ensure a steady stream of customers year round.

The World's Colombian Exposition held in 1893 in Chicago is generally credited with the creation of amusement centers catering to patrons that can be traced forward to amusement parks today (Rubin 1979; Ford and Milman 2000). This fair had a separate section devoted solely to entertaining visitors with various attractions. The section was known as the Midway Plaisance, or in simpler terms—amusement zone (Rubin 1979). The idea for Coney Island grew out of the City Beautiful movement that provided the spark for the White City, the centerpiece of the World's Fair. While the White City was constructed to promote order and cleanliness, the Midway Plaisance amusement strip

offset from the city center instead promoted a raucous and outrageous atmosphere replete with light displays, freak shows, and boisterous crowds. The amusement parks opening on Coney Island took their cue from the Midway and used outlandish architecture to show on the outside of buildings what awaited visitors on the inside. The architecture and layout of each park was carefully planned to draw in as many patrons as possible to each and every attraction (Bogart 1988).

George C. Tilyou, the creator of Steeplechase Park on Coney Island, was a pioneer of the amusement park industry, developing managerial practices for a successful park that are still in use today at major parks, such as Disneyland. Coney Island was easily reachable via the subway and exuded a family atmosphere that was easily marketed. Steeplechase Park was one of the first to market its image through merchandise available at stands within the park, further enamoring his park with the public. A gate surrounded Steeplechase Park, providing both a means of escapism from the outside world as well as barring undesirable characters from ruining the experience for others (Ford and Milman 2000).

Retail Built Environments

The shopping center is, similarly, a carefully planned and regulated environment (Blommestein, Nijkamp and Van Veenendaal 1980; Bogart 1988; Bukatman 1991; Goss 1993; Bell 1999). The center space within the mall has a number of specific uses ranging from a place to rest to an area displaying informative exhibits detailing new mall developments. Early shopping centers were designed to emulate town marketplaces and old world village squares to evoke feelings of nostalgia.

Main Street U.S.A., the cornerstone of Disneyland, also fosters nostalgic feelings with its idealized image of a town center in many visitors' minds regardless of the fact that some guests have never set foot in such a place in the real world (Bukatman 1991; Goss 1993). Heritage Village, a former Conservative Christian themed shopping complex blended the sacred with the secular as consumerism became a new religion. Inside, visitors were treated to a grandiose hotel, a shopping mall reminiscent of Main Street U.S.A. in Disneyland and a water park (O'Guinn and Belk 1989).

The classic design of shopping centers is the "wheel spoke" layout designed to funnel customers through the center of the mall. The most recent addition to the retail built environment is a carnival atmosphere denoted by small rides or a carousel (Goss 1993). The shopping center provides a place for consumers to recreate and spend money, a complete symbiotic relationship. Amusement parks seek to serve a similar purpose by offering a brief respite from everyday life by encouraging visitors to have fun within numerous created environments, each one complete with shopping, dining, rides and entertainment.

Park Design

Theme parks are developed via a series of stages before being fully realized in steel and concrete: concept realization, design implementation and finally construction. When Disneyland opened its gate in 1955, the theme park revolution began (Graham 2001). Disneyland is a "combination World's Fair, playground, museum of living facts and a showplace of beauty and magic" (Platt 1955, 101). Through the years, the park has remained as exactly what it was planned to be—a well executed park suitable for

families, locals, and tourists alike. Disneyland was designed to hide the real world outside its walls, and instead present a safe and sanitized environment rich in themed attractions and lands. This artificial environment is highly centralized and controlled (Bukatman 1991; Graham 2001). The newer Disney's California Adventure just across the way from the venerable classic also has highly specific themes present in each land (Barbour 2001). The lands in Disney's California Adventure do offer the usual assortment of amusement park attractions; however, the ratio of these amusements to shopping and dining is decidedly low, prompting one critic to dub the park as a "disguised supermarket" (Graham 2001).

Legoland California is also divided into zones all displaying a distinctive theme central to each zone. To further delineate the zoning of the park's themed lands, lighting concepts were created for each area to heighten the sensations created by each location in the park. Concerning the future of other Lego based parks, Legoland California will be used as the model on which others will be designed and built, as it exhibits the closest thing to a formula to date. According to Ian Sarjeant, Legoland Attractions Director, "We know where to focus and where to adjust. We're currently working on a high-level master plan that can be taken anywhere, localized, and updated in terms of operating technology and the Lego product line" (Rubin 1999, 9).

The designed sense of space and place presented to consumers is easily manipulated and interchangeable should interest in a certain attraction lag. Consumers can never be sure of their space as it can be changed on a whim, each time seeking to draw more consumers in than before (Hugill 1975; Sack 1988; Meyrowitz and Leiss

1990; Graham 2001). The less that is known about the theme being presented, the better; more room is left for the imagination of engineers and designers to create environments that may or may not be historically accurate. Even greater success can be achieved if the overall theme does not remind a visitor of any particular place, instead being fresh and vibrant (Lowenthal 2002). For other customers it is the past that brings them back to the parks, not the bigger and better improvements that are constantly being made. There is, thus, a tension between legacy attractions and a park's need to update its attractions. Replicating these past experiences in some shape or form within updates may benefit parks and, indeed, industries seeking to capitalize on breeding nostalgia (Holbrook 1993).

The biggest and best ride is often located near the back of the park with the idea being to entice customers to make their way through the park (Schneider 1998). The routes through the parks and other retail environments, such as Las Vegas casinos, are controlled, making it hard for visitors to make their way to the exit. Paths are also sure to meander around attractions and shops so that wayward patrons can spend even more time and money in the park on their journey to the momentarily forgotten exit (Goss 1993; Lowenthal 2002). Concerning the flow of patrons through the park, psychologists have discovered that well mannered people are drawn in a rightward direction with the rebellious teenagers being drawn in an opposite, yet equal, leftward direction (Schneider 1998). By manipulating this psychological tendency, park designers can place family related attractions off to the right of the main land or gate, and thrill rides off to the left.

The designers of theme park amusements typically use the emotion of fear as a tool to create a memorable and fun experience on a roller coaster or in a haunted house.

For example, if a haunted house lacks a knife wielding maniac, visitors may complain and lose interest. On the upside of things, if a haunted house has all the elements that visitors have grown accustomed to seeing while combining them with new elements not envisioned by the average guest, the success of the house can be phenomenal: a successful balancing of the tension between nostalgia and updating. Roller coasters get a lot of mileage out of playing up the fear of heights and the sickening sensation of speed. These are elements that are common to any good coaster and without them the attraction may suffer (Minton 1999). In much the same way, amusement parks will attempt to provide consumers with standard features be it with haunted houses and roller coasters or entertainment and shopping opportunities.

Summary

Identifying a hierarchy among amusement parks will be achieved through the collection and classification of the features contained with each park. The parks share similarities with other closely studied retail built environments such as shopping malls which provide this study of amusement parks in California with a logical course of action in identifying park features, classifying those features, and mapping the features for analysis. The design and layout of the arrangements within the park will be used to determine the level of each park be it, low order, middle order, or high order. In Chapter 2 a discussion of the data collection via park survey begins the process of defining this hierarchy.

CHAPTER 2

DATA AND METHODOLOGY

Data Collection

As noted in Chapter 1, there are two major questions that structure this thesis: (1) How are theme parks and their internal workings arranged? and, (2) do the arrangement and types of commercial features within a park denote a hierarchy of sorts among the parks? These questions were investigated by examining the distribution of rides, entertainment venues and shows, food establishments, and merchandising enterprises within the chosen amusement parks in Northern and Southern California. This thesis began with an examination of central place theory, recreational opportunities, and park design. It is argued central place theory offers as many insights to understanding theme parks as it does for understanding the size and arrangement of urban centers and other commercial developments. To understand the possibility of one park achieving the highest possible order, one must collect information on what types of features are contained within amusement parks.

Data were collected from visits to ten theme parks during the summer months of 2004 in Figure 1. The parks in Northern California were visited on weekends during the month of July, while the parks in Southern California were visited on weekends in the month of August. Parks were visited on Saturdays and Sundays because it was presumed there would be more activity available to catalogue during the typically busier weekends.

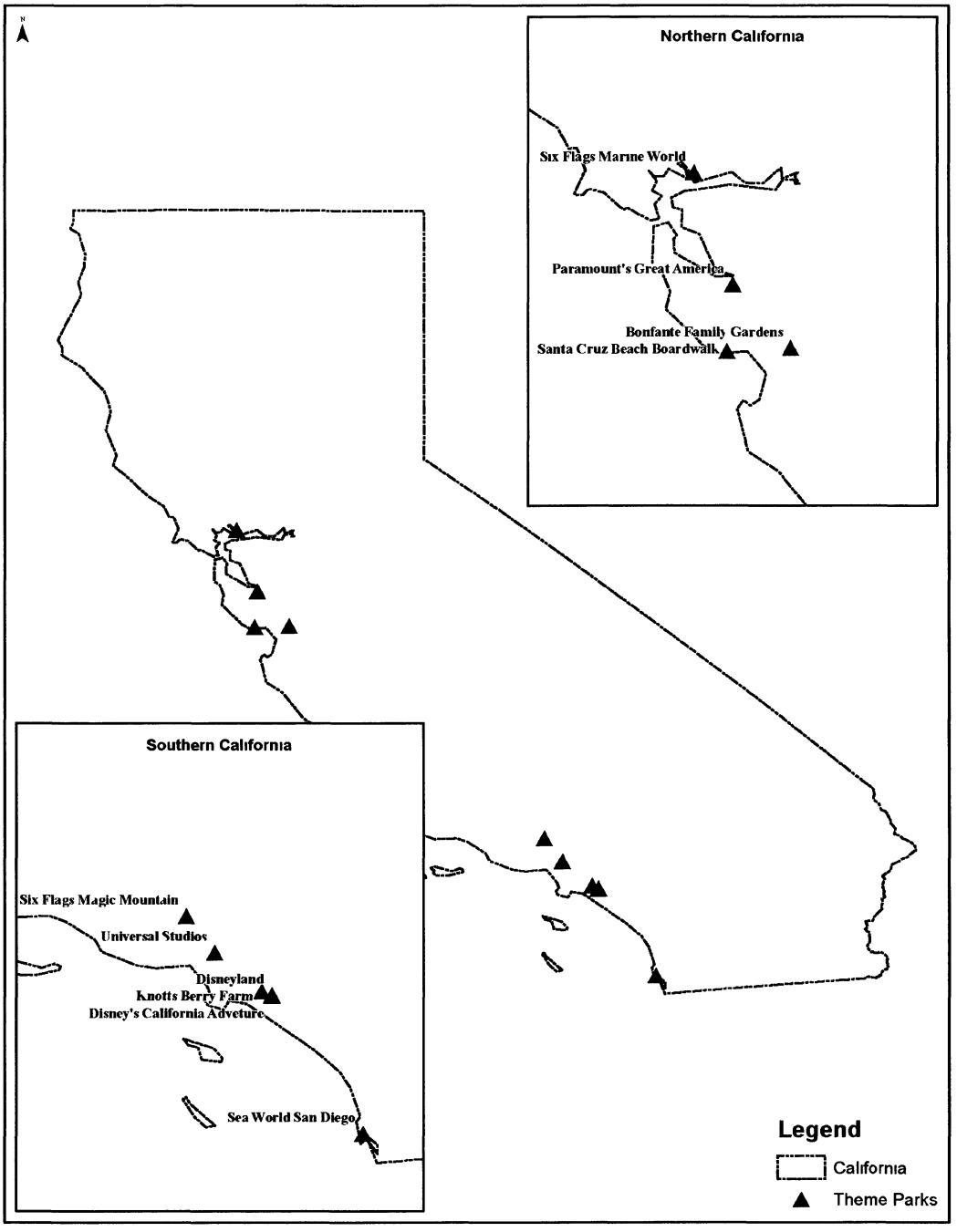

FIGURE 1. Map shows the locations of the surveyed amusement parks.

Data were derived from three sources to maximize accuracy of total counts related to precise total counts of chosen features within their specific region of the parks. The first source for data recognition and acquisition was the internet. Each of the parks in question has a web site that outlines the opportunities available to visitors, with some of these sites being more informative than others. Visiting the parks to determine the accuracy of the information available online was to be the next step. In visiting each park, it was possible to determine if boundaries existed between caches of features, be it architecture and signage around a certain cluster, or an actual physical barrier such as a bridge or a simple hedge (Rubin 1979; Sack 1988; Lowenthal 2002). The information online was used to create lists of the types and amounts of each feature in question to be checked in the field when visiting each park.

With the internet lists of features in hand, a base of knowledge was established about the arrangement and layout of each park prior to arrival. This a priori knowledge was used to gather my bearings and make a quick initial sweep in a clockwise direction of each park to identify large landmarks such as roller coasters and towers, and to locate isolated regions or lands within the parks, should any exist. Many of the parks had numerous lands that were themed in a variety of ways and separated from each other by physical barriers or signs noting that one was leaving a certain land and entering another one. Once the initial walk-through was completed, a second more thorough assessment was conducted beginning at the front gate and circling around in a counter-clockwise fashion back to the starting point, then proceeding up the middle to the rear of the parks to finalize the collection. On this second walk-through, a digital camera was used to

document each feature with hundreds of photos taken in each park. This second sweep proved useful in identifying features that were not present on the lists created from the internet sites for each park. In many cases, the websites were not completely accurate, as many food and commercial vending sites were not accounted for. Finally, a third sweep was made of each park near the end of the day to make sure that nothing was left out and everything of interest had been accounted for and documented with photographs. It was noted in many of the parks that arriving as soon as the gates opened allowed for the quickest perfunctory examination, but that some vendors, especially food carts, opened later as dictated by the increasing number of people in the park. This final sweep was instrumental in identifying and documenting vendors opening later in the day, as well as wrapping up the day with a last check of everything that was supposed to be in the park based on the park list created before arrival.

The third and final sources for data acquisition were park brochures and literature available on entry to the park. These handouts consisted mainly of maps showcasing the major rides and their respective locations in the park. Many of the brochures also detailed where a cool drink or snack could be purchased, what time the next wild animal show was to begin, and where merchandise could be purchased. The brochures and maps lacked any sort of scale or geographic referencing system, and existed merely as schematics showing where and when to find things. The maps created in the analysis portion of my research mirror this disregard for all things geographic, choosing instead for them to be useful for accurate counts of features and their locations. Bonfante Family Gardens had a wide variety of handouts, with one each for dining and shopping locations,

rides, and the times and venues for each show. Other handouts at this park included information about the trees and shrubbery in the park, as landscaping was deemed to be an attraction bringing in guests. There was only one case in which a brochure and map was unavailable, this being the Santa Cruz Beach Boardwalk. The Boardwalk was at odds with every other park in this study as it did not charge admission to gain entrance nor were there any walls present to create a definite park boundary.

