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Constructing Identity in Master Planned Utopia: The Case of Irvine New Town

by

Deni Ruggeri

A dissertation submitted in partial satisfaction of the

Requirements for the degree of

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in

Landscape Architecture and Environmental Planning

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of the

University of California, Berkeley

Committee in charge:

Professor Michael Southworth, Chair

Professor Randolph T. Hester

Professor Kenneth Craik

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Constructing Identity in Master Planned Utopia:  
The Case Of Irvine New Town  
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Deni Ruggeri

## Abstract

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Deni Ruggeri

Doctor of Philosophy in Landscape Architecture and Environmental Planning

University of California, Berkeley

Professor Michael Southworth, Chair

This dissertation investigates the influence of landscape architecture and urban design on the establishment of sense of place in Irvine, California, and the consequences of design decisions on the residents' place-identity and attachment to their hometown. It opens with an overview of the evolution of the suburban model and the theories of place identity and attachment as environmental and social psychologists have interpreted them. It continues with a brief account of Irvine's history and a discussion of the idiosyncratic elements that made it what it is today: its master planned nature, the presence of a single owner and developer, an experimental planning process whereby landscape architects and urban designers acted as mediators between the various actors of the development process, and the interplay of design and marketing that guided every planning decision.

This dissertation adopts a definition of place identity as a multifaceted "gradient," which encompasses the emotional attachment that emerges from individuals' bonds with place, the satisfaction experienced as their needs are fulfilled, the legibility and imageability of their environment, and the social imageability and values that they share with other residents. The author's assumption was that these dimensions of the person/place relationship contribute to establish place identity, and that such place identity acts as a "gestalt." Thus, place identity becomes more than the sum of each identity component, which is consistent with Harold Proshansky's (1983) place identity definition as a "pot-pourri."

Through surveys, semi-structured interviews, cognitive mapping and traditional site analysis, this research revealed that Irvine's unique urban design does contribute to such an identity gradient, ultimately shaping the lives and identities of the residents of three of Irvine's most popular villages: Northwood, Westpark, and Woodbridge. Out of all the placemaking tools urban designers employ, landscape architecture is the one residents value the most. Despite the developers' investments in architectural details and its obsession with stylistic "authenticity," it is the landscape that dominates people's lives. To preserve its aesthetic appeal, rules and

regulations are in place, which allow homeowner's associations to control every aspect of the landscape, from the size and species of trees to the height of grass blades and the opening of a garage door. This rigidity is a source of frustration among residents and raises the issue of whether Irvine will be able to adapt to changing world economic and environmental conditions.

This research concludes by highlighting the unique challenges faced by suburban communities like Irvine as they approach their mature stage. It also suggests ways in which urban designers and landscape architects may be able to help move suburbia toward more sustainable futures.

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## **List of Acronyms**

OC	Orange County
TIC	The Irvine Company
ICDC	Irvine Community Development Corporation (residential development and urban design branch of TIC)
HOA	Homeowners Association
CC&Rs	Covenants, Conditions and Restrictions
UD	Urban design
PUD	Planned Unit Development
IBD	Irvine Business District
WVA	Woodbridge Village Association
AIA	American Institute of Architects
SWA	(Formerly Sasaki, Walker and Associates) landscape architecture firm based in Northern California
WRT	Wallace, Robert and Todd's, Philadelphia-based landscape architecture firm (formerly Wallace, McHarg, Robert and Todd's)
UPND	Urban Planning and Design (Irvine Company Urban Design Department)

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To my parents Mario and Maria, my sister Anna, my nephew Nicholas,  
and in loving memory of my brother Luigi.  
I miss you every day of my life.

## Introduction

### REVISITING MASTER PLANNED UTOPIA

*“What architects like to do is go to Europe and look at all the old towns and say let’s do something like that. What is really needed [...] is to go back in and say, “Well, whatever reasons you had for building the community the way you did do it, how has it turned out? What has it become?” And I think a lot of the stereotypes we have, visions we have, of what is good and bad, or was it productive of a better life or a better place to live might change and reflect that”.*  
(Watson, 2005, p. 379)

What are the effects of urban design on sense of place, and what kind of influence does it exert on the daily lives of residents? Like Ray Watson, former planner and president of the Irvine Company, the author was frustrated with the lack of research in this particular field. Post Occupancy Evaluations (POE) became popular among designers in the 1970s, when many Modernist housing projects and landscapes had come to maturity and were being evaluated for their user friendliness and for the effectiveness of their designs. Among the most popular studies of this kind are Clare Cooper Marcus’ *Housing as if People Mattered* (1998) and Donald Appleyard’s *Planning the Pluralist City* (1976). Both books grew out of a critique of the methods and practices used by many designers in planning environments and the realization that while much time is spent developing conceptual frameworks, they never take time to evaluate their work after construction.

This dissertation attempted a post occupancy evaluation of three neighborhoods in Irvine, California. It investigated the role that urban design and landscape architectural features play in place attachment and place identity in the context of master planned new towns, a particular kind of suburban development. Planned communities, or “planned unit developments” (PUDs) emerged during the 1960s and 70s in response to the unplanned, informal suburbs of the early to mid 1900s, either built by small developers or self-constructed (Harris, 1996). As Weiss (1987) pointed out, master planning had many advantages in terms of economies of scale and regional connectivity (each developer had to fit within the larger system of arterials). This was particularly evident in southern California, and in the region south of the city of Los Angeles, where large-scale, planned unit developments accounted for most of the post-war growth.

PUDs were more comprehensive than traditional tract-housing suburbs. Their scale was in many cases very large, encompassing multiple neighborhoods and entire cities and became the development model of choice for many of America’s new towns, including Reston, Colombia and the Woodlands (American institute of Architects, 1973; Forsyth, 2002). Because of their scale, their planning needed to be negotiated with counties and other regional planning agencies, particularly those in charge of transportation (Southworth and Ben Joseph, 1997). Planned Unit Developments included a variety of uses, ranging from commercial to retail, from single family to multi-family housing. Parks, schools and other services were often included as part of their planning and financed by the developers themselves. Within the neighborhoods common areas and neighborhood facilities were managed and maintained by homeowners associations (HOAs). In California, after the passing of Proposition 13, which reduced public spending for infrastructure and services, PUD were used to relieve municipalities from the burden of building and maintaining infrastructure (Weiss, 1987; Interview #24).

Because of their physical uniformity, both in the architecture and in the landscape, master planned communities have been under attack by urban designers as the quintessential placeless environments (Relph, 1976; Hough, 1990). In particular, critics have focused on the rigidity of their urban design policies and the regulatory framework of CC&Rs (Covenants, Conditions and Restrictions), which greatly limit residents' ability to make changes and adaptations at all scales of the neighborhood landscape. This is particularly true in Irvine, where HOAs exercise a great deal of oversight on environmental design decisions and are particularly strict in their interpretations of such rules, resulting in a landscape that seems too controlled and aseptic. This has led some to call Irvine a "variation on a theme park" (Soja, 1992; Sorkin, 1996) and critique its environment for its placeless and lack of distinctiveness.

The negative predisposition of scholars towards suburbia emerged as early as the late 1950s, when neighborhoods like Levittown, NJ and Lakewood, CA were built in response to the need for new homes to accommodate returning soldiers and their families. Places like Levittown have been called "non-places," for the lack of distinctiveness and memorability that came from a standardized approach to site planning and design. Over the years, only a minority of scholars has challenged these harsh judgments. Through a 1967 participant observation study of life in the newly built community of Levittown, sociologist Herbert Gans uncovered the mechanisms behind socialization in suburbia and proved that place identity and sense of community did exist, but in forms that differed greatly from those seen in cities. William H. Whyte was slightly more critical of the suburban phenomenon. In *The Last Landscape* (1976) he critiqued the land use processes that generated low-density suburban environments and led to anomies and disconnection from their environment. In *The Organization Man* (1956), Whyte revealed the link between the values promoted by white middle class Americans of Protestant background and those promoted by the American corporations. Edward Relph, one of the most influential critics of the suburban model, called suburbs placeless, uninspiring and inauthentic. Oldenburg has recently written about the existence of a "problem of place" (Relph, 1999) in America, and traced the roots to the landscape of the suburban neighborhood. He suggests that the problem stems from homes "designed for families of particular sizes, incomes and ages," making it almost impossible for families to establish a lasting connection with their neighborhoods.

This dissertation investigated how residents of Irvine, one of the most popular and criticized suburban communities in America, relate to the physical landscape of their neighborhoods, what they feel most connected to, and how these connections are established and maintained over the years. The methods used cut through the fields of environmental design, environmental psychology and sociology. They included an analysis of their physical form, large-scale quantitative surveys, open-ended questions and in-depth interviews. Its overarching goal was to shed light on the influence of design on place identity, and highlight how the landscape of these places resonates in the minds, lives and words of residents of suburbia, how it fits their identities, what type of conflicts emerge from this influence and how this landscape could shape better communities.

Also emerging from this research were challenges related to the future of Irvine in terms of its sustainability both in physical and sociological terms. The data collected through surveys and interviews revealed that the change affecting the city of Irvine is having important impacts on its identity and that of its residents. The unprecedented population growth, higher densities, increase in high-rise developments and traffic congestion are affecting residents' perceptions of what Irvine is and what the future might hold for them. In particular, there are many residents who believe that the original identity of Irvine is being lost in favor of a new, urban and

cosmopolitan identity. With this new identity come fears often associated with urban areas, like the fear of crime, the perceived decreased safety, and the loss of its idyllic qualities. As the literature suggests, it is during this time of crisis that place identity and attachment become most apparent, and this is what prompted the author to begin this investigation.

## Chapter 1

### THE THEORY: PLACE, IDENTITY AND THE SUBURB

#### a) Placeless suburbs

The emergence of suburbia both as a social phenomenon and as a topic of academic investigation in recent years is not a prerogative of the United States. Although their physical form may be different and adapted to local vernacular, suburbs can be seen in all continents, in developed and underdeveloped countries (Lang and LeFurgy, 2007). Suburbia is where for the large majority of American families (Baldassarre, 1986; Chow, 2002) and 86% of all California families live (Kotkin, 2005). Although original suburbs were built to appeal to the middle classes, today's suburban neighborhoods are increasingly ethnically and socially diverse (Baldassarre, 1986; Brooks 2000; 2004a; 2004b); many of them have evolved into true cities, with enough jobs and activities to compete with older urban centers in attracting residents and businesses (Garreau, 1991; Fishman, 1987). Just like traditional cities, suburbs are facing unprecedented challenges in terms of their sustainability and resilience, made worse by the rise of energy costs. Yet they are here for the long haul. As a recent paper pointed out, the “aging in place” phenomenon has led to an increasing number of underserved citizens without easy access to transportation, health services, shopping, and education (Lo, 2006).

While suburbs have evolved both physically and sociologically, their critics continue to argue against them based on outdated stereotypes that depict an image of suburbia as soulless, placeless and lacking a true place identity (Whyte, 1956; Relph, 1975). The spatial and socio-economic homogeneity of suburban neighborhoods have been held responsible for the decrease in sense of community and solidarity experienced by American society (Putnam, 1995). The New Urbanist movement has been quick to point out low densities and sterile architecture as the primary reasons for their lack of identity (Calthorpe, 1993; Duany and Talen, 2002; Day, 2003). In response to these problems, it has envisioned new types of suburbs where the architecture mimics that of old urban neighborhood and nature is integrated into the walkable built fabric, yet they have been unable to alter the segregation and homogeneity of their social fabric. Despite their efforts, recent studies have shown that New Urbanism has not had significant effects on suburban sense of community (Talen, 1999). Decades after new urbanism began to investigate the suburban realm, it is still unclear what suburban placelessness is, how to define it, and how to improve on it. Moreover, there is still an unresolved tension between academics' accounts of a bleak suburban life and those of their residents.<sup>1</sup>

Critics of suburbia have tended to bundle all suburbs into one all-inclusive category of “sprawl”. Contrary to this, research has shown that there is much diversity across suburbs, and that each type has very specific characteristics in terms of design, planning and architectural

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<sup>1</sup> A few years ago, while at UC Berkeley, the author asked first year architecture students—the majority of whom had grown up in suburbs—to write about sustainability in their neighborhoods. A narrative stood out from all others: Peter's story of his childhood and adolescence in Woodbridge: “My neighborhood was one big family. All of the kids on surrounding streets were friends and were able to safely play with one another when growing up. These circumstances have helped me create life long friendships (...). The neighborhood I grew up in was called Woodbridge. This neighborhood boundary was created by the presence of two lakes and a street called the loop. The loop, about a 3-mile street went in a circle connecting all of Woodbridge together (...). Woodbridge was able to place high-income families and low-income families in a tightly enclosed area effectively. The public schools that existed in Woodbridge brought kids and their families of all different economic circumstances together. All throughout my childhood, I was able to play games in the streets with not a worry in the world regards to safety. Streets invited people to them instead of keeping them away [...]” (UC Berkeley Student, Fall 2003).

forms. The master planned communities and new towns of the 1960s and 1970s for instance, differed from traditional sprawl in three fundamental ways:

a) A comprehensive planning process (master planning) in which all decisions were coordinated at the county or regional levels (Hise, 1997; Weiss, 1987; Forsyth, 2002; 2005). After WWII the size of suburban development has increased to encompass entire new cities. Irvine, The Woodlands; Reston, and Columbia are all examples of suburban new towns created in part thanks to ad-hoc legislation promoting master planning and the coordination of various aspects of the planning process (Forsyth, 2002);

b) The ample provision of public services and community facilities in support of residential living. While early suburbs included limited public amenities in part to keep prices low and offer more affordable housing for a lower income, blue and white collar potential buyers (see Herbert Gans' accounts of Levittown), master planned communities often used schools, parks, retail areas and other public facilities as neighborhood magnets and attractors. Unlike traditional suburbs, these facilities were built by the developer rather than local municipalities, in master planned communities streets, sewers, schools, community facilities, parks and open space were built by the developer, thus relieving public administrations from the economic burden of establishing this infrastructure (Forsyth, 2002, 2005; Weiss, 1987);

c) An obsession with creating distinctive urban design and landscape architectural forms. Many master planned communities have been inspired by contemporary research on urban design, such as Kevin Lynch's imageability theory (1960, 1981), Gordon Cullen's picturesque-inspired *Townscapes* (1961), and Ian McHarg's *Design with Nature* (1969), which offered a framework for the ecological planning of suburban communities. Master planned new towns displayed a unique care for the appearance of their public realm, combined with easy access to nature and to a variety of recreational opportunities. Urban designers and landscape architects offered developers the tools for shaping better communities and inspiring identity and attachment (Forsyth, 2005; The Irvine Co, 2000).

Today, urban designers and landscape architects are increasingly involved in redefining the traditional depictions of suburbs as low density and cookie-cutter and in retrofitting sustainability in the form of higher-densities, a mix of land uses, and ecological systems into their traditional fabric. Most of all, suburbs are becoming more socially diverse than ever, as immigrant, low-income families, and ethnic families have begun to relocate at the urban fringe (Baldassarre, 1986; Brooks, 2000; 2004a, 2004b). The planning of suburban communities has seldom been informed by the in-depth evaluation of past models. To date, no study has investigated the effectiveness of urban design decisions on place identity and on residents' attachment to suburban planned communities. Donald Appleyard (1976) came the closest to doing so in his study of Ciudad Guyana, where he investigated the reasons and expressions of the gap that persists between values and perceptions held by design practitioners and residents of the Venezuelan new town. This research asks some of these questions and outlines a methodology for understanding the effects of urban design on place identity, attachment and residents' community attitudes. Because of its deliberately planned nature, Irvine is a particularly appropriate case study for this type of investigation, and can offer lessons for other planned communities, which are engaged in the redefining of their identity through design.

## **b) Places, place identity and place attachment**

### Places, meanings and imageability

Why should urban designers and planners be concerned with place identity? Places are sites where individuals and groups embed their identities, meanings and symbols. The theory of “symbolic interactionism” suggests that while places may have meanings of their own, it is through the daily interaction with other human beings that additional meanings are created (Milligan, 1998; 2003), transforming them into complex forms of non-verbal communication (Rapoport, 1982; Tuan, 1990). The act of working and sharing a place contributes to the construction of group identities and at the same time strengthens individual identities (Cooper-Marcus, 1995; 1998a, 1998b; Milligan, 1998; 2003).

Given that places and their meanings are primarily experienced through vision, it is crucial that the places that individuals inhabit be legible—hence Kevin Lynch’s interest in the concept of imageability defined as “[...] that quality in a physical object which gives it a high probability of evoking a strong image in any given observer. It is that shape, color, or arrangement that facilitates the making of vividly identified, powerfully structured, highly useful mental images of the environment. It might also be called legibility” (Lynch, 1960 p. 9). Lynch considered identity as the simplest component of a sense of place and defined it as the ability of a person to “recognize a place as being distinct from other places, as having a vivid, or unique, or at least a particular character of its own” (Lynch, 1981, p. 131). In his view, imageability and mental recognition could lead to changes in individual behavior. Through this simple deterministic observation Lynch was able to link the personal identity of the residents to the physical structure of a place, because in his view the “‘*I am here*’ supports [the] ‘*I am*’” (Lynch, 1960, p. 132). His research resulted in a series of normative tools for the creation of imageable and identity-shaping environments. Decades later, his normative framework continues to be used by environmental designers engaged in the design of cities and suburbs (Forsyth, 2005).

## **c) Place identity as a result of livable, walkable urban form**

In addition to the focus on imageability described above, designers also believe that strong identities are the result of a mix of physical qualities commonly found in many historical European and American cities. This school of thought can be traced back to the seminal work of Jane Jacobs, and her 1961 book *The Death and Life of Great American Cities*, in which she advanced the notion that physical proximity, density, comfortable streets, and architectural forms organized in an urban “fabric” (Chow, 2002) where public and private realms seamlessly blend, as in her hometown of New York, ultimately resulted in more distinctive, imageable, and socially cohesive communities. Integral to the notion of fabric is also the idea set forth among others by the New Urbanists that an urban environment with a strong place identity should feature a mix of land uses, supported by a variety of open space types and recreational options, walkable streets, and residential architecture that is varied, carefully crafted and arranged to reinforce the primacy of the street as a social space (Jacobs, 1993; Calthorpe, 1993; Dutton, 2000; Chow, 2002; Ellis, 2004).

## **d) Place identity as individuals’ ties with places**

For decades, environmental psychologists have researched the role that places play in the development of residents’ identities. Most research was based on an “ecological approach,”



focused mainly on the physical environment as a source of stimuli to which a person simply reacted (Bonnes and Secchiaroli, 1995). It was thanks to the emergence of phenomenology, which insisted that places only exist by virtue of them being experienced by individuals, that environmental psychologists started to become interested in “place” as “unit of environmental experience” (Canter, 1977). Whereas objectivism seemed to suggest that the environment was a static entity and that behavior could be logically explained, a new approach called transactionism introduced the idea that the person/environment relationship was a more dynamic one, with both sides of the equation shaping one another (Canter, 1977).

The cognitive process by which individuals relate with places and the meanings associated with certain places became the object of many studies in the psychology field. While behavior could be observed and physical attributes measured, the difficulty was in conveying the cognitive processes by which individuals attached meanings and emotions to places. Canter was the first to formulate a definition of place that included actions, conceptions and physical attributes, joining the transactionist and phenomenological perspective and contributing to the founding of the field of environmental psychology (Bonnes and Secchiaroli, 1995).

Once a new definition of place was set forth, the next logical step was to analyze the effects of the environmental transaction on residents’ identities; during the 60s and 70s psychologists Irwin Altman (1975) and Harold Proshansky developed the “place identity” concept (Proshansky et al, 1983). This was achieved by expanding Erik Erickson’s (1959) “reflected appraisal,” the process by which an individual establishes his own identity by distinguishing himself from other people, objects, real or idealized places. Place identity thus became the result of a constant negotiation between a person’s self and the “pot-pourri” of experiences, objects and conceptions of places filtered through societal schemas (Proshansky et al, 1983).

Like Proshansky, Yi Fu Tuan writes of places as multi-nucleated constellations of experiences (Tuan, 1977). Other researchers have described place identity as the understanding of who we are in relationship with the places in which we live (Opatov and Clayton, 2003). In either case, place identity acts as a critical element in the interface between the individual and the “social” and physical environment that surrounds us. Place identity is thus the outcome of a complex process involving the physical environment, a person’s self-identity and socially constructed meanings and symbols (Bonnes and Secchiaroli, 1995).

#### **e) Place attachment**

Recent studies have expanded on this interpretation of place identity and shifted the focus to place attachment, i.e. the bond that exists between people and their environment. Despite the existence of this bond was clear to many phenomenologists, environmental psychologists have struggled to find a univocal definition of the concept. Proshansky’s place identity construct suggests that attachment evolves out of positive cognitions about places. According to psychologist Korpela (1995) place attachment is a strategy that individuals use to strengthen their identities. Altman and Chelmers (1980) suggested that by attaching to places individuals gain control over their boundaries and are able to protect their privacy, and that such attachment is key in establishing a healthy identity. Recent studies have formulated a more concrete definition of place attachment as the interplay between place identity (intended as a deep emotional connection between an individual and its locales), place dependence and satisfaction (both expressions of pragmatic, need-fulfilling connection to place) (Cuba and Hummon, 1993; Williams and Vaske, 2003; Stedman, 2002; 2003a; 2003b; Pretty et al, 2003) and social

imageability, defined as the capacity of places to evoke vivid, widely-held social meanings among their occupants (Stokols and Shumaker, 1981). Social meanings may include shared values, symbols, discourses, but also landscape features, which may be used in discursive terms by members of a community in order to position themselves against other communities (Hummon, 1986; Blake and Arreola, 1996; Castells, 1997; Dixon and Durrheim, 2000; Duncan and Duncan, 2001; Colombo and Senatore, 2005).

A recent development of the place identity and place-attachment research has focused on the role that nature plays on the development of an individual's "environmental" identity, and their attitudes and behaviors towards nature and natural resources conservation (Opotov and Clayton, 2003; Williams and Vaske, 2003; Uzzell et al, 2002) as well as many more studies attempting to prove Yi Fu Tuan's original intuition that attachment to a place leads to increased care for its future (Chavis and Pretty, 1999; Stedman, 2002). These studies have shown that attachment to place influences positive behavior towards the environment. Stedman (2002) has found that attachment to a place affects environmental behavior, and that individuals are more likely to fight for places that are central to their identity (place identity). Moreover, he identified in the shared meanings and symbols a strong determinant of attachment and consequent type of behavior toward places.

An aspect of place identity that awaits more research has to do with the quality and behavioral consequences of place attachment. As much research on identity politics has shown, place attachment may not always be positive, resulting in the positioning one's community against others using discourses of exclusion, exclusivity and through physical separation and gating—all aspects of a NIMBY attitude (Duncan and Duncan, 200; Low, 2005). Because of its multiple facets, research suggests that place identity may be better measured as a gradient along a continuum between place and non-place rather than in the dichotomic terms Edward Relph used.