Data Coding

After noting the initial impressions of each park and collecting the necessary data from each visit, the task of identifying central places among parks based on their combined features. These centers, in turn, some of them being of a higher or lower order than others, would likely showcase which parks in California offered the greatest assortment of park features to serve the broadest consumer base. The analysis of the features collected and counted while visiting the parks was divided into two key parts: 1) classifying park features into manageable categories and, 2) mapping the relative location of each classified feature within each park. When totaled, the entire collection of features documented at each park numbered 1,530. This large number was divided unevenly among the parks with some parks having more features than others. As can be seen in Table 1 on the next page, both Disneyland and Knott's Berry Farm had 231 features while the smallest park in terms of feature count was Bonfante Family Gardens, totaling just 73 features. Each of the parks had a list associated with it detailing the amount of collected features. The next step was to pare down these numbers into manageable categories for meaningful analysis.

TABLE 1. Amusement Park Feature Counts

Park	Totals
Disneyland (DL)	231
Knott's Berry Farm (KBF)	231
Six Flags Magic Mountain (SFMM)	173
Paramount's Great America (PGA)	169
Six Flags Marine World (SFMW)	168
Sea World San Diego (SWSD)	134
Universal Studios Hollywood (USH)	121
Disney's California Adventure (DCA)	118
Santa Cruz Beach Boardwalk (SCBB)	112
Bonfante Family Gardens (BFG)	73
	1,530

Content analysis, in its simplest form, can be useful for any number of studies that must measure in a quantitative fashion the typically qualitative data available to researchers. Content analysis involves the disassembling of a chosen data type into manageable blocks or categories that seemingly repeat themselves not so randomly in the initially gathered data (Davies 1977; Bird, Lochhead and Willingale 1983). The data collected from each park required breaking apart the larger data pool into more manageable pieces before any type of analysis could take place. Using content analysis while perusing the park brochures and the photo documented park features helped to create major categories that lent themselves to being deconstructed into smaller and smaller subcategories.

The logical approach to breaking down the data was to start where the available materials had left off. The categories chosen as the major ones had initially been created

after gathering information from the websites and pamphlets from each park. These major categories were entertainment, rides, shopping establishments, and dining options. In each case, these categories were well represented at each park, some in greater quantities in larger parks than in the smaller parks. The final counts for each of the major categories is displayed Table 2.

TABLE 2. Core Park Categories

Park	Enter.	Rides	Dining	Shop.	Totals
DL	43	39	93	56	231
KBF	48	35	73	75	231
SFMM	32	44	55	42	173
PGA	53	40	41	35	169
SFMW	57	32	50	29	168
SWSD	51	5	32	46	134
USH	28	4	58	31	121
DCA	31	17	49	21	118
SCBB	30	32	36	14	112
BFG	24	18	18	13	73
	397	266	505	362	1,530

A table was created for each park, with the counts and types of features found within placed into the four broad categories of entertainment, rides, dining, and shopping. These categories were well represented and served as the breakout categories after surveying each website, brochure, and park. Further analysis of the numbers, indicated that these categories were too broad, and that within each identified major category there

existed several smaller and identifiable subcategories. A classification scheme was needed that would identify activities within theme parks. Since one did not seem to exist, one was created from analogy with the Anderson Land Classification system; a nested hierarchical classification system originally developed for use with remote sensing data (Anderson et al. 1976).

The four major park features previously noted were useful in defining and classifying the largest portions of the collected features. Each of these core park features contained smaller subcategories that became evident once the initial breakdown was completed. This final step provided the closer inspection of features needed to proceed with the analysis phase of the thesis. On occasion, the third subcategory required splitting the feature along a division. In the case of roller coasters a steel coaster may or may not contain inversions, an incentive for some patrons to ride or to choose a different ride with different features. There were enough instances, though limited they were, that forced this trend of breaking out some of the subcategories. The four major categories and their subcategories are discussed in Chapter 3.

CHAPTER 3

CLASSIFYING AND MAPPING THEME PARK FEATURES

Feature Classification

The survey identified 1,530 features among the California parks visited. These features were broken down into four major categories forming the core of operations in each park. The first major core category classified was entertainment. For this study, entertainment was loosely defined as a designed space or event within the park where a visitor has the opportunity to enjoy an activity other than going on rides. The survey identified 397 features related to entertainment. Many of the category headings and subcategories are self-explanatory; however, for those that are not a brief explanation will be proffered.

The subcategories created from entertainment included, shows, exhibits, photo opportunities, games, animals, and finally play-areas. Concerning photo opportunities, a number of options were available to consumers such as having a picture taken with popular cartoon characters or, in parks where animals comprised a large portion of the total feature count, taking a picture with an animal was a popular photo opportunity. The largest of the subcategories contained within entertainment, was that of games, a popular pastime in all of the parks, and a nod to the days of the Midway (Rubin 1979). The final item noted in the game category was the pay to play locations wherein admission to the

park did not cover these further adventures. These two part pricing schemes are utilized by park owners to create an extra source of revenue by offering adventure seeking patrons an exclusive chance to try an activity not readily available elsewhere (Oi 1971; Locay and Rodriguez 1992; Schmalensee 1981). The categories and their representation in each of the surveyed parks are noted in the Table 3.

TABLE 3. Entertainment Category with Park Ranking

	BFG	DCA	DL	KBF	PGA	SCBB	SFMM	SFMW	SWSD	USH
Entertain.										
shows	5	15	19	10	12	1	8	9	10	10
exhibits	11	7	3	12	0	0	0	1	1	2
photo ops	3	3	10	1	5	0	1	0	1	8
games	1	2	2	21	28	28	19	14	4	3
animals	1	0	1	1	0	0	1	31	34	0
play areas	3	4	8	3	8	1	3	2	1	5
totals:	24	31	43	48	53	30	32	57	51	28
park rank:	10	7	5	4	2	8	6	1	3	9

The second major category defined from the information gathering process as described in Chapter 2, was that of the rides, perhaps the most important consumer attractant (Kemperman et al. 2003). Rides come in many shapes and sizes and dominate the landscapes of many parks with their high towers and sprawling tracks. The flat ride subcategory contains various minor category rides that operate on a track but are placed on level ground and rely on centrifugal force and collisions to create a sense of fun. The launch coaster, housed on similar track as the steel coaster, involves launching a shuttle full of riders out of a station house at a very high rate of speed. Track rides involved

riders being propelled along a linear path in various modes of transportation, such as a car or boat. The dark ride, very popular in Disneyland and theme parks from the past, involves loading riders into vehicles that move along a track through a darkened series of adventures with rooms and shortcuts opening up depending on the path chosen by the ride operator (Ford and Milman 2000). The breakdown of this category frequency and rank related to each park can be viewed in Table 4.

TABLE 4. Ride Category with Park Rank

	BFG	DCA	DL	KBF	PGA	SCBB	SFMM	SFMW	SWSD	USH
Rides										
flat	12	9	4	15	21	23	16	19	0	0
coasters	2	2	4	6	8	3	16	8	1	1
drop	0	2	0	2	2	1	3	1	1	0
water	2	1	7	4	6	1	6	2	1	1
track	2	1	12	7	3	2	3	2	1	1
simulators	0	1	1	0	0	0	0	0	1	1
dark	0	1	11	1	0	2	0	0	0	0
totals:	18	17	39	35	40	32	44	32	5	4
park rank:	7	8	3	4	2	5	1	5	9	10

The third major category culled from the collected data was that of dining establishments. The fare among each park was predominantly similar. Food and drink could be purchased throughout the park in restaurants, dining cars scattered along major thoroughfares, large cafeteria type areas, and at small stands that dotted the park landscape. Restaurants, the first category within dining, was any location where a park patron could order a meal and have it delivered to them via a waiter or picked up at a

counter, and eaten on the premises where the order was originally placed, such as a patio or dining room. The refreshment category was any location in the park where a patron could purchase a snack or cool drink. Refreshment stops served cold beverages and warm snacks from designated stands, or on mobile carts. Often, vendors would locate together creating a combination of beverages and snacks available in one place. For example, it was not uncommon to find a pretzel vendor in close proximity to a soft drink vendor. The gatherings subcategory was a designated area where patrons could meet as a group and share a meal, typically used by youth groups or for corporate related picnics for workers. Table 5, highlights the dining category along with park frequency and rank.

TABLE 5. Dining Category with Park Rank

	BFG	DCA	DL	KBF	PGA	SCBB	SFMM	SFMW	SWSD	USH
Dining										
restaurants	7	17	24	24	9	9	18	19	10	14
refresh.	10	32	69	49	31	27	34	30	21	44
gatherings	1	0	0	0	1	0	3	1	1	0
totals:	18	49	93	73	41	36	55	50	32	58
park rank:	10	6	1	2	7	8	4	5	9	3

The fourth and final category selected for major designation was shopping. There existed numerous places within each park where any number of items could be purchased. The generic merchandise subcategory contained park-specific and corporate-specific items for purchase, such as those depicting popular television characters and ride related items. The photography subcategory in this instance differs from the photography subcategory found in entertainment in that a purchase was forthcoming with each picture

taken, such as in a photo booth or ersatz historical setting. The arts and crafts subcategory was comprised of various booths where body art, art on the fly creations such as caricatures, and hand crafted items could be purchased. Customer convenience shops were noted in many of the parks wherein film, batteries, and other lost, misplaced, or forgotten items could be purchased. Novelties, such as magic tricks and gourmet foods, were any items that seemed out of place and did not tie into a park in the way of characters or locations. Finally, the fashions category was any location selling shirts, hats and other clothing that one could find for sale at a local mall. Table 6, below denotes the subcategories in the shopping category with park frequency and rank.

TABLE 6. Shopping Category with Park Rank

	BFG	DCA	DL	KBF	PGA	SCBB	SFMM	SFMW	SWSD	USH
Shopping										
merch.	4	9	24	23	7	3	10	8	17	16
photo.	0	2	1	14	7	2	8	9	6	2
crafts	1	2	9	20	10	2	9	9	13	7
convenience	2	0	2	2	2	0	5	1	2	2
novelties	5	4	12	11	3	1	4	1	4	3
fashions	0	4	8	5	6	6	6	1	4	1
totals:	12	21	56	75	35	14	42	29	46	31
park rank:	10	8	2	1	5	9	4	7	3	6

Mapping Attractions

Following the separation and identification of main categories into subcategories, maps were created to show where in the park each of the features comprising the categories occurred. There was no spatial framework by which to place the features on

each map; instead, the photographs of each element were examined closely to place items on the maps next to their correct neighbors. The simplified maps display the features within the proper region or land, should one have existed, for the purposes of displaying the distribution of features across each park. The park brochures and maps collected at the front gates provided the framework for each park map. The maps were scanned and stored as digital images and then reproduced in a simple fashion with Adobe Illustrator software. The outlines of each park and the lands contained within were created from the digitized images. The features were placed in the proper location outlines as culled from the photographs obtained during the research phase of the project. Figure 2 on the next page, a map of Disneyland is provided as an example of the maps in this first series. Each park map noting the locations of features within the boundaries can be viewed in the Appendices.

The outline base map created for each park was first used to note the locations of features contained within the park as demonstrated in Figure 2. A second series of maps was created for each park, minus the features, with graduated circle charts keeping intact the color scheme assigned for the major features in the first set of maps. To create the graduated circles, the smallest recorded feature count of 4 would equate to the smallest circle, with the largest circle size being generated by the value of 231 as counted at both Disneyland and Knott's Berry Farm. A radius size of .25 inches for the smallest value was decided on after the initially chosen sizes of .10 inches and .50 inches provided circles that were either too large or too small to display the differences in feature counts between parks and lands. The largest circle denoting 231 features had a radius of 1.9

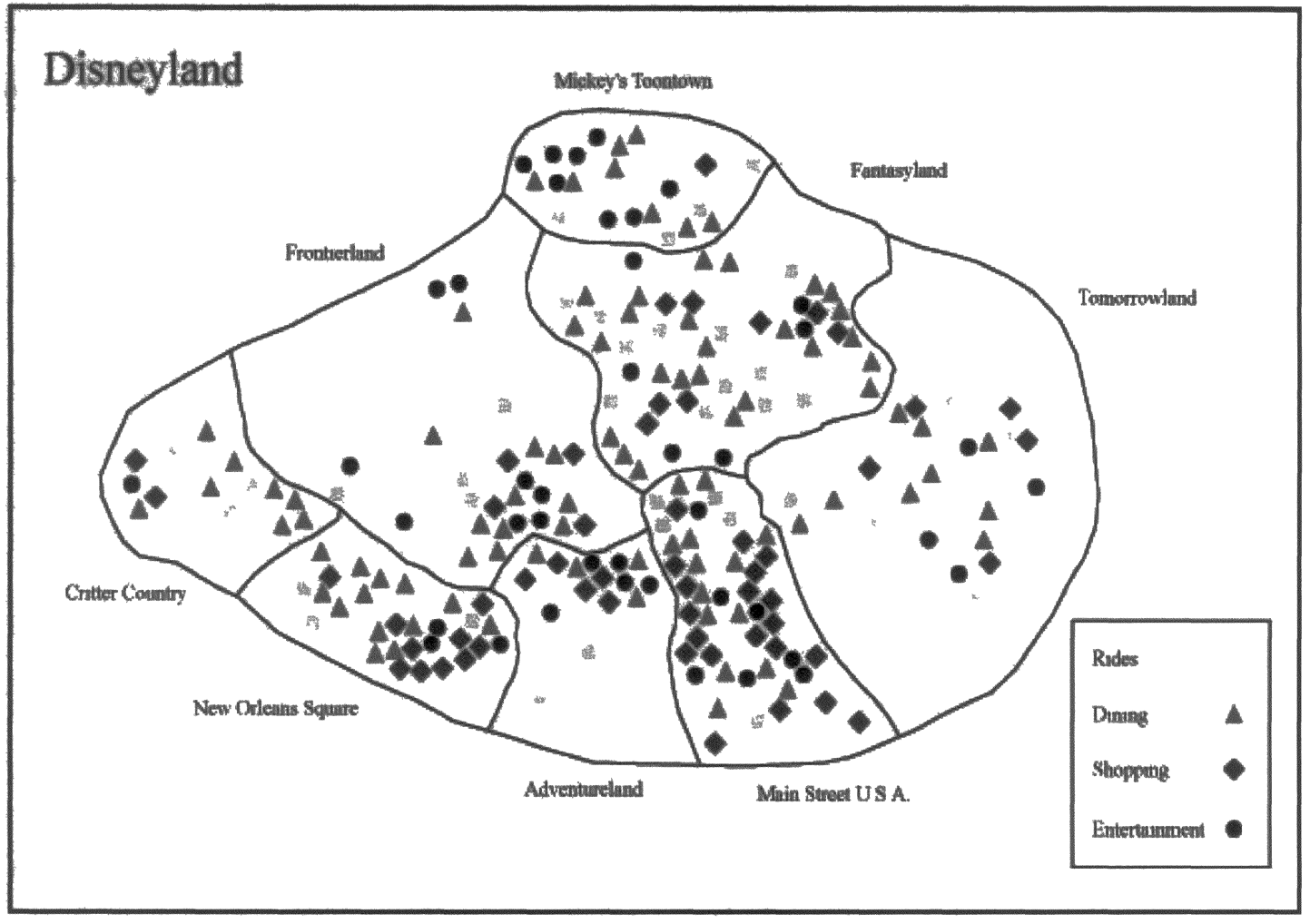

FIGURE 2. Map of Disneyland displaying core functions and locations.

inches. To obtain the rest of the needed radius sizes, this formula was run for each feature count present between 4 and 231 as noted in Figure 3.

$$\frac{.25^2}{x^2} = \frac{4}{231}$$

X = 1.9 inches

FIGURE 3. Formula used to create graduated circles for second map series.

The graduated circles were created to display the relative number of all features found within each region or land. Next, the pie wedges within the circles were used to symbolize the rough percentage of each feature within the region or land. A map depicting Disneyland with graduated circles noting the number of features by land can be seen in Figure 4. The entire second series of maps with graduated circles in place of the features can be viewed in the Appendices.

Finally, a third set of maps was created to aid further in determining the level of each park as related to central place theory. The first map displays the parks surveyed in Northern California: Six Flags Marine World, Paramount's Great America, Santa Cruz Beach Boardwalk, and Bonfante Family Gardens in Figure 5. Each park has a ring around it denoting a 50-mile radius. Within the 50-mile radius, cities with more than 100,000 people are noted along with airports, and interstates. The 50-mile radius was

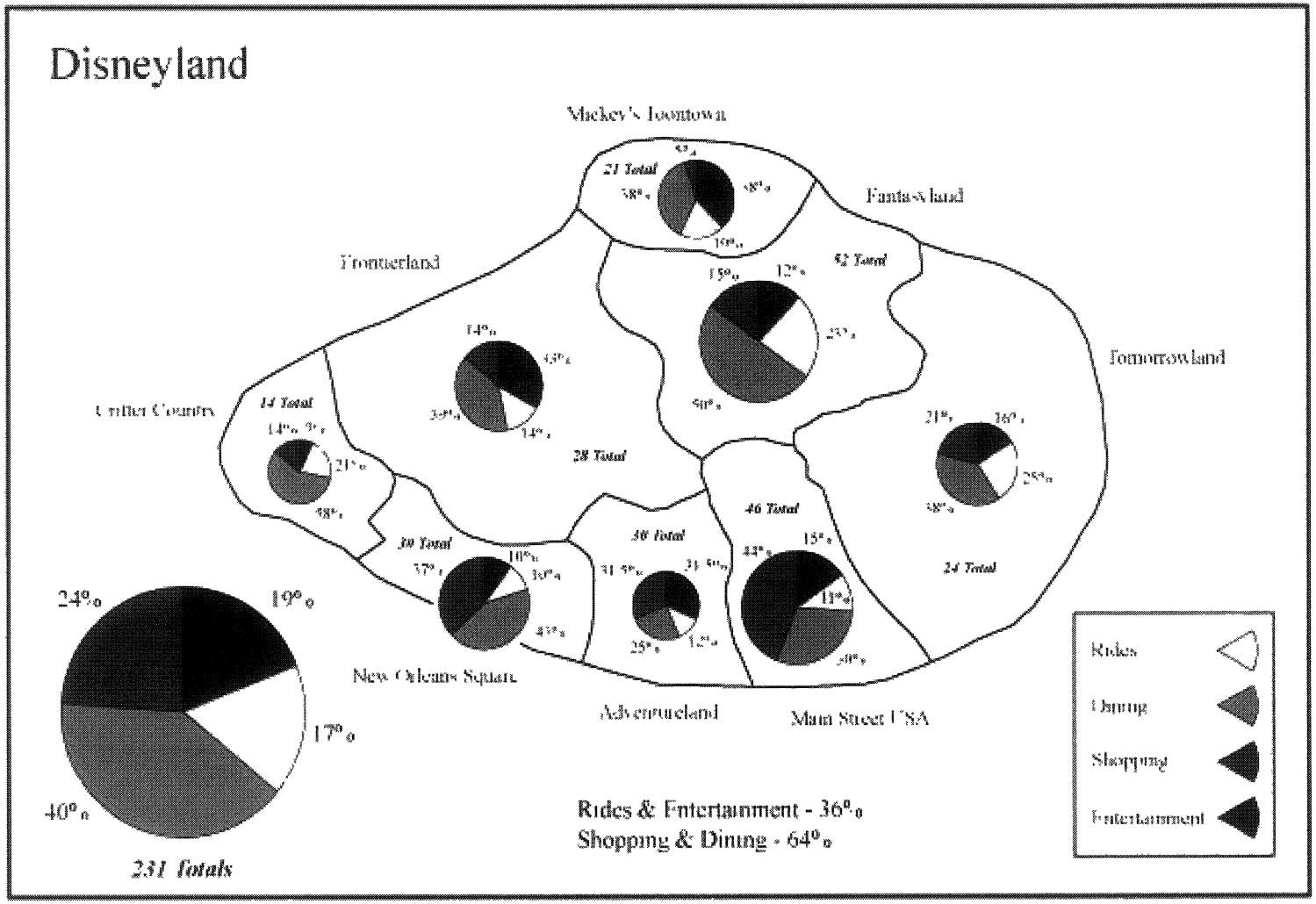

FIGURE 4. Map of Disneyland displaying graduated circles in place of features.

arbitrarily chosen to represent a one hour drive time, the idea being to illustrate where person within the circle could expect to travel to an amusement park within an hour. The catchment area created by the radius can be used to demonstrate a measure of drawing power on a consumer base (Nelson 1958; White 1972; Brown 1987). A map for Southern California was created as well, the only difference being the parks. The parks in Southern California surveyed for this thesis included Six Flags Magic Mountain, Universal Studios Hollywood, Knott's Berry Farm, Disneyland, Disney's California Adventure, and Sea World San Diego and can be seen in Figure 6.

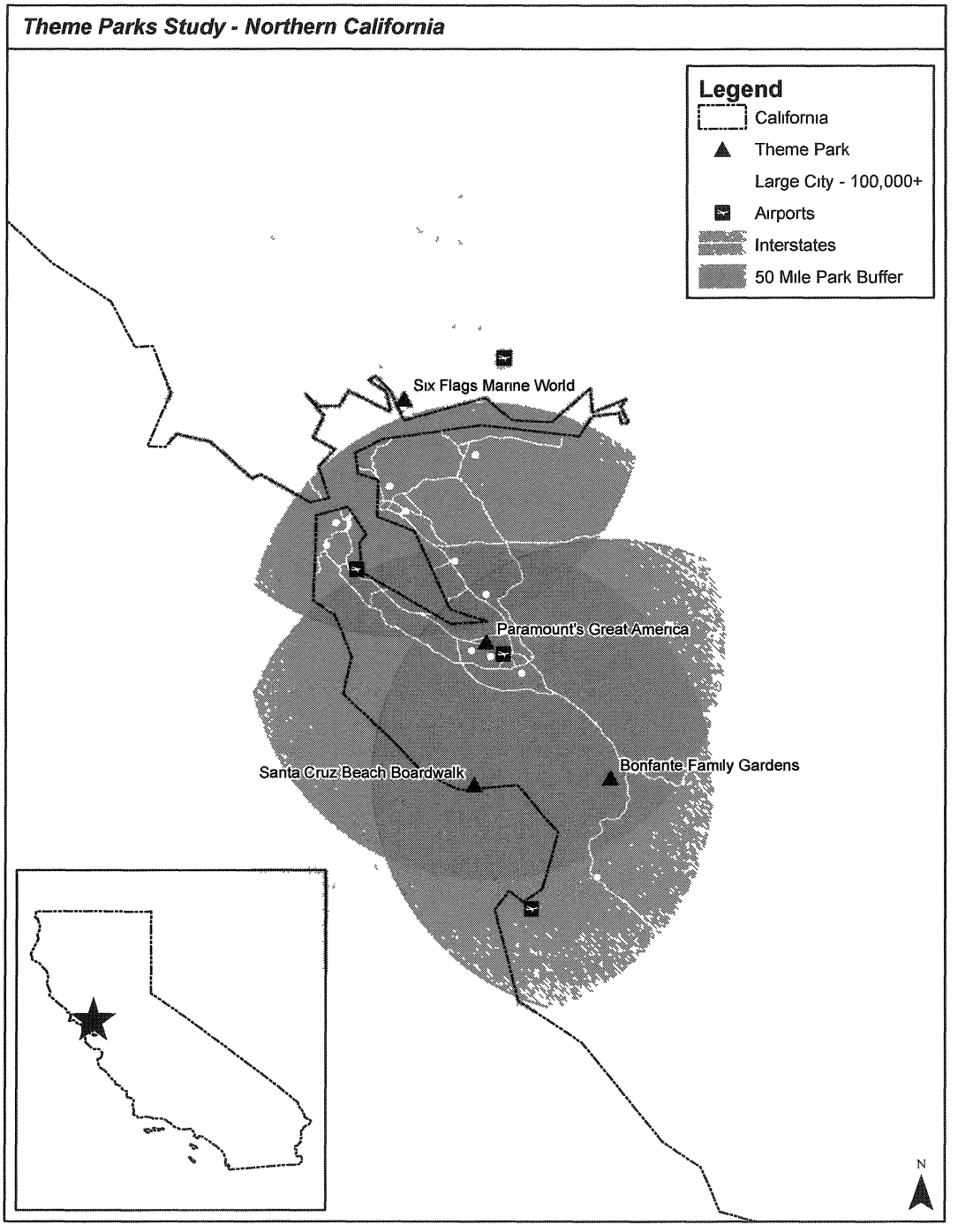

FIGURE 5. Map of Northern California parks displaying catchment areas.

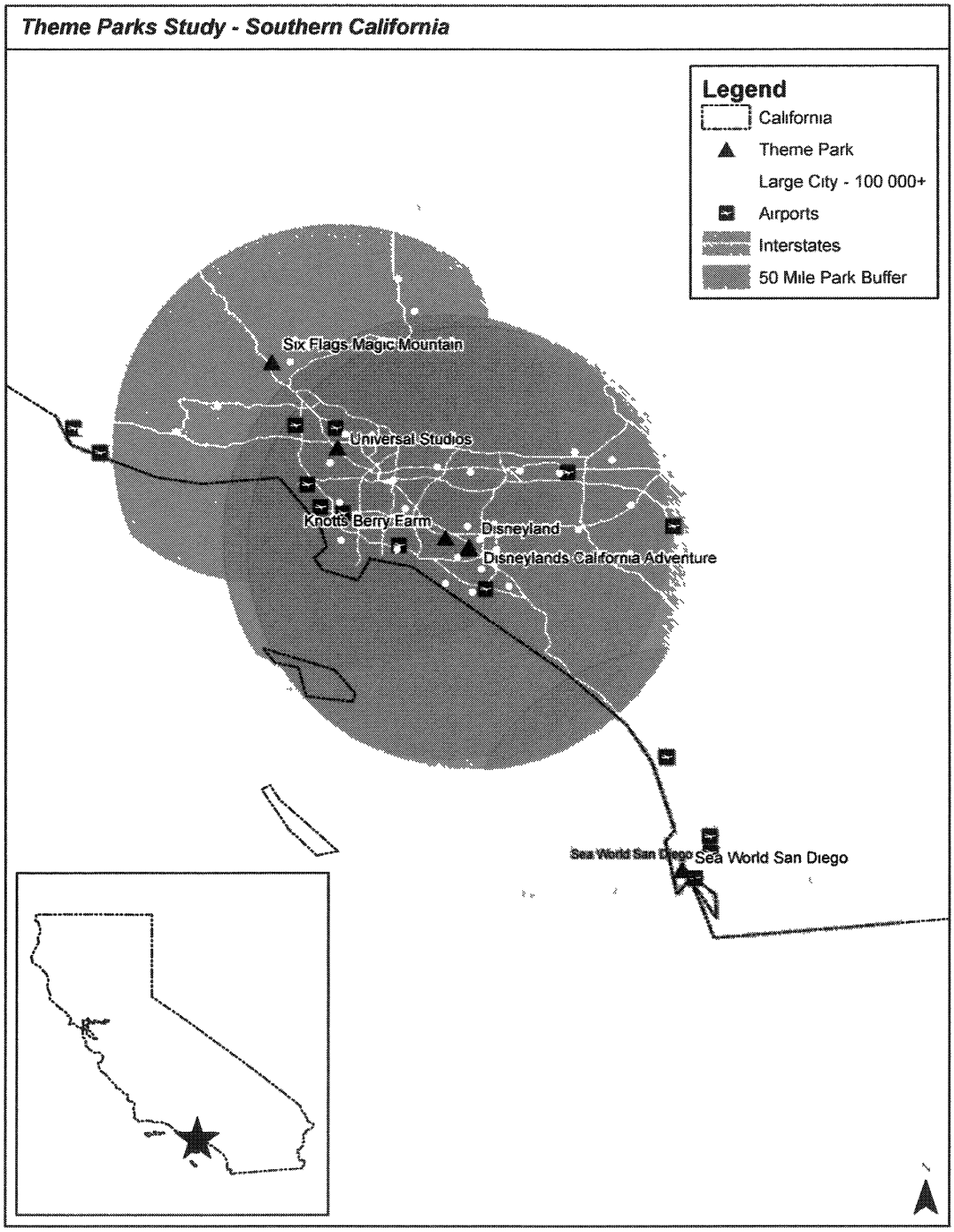

FIGURE 6. Map of Southern California parks displaying catchment areas.

CHAPTER 4

ASSESSING THEME PARK EQUIVALENCE

Park Features and Ranks

After classifying and mapping the features documented at each park, the analysis phase of the thesis began. Features found at each park were tabulated for comparison purposes. The table below notes the type and count of major category features found in each of the parks.

TABLE 7. Feature Count per Park

Park	Entertainment	Rides	Dining	Shopping.	Totals
DL	43	39	93	56	231
KBF	48	35	73	75	231
SFMM	32	44	55	42	173
PGA	53	40	41	35	169
SFMW	57	32	50	29	168
SWSD	51	5	32	46	134
USH	28	4	58	31	121
DCA	31	17	49	21	118
SCBB	30	32	36	14	112
BFG	24	18	18	13	73
	397	266	505	362	1,530

The parks with the greatest feature total are Disneyland and Knott's Berry Farm. These parks have features that number in the 200s, nearly 60 greater than the next park,

Six Flags Magic Mountain. Three different clusters are identified in the table indicating that a hierarchy of functions between the parks exists. The total counts can be used to group them into low, middle or high level centers as can be seen in Table 8. The parks with the greatest number of total features, Disneyland and Knott's Berry Farm, consistently rank within the top five of the four major categories, and the top two of two of the major categories, while the parks with the smaller number of features rank closer to the bottom in the four major categories.