#### **f) Identity, community attitudes and social capital construction**

The discussion on the quality of attachment and its effects on community attitudes leads us to the third focus of this research, which deals with social capital construction and community values. Traditionally, suburbia has been described as lacking the tight forms of community that characterized urban neighborhoods and small towns; Packard (1961) and Whyte found evidence of suburban social networks based on shared values and economic status and community life centered on shared faith and political affiliations. In *Better Together: Restoring the American Community* (2003) author Robert Putnam described the proliferation of what he called "bonding social capital," a form of socialization based on shared religious and life values, the modern-day translation of Whyte's social ethics concept. As Putnam suggests, these new forms of community speak of exclusivity, homogeneity and cannot be considered as proxies for more inclusive forms of community life.

Researchers have been inconsistent in their definition of social capital, operationalizing it in terms of trust, described as the "willingness to take risks knowing that others will respond in mutually supportive ways" (Putnam, 2003, p. 34), reciprocity, pro-activity and social agency; tolerance and diversity. Regardless of the definition of social capital one embraces, there is evidence that place identity acts as a prerequisite for a sense of community to develop. As Lynne Manzo (2003; 2006) states, "processes of collective action work better when emotional ties to places and their inhabitants are cultivated" (Manzo et al, 2006, p.347). Based on this assumption, this study looked at social capital as a consequence of a strong sense of place identity and

attachment to one's neighborhood. Its ultimate goal was to sensitize urban designers to the political and ethical consequences of design decisions, and to the importance of design not only in creating more memorable environments, but also in shaping stronger and more resilient communities.

**g) Whose identity? Insiders vs. outsiders and users/producers/evaluators**

Sociologist Herbert Gans (1967) was among the first scholars to investigate differences in perception of place between insiders and outsiders in the context of planned communities. He found that the seemingly bleak and uninspiring environment of suburban communities in reality supported a life of intense social activities centered on women's coffee klatches and children. Similarly, Donald Appleyard (1979) investigated the differences in place perceptions between insiders and outsiders. He saw city form in terms of its symbolic value, and moved beyond the simplistic distinction between insiders and outsiders, toward one accounting for the roles that users (insiders), producers (developers, architects) and evaluators (planners, critics) play in shaping these symbols. In *Planning the Pluralist City* (1976) he illustrated differences in place identity, imageability and perception across the three groups, and highlighted their effect on the planning process for the South American new town of Ciudad Guyana.

This research aims to evaluate the role that landscape architecture and urban design have in the establishment of place identity and how the landscape may ensure that such identity may sustain itself and be stewarded overtime. The new town of Irvine was chosen as a case study, because in its planning, design was intentionally used as an instrument for the establishment of place identity. The following chapter provides an overview of Irvine's short history, from its days as a ranch, until the construction of the largest American new town, and highlights aspects of its history that have affected its place identity.

## Chapter 2 THE IRVINE RANCH FROM LIMA BEANS TO HOMES

### a) Brief history of Irvine

#### 1. From lima beans to homes

The area now known as the Irvine ranch comprises 63,000 acres of fertile land in Southern California, half way between Los Angeles and San Diego. The ranch was part of Rancho San Joaquin, a Mexican land grant owned by Jose Andres Sepulveda. In 1850s, James Irvine, a wealthy San Francisco merchant, purchased the land from its original owners with the intent to establish on the ranch a model agricultural enterprise (fig. 1). To this end, he founded with a few business partners the Irvine Company, incorporated under the laws of West Virginia.



**Figure 1 The Irvine Ranch in the early 1900s  
(source: Cleland)**

The Irvine Company was among the first agricultural companies in California to introduce extensive agricultural practices based on large-scale farming and cattle grazing grounded in mechanization and experimentation. In order to ensure success, the Irvine family invested in roads, dams, canals, and windbreaks to protect the crops. By 1910 the Irvine ranch was the most productive farmland in California. Its success continued over the years, when Irvine was among the largest producers of lima beans and, most recently, strawberry and oranges, a production that is now memorialized in Orange County's name. Agricultural production remained at the heart of the ranch operations until WWII, when the first seeds of change were planted with construction of military installations and the opening of the first industrial plants.



**Figure 2 Aerial view of 1950s neighborhood in the northern part of the Irvine Ranch  
(Source: TIC)**

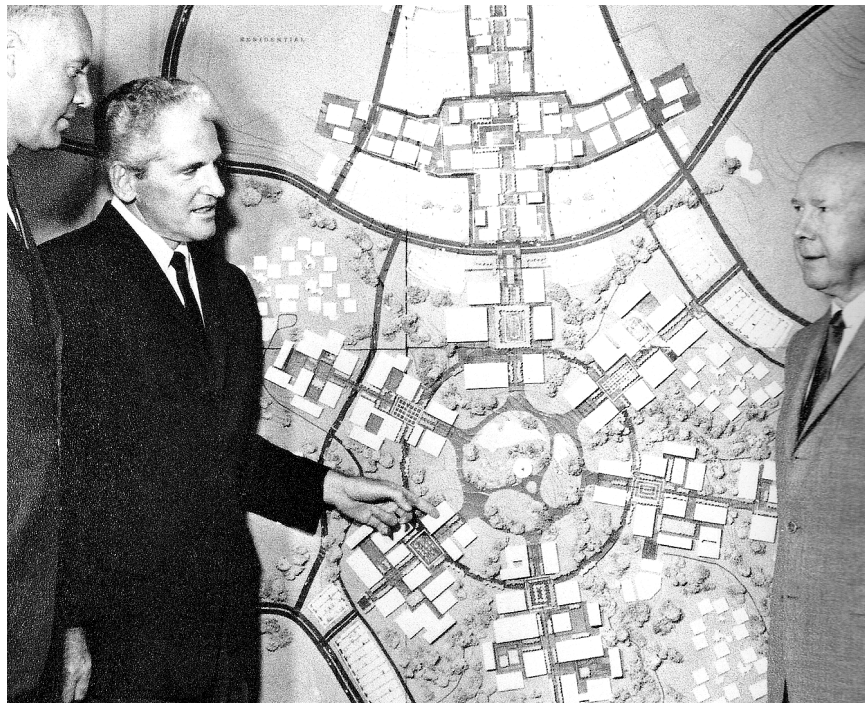
Beginning in the 1950s, intense residential development began to replace agriculture as the region's driving economic force, and tract developments similar to those already visible in the Los Angeles region began to encroach onto the ranch (fig. 2). Early residential neighborhoods were built to the north, near the existing city of Santa Ana, and to the south, along the Rancho Trabuco border, where the planned community of Mission Viejo had been established in 1963 (Forsyth, 2002). This type of suburban development was made popular by Bill Garnett's aerial photographs, which showed the succession of development phases, from rough grading to the laying out of streets and sewers. Many among the planning and design communities criticized the scale and uniformity of the physical landscapes of this suburban type, as well as the segregation and lack of socialization that it entailed (Whyte, 1956). The Irvine family, who feared that the ranch would soon be flooded with such low-quality housing, was among the toughest critics of the suburban model of the time. Overwhelmed by higher property taxes (Griffin, 1974), but unwilling to concede to sprawl, the family began to think of alternative developments models, and began planning for the establishment of a new town.<sup>2</sup>

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<sup>2</sup> New towns emerged in response to a post WWII housing shortage. Great Britain, France, Sweden and other European countries engaged in the creation of satellite cities that would help organize urban growth and improve the living conditions of many urban dwellers. A key piece of legislation was the New Town Planning Act of 1946 (later replaced by the New Towns Act of 1964), which established the first generation of British New towns. In America, new towns had been planned during the new deal based on precedents such as Ebenezer Howard's garden city and Clarence Stein and Henry Wright's work at Radburn, NJ. However, it was not until the late 1960s that a law to be passed allowing private developers to have access to funds for the creation of new towns. Despite adopting the name and philosophy of the new town movement, Irvine set itself apart from other contemporary new towns, as it did not seek access to public funds, relying instead on the profits from the agricultural operations.

## 2. Building America's largest private new town

During the late 1950s, the University of California's undertook a search for a site for a new satellite campus. Thanks in part to the political connections that existed between members of the Company's board and the Regents, of the University, the Irvine ranch was identified as a potential location. In 1959, The Irvine family seized the opportunity by donating 1000 acres of prime land, just a few miles from the Pacific Ocean shoreline, for the creation of a new campus surrounded by a self-contained community of 10,000 acres (Griffin, 1974). University administration and Irvine Company executives joined forces and commissioned architect William Pereira a master plan for a new town centered on the new university campus (fig. 3).



**Figure 3 William Pereira presents the UCI plan to the governor of California  
(source: Cleland)**

William Pereira's vision for a new town was in direct opposition to the sprawl of the Los Angeles region, dominated by endless fields of housing and never-ending roads. Irvine's First Master Plan (1961) envisioned a new type of community that combined the qualities of urban living in close contact with farmland and nature (fig. 4). Marketing slogans such as "Come hear the asparagus grow" were successful in attracting an ever-growing number of Los Angeles residents (Interview #10). Soon the new town of Irvine became associated with a new paradigm for suburban living, where families could live in close proximity to nature and farmland (Cameron, 1976; Dagen-Bloom, 2001; Forsyth, 2005). The success of the new town was celebrated by no less than Time Magazine, which featured Irvine's planner William Pereira on one of its covers.

Irvine's popularity as Southern California's new destination was unprecedented. By the mid 1960s it became clear that the initial population target of 100,000 was too conservative and inadequate to meet the large demand of the marketplace. Most of all, the size of Pereira's new

town was too small to be able to support a unified school district, which would have forced students to attend schools in nearby Santa Ana and Costa Mesa. TIC planners became aware that without a well-organized and funded school district, Irvine would not be able to grow (Watson, 2005). Moreover, there were signs that the nearby city of Santa Ana wanted to annex a 350-foot wide, ten-mile long strip of land, which would allow them to incorporate the retirement community of Leisure World. The shoestring annexation (Watson, 2005) would have created a situation whereby Irvine would be physically split into two new towns, a major conflict with the Irvine Company's vision of a unified new town. This potentially negative turn of events was avoided when political negotiations involving the University of California regents, the California Department of Transportation, The Irvine Company and other local organizations, resulted in the formal rejection of the annexation (Watson, 2005).