TABLE 8. Rank of Features per Park

Frequency				
	Entertainment	Rides	Dining	Shopping
Rank				
1	SFMW	SFMM	DL	KBF
2	PGA	PGA	KBF	DL
3	SWSD	DL	USH	SWSD
4	KBF	KBF	SFMM	SFMM
5	DL	SCBB, SFMW	SFMW	PGA
6	SFMM		DCA	USH
7	DCA	BFG	PGA	SFMW
8	SCBB	DCA	SCBB	DCA
9	USH	SWSD	SWSD	SCBB
10	BFG	USH	BFG	BFG

The parks with the greatest number of features sit at the top of the chart, with parks in the middle having a large number of features but far fewer than the primary parks, and the lesser parks are found at the bottom of the chart as viewed in Tables 9 and

TABLE 9. Major Park Features

	Entertainment	Rides	Dining	Shopping	Totals
DL	43	39	93	56	231
KBF	48	35	73	75	231
SFMM	32	44	55	42	173
PGA	53	40	41	35	169
SFMW	57	32	50	29	168
SWSD	51	5	32	46	134
USH	28	4	58	31	121
DCA	31	17	49	21	118
SCBB	30	32	36	14	112
BFG	24	18	18	13	73
totals:	397	266	505	362	1,530
SD	11.4	13.8	20.2	18.4	48.7
Mean	39.7	26.6	50.5	36.2	153.0
Median	37.5	32.0	49.5	33.0	151.0

TABLE 10. Total Park Features and the Expectations of Central Place Theory

Rank	Park	Total	Order
1	DL	231	Primary
2	KBF	231	Primary
3	SFMM	173	Secondary
4	PGA	169	Secondary
5	SFMW	168	Secondary
6	SWSD	134	Tertiary
7	USH	121	Tertiary
8	SCBB	118	Tertiary
9	DCA	112	Tertiary
10	BFG	73	Tertiary
		Natural Breaks	Expected CPT
mean = 153.0	Primary	2	1
SD = 48.7	Secondary	3	2
	Tertiary	5	6

10. Disneyland and Knott's Berry Farm, top ranked and indistinguishable at 231 attributes each exceed the mean by nearly two full deviations ensuring their equal position as primary parks, even though central place theory would predict one. I would expect two parks to comprise the second rank, but the ranked feature counts show a tight grouping of three parks with total feature counts between 168 and 173. In contrast, the remaining five parks had total feature counts below the mean of 153. I would expect to find six third ranked parks.

Concerning the features found in each park, the same four basic core categories are found in all ten parks at all orders of the hierarchy. Even so, it must be noted that the arrangement of the features within the parks is not random. Instead they are deliberately placed within the parks to maximize retail space and customer patronage (Goss 1993; Schneider 1998; Lowenthal 2002). Despite the basic similarity of commercial features available in each park, the ten parks vary markedly in the distribution of attractions across the four core park categories.

Chi Square Analysis

A table of critical values for chi square shows that with 27 degrees of freedom, the critical value of chi square is 40.11 at the 0.05 level of significance. The chi square is 127.06 as noted in Table 11. This figure is much larger than the critical value at 0.05 indicating that there is less than 5% chance that the tested relationship is random. Thus the variety and arrangement of commercial attractions varies significantly among all ten parks; the pattern of features noted in one park does not mirror a pattern in another park, further weakening the earlier attempt at comparing the parks individually to one another

in the attempt to standardize feature counts and define a park design schematic. I could not, therefore, reject the null version of the first hypothesis.

Central Places and Hierarchies

The analysis of the collected data, however, does point to a hierarchical system of theme parks based on the rankings of frequency of features within parks and the percentage of the total feature count for each park. The natural breaks in the frequency of features divides the ten parks into two primary centers, three secondary centers, and five tertiary centers. This conforms closely with the expectations of central place theory: Its K=3 hierarchy predicts one primary center, two secondary centers, and six tertiary centers.

The number of parks and the number of expected centers are too small to justify a Chi square goodness-of fit test, but the actual and expected numbers are too similar to generate a significant difference. A chi square analysis of the distribution of feature counts by the high order, middle order, and lowest order centers can, however, be used as a final measure of determining if a hierarchy is present as demonstrated in Table 12. A table of critical values for chi square shows that with 6 degrees of freedom, the critical value of chi square is 12.592 at the 0.05 level of significance. The value of chi square is 34.726 as noted in Table 12. This figure is larger than the critical value at 0.05, thus the null hypothesis stating that there is no discernible hierarchy between the surveyed amusement parks can be rejected. A hierarchy of parks does exist with three discernible levels based on feature distribution. However, when viewing Table 12, a counterintuitive line of thought is on display.

TABLE 11. Chi Square Analysis of Park Features

Actual							$\frac{(O-E)^2}{E}$		
	Enter.	Rides	Dine	Shop.	Total	DL		SWSD	
DL	43	39	93	56	231	1.1	4.787	6.1	7.576
KBF	48	35	73	75	231	1.2	0.034	6.2	14.37
SFMM	32	44	55	42	173	1.3	3.682	6.3	3.381
PGA	53	40	41	35	169	1.4	0.033	6.4	6.446
SFMW	57	32	50	29	168	KBF		USH	
SWSD	51	5	32	46	134	2.1	2.378	7.1	0.367
USH	28	4	58	31	121	2.2	0.663	7.2	13.797
DCA	31	17	49	21	118	2.3	0.138	7.3	8.169
SCBB	30	32	36	14	112	2.4	7.573	7.4	0.196
BFG	24	18	18	13	73	SFMM		DCA	
	397	266	505	362	1530	3.1	3.701	8.1	0.005
						3.2	6.445	8.2	0.602
Expect.						3.3	0.077	8.3	2.594
	Enter.	Rides	Dine	Shop.		3.4	0.028	8.4	1.715
DL	59.939	40.161	76.245	54.655		PGA		SCBB	
KBF	59.939	40.161	76.245	54.655		4.1	1.909	9.1	0.03
SFMM	44.89	30.077	57.101	40.932		4.2	3.837	9.2	8.061
PGA	43.852	29.382	55.781	39.986		4.3	3.917	9.3	0.025
SFMW	43.592	29.208	55.451	39.749		4.4	0.622	9.4	5.896
SWSD	34.77	23.297	44.229	31.705		SFMW		BFG	
USH	31.397	21.037	39.938	28.629		5.1	4.124	10.1	1.351
DCA	30.618	20.515	38.948	27.919		5.2	0.267	10.2	2.22
SCBB	29.061	19.472	36.967	26.499		5.3	0.536	10.3	1.542
BFG	18.942	12.692	24.095	17.272		5.4	2.907	10.4	1.057
								X^2_{calc}	127.057
								alpha	0.05
								df	27
								X^2_{crit}	40.113
								prob	1
								Cramér's V	0.166
								power(1-β)	0.997

TABLE 12. Chi Square Analysis of Park Hierarchy

							$\frac{(O-E)^2}{E}$
Actual						Low	
	Enter.	Rides	Dining	Shop.	Totals	1.1	2.549
Low	164	76	193	125	558	1.2	4.55
Middle	142	116	146	106	510	1.3	0.422
High	91	74	166	131	462	1.4	0.373
	397	266	505	362	1530	Middle	
						2.1	0.707
Expected						2.2	8.424
	Enter.	Rides	Dining	Shop.		2.3	2.962
Low	144.79	97.01	184.18	132.02		2.4	1.783
Middle	132.33	88.67	168.33	120.67		High	
High	119.88	80.32	152.49	109.31		3.1	6.957
						3.2	0.497
						3.3	1.197
						3.4	4.304
						X^2_{calc}	34.726
						alpha	0.05
						df	6
						X^2_{crit}	12.592
						prob	0
						Cramér's V	0.107
						power (1-β)	0.921

The high order parks show more shopping and dining features than statistically expected with fewer rides and entertainment features. This line of thinking runs contrary to what one would expect to find at amusement parks, notably more rides and entertainment. The middle order parks instead house a greater number of entertainment

and ride features than expected, with fewer dining and shopping features. Finally, the low order parks are different still from both the high and middle order parks, in that there are more entertainment and dining opportunities than statistically expected with fewer rides and shopping opportunities. This may make a case for product differentiation, whereby amusement parks offer the four core categoriesnoted in this research in differing proportions in an attempt to carve a new niche, or segment, dependent on the order of park in question (Hotelling 1929; Chamberlin 1962; Sharp and Dawes 2001). The park managers may choose this route so as to appear unique to potential consumers seeking a new or, different park experience.

After analyzing the data in attempts to answer each hypothesis, something noteworthy and unexpected occurred. First, Northern California did not contain a high order amusement park based on park feature count. I had initially anticipated that each region of California would contain one high order park, but based on feature count that is not true. Secondly, there also appeared to be a difference between parks in Northern and Southern California based on the generative or suscipient effects of the features in the parks. This point of interest is illustrated in the Table 13.

A table of critical values for chi square shows that with 3 degrees of freedom, the critical value of chi square is 7.814 at the 0.05 level of significance. The value of chi square is 45.015 as noted in Table 13. This calculated value is larger than the critical value at 0.05, thus the null hypothesis stating that there is no difference between the surveyed parks in Northern and Southern California can be rejected. Amusement park feature count and distribution may, in fact, differ among regions.

TABLE 13. Chi Square Analysis of Parks in Northern and Southern California

							$\frac{(O-E)^2}{E}$
Actual						Low	
	Enter.	Rides	Dining	Shop.	Totals	1.1	2.549
Low	164	76	193	125	558	1.2	4.55
Middle	142	116	146	106	510	1.3	0.422
High	91	74	166	131	462	1.4	0.373
	397	266	505	362	1530	Middle	
						2.1	0.707
Expected						2.2	8.424
	Enter.	Rides	Dining	Shop.		2.3	2.962
Low	144.79	97.01	184.18	132.02		2.4	1.783
Middle	132.33	88.67	168.33	120.67		High	
High	119.88	80.32	152.49	109.31		3.1	6.957
						3.2	0.497
						3.3	1.197
						3.4	4.304
						X^2_{calc}	34.726
						alpha	0.05
						df	6
						X^2_{crit}	12.592
						prob	0
						Cramér's V	0.107
						power (1-β)	0.921

The rides and shows are generative activities, the specific reason a patron travels to the park (Nelson 1958; White 1972; Brown 1987). Parks in Southern California contained on average more activities related to dining and shopping than the generative rides and shows. These suscipient activities, an objective discovered while visiting an

establishment for an entirely different reason, were more common than the generative activities designed to bring consumers in (Nelson 1958). Parks in Northern California typically contained lower feature counts with a higher percentage of these services dedicated to generative business in entertainment and rides. The parks in Southern California reversed this trend with more suscipient than generative services available to consumers, and a typically higher count of features for consumers to enjoy. In Chapter 5, I conclude with a discussion of the hierarchy established among amusement parks in California.

CHAPTER 5

RESULTS AND CONCLUSIONS

Discussion

This study of amusement parks in California considered the design of the parks in order to create an idealized schematic by which all parks are created. This thesis sought to examine two interrelated questions: 1. Do theme parks within California exhibit a similar design based on arrangement and type of features within? And 2, Do theme parks in California exhibit a hierarchy based on the number and type of features contained within each park? In this study, I used content analysis of park websites, park brochures and maps created to gain an initial awareness of the types of features that could be expected to be found in each of the surveyed parks. Next, a trip was made to each park to verify and document the entertainment opportunities contained within. Finally, the collected data were used to create a series of tables and maps for each park that showcased the number, type, and relative location of each feature verified during the survey. The tables created for each park were used to perform statistical analyses to ascertain whether or not theme parks exhibit similar enough qualities to one another to determine a park archetype by which all of the parks were designed.

Results

In general, the findings demonstrated that an amusement park is comprised of a mixture of the four core functions identified in this study; shopping, dining, rides, and entertainment. The first hypothesis stating that each park contains a similar number, type, and arrangement of features cannot be entirely agreed with. Four core categories comprised the counted activities at each visited park. Each of these core categories was broken further down into smaller subcategories noted in Chapter 3. Each park had at least one feature from each core category, with many of the parks containing at least one feature from every subcategory as well. When taking these subcategories into account, there was less and less conformity among the parks with larger ones containing more features versus the smaller parks containing a limited amount of features. Following the completion of the analysis of the core categories, it can be stated that each park did display a similarity between the core categories; however, it could not be easily determined where within a park that the activities would be located. For example, one could expect to find a clustering of gallery games and soda carts within an amusement park, but pinpointing the exact locations would not be an easy task as there did not seem to be a common arrangement by which the parks were designed.

I was expecting to find a typical layout among the parks such as a wagon wheel or grid pattern commonly found in shopping malls (Goss 1993). In actuality there were a couple of parks in the survey that did not contain a generic layout comprised of different theme areas that were encountered in the other parks. For example, Bonfante Family Gardens and the Santa Cruz Beach Boardwalk did not contain demarcation lines

anywhere, while Six Flags Marine World did display regions on its park map though it was highly generic as each zone was symbolized with a different color. While walking through this park, it was not clear when boundaries were crossed as no architectural cues alerted me to entering a new area (Rubin 1979; Sack 1988; Lowenthal 2002). Thus, a schematic by which all theme parks are defined was not derived as the core functions will be there, but where they will be remains a matter of the space and place within each specific park.

Furthermore, I had initially planned to focus on the core functions in the park using them to create a hierarchy of the lands within each of the parks in an attempt to determine a central land or zone within a park. I was curious if the parks contained a hub or central business district that would contain the highest concentration of features with the lands or zones further from the center of the park containing less and less activities the further one went into the hinterland. For example, within Disneyland, Fantasyland has 52 activities making it the highest level center in the park while Adventureland contained 14 activities within its boundary and was the lowest order center in the park. Coincidentally, Fantasyland is close to being the geographic center of Disneyland, as it contains Cinderella's castle. I intended to use the activity data to determine an average number of lands and centers one would find in a generic theme park that would mirror closely the amount of centers and activities within each of the surveyed parks. After determining that not all of the parks contained physical barriers used to denote lands or themes as mentioned earlier, the idea of pinpointing where within a park one would find each and every attraction became unrealistic. Instead, focusing on all of the parks at the

same time to identify a hierarchy among the parks proved to be much more fruitful than looking inward at the parks individually.

With this in mind, it was much easier selecting levels of the parks to create a hierarchy. In this sense, the parks acted as centers related to central place theory. The highest level park, or national level center, will contain all of the core functions in the greatest number and with the greatest diversity among attractions. It will ideally contain every feature found at any lesser park as well as features not readily available at any other park. It was decided that parks with over 200 features would be the highest level center. With that criterion, Disneyland and Knott's Berry Farm were chosen as the highest level parks. Each of these parks had 231 total features. I did not anticipate each of the parks having the exact number of activities, although in different categories and arrangement within each park. Secondly, I did not expect to find that the highest order theme parks would be located mere miles from one another in Southern California. I anticipated the existence of two high order centers; one in Northern California and the other here in Southern California, not the arrangement noted above.

The majority of parks surveyed had fewer than 200 features, seven with features totaling between 100 and 200, and finally the last park containing only 73 features. Among the seven parks, three were clustered together in the high 100s. This grouping became the second level in the hierarchy akin to the regional center in central place theory. These three parks had contained fewer features than the national level parks, though each contained all core categories, with diminishing count and variety of the subcategories. There exists a decent representation of features for customers to enjoy, yet

something might be missing for the casual park visitor, whereas virtually any type of park attraction will be found at the highest order park. The three parks, Six Flags Magic Mountain, Paramount's Great America, and Six Flags Marine World represented the regional level center, or middle level of the proposed hierarchy. The parks were within five park features of one another, with two parks located in Northern California and one in Southern California. I had not previously made assumptions about the number of medium and low order centers, or where they would occur in California. With Northern California lacking a true national level center amusement park, perhaps, being home to two middle order centers makes up for the exclusion.

The lowest level parks were those that had features numbering in the low 100s, with one outlier; Bonfante Family Gardens in Northern California, home to a mere 73 activities. These parks held fewer and fewer attractions, and fewer of the large attractions, such as roller coasters or shows and venues than did their counterparts in the middle and high level centers. Once again each of the four core categories was represented though in lesser numbers, with some of the subcategories being few and far between when present at all. These low level or regional center parks included Sea World San Diego, Universal Studios Hollywood, Disney's California Adventure, The Santa Cruz Beach Boardwalk, and Bonfante Family Gardens. Two of the parks were in Northern California, with three parks located in Southern California.

Further Findings

In answering the second hypothesis, it was found that Northern California did not contain a high order, national level center as had been anticipated. This scenario does not

lend itself well to a strict definition of central place theory as the high order center is lacking; however, other curious findings were made based on differences between parks in Northern and Southern California. The first noticed difference was the types of activities that were contained within the parks. Secondly, another more subjective difference involves a comparison between the perceived draw of parks in each respective region.

Parks in Northern California displayed a greater number of activities on average that would normally entice a consumer to make a trip to an amusement park. These generative features relate specifically to the rides and entertainment opportunities as defined in Chapter 2. Parks in Southern California, however, displayed an opposite trend with a greater number of suscipient features; the numerous shopping and dining locations within the parks. Thus theme parks in Northern and Southern California were an inverse of one another, making it even more difficult to draw up a park schematic as parks apparently differ by region in the services offered.

One final way to examine the parks involves determining in a subjective fashion the draw of each park surveyed in the study as related to tourism. Measuring the draw one park has on a consumer base is not an easy task to undertake, but one could come could to a conclusion on how the level of a park might equate to greater tourism. Maps presented in Chapter 3 noted the location of parks in California in relation to cities with populations larger than 100,000 residents and access to transportation. The parks in Northern California were spaced farther apart than their counterparts in Southern California. The parks in Northern California had less access to major transportation

networks and there were fewer cities with 100,000 or more residents in close proximity to the parks. Thus the parks in Southern California theoretically demonstrate a greater draw in a geographical sense as they are closer together spatially, and have access to larger populations who have greater freedom to get to and from the parks.

In a practical sense, the parks in Southern California are better known nationally than the parks in Northern California as demonstrated by the 2009 Visit California tour guide available from www.visitcalifornia.com. A quick glance at the generic list of things to do in Northern California notes the Santa Cruz Beach Boardwalk as not to be missed, while every park surveyed in Southern California is listed as an attraction to visit. The other parks surveyed in Northern California, with the exception of Bonfante Family Gardens, do eventually make an appearance in the guide but only when they are gathered together in a catchall amusement park section on page 58. One could make a case that advertising plays a big part in which parks are covered in the guide; in fact, Universal Studios had an advertisement on the inside cover of the guide, while turning the page displayed a two page ad for Disneyland and Disney's California Adventure. It could be a simple case of the parks in Northern California are not well known and draw only from a regional or even local populace as opposed to a national and global populace that the parks in Southern California can command.

Conclusions

In closing, the first hypothesis stating that the parks will contain similar arrangements of commercial features that will denote a single park archetype can be partially agreed with. The features contained in each of the parks were similar to one

another in general style demonstrated in the tables in Chapter 4 and as explained here in Chapter 5. It seems that an amusement park cannot be called an amusement park if it does not contain a roller coaster, daily shows, beverage services, or playgrounds to name a few of the features delineated in this study. The ideal amusement park would have a sizable arrangement of features scattered evenly throughout the park; in this sense the first hypothesis can be agreed with as each of the parks in the survey contained every major category of features and a sizable amount of sub-categories. The second part of the hypothesis stating that the commercial arrangement of features will be similar in location throughout the park to one another cannot be agreed with as a variety of the attractions catalogued in this study will be present in an amusement park; however, there were no discernible distribution patterns of attractions and lands among the parks. Thus a schematic for a generic amusement park could not be arrived at; the features will be there in some fashion, but the rules by which they will be located were non-existent in this research study. The second hypothesis stating that a hierarchy between the parks will exist denoting a primary park can also be partially agreed with as there was a definite hierarchy existent in the research which accords generally with the expectations of the K=3 central place theory. However, a single high level park could not be chosen as both Disneyland and Knott's Berry farm contained the same massive number of features.

Furthermore, two high level parks were noted, however, they were both located in Southern California. Disneyland and Knott's Berry Farm are separated by roughly five miles of freeway. Concerning scale, the parks are virtually next to one another with bot providing consumers with the best an amusement park has to offer. The parks are

different from one another yet offer comparable experiences. A similar scenario occurs when fast food restaurants and department stores locate within close proximity of one another. First noted by Harold Hotelling in 1929 with ice cream vendors on a beach, a competitor will attempt to replicate a successful business model by adapting it to make it different, yet not so different as to lose the market already owned by a rival (Hotelling 1929; Brown 1989). Perhaps in the future a more exhaustive study can include all amusement parks in California to see if the research presented in this paper can be expanded on in determining a more precise measure of park hierarchy.

APPENDICES

APPENDIX A

PARK MAPS: NORTHERN CALIFORNIA PARK FEATURES

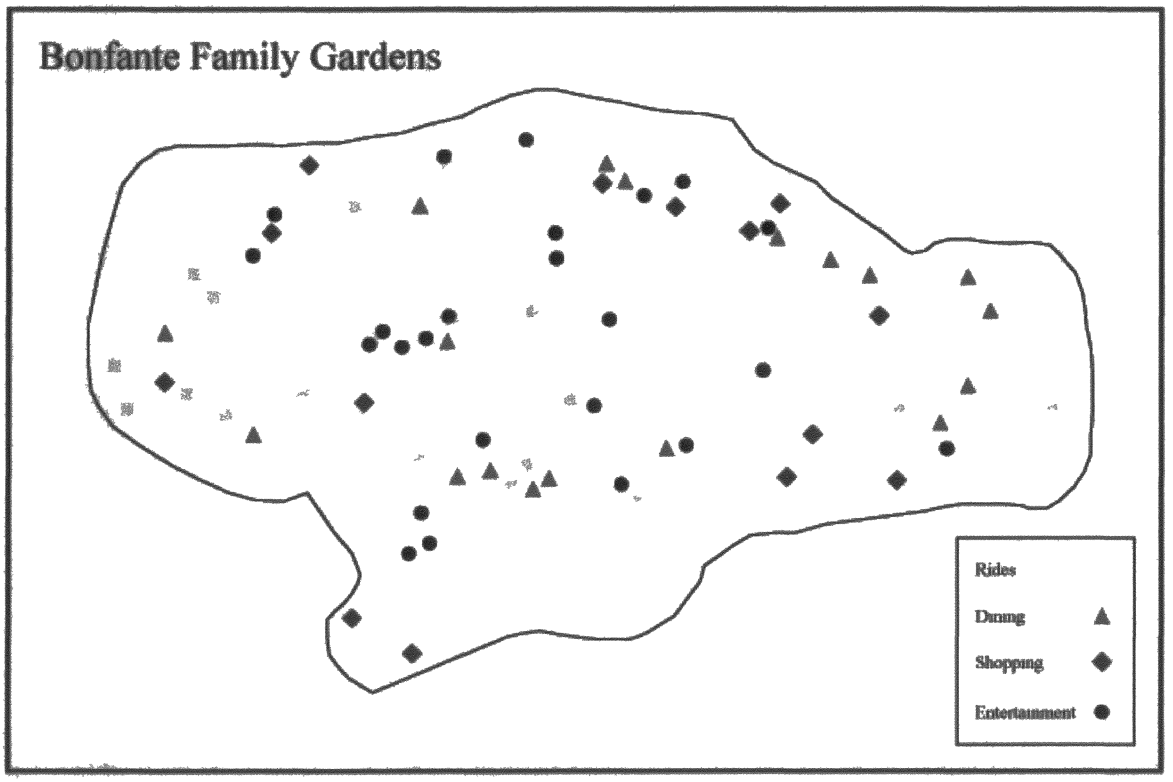

FIGURE 7. Map of amusement park features in Bonfante Family Gardens. (Data Source: Bonfante Family Gardens 2004. Map author: M. Mercurio)

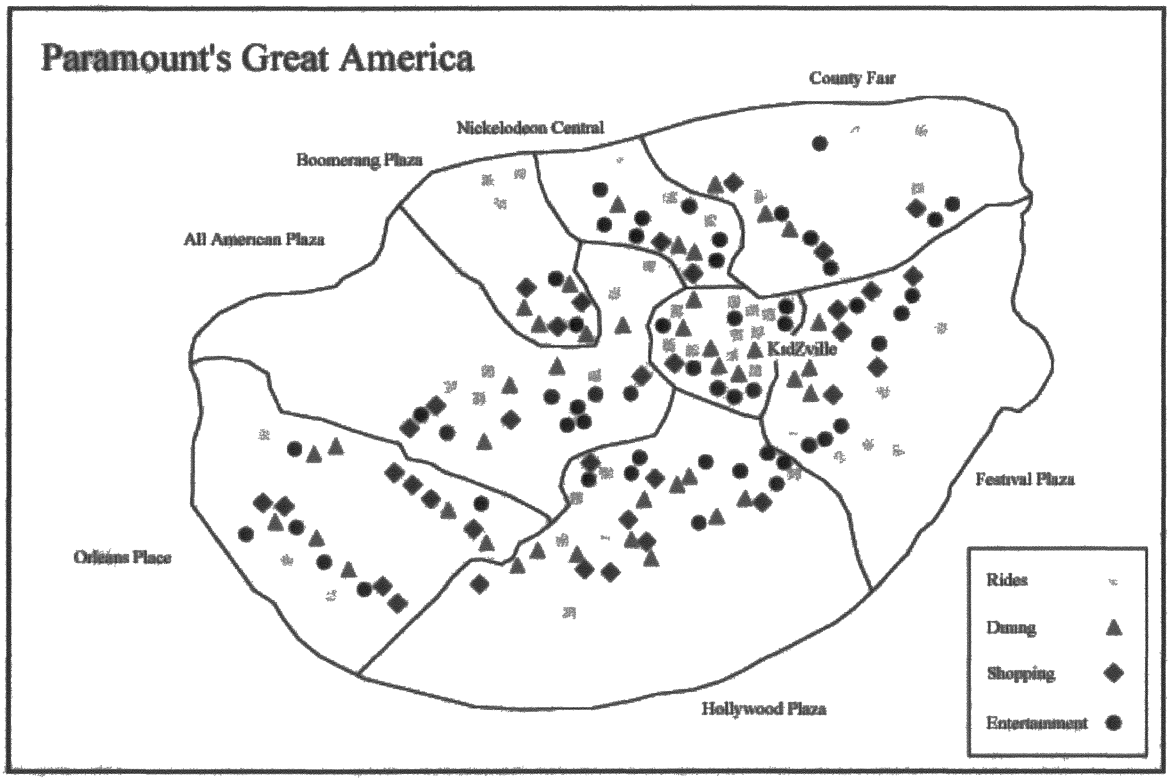

FIGURE 8. Map of amusement park features in Paramount's Great America. (Data Source: Paramount's Great America 2004. Map author: M. Mercurio)

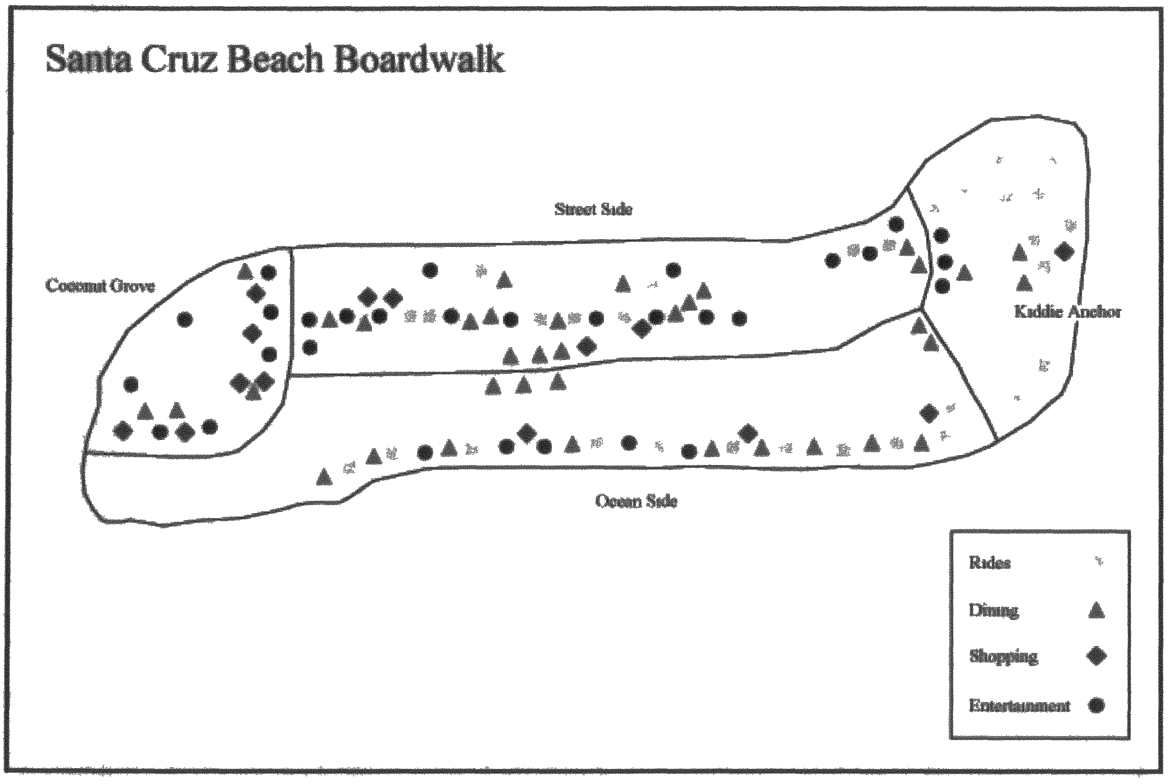

FIGURE 9. Map of amusement park features at the Santa Cruz Beach Boardwalk. (Data Source: Santa Cruz Beach Boardwalk 2004. Map author: M. Mercurio)