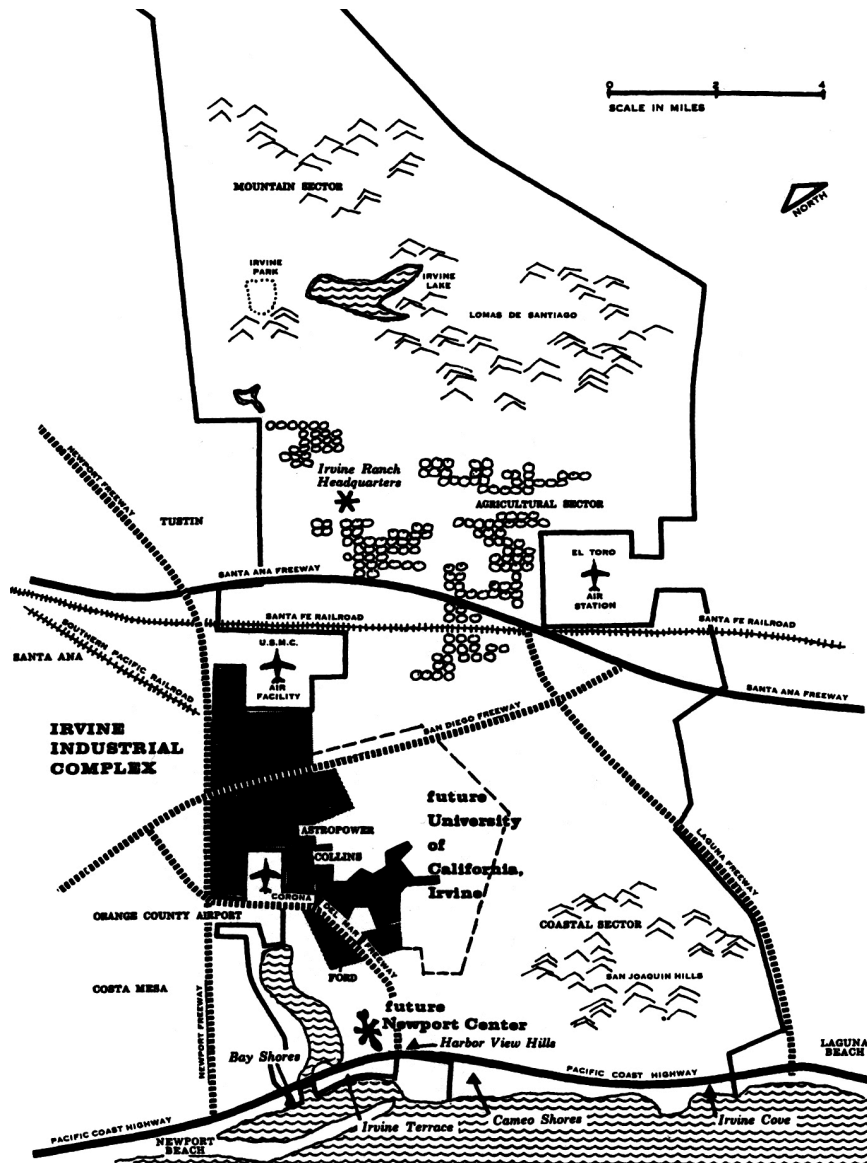


Figure 4 Irvine according to Pereira's master plan (source: Cleland)

The annexation debacle accelerated the incorporation process of Irvine into a city. Irvine Company officials began to work on a new plan that would extend Irvine's sphere of influence to include 50,000 acres of agricultural land north of the 405 and the 5 freeways, and in December of 1971 the city was incorporated. After the city worked closely with the Irvine Company to modify the original plan so it could accommodate additional growth, adopting a new TIC vision that included its expansion to include the agricultural areas north of the 405 Freeway, which offered a flat topography and easy access to freeways. The framework for such new development would be a square mile grid of arterial roads built along existing dirt roads and irrigation ditches already serving the agricultural operations (interview #15).

### 3. Irvine moves!

In addition to the need for new land to accommodate the projected population growth, another important change to the original master plan would alter Irvine's future in dramatic ways: the relocation of the town center. William Pereira's plan envisioned a new town center situated adjacent to the University of California, Irvine campus named University Town Center, but student protests and the turmoil that shook all the UC campuses in the late 1960s prompted the Irvine Company to rethink its original plans and develop instead a polycentric urban model, with centers located at the Irvine business districts, Newport Center, Tustin Marketplace, The Spectrum and a linear activity corridor situated between Alton and Barranca Parkway, a few miles from the UCI campus.

The new polycentric urban model shifted Irvine's center of gravity north of the 405 freeway, facilitating the company's plans to develop many more villages in the central ranch area. The linear activity corridor proved to be a failure as many of the businesses that were expected to locate there did not. In its place, strip-mall like commercial developments filled the gaps between the Irvine Company town center and other scattered office buildings. To further complicate the scenario, a change of policy with regard to the location of retail centers prompted the Irvine Company to abandon a large site zoned for a large shopping area at the center of Woodbridge in favor of a more traditional and more visible site at the corner of Jeffrey Road and Alton Parkway (interview #37).

The next few decades saw a tremendous amount of development in both the central portions of the ranch and in the areas surrounding the university. Turtle Ridge, University Park and Woodbridge, all of which represented very innovative planning experiments both in terms of housing and in landscape design, were the first neighborhoods to be planned according to the "village" model under the supervision of Ray Watson, first Irvine planner and future President of the Company. Watson's application of the Planned Unit Development (PUD) model typical of many contemporary new towns (AIA, 1973) combined solid urban design and planning with social planning objectives to create thriving diverse neighborhoods. This was achieved through the mixing of housing types, the provision of community services, and the careful planning of the educational system. Watson understood that these ingredients would create a unique sense of community, but only if they were planned as integrated parts:



*“We did not have much experience, but it wasn’t the first time (the PUD) was done. But it fit right with the idea of building a community. I was somebody who was (...) selling the idea that we were community builders all the time. [It was] about building community in a sociological sense [which] meant that there were more than a bunch of subdivisions together, but a place that people would call “a community, having something in common”.*  
(Watson, 2005, p. 110)



**Figure 5 View of a residential neighborhood in Westpark  
(photo by author)**

#### 4. Donald Bren and the reinvention of Irvine as a “Mediterranean” place

A paradigmatic shift in the history of Irvine came in 1983, when the Irvine Company went from a not-for-profit foundation to a privately owned corporation, in response to legislation that prevented foundations from acting as business enterprises. The not-for-profit side of the Irvine Company, renamed “the Irvine Foundation,” established its headquarters in San Francisco and took on the mission of funding scholarly research, while the private side was sold to a group of entrepreneurs and corporations headed by Donald Bren, developer and planner of the nearby suburban community of Mission Viejo. The new Chairman came to Irvine with a new vision that seemed to be in contrast with the choices made in the planning of the early villages, and his arrival was accompanied by turmoil within employees who feared that it would change its philosophical approach (Watson, 2005, pp. 387-8).

Donald Bren’s philosophy became apparent in the planning of his first village of Westpark (fig. 5). The new chairman brought to Irvine a new taste for Mediterranean forms, with stucco walls and terracotta tiles replacing the wood and shingles of earlier homes. He also focused on increasing densities and in making Irvine affordable by considerably shrinking the size of the residential lots. Another important change consisted in abandoning the housing mix seen in Woodbridge and University Park in favor of segregated neighborhoods of either single-

family homes or apartments. In response to the demands of retailers, Irvine Company planners also abandoned the practice of locating village centers at the heart of each village in favor of more visible external locations at the intersections of arterial roads. Finally, the wealth of amenities, pools, lagoons, tennis clubs, playgrounds, neighborhood parks, seen in Woodbridge was not replicated in Westpark, where only two pools and a few parks were planned to serve the entire village.

Donald Bren's influence was not limited to the new Mediterranean taste. During the late 1980s he was responsible for the decision to donate a large portion of the ranch to create a nature preserve, reacting to growing interest among the Irvine population for landscape preservation, and anticipating the discussion on sustainability of the late 1990s. This decision was also in response to the fear many Irvine residents had that Irvine would begin to grow in all directions. By limiting the amount of developable land, donating natural areas for the public use of Irvine residents, and concentrating new development in the central areas of the ranch, the new chairman managed to successfully placate residents' concerns over growth, reinforce his own identity as a philanthropist, and re-position Irvine Company's marketing towards the promotion of Irvine as the city in nature ([www.irvineranchconservancy.org](http://www.irvineranchconservancy.org)).

### 5. Irvine and the new millennium

Beginning in the late 1990, urban development in Irvine began to shift toward the foothills to the north and south of the city, thus replacing the old avocado groves with new housing. This new era of residential developments increasingly steered away from the intentions of Pereira's master plan. For instance, the new village of Northwood—not to be confused with the “old” Northwood, which was a pre-Irvine Company development—featured for the first time in Irvine history a number of gated communities without a commercial component or a walkable street network. More recent villages like Shady Canyon, Quail Hill, Portola springs have been built in the foothills, far from Irvine's historic core and rely on the automobile as the primary means of transportation. Despite this departure from a key principle of Pereira's master plan, these villages have seen the introduction of important and innovative design elements, such as the use of native, drought tolerant vegetation, and the incorporation of New Urbanist forms and principles into the city's urban fabric. In Woodbury a rectangular street grid has replaced the winding streets of the early Irvine villages, allowing for more walkable neighborhoods and an increased permeability of the village to pedestrian traffic.

Over the past 10 years a major source of change within the city of Irvine has come from the redevelopment of former military, industrial and commercial areas, as well as the closing of many elementary schools by the Irvine Unified School District. The former military bases of El Toro and Tustin, decommissioned in the late 1980s, have become the object of large redevelopment efforts, the former as Orange County's Great Park (fig. 6), the largest urban park in America, while the latter has been redeveloped as a mixed use development. More change has occurred in the Irvine Business District (IBD) an area historically occupied by commercial and light industrial activities currently being redeveloped as mixed-use villages and high-rise condominiums. Central Park West, a mixed-use development by the Lennar Corporation, is intended to offer Irvine residents a new “urban living” lifestyle TIC has never planned for. Similarly, the Great park is being marketed as a “grown up” Irvine village (interview # 35) and as the new downtown destination for a city that was born without one.

An almost invisible, yet important source of change in Irvine affecting older villages like University Park and Woodbridge has been the closing of elementary schools built to serve the

original population of families with young children. In the planning of those early villages, the Irvine Company believed in what they called an “incubation theory” by which families would move into the villages and eventually transition into newer neighborhoods as their children grew and the family needed larger homes. This would have ensured that schools would continue to operate, as the new population moving in would most likely be younger couples. Contrary to this theory, in many of the early villages, an increasing number of older couples are “aging in place,” due in part to the increased cost of newer homes, which makes moving unfeasible. This has led to a decrease in enrollment and the closing of old elementary schools followed by their redevelopment of a new infill housing, a decision that is met with much opposition by the residents.



**Figure 6 Aerial rendering of the Great Park, Irvine's new destination  
(source: Great Park Corporation)**

A final source of change has come from the loss of the agricultural land that once surrounded the new town. Agriculture was instrumental in establishing Irvine’s original identity, luring residents with the promise of a life in close connection with the productive landscape of the ranch. Today, little to no agriculture remains in Irvine. Homes, apartments and shopping centers have replaced the strawberry and lima beans fields, orange groves, and plant nurseries, and traditions like the annual harvest festival are the only reminders of a lost identity that is deeply missed by the residents.

*“In the past, when we had the fields around, we got a sense of seasons and change when they harvested. When you went places you would see green and nature, now we see houses and commercial [...]. They cut down the trees and overnight they planted two-by-fours, and they did not even plant citrus in the backyards. When we first moved here, we could smell the orange groves, and that was what attracted us to this place: a sense of nature [...]. Kids would throw oranges to you. Or when it rained a lot, you would see oranges flow down the sides of the streets”.*  
(Interview #7, Northwood old time female resident)

## **b) Irvine’s Uniqueness**

The new town of Irvine is the quintessential master planned community where the interaction between planning, landscape architecture and urban design contributed to the creation of a landscape that acted as a “machine for suburban living,” to paraphrase Le Corbusier’s famous quote, and created a place and a lifestyle embodying the Southern California ethos. Irvine’s planners worked at an unprecedented scale, over 90,000 acres of land, and at a pace unimaginable in many other contexts worldwide, creating a functioning new city, a “global village” (interview #29) and a community where one can “live, work, play and [...] shop” (interview #37).

Irvine’s uniqueness among other suburban communities comes from a series of factors that affected its conception, implementation and growth. First and foremost is the planned nature of the city, which was established according to a master plan. Integral to Irvine’s master plan were strict design guidelines that would ensure control over the imageability of the place. These guidelines were negotiated as part of a unique planning process whereby landscape architects acted as leaders of interdisciplinary teams of professionals working toward creating the best possible results in terms of identity (interview #14). Also integral to master planning was the careful balance between jobs and housing; TIC planners understood that a sustainable new town would require ample employment opportunities in clean industries. The emphasis initially placed on the presence of a campus and the hidden presence of military-related industries would ensure a steady job market, and had a lasting influence on sustainability and resilience of the new town.

Because of its complex history and the unique interplay of factors that shaped both physical form and planning processes critics have concluded that Irvine does not fit the traditional notion of new town, becoming a category of its own within the context of the new town movement (Griffin, 1974; Forsyth, 2005). Drawing on bibliographical sources, interviews, personal accounts and other primary sources, the following sections attempt to shed light on Irvine’s unique traits and begin to suggest how these may have influenced its place identity.

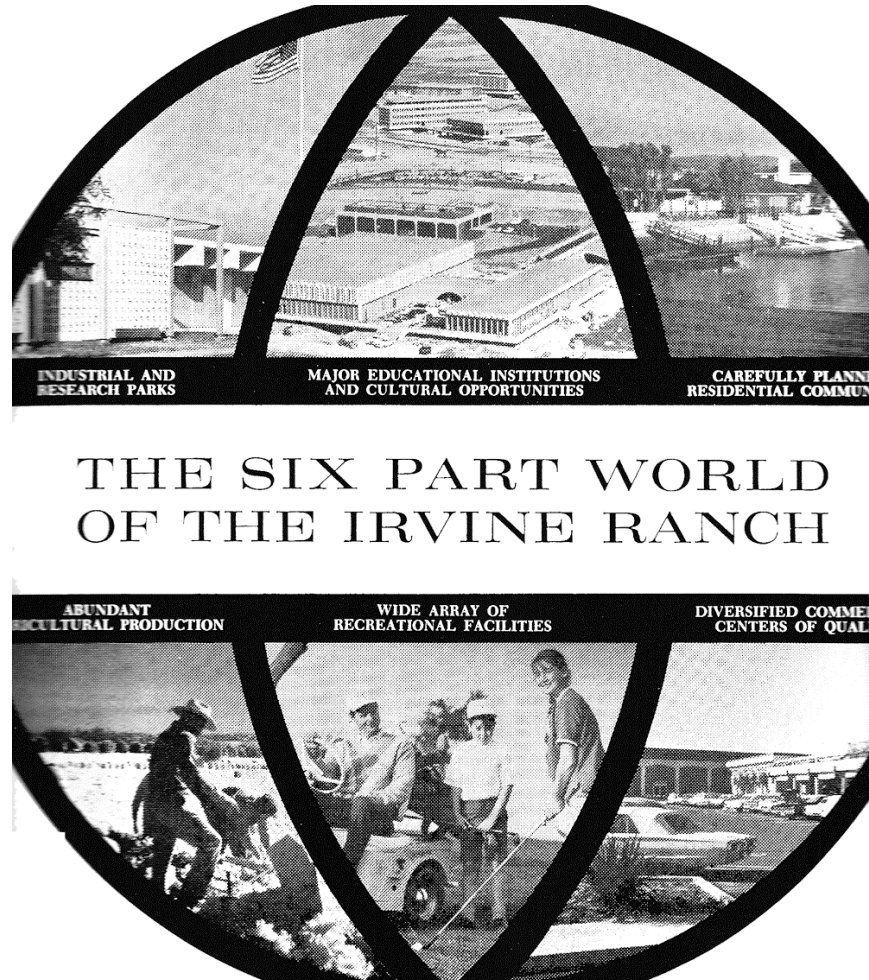
### 1. Irvine as the quintessential master planned community

Irvine is the prototypical planned unit development (PUD), commonly used in the establishment of new towns (AIA, 1973). The model differed from traditional sprawl in three fundamental ways:

- a) The use of a comprehensive planning process in which all activities were coordinated according to a “system planning” philosophy (AIA, 1973; Hise, 1997; Weiss, 1987; Forsyth, 2005);
- b) The scale of development. After WWII the size of suburban developments increased to include entire new cities (Forsyth, 2005);



c) The availability of public services/facilities. While early suburbs included limited public amenities in order to keep housing affordable and target a lower income clientele, the planned communities built by larger developers included schools, parks, retail areas and other public facilities<sup>3</sup> (Forsyth, 2005; Weiss, 1987).



**Figure 7 The components of Irvine’s DNA  
(source: Irvine World News)**

In the intentions of its planners, the use of the PUD as the principal urban development model would ensure the efficient integration of the new development with the surrounding context, and facilitate the management of the growing population and its needs. Most of all, PUDs relieved the public sector from the need to build infrastructure and services, which were often built by the developer himself. This was promoted by the passing of proposition 13, a law that prevented local government from collecting taxes in excess of 1% of the house value, and asked that every tax increase be ratified by two thirds of the total California electorate.

<sup>3</sup> See Herbert Gans’ *The Levittowners* (1967) for a detailed discussion of post WWII suburbia.

Decimated in their budgets, public governments had no other choice than to develop a system by which the private developer would build services.

Master planning is part of Irvine's DNA. It began in 1959, when the University of California decided to locate its newest campus on 1000 acres donated to the university by the Irvine Company. Both institutions commissioned William Pereira, well known modernist Los Angeles architect,<sup>4</sup> to prepare a plan for a new college campus and surrounding new town of 100,000 residents. The proposed new town would be located in an area nestled between the Pacific Ocean and the newly extended 405 freeway. It would have a center in the new campus, and be composed of neighborhoods, which in Irvine would be named "villages," featuring a mix of housing types and retail sites centrally located to encourage walkability. Pereira's master plan laid out a vision for the entirety of the Irvine Ranch (fig.7), which included the preservation of agricultural land, the consolidation of housing and the creation of research and development facilities around the college. Pereira's plan also envisioned smaller, more upscale residential communities in the foothills, and large areas of undeveloped open space in northernmost areas of the ranch.

The master plan proved so successful that by the late 1960s a revision was needed to respond to the growing demand coming from potential residents. A new version of the master plan was developed in 1971 that altered many of the provisions of Pereira's plan. These changes transformed the new town in four fundamental ways:

- From a mono-centric model centered on the university campus, to a polycentric city of multiple retail, commercial and public centers;
- From a self contained, walkable new town of small dimensions to a large city made of villages;
- The development of a new urban design framework based on Kevin Lynch's imageability theory;
- The decision to expand Irvine's area of influence and increase the projected population from 100,000 to 430,000 residents.

Nowadays, despite the many changes and adaptations, Irvine's master plan remains a guiding force in the development of the new town and its region, shaping both the public life of the community and the private lives of its residents. Four out of ten residents use the adjective "master planned" to describe their city to outsiders. Many of them are familiar with what master planning entails, and how the master planned nature of the place ultimately affected them, but very few are able to predict the future steps in the master planning process or feel like they will have a say in it. While TIC officials described the master plan as a flexible, adaptable entity, others—including many interviewees—seem to think of it as a static document, intended to preserve the integrity of Irvine as a collection of villages:

*"The notion of the master plan [...] implies an orderliness and thoughtfulness. [...] If there is one idea that everyone relates to, it is that. They may not be able to articulate it but they are talking about the master plan".*

*(Interview #10, Irvine resident and business executive)*

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<sup>4</sup> William Pereira (1909-1985) is best known for his design of the Trans America Pyramid in San Francisco, as well as many other public and private buildings throughout California. Trained as a modernist, Pereira embraced the ideals of the CIAM and Le Corbusier and the "architecture as a machine" ideal. This philosophy is visible in many of his works, including the Library Building on the UC San Diego Campus and the Los Angeles International Airport.

*“The idea of putting together a master plan that has a 40-year life is very hairy [...]. You have to have key broad policies and moves and enough of a physical framework to hold it together. The plan that Ray and others put together had enough big ideas and physical things but also enough flexibility to move with the times”.*  
(Interview #37, Irvine Company)

*“I like the way that is planned, the way the access is planned. It is not always enough, but at least somebody has planned and thought about it. I like the attention to the plants and trees”.*  
(Interview #7, Northwood old time resident)

## 2. Irvine’s “team-based” planning process

Aside from its master planned nature, a peculiar aspect of Irvine’s identity derives from the presence of a single owner and planner—the Irvine Company—that built the place from the ground up over the course of a relatively short time. This private entity (first a foundation, then a corporation) has informed all aspects of Irvine’s physical environment, and shaped the way Irvine is governed. Having preceded the city in its establishment, for many years TIC has acted as the main steward of the land and of the master plan, responded to the needs for the community, and it has ensured its long-term sustainability.

The institutional relationship between TIC and the City of Irvine cannot be described in traditional terms. Since its inception, the Irvine Company played a “pseudo-governmental” role, making decisions that would later become incorporated into the city’s statutes. To balance their power, it relied on a collaborative, team-based process involving a number of actors, both public and private (fig. 8). Although not unique to Irvine, this process reached new heights and sophistication in the planning of the Southern California new town.

*“I would not say it [is unique to Irvine]. But it has been done so many times here that it has reached a higher level of sophistication as to how you create places like that at that scale. It is a process that has been proven to work”.*  
(Interview #14, Landscape Architect)

The idiosyncratic dynamics emerging from the TIC role as a private institution that was also the original planner of the town, and the city as a controller becomes apparent when one looks at the city’s policies. Many of these regulations can be traced back to the early stages of Irvine’s history, when the company’s decisions guided every aspect of the new town’s development. The power of the Irvine Company was such that it called for a planning process negotiated and arbitrated by mediators. In the case of Irvine, the role of liaison between public and private interests was played largely by urban design professionals, among them many of the most notable landscape architects in the country. The influence of landscape architecture was such that Irvine has registered over the years one of the largest concentrations of landscape architecture and urban design firms in the country (source: [www.asla.org](http://www.asla.org)).



**Figure 8 Landscape architects play the role of mediators in the design process  
(source: TIC)**

The non-traditional collaboration between developer, designers, and municipality was made possible thanks to a interdisciplinary “team” approach, during which the needs of all actors (the company, the city, the designers, the HOAs) were laid out, negotiated, and eventually embraced by the company. Interviewees were unable to pinpoint the specific stages or steps of this process (interview #29), as very often TIC would modify it to fit the idiosyncrasies of a project or particular political circumstances. This lengthy process, at times spanning over a decade, was employed by TIC in the development of all villages, shopping and commercial areas in the new town, and clearly led to successful projects, as some consultants acknowledge:

*”Within the company business plans dictate when things will happen and market research helps them decide what kind of things will happen, when and where. Then consultants are brought in and they begin the planning process. There are a lot of people involved in the process: civil and traffic engineers, marketing consultants, land planners, landscape architects and some architects”.*

*(Interview #14, Landscape Architect)*

*“It is part of the job that everyone has to sort that out and come up with the best answers. It is an interactive process and it does do the job and it often ends up with a very good result that solves most of the issues out there. The end result may not make everyone happy, but it solves the issues”.*

*(Interview #14, Landscape Architect)*

Former TIC president Ray Watson described Irvine’s unique planning as quintessentially democratic, a process where every department had equal voice and every issue was discussed, argued and evaluated against the broader goals of community identity (Watson, 2005). The development of the TICMAP (The Irvine Company Coastal Community Multi-agency Planning) illustrates such iterative, multi-disciplinary process. The plan refers to the controversial



development of TIC land located along the Pacific Coast Highway between Newport and Laguna Beach, which came to a positive conclusion once the “team-process” was set in place. By being involved in a process as actors, rather than evaluators, representatives of Newport Beach and Laguna Beach, initially opposed to the development of the coastal areas, were able to be heard, resulting in a plan swiftly approved and satisfying both developer and future users’ interests (New Worlds, 1976).