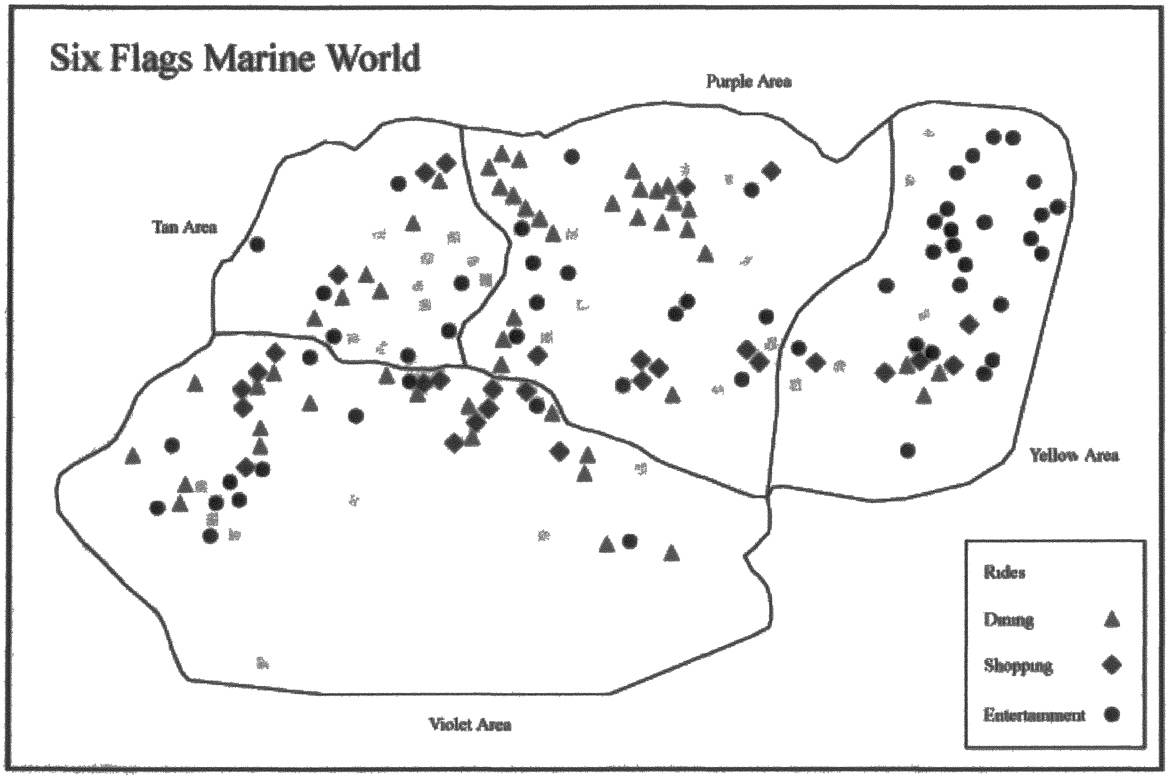

FIGURE 10. Map of amusement park features in Six Flags Marine World. (Data Source: Six Flags 2004. Map author: M. Mercurio)

APPENDIX B

PARK MAPS: NORTHERN CALIFORNIA PARK PERCENTAGES

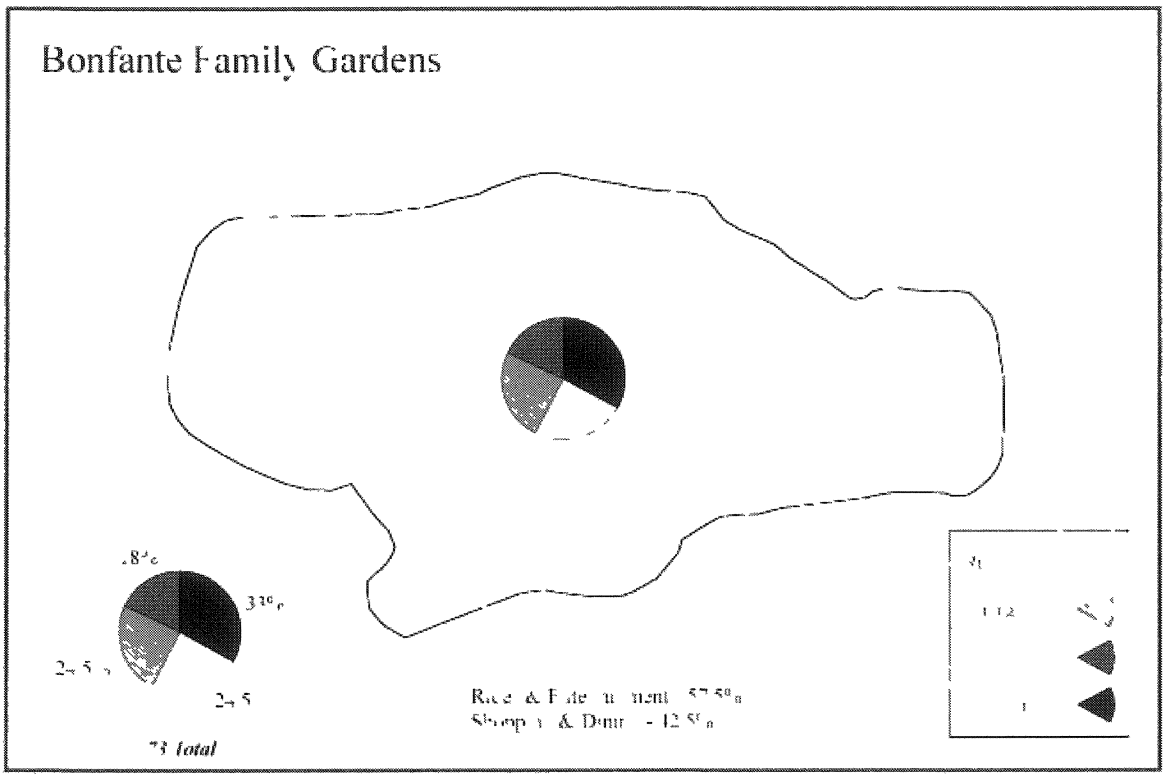

FIGURE 11. Map of amusement park feature distribution by land in Bonfante Family Gardens. (Data Source: Bonfante Family Gardens 2004. Map author: M. Mercurio)

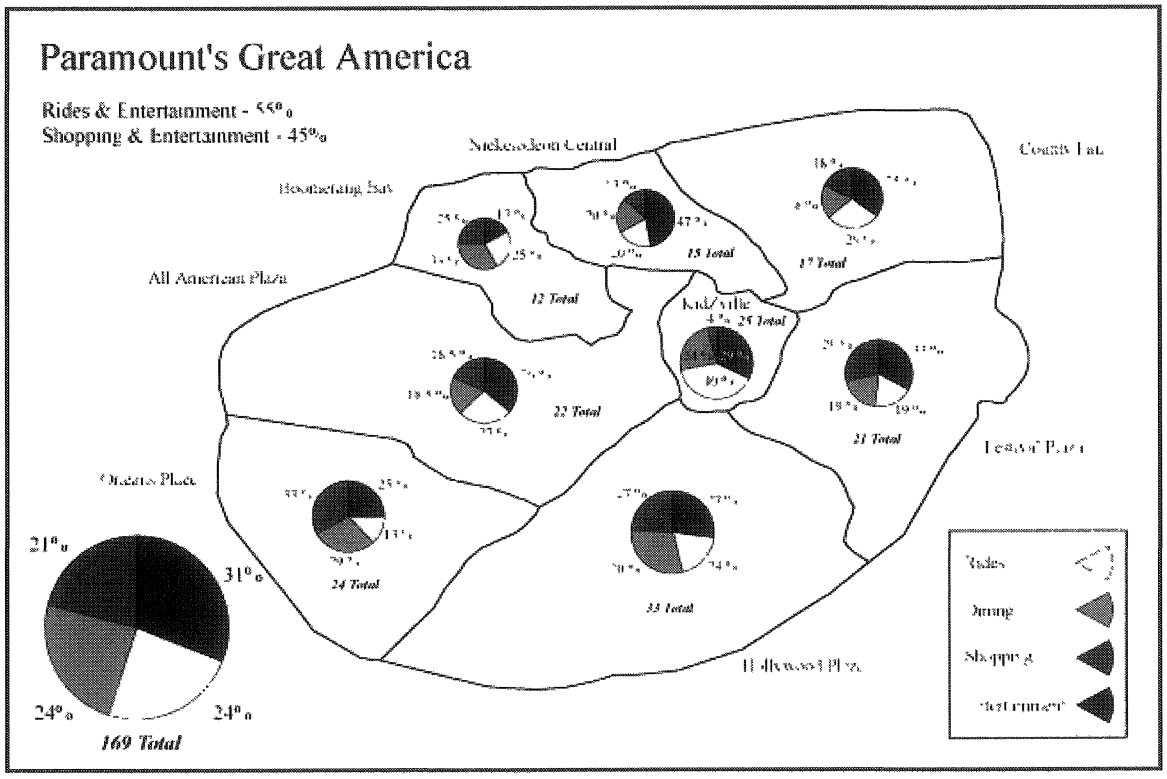

FIGURE 12. Map of amusement park feature distribution by land in Paramount's Great America. (Data Source: Paramount's Great America 2004. Map author: M. Mercurio)

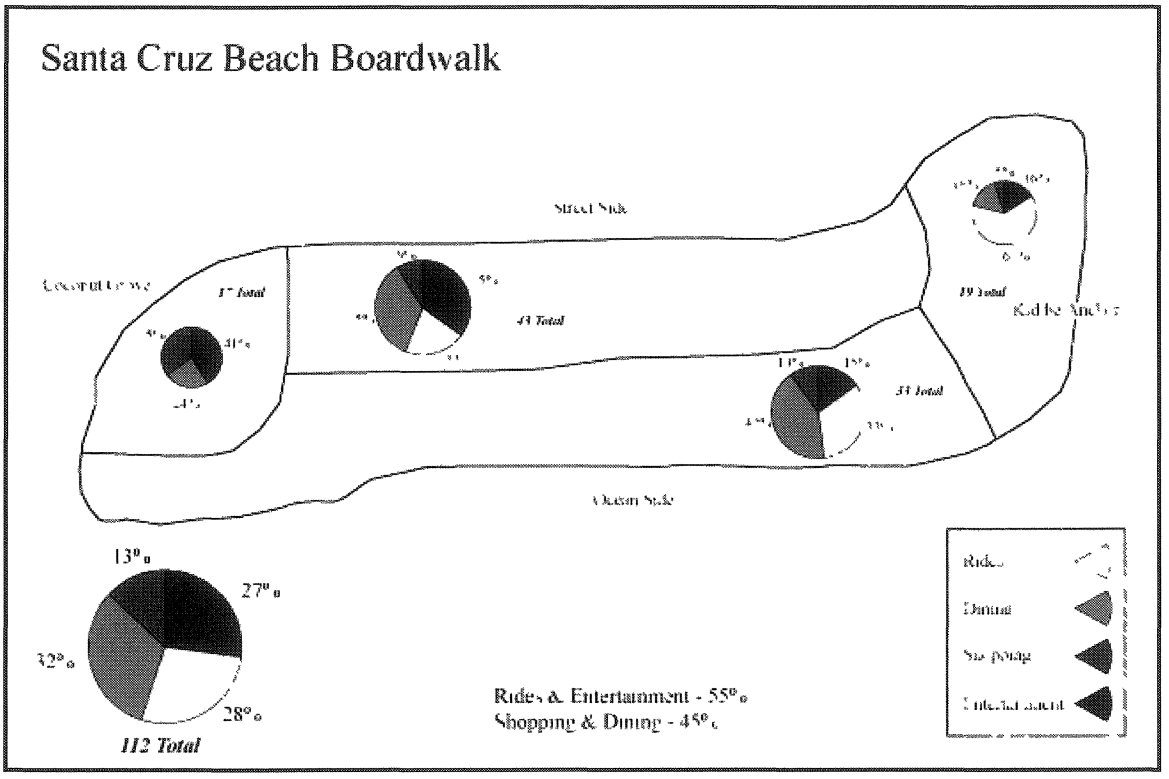

FIGURE 13. Map of amusement park feature distribution by land in Santa Cruz Beach Boardwalk. (Data Source: Santa Cruz Beach Boardwalk 2004. Map author: M. Mercurio)

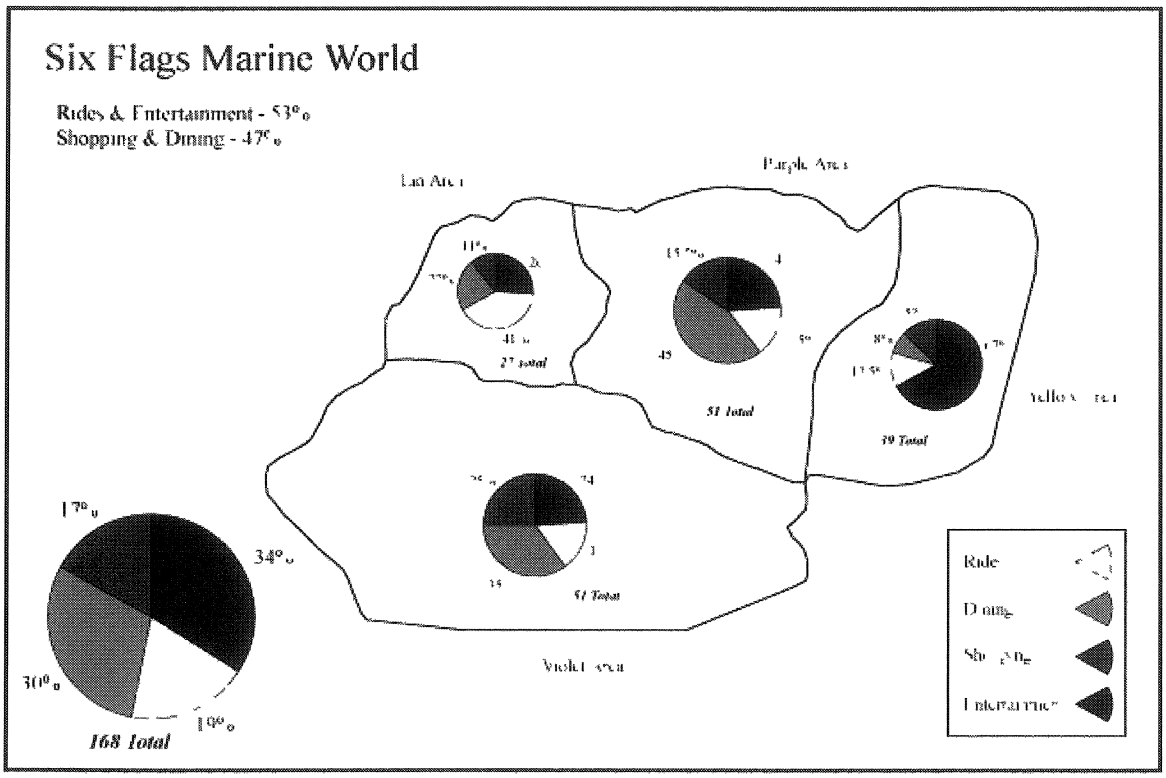

FIGURE 14. Map of amusement park feature distribution by land in Six Flags Marine World. (Data Source: Six Flags 2004. Map author: M. Mercurio)

APPENDIX C

PARK MAPS: SOUTHERN CALIFORNIA PARK FEATURES

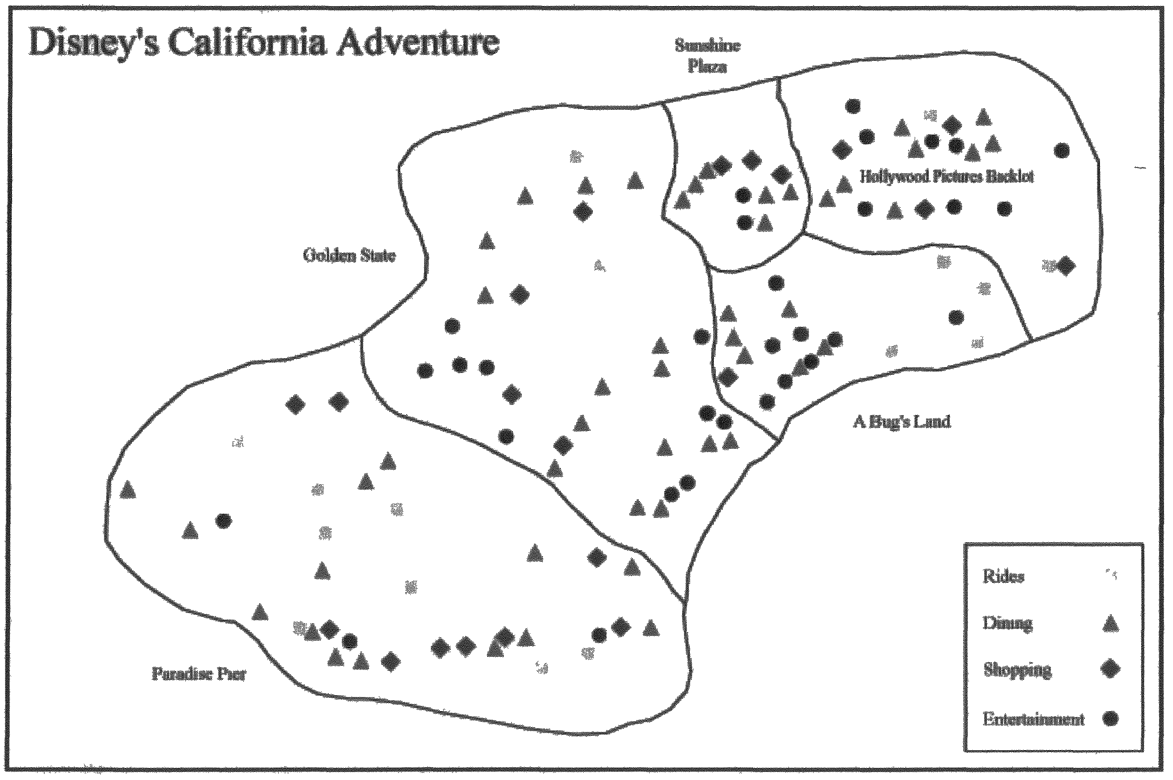

FIGURE 15. Map of amusement park features in Disney's California Adventure. (Data Source: Disney 2004. Map author: M. Mercurio)

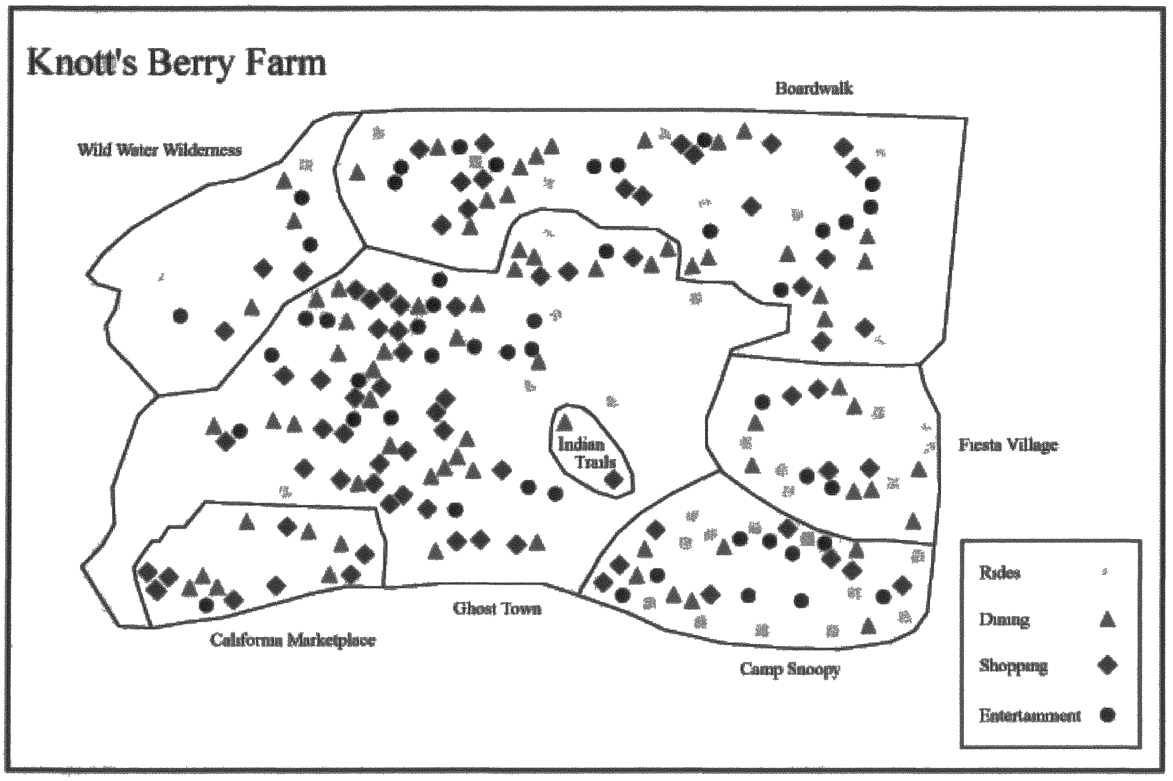

FIGURE 16. Map of amusement park features in Knott's Berry Farm. (Data Source: Knott's 2004. Map author: M. Mercurio)

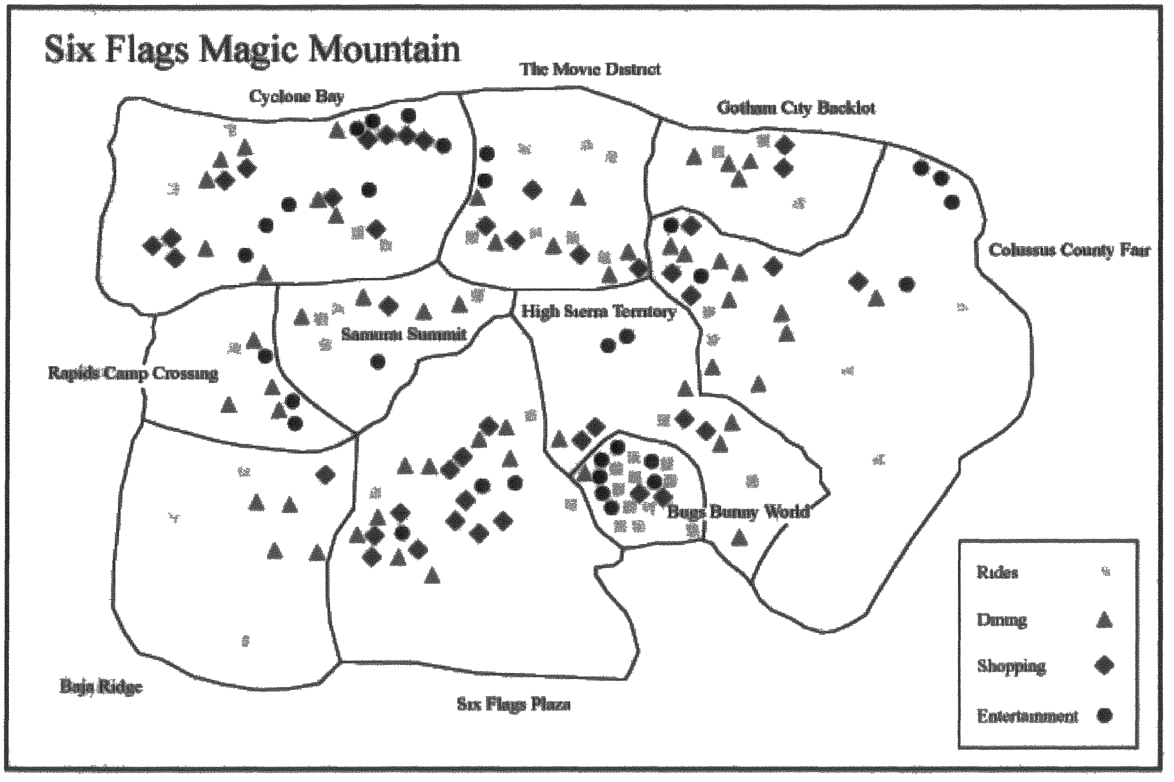

FIGURE 17. Map of amusement park features in Six Flags Magic Mountain. (Data Source: Six Flags 2004. Map author: M. Mercurio)

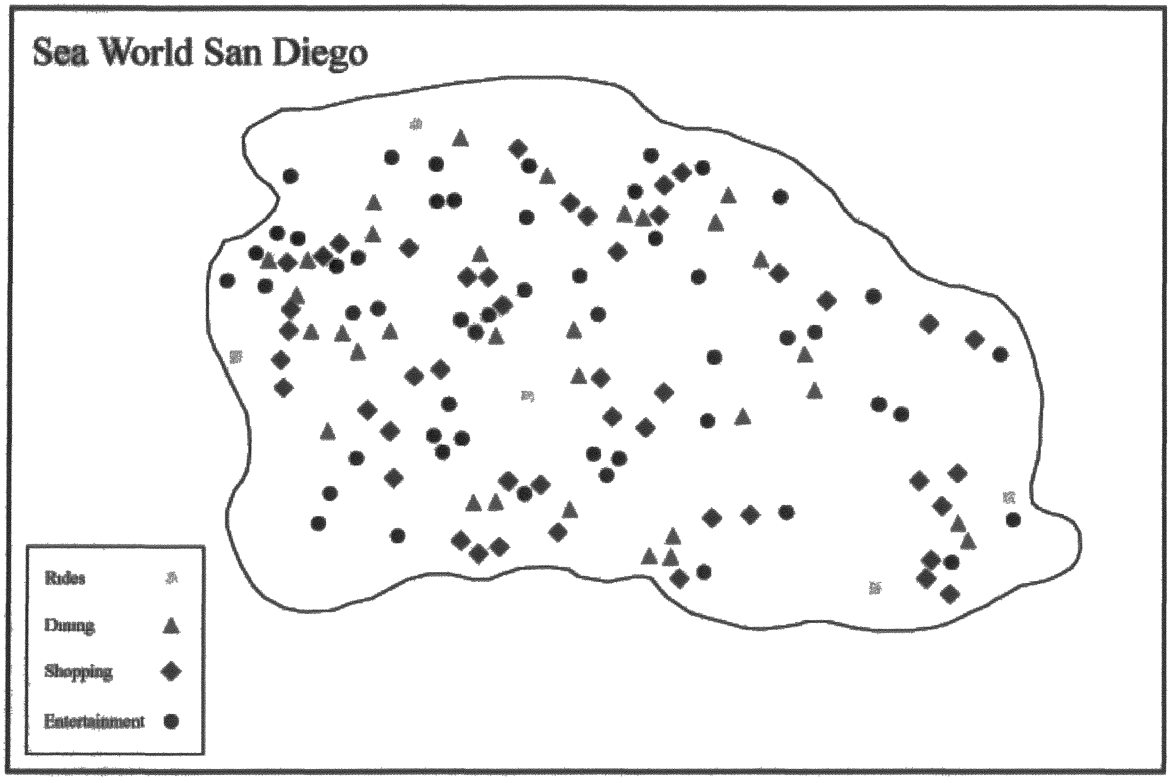

FIGURE 18. Map of amusement park features in Sea World San Diego. (Data Source: Sea World 2004. Map author: M. Mercurio)

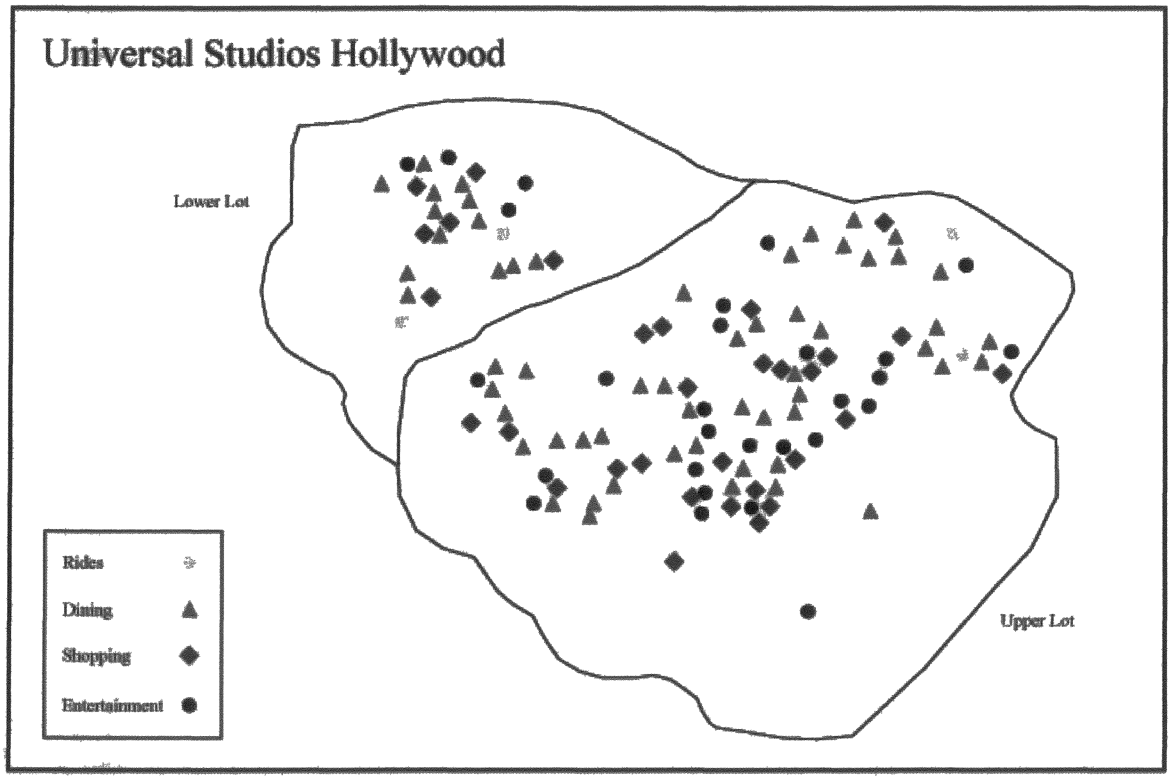

FIGURE 19. Map of amusement park features in Universal Studios Hollywood. (Data Source: Universal 2004. Map author: M. Mercurio)