Regardless of the specificity of each project, the planning process of every Irvine village begins with the careful evaluation of environmental qualities, first and foremost the topography of a site, its views, and its imageability. This is consistent with the landscape role as a key element in Irvine’s planning. As an Irvine Company employee suggested:

*“The process is pro-active rather than reactive, meaning that the developer is good at creating a vision for a place that is connected to a regional identity and that influences the local project.*

*How does it all look, how is the open space connected, the hierarchy it creates are all driving factors. It is never residual, it is a primary concern we spend a lot of thinking around that. The vision comes out of the site, its topography, constraints, straightforward landscape architecture and planning methods”.*

*(Interview #29, Irvine Company)*

### 3. Irvine’s urban design principles and the implementation plan

Irvine’s first urban design policy dates back to 1977, six years after the incorporation of Irvine as a municipality, when the municipality hired the leading landscape architecture firm Wallace, Roberts, McHarg and Todd (nowadays WRT) to produce a document summarizing urban design and environmental design guiding principles for future villages and offering a normative framework for the evaluation of TIC plans. The document became an integral piece of the new general plan also being developed at the time (UD Implementation Plan), the publicly amended version of the master plan adopted by TIC years earlier (fig. 9).

Ian McHarg’s task in drafting a new urban design plan was relatively straightforward. For years The Irvine Company had been using internal guidelines to guide urban design and village planning decisions (interview #15). These guidelines promoted an approach that recognized the scale of the village as a fundamental unit of urban development. Within the design of a village, streets and arterial roads played a particularly important role as instruments for city design. The importance of roads as place making tools had also been established at the time of the first Pereira Master plan, which had introduced the practice of orient arterial roads toward natural or man made landmarks. This in return provided an experiential framework for urban expansion and a tool for the promotion of a stronger citywide imageability (UD implementation plan, section 3). In addition to adopting existing policies, the plan was expected to lay out a vision for the future of Irvine and establish long term development goals based on a more balanced consideration of ecological concerns, as was expected of Ian McHarg, who had distinguished himself as an ecological designer.

The UD Implementation plan process began with the analysis of the existing conditions, and the establishment of an intermediate milestone for Irvine’s development identified in the year 1985. The plan outlined many of the shortcomings with the current development patterns and offered both short term and long term strategic solutions:

- a) The identification of a potential site for a future Town Center, found at the intersection between the Alton Parkway activity corridor and Jeffrey Road;
- b) The relocation of a north-south green corridor from Jeffrey Road to a new area to the east of the city, corresponding with Peter's Canyon;
- c) The creation of civic gateways at each point of entry into the new town;
- d) The establishment of special urban design districts for hillside development, where particular care would be required in the site and landscape design;
- e) The strengthening of the physical and metaphorical connection between the University of California, Irvine campus and the rest of the new town.

Of the many recommendations made by McHarg's team, few were adopted or incorporated into future development plans.<sup>5</sup> Many of the proposals may have appeared too radical a departure from William Pereira's master plan and did not take into account Irvine Company's established visions of what Irvine would grow up to be. For instance, the proposal to create a new town center at the end of the Alton activity corridor was in direct contrast with an ideological rejection of the 'downtown' concept and with an established vision of Irvine as a polycentric city, with specialized commercial centers located at the Irvine Spectrum to the south, Irvine business district to the north, Fashion Island to the west and Tustin marketplace to the east. Similarly, both the City of Irvine and TIC rejected the idea of shifting the north-south greenway from Jeffrey Road to Peter's Canyon, although it took years for the plan to finally be implemented. After a long community consensus process led by TIC, City staff and the SWA Group, a landscape architecture consultant, the planning for the Jeffrey Greenway was completed in 2004, and its middle portion opened to the public in late 2006.

#### 4. Urban design-based marketing on the Irvine Ranch

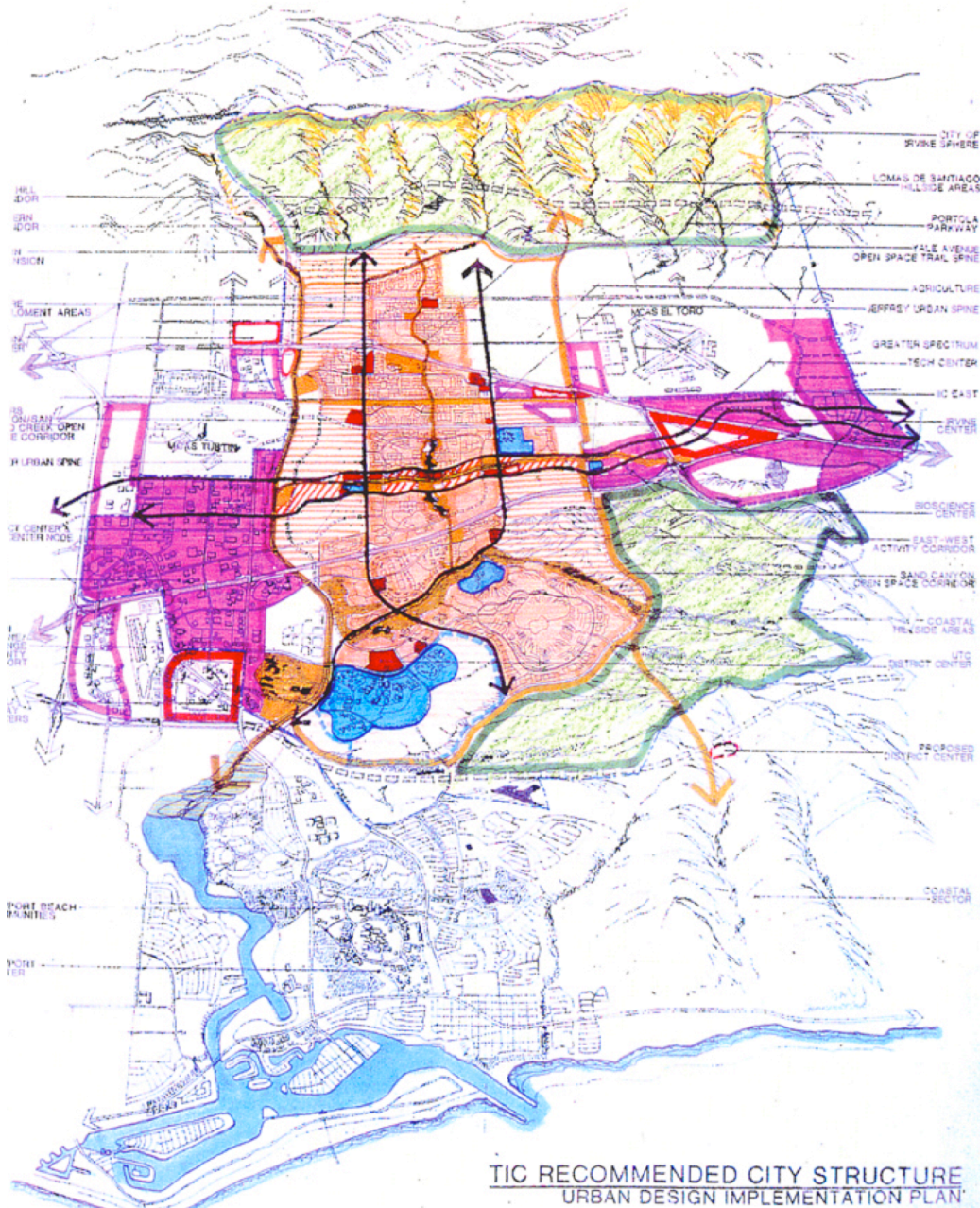
*"Part of what we began to develop in the Irvine Company [...] is market segmentation. We did research in this. We did focus studies. We did sale studies [...], we interviewed people as they came to the sales offices of the different developments and [asked them] "where did you hear this? What paper did you read this in?"*  
*(Watson, 2005, pp. 223-4)*

A unique aspect of The Irvine Company's urban design approach consisted of its use as a promotional marketing tool. Anticipating the contemporary discussion on city imaging (Vale and Bass Warner Jr., 2001), the Irvine Company General Plan: Urban Design Element outlined a set of urban design principles that aimed at creating an imageable and pleasant environment, but adjusted them to fit the needs of the company's marketing department, which in return used surveys and focus groups to continuously gauge residents and perspective buyers for changes in taste. Half way between a zoning document and a marketing publication, the plan identified five operational levels starting with the region and ending with the streetscape and signage, and explained how the company intended to fight sprawl, its visual monotony and loss of identity.

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<sup>5</sup> The recent development of a comprehensive signage system along the freeways and at key civic gateways recently completed by Irvine Company staff fulfilled one of McHarg's suggestions.

City of Irvine  
Urban Design Structure



**Figure 9 Ian McHarg’s proposed UD framework for Irvine (source: Robert Donnembrink)**

*The regional and sub regional landscape*

The nature of the urban design guidelines as a hybrid between a marketing brochure and a planning document was particularly apparent at the regional level, where urban design and landscape architecture needed to preserve and enhance the Southern California and Orange County’s ethos, a reference to the region’s aesthetics and peculiar outdoor-oriented lifestyle. The key strategy was the use of architectural and landscape references in marketing campaigns in

support of urban design solutions that would reinforce the identity of Irvine: “In subtle ways buildings, projects, neighborhoods, villages, districts and cities should somehow recognize and reflect certain things that people will associate with the region’s culture or inherent attributes. In Southern California, this would include the value that people place upon recreation and leisure time activities, which is fostered by the region’s mild climate” (ICDC I, p. 5).



**Figure 10 Imageability at the city level  
(photo by author)**

### *The city level*

One of the most difficult tasks TIC faced was the need to create an almost instantaneously memorable place, one that would resonate in the lives and minds of its residents. During the 1960s and 70s many urban designers began to investigate the issue of “imageability” as a proxy for identity (Southworth and Ruggeri, 2010). Research by MIT professor Kevin Lynch (1960, 1976, 1981) and his former student Donald Appleyard (1965, 1976) attempted to find a normative framework for the achievement of imageability in urban design. Following that framework, TIC planners aligned roads on axis with natural or built landmarks (fig. 10), planned districts around geographical features, introduced green buffers along village edges, and preserved agricultural windrows as major pedestrian linkages between them. Such imageable infrastructure of urban design elements would facilitate residents’ wayfinding, create a meaningful urban experience, and ultimately result in clear mental maps of the city and its natural context (ICDC I).

*“We do know from surveys that we have done [...] that the village idea has really taken with them. They like the sense of community—a neighborhood community [created] by the work that Kevin Lynch taught us, making strong edges, entryways, identifiable where you are and also that the mixture within it is more than just all single-family detached houses. There are some apartments in it, townhouses in it, there’s the shops and the stores in it. They liked that”.*  
(Watson, 2005, p. 381)



### *The district*

The urban design plan defines a district as a collection of villages sharing similar characteristics. It suggests that at the scale of the district, urban designers would be mainly concerned with creating and reinforcing focal elements around which to organize the villages (fig. 11). In the early Irvine communities of University Park, Turtle Rock and East Bluffs, the presence of elements like the campus, natural rock outcrops, and the Newport Back Bay served as unifying elements in the planning of new districts, and inspired the naming of neighborhoods and their streets.



**Figure 11 Focal elements add distinctiveness to each Irvine district  
(source: SWA Group)**

The presence of natural and man-made landmarks within the city's districts Irvine reinforced by naming strategies that would create an immediate sense of identity, for instance by using terms like "bluffs" and "ridges" in village names. This strategy was a direct re-interpretation of Kevin Lynch's "imageability" theory by the Irvine Company's marketing department, and predated the recent discussion on social imageability (Stokols and Shumaker, 1981). For example, reference to an imaginary "woody" character reinforced the conceptual connection between the villages of Woodbridge and Northwood, built during the 1970s and 80s, while also offering the company's marketing department opportunities for the positioning of each village (ICDC I).

*When you buy there you buy into an image. This is all for marketing reasons. It would be apparently less successful if they did not do it.  
[TIC] spends an amazing amount of time naming things.  
(Interview #11, Irvine planner)*

### *The village level*

*“[The] big fear we had [...] was this sense of suburban sprawl—everything looking alike, oozing its way out there, and you have no identity of where you live. Because [...] there is something comforting about living in a well-defined community. I call them small little towns. As a matter of fact, most of the old historical towns are very small--about 20,000 people. Woodbridge is 25,000 people. So it’s easier to visualize it as an identifiable part, and at some point, if it gets too big without having an edge, it oozes over and you lose the identity of your community”.*  
*(Watson, 2005, p. 380)*

The Irvine Company defined a village as a walkable, self-contained urban unit. At the village level, urban design and landscape architectural elements would contribute to a cohesive psychological, thematic and functional identity” (ICDC I, p. 3). Green “edges” would act as buffers between homes and roads, while also enhancing the identity of each village. In Westpark, a “Mediterranean” palette of palm trees, Italian rock pines and birds of paradise reinforced the Southern California “ethos” and reminded of a lifestyle centered on outdoor living. In Woodbridge, the highly visible village edges were complemented by the presence of artificial lakes, which would provide cohesion, and contribute to the shaping of its unique identity (Watson, 2005). The importance of the village edge is still stressed in the most recent residential communities. In Woodbury, the Jeffrey Greenway, a linear park flanking the village to the east is essentially an enlarged rights-of-way (up to 350 feet in width), which acts as framework for the entire village and announces its presence to those driving along Jeffrey Road.

### *The neighborhood level*

Irvine Company’s urban design guidelines described the neighborhood as “a collection of buildings” characterized by “a certain level of compatibility” (ICDC I, p. 3). Such compatibility would be achieved the repetition of architectural forms, decorative details and urban design elements. This vague set of principles requires an explanation. First, TIC officials rejected the use of the term neighborhood, focusing instead on the “village” concept, which had a more positive flavor and was reminiscent of quaint, New England communities. This was not just a matter of semantics. In the eyes of TIC officials, the term “neighborhood” was loaded with negative associations to the sprawl of Southern California. Moreover, the Irvine Company considered the scale of the neighborhood to be too small to be effectively marketed and implemented (ICDC I).

The distinction between village and neighborhood and the marketing efforts directed at the promotion of Irvine as a series of interconnected villages made of smaller, less defined neighborhoods centered around schools and retail centers seem to resonate in the residents’ place identity. The term village is used in the narratives of residents as one of Irvine’s unique traits. By dividing Irvine into villages, not neighborhoods, TIC was able to successfully position the new town vis-à-vis other less exclusive locales in Southern California.

*“In every village [...] there was an elementary school within the neighborhood. It was wonderful that children could walk to a safe school within a safe cocoon area and that helped them develop a sense of attachment and identity. That is what really drew me”.*  
*(Interview #30, Woodbridge female resident)*

*“As packed as we are you can walk out of the door and within a block be in a relief area. If you go to other communities south of here and it’s just a sprawl [...] even though places have different names, there is not a village concept and you have to drive a half hour to go to a grocery store, versus a mile. Here I have three grocery stores within a mile”.  
(Interview #6, Westpark female single resident)*



**Figure 12 Entry sign in the village of Westpark  
(photo by author)**

### *The Streets and signage level*

Streetscape and signage constituted the smallest level of implementation of the urban design strategies. The right of way of Irvine streets was to be wide enough to accommodate a dense, well-designed landscape edges and paths, which would translate into clear mental maps of the city according to TIC’s reinterpretation of Kevin Lynch’s theory. Most of all, streets and signage were tools for the definition of a “superior living environment”. Extensive research went into the selection of signage and environmental graphics in support of, and respectful of village identities. Within the Irvine Company, a department was created to control the application of signage policies (ICDC II). Today, Irvine Company signage is used to market villages, direct buyers to retail centers, advertise future development or promote space preserves and has become an integral part of the landscape of Irvine: street lighting, street furniture and landscaping facilitate residents; wayfinding and makes Irvine more distinctive (fig. 12).

## 5. Irvine, the “live and work” community

*“When I came down, [Orange County] was suburban in the sense that people lived here but commuted [...] to Los Angeles County to work. Today, because the pace of housing growth has not kept up with the pace of job growth, we have more jobs here on a pro rata basis than we have residents.”*  
(Watson, 2005, p. 173)

Demographers Robert Lang and Jennifer LeFurgy (2007) have placed Irvine among the top “boomburbs,” a term they used to describe a suburban community experiencing unprecedented population and job growth. Similarly, others have called it the quintessential “edge city,” (Garreau, 1991),<sup>6</sup> an expression used to indicate suburban communities situated along major transportation corridors where the office, retail and commercial space greatly outnumbers residential development. Similarly, Dana Cuff (2003) has used the term “cyburg” to describe suburbs with a concentration of high tech jobs. All of these categories seem to be particularly fitting in describing Irvine and its regional context.

Indeed, Irvine has been ranked among the fastest growing cities in the country both in terms of population and jobs. According to 2000 census data, the Orange County community ranked sixth as the fastest growing metropolitan area (source: City of Irvine web site). Irvine’s success is not accidental. It is the result of a carefully manipulated balance of housing and jobs promoted by the Irvine Company. Beginning with the decision to lobby with the University of California to establish here a new campus, the Irvine Company helped companies relocate their operations within the territory of the new town. These companies helped create thousands of precious white-collar jobs, and in return would find here a developer and a municipality that would expedite the development and permitting process, an appealing landscape, high-quality housing, and plenty of recreational and shopping opportunities for company officials and workers alike.

*“We have been lucky to have affordable housing, but the other thing that drives it is the housing to job ratio. You don’t want to build a lot of homes if you do not have job development. We want a live and work type place. The TIC motto is live, work and play. The first time we saw that it was a magazine that came out of a Sunday paper: ‘Live, work, play and shop,’ that is it”.*  
(Interview #37, Irvine planner)

*“[The] city has done a good job at balancing residential and the job market here. They developed the spectrum that has a tremendous amount of job opportunities for people, so people can live and work in the same community, and they seem to be willing to pay the price”.*  
(Interview #13, Woodbridge resident and professional)

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<sup>6</sup> Edge cities are usually defined as places of recent vintage that have a strong identity and can count more than half a million square feet of office space, more than 600,000 square feet of commercial and retail, a positive job to housing balance,





**Figure 13 A view of Tustin Air Force Base hangars from the Irvine hills  
(photo by author)**

#### 6. The Influence of the Military industry on Irvine

*“El Toro was carved out of the [...] original Irvine Ranch in 1943, when it was condemned by the federal government to build a marine air force base [...]. El Toro then became a major training base for the marine flyers, and coming out from that base there was noise zones created which prevented us from building housing on the Irvine Ranch within those zones, but we accommodated. We built the Spectrum is in that zone. That’s the reason there was no residential in there. Now that they have been both declared surplus and are being sold, we are able to put residential into Spectrum”.*  
*(Watson, 2005, p. 302)*

Among the many forces that contributed to Irvine’s economic success was the discreet presence of the military industry. After the beginning of WWII, the government requested that 2318 acres would be requisitioned from the Irvine company for the establishment of two military installations, the El Toro Marine Corps Base and the Tustin Air Field (fig. 13), with hangars to house blimps (Cleland, 2003). A first hint of the military influence on Irvine came from the appointment of Eisenhower’s secretary of the Navy Charles S. Thomas as sixth president of the Irvine Company. Thomas oversaw the development of Pereira’s master plan, the opening of the University of California campus, and the move of the Irvine company headquarters to Newport Center (New Worlds, 1976). The military sector provided a strong economic base and contributed to putting Irvine on the global map. The suburbanization of military-related industrial plants was not unique to Irvine, but rather a part of a national trend. As historian Margaret O’Mara (2007) explains, during the post World War II period, companies working on military commissions found the landscape of suburbia the ideal location for their highly skilled workers (many of whom were of foreign origins—Korea, Japan etc). This landscape acted both as a visual reminder to immigrant scientists and their families of the American dream, while also providing a sense of privacy and safety (Mozingo, 2003).

*“Irvine had two active military bases on both ends of the city. It was a very different environment. When I first moved here the military influence was huge. El Toro probably had 1,000 troops”.*  
*(Interview #5, Northwood resident)*

While they were built on Irvine Company land, the military bases—Tustin Air Force base to the North and El Toro to the south—did not physically affect the growth of Irvine, as they were located at the very edges of the ranch. However, having been established before the new town was even planned, these bases did contribute to promoting development in neighboring cities and in attracting early employers and businesses. Immediately after World War II, residential construction boomed in small centers like Santa Ana and Tustin to the north and Lake Forest to the south as housing was built to provide for the families of military personnel and industrial workers.

*“They were built to support the military. The other area was down on El Toro. You can still see large apartment complexes that were built in the middle of nowhere well before Irvine or other nearby communities were built”.*  
*(Interview #5, Northwood resident)*

#### 7. Irvine and UCI: the gown without a town

*“I have no misgivings about the fact that we were fighting for that campus to get the benefits of the largeness of the company, and it is a unique relationship. The company did give the land and it did sell this land less expensively, and if it benefits that university, it will benefit the whole community”.*  
*(Watson, 2005, p. 342)*

Founded in 1965, The University of California, Irvine—commonly referred to as UCI—has established itself as a premier university, ranking 13th among American public universities and 44th among all universities in the US (University Communications, 2007). The 40-year-old history of the University is deeply intertwined with the vicissitudes that led to the creation of a new town. In donating the 1,000 acres needed for its planning, the Irvine family was well aware that the establishment of a new university would be critical to the success of the new town. During the early years of the new town, the life of the University and that of Irvine went hand in hand. Many of the early residents were connected to the University either as professors, staff, or family of students. Interviewees talked vividly about their memories of those early years and described UCI as a rural university, accessible only by dirt roads and surrounded with cow pastures and agricultural fields. A few remembered their reactions as they first visited the campus, and the skepticism toward the success of what seemed like a small rural university:

*”When my son went to UCI’s medical school, back then Irvine was all-new, so was the university. I remember asking him: how did you find this place? My opinion was like: no one knows about this place. He was at USC, and everyone knows about it. But it was hard to get into UCI and I accepted it”.*  
*(Interview #16, Westpark elderly female)*

*“I went to UCI from 1984 to 1986 and it was like country. That was not that long ago, but that is the change that occurred over 20 years. When I went to UCI there were cows on the hills nearby. It was almost like a small town and I used to think people did not know where UCI was”.*  
*(Interview #41, Woodbridge young mother)*