APPENDIX D

PARK MAPS: SOUTHERN CALIFORNIA PARK PERCENTAGES

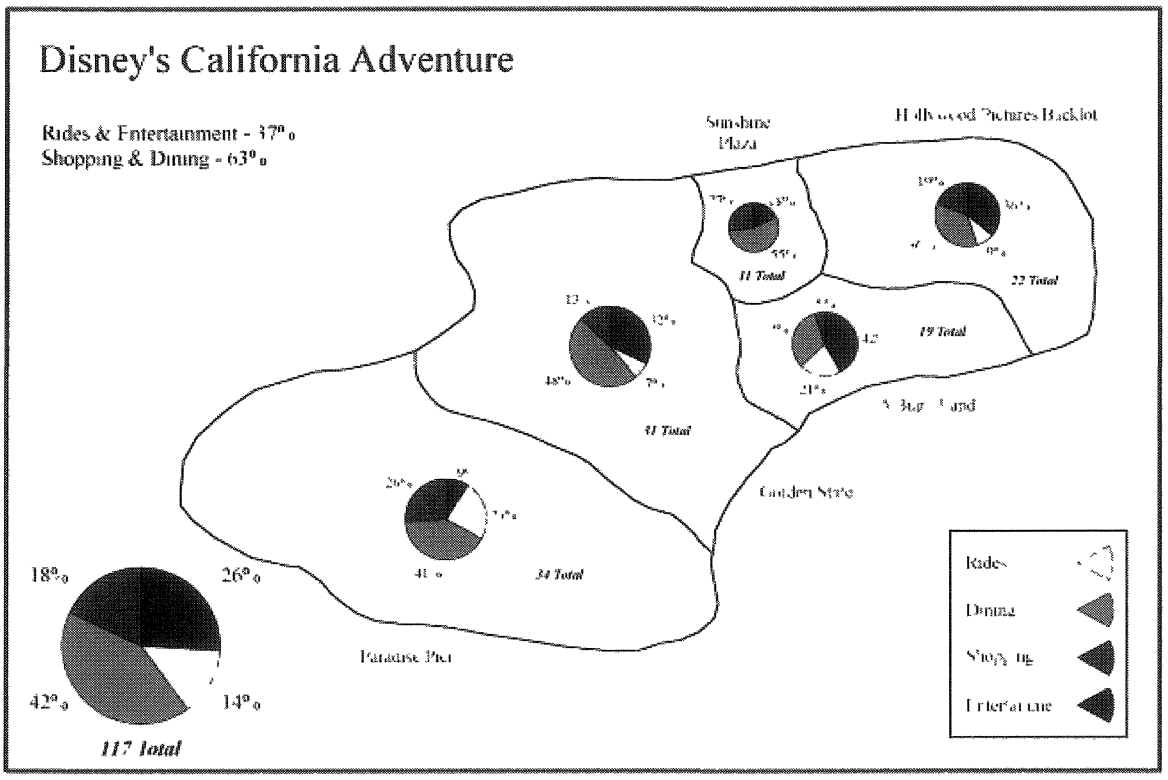

FIGURE 20. Map of amusement park feature distribution by land in Disney's California Adventure. (Data Source: Disney 2004. Map author: M. Mercurio)

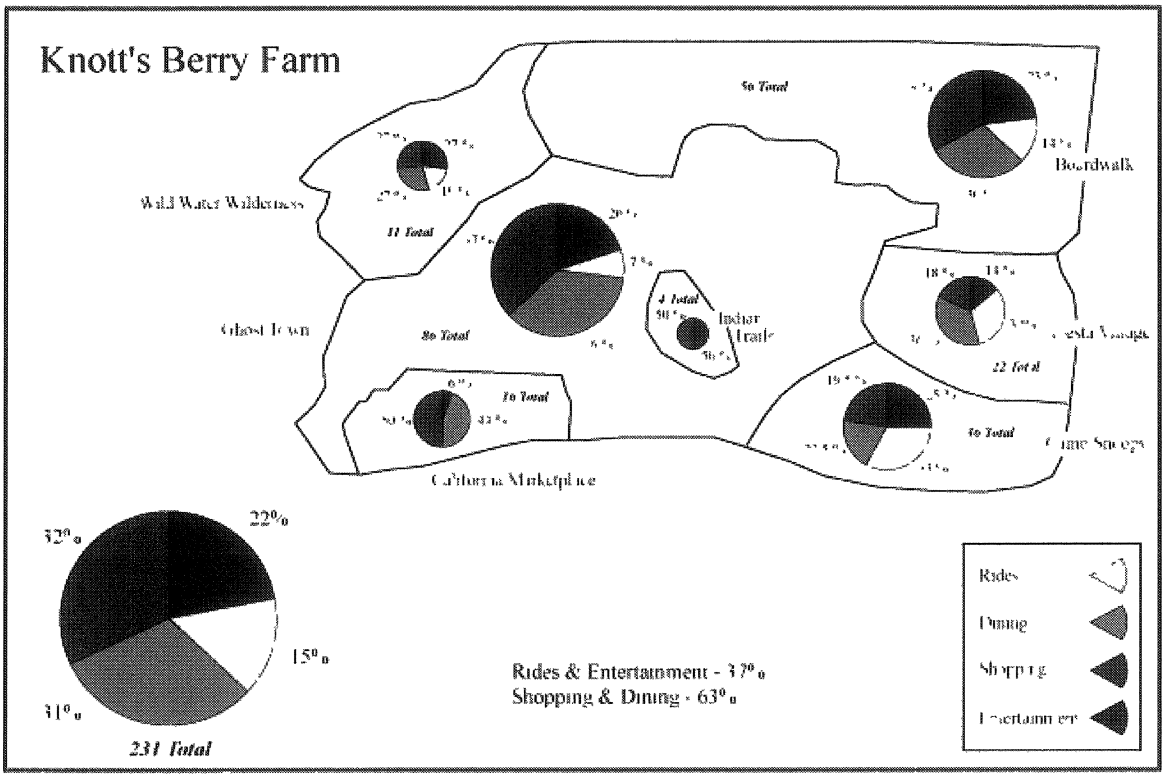

FIGURE 21. Map of amusement park feature distribution by land in Knott's Berry Farm.

(Data Source: Knott's 2004. Map author: M. Mercurio)

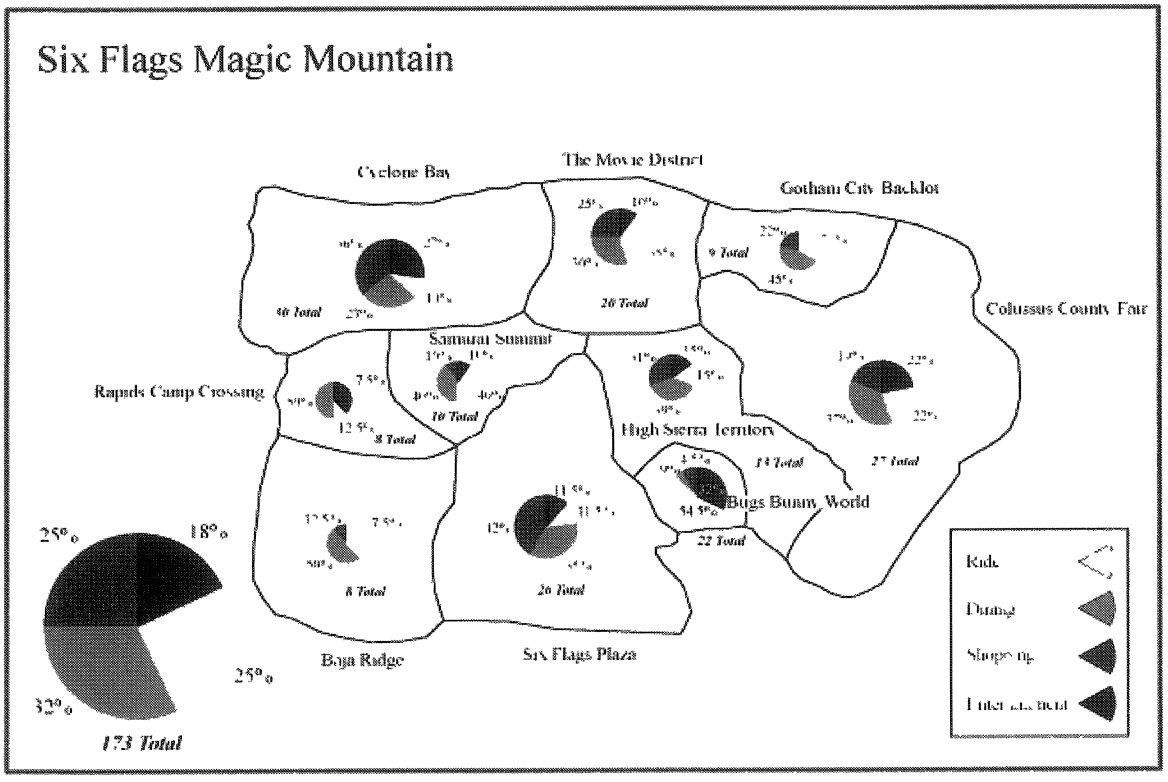

FIGURE 22. Map of amusement park feature distribution by land in Six Flags Magic Mountain. (Data Source: Six Flags. Map author: M. Mercurio)

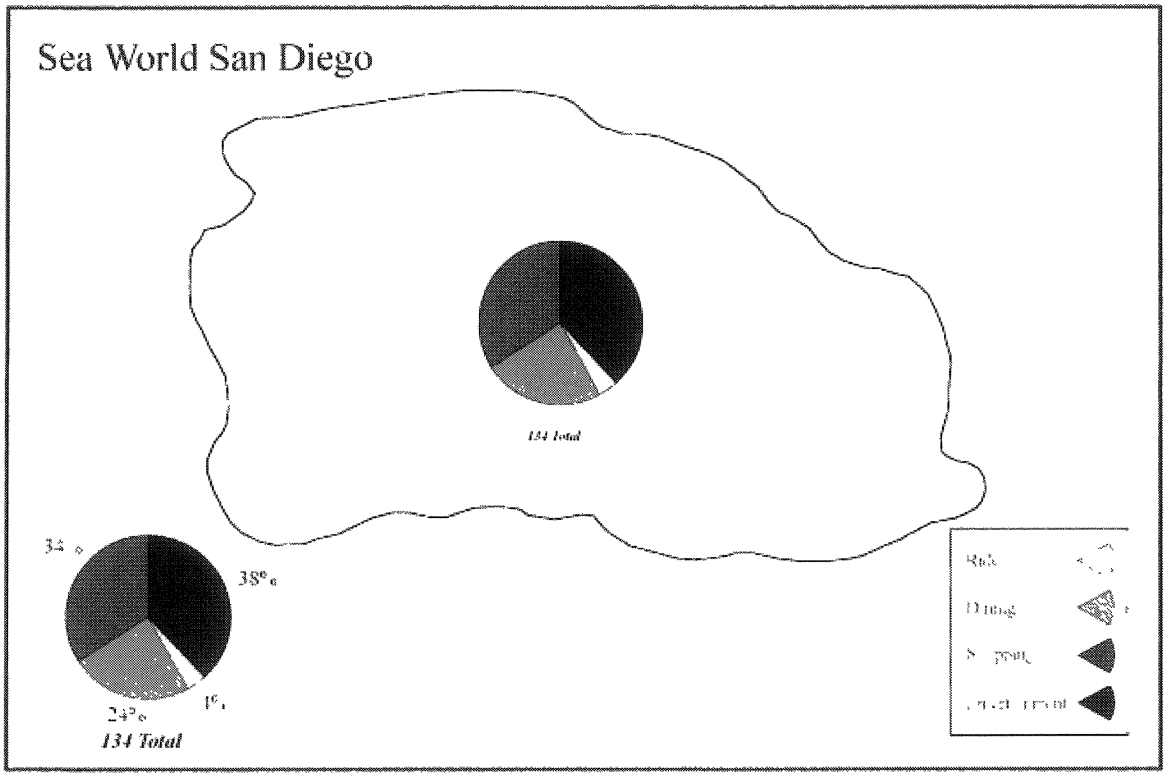

FIGURE 23. Map of amusement park feature distribution by land in Sea World San Diego Adventure. (Data Source: Sea World 2004. Map author: M. Mercurio)

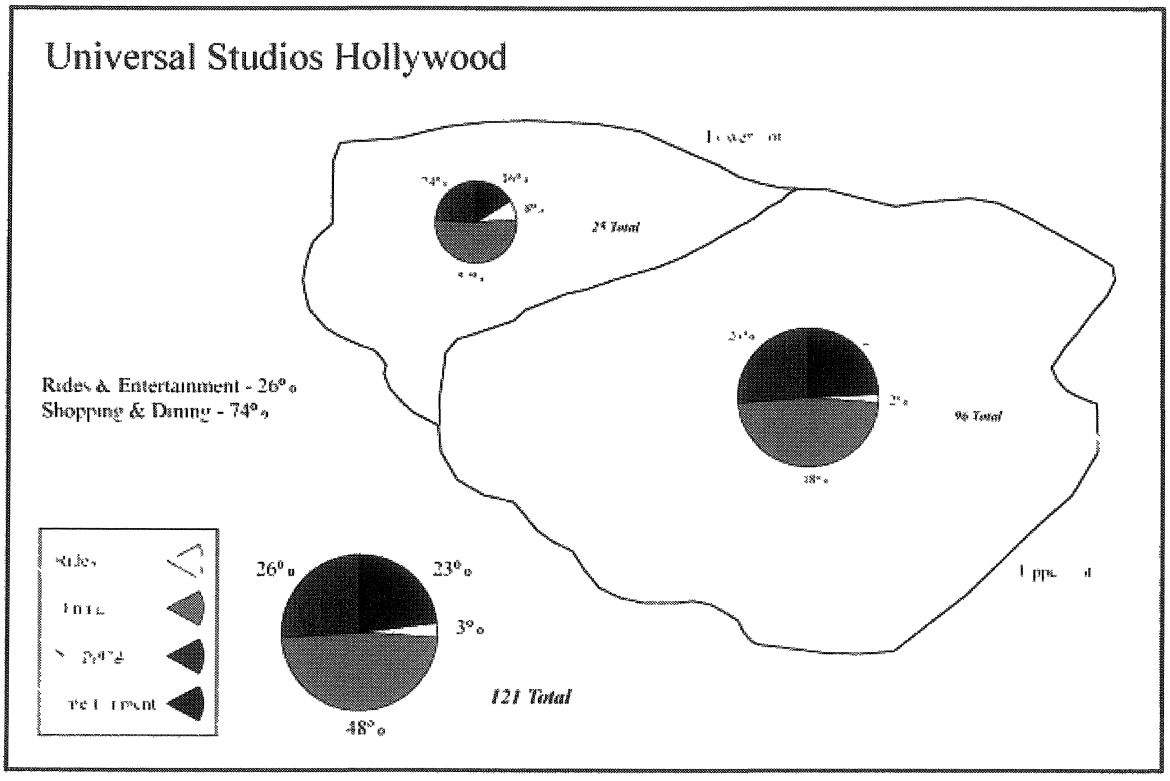

FIGURE 24. Map of amusement park feature distribution by land in Universal Studios Hollywood. (Data Source: Universal 2004. Map author: M. Mercurio)

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