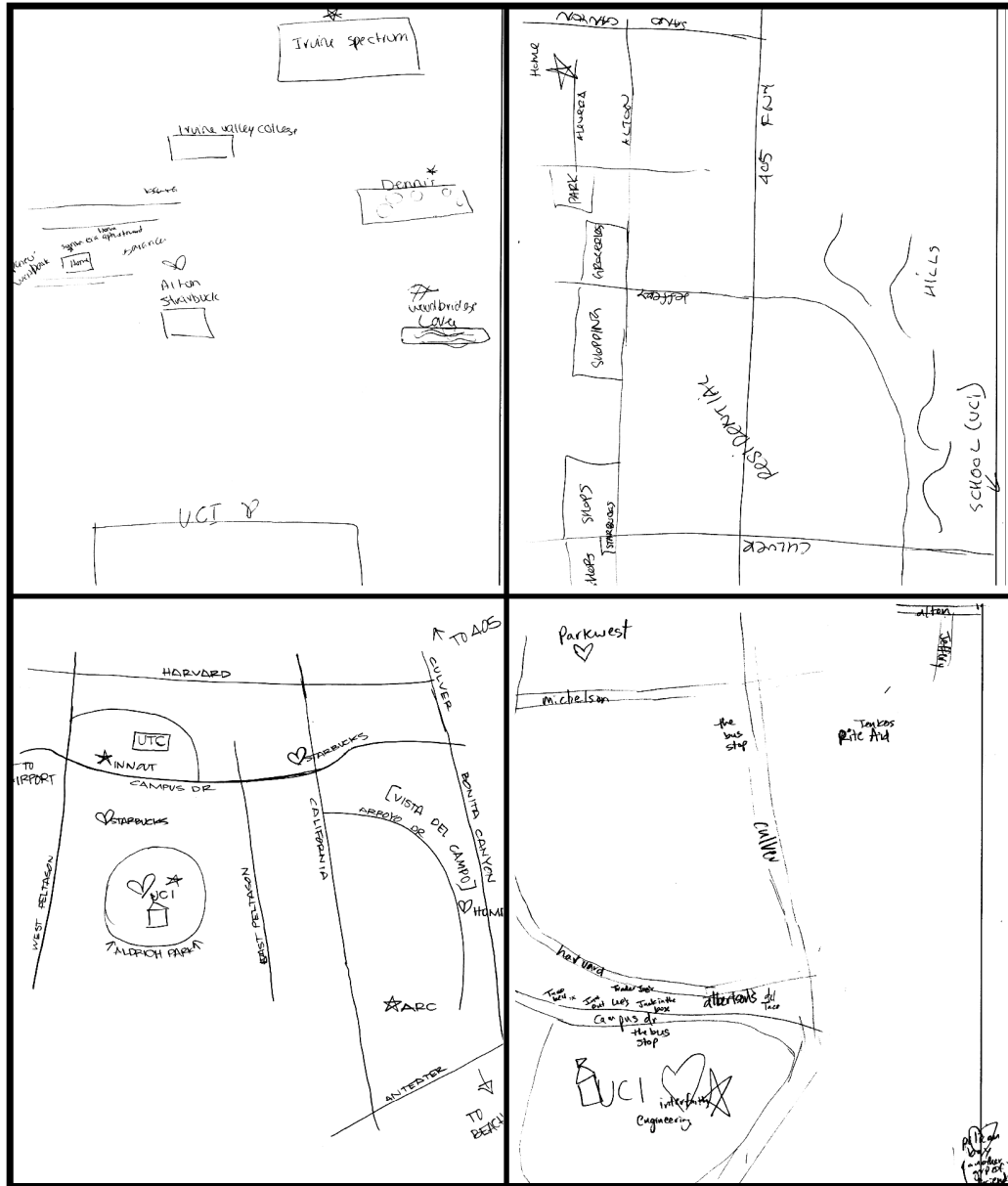
Over the years, despite the academic prominence it has achieved and the excellent students and faculty it attracted, UCI had remained somewhat disconnected from the life of the new town it helped establish, and has not manifested the “town and gown” dynamics, both positives and negatives, typical of many other college towns in the United States. During the early years as a city, the vision that many shared of the future of Irvine was that of a city deeply connected with the university campus. This was supported by the physical location of a town center directly adjacent the campus. In the intentions of William Pereira, the positive feedback between the university and the numerous industrial and commercial activities of the Irvine Business District would play a key role in the establishment of the new town’s identity.

Completion of the University Town Center did not occur until the late 1970s. The local magazine “New Worlds” welcomed the long-awaited completion of the town center as the definite resolution of town and gown fracture in Irvine (New Worlds, 1976). Albeit for a short time, the town center did play a role as the heart of the new town. The Irvine Company briefly established its headquarters there, and in December 1971 the first City Council meeting was held in one of the town center’s towers. However, due to student protests associated with the free speech movement and to a fire bombing of a Bank of America branch, TIC was forced to relocate its headquarters to Newport Center and the municipality began to consider other potential sites for a City Hall (Watson, 2005).

A major policy change occurred in the late 1970s, when it became clear that the land set aside for the university new town was insufficient to cover the demand for new housing, retail and industrial uses. In addition to supply and demand concerns, the turmoil that shook the foundations of the University of California system during the late 1960s became another source of major concern for Irvine Company officials. Fearing a backlash on home sales, the company decided to shift its center of gravity to the areas north of the 405 Freeway, on the farmland that once contributed to the Irvine family’s fortune. Rather than one center, the company envisioned the presence of a linear “activity corridor” (avoiding the term “downtown,” for fear of creating unappealing associations with the downtowns of Los Angeles and other traditional cities). The activity corridor would disperse commercial and public uses along an east-west stretch of land wedged between by Alton and Barranca Parkways, in a safer location away from the university campus.

The decision to shift the center of the new town to the central areas of the ranch had important consequences in terms of place identity. While in the beginning Irvine residents recognized the University as a key player in the new town, gradually the university took on a secondary role in the life of the community. This is reflected in the opinions of the resident: open-ended survey responses included only minor references to the presence of a world-class

university. While only one out of ten Westpark residents described Irvine as a college town, residents of other villages did not seem to consider the university as a distinctive feature in the city at all. Residents also showed a degree of uncertainty toward the status of the University and its national ranking, while only a handful of interviewees credited Irvine’s diversity to the presence of the university population, correlating between the large percentage of Asian American residents in with city and the reputation of the University.<sup>7</sup>



**Figure 14 UCI students' maps illustrate the separation between “town” and “gown”**

<sup>7</sup> An interviewee speculated: “Asian people were attracted by the UC system. This is what attracted Asian people to Irvine. UCI has a large Asian student body and it could be that the students moved here and their families followed them” (interview #15).

In this study the relationship between Irvine and its college students was investigated through cognitive maps drawn by a group of UCI students enrolled in an introductory environmental psychology course led by professor Daniel Stokols. Not unlike all other Irvine residents, when asked to represent things they liked the most about their community, UCI students drew maps whose boundaries barely extended beyond the confines of the campus (fig. 14). Some included the freeway and arterial grids, but very few indicated any sense of belonging or even a superficial knowledge of other parts of Irvine, like the Woodbridge lakes, the village centers, or its city parks.

Overall, the maps clearly illustrate the high levels of segregation experienced by UCI students and residents. This separation was exacerbated by the decision to shift the center of the new town to the central areas of the ranch and by the many phases of expansion of the city to the north. The physical and cultural separation between campus and city that resulted from these planning changes ultimately denied William Pereira's dream of a new town that would have thrived from a healthy and continuous interaction with academia and had enormous consequences on the resident's place identity.

#### 8. Irvine and farming

*“With the annual spring roundup as one face of the past and with the planned community as one facet of the future, the ranch, as it approaches its centennial [1962] continues to keep a multilevel rendezvous with history. Its long rural traditions will inevitably bind it for decades to come; but the impact of change is already felt on the land”.*  
(Cleland, 156)



**Figure 15 Remnants of the agricultural past against Irvine's modern skyline  
(photo by author)**

This quote from a 1962 history of the Irvine Ranch, predicted that agriculture, an essential factor in the establishment of Irvine as it was in those days, would have remained an

important force in the future of the new town. Indeed, agriculture had been an important presence on the ranch, and a source of pride for the Irvine family, whose ranch had long been recognized by the state government as the most productive farmland in California. Irvine oranges were exported as far as Japan and even Italy, and the city was once the largest producer of lima beans in the United States (Watson, 2005). Much work was involved in promoting new technologies, new machinery (most of them developed in cooperation with the University of California agricultural station) and in the establishment of “vertical farming,” i.e. the diversification of crops that was intended to minimize risk in case of pests or decline in productivity (Watson, 2005).

Given this important legacy, one wonders how TIC could have transformed into a development company so quickly, and what kind of influence agriculture had on the physical transformation of the Irvine Ranch into a planned community (fig. 15). First and foremost, what transpired from the interviews and from archival research is a “pragmatic” role played by the agricultural operations, which contradict many of the official statements made by TIC and its marketing executives. Although TIC made continuous references to the agricultural past in its marketing brochures,<sup>8</sup> agriculture was nothing but a temporary solution and a tool for saving the company money. Under the Williamson (California Land Conservation) Act,<sup>9</sup> land set aside for conservation or agricultural purposes could be spared high property taxes, thus resulting in considerable tax savings for TIC on land that was essentially urban. The law required that land be taken out of conservation for the purpose of building on it, which explains why the process of planning villages in Irvine always began ten years prior to their construction (Watson, 2005). In addition, TIC owned land in other parts of the country, and was able to transition to urbanization in a fairly short time frame:

*“As urbanization came along and fields we had to take out—we got a lot of criticism for taking asparagus out, [the local people] loved it. [...] They liked living across the street and seeing farmland [...]. So we started cutting back on a lot of agriculture, just cutting it down. It wasn’t worth doing, to keep it alive for long. It [would be] several years before we were going to even need to do it. Agriculture was used as a temporary solution, as a way to either pay less taxes, justify losses, or make money at times”.*  
(Watson, 2005, pp. 141-2)

A second source of influence of agriculture on the physical planning of the ranch came from the organization of the TIC and its farming operations, which involved the concerted efforts between hundreds of farmers and supervisors. During the agricultural phase of its history, the ranch was used as a ground for the testing of new crops and techniques for fighting pests and diseases. The Company worked with the University of California’s field station to improve the productivity of its crops, and engage in continuous adjustments to their practices to react to challenging times (Watson, 2005). In *The Irvine Ranch* (2003), historian Robert Cleland described the experimentation in farming operations in military terms:

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<sup>8</sup> See page 32 for a discussion of early marketing efforts by TIC.

<sup>9</sup> For more information on the Williamson Act, see [www.conservation.ca.gov](http://www.conservation.ca.gov).

*“Thus a complicated transitional process goes on, and, like a military operation in modern warfare, it moves on many fronts. As walnuts are phased out and as “quick decline” [of oranges] claims its toll, new orange stock is planted and in more intensive patterns”.*  
(Cleland, p.142)

Much like TIC’s farming operation, massive yet flexible and quick in responding to emergencies, planning on the Irvine Ranch was designed to respond to changes in taste and global economics. Based on this process certain crops were tested, employed and abandoned when they proved to be no longer productive. Similarly, in the planning of Irvine, strategies and aesthetic approaches that proved unsuccessful in attracting buyers would be discarded in favor of newer, more marketable solutions. Over the years, this incremental, adaptable process has remained part of Irvine’s DNA and it is recognized as one of Irvine’s traits of uniqueness.

*“The size of the ranch allowed us to experiment and learn from what we did [...] our success would be judged by those who lived and/or worked there”.*  
(Watson, 2005, p. 169)

The previous chapter highlighted the unique characteristics of Irvine’s identity seen through the lens of the interviewees’ responses. Together with the physical form of its villages, these factors were instrumental in shaping Irvine’s place identity and continue to have tangible effects on the daily lives and experiences of Irvine residents. The following chapter illustrates how the interplay between these factors influences the residents’ place attachment.



### Chapter 3

## URBAN DESIGN, PLACE IDENTITY AND ATTACHMENT

#### **a) Research goals: the place identity gradient**

The previous discussion has attempted to frame Irvine and its identity through the analysis of the factors that influenced its current form. In particular, the discussion highlighted the key role that urban design played in the shaping of Irvine's physical environment. This dissertation attempted to go one step further and study how this very unique type of physical and social environment may in return have generated a very unique sense of place identity in its residents. Researchers from all fields have recognized the importance of place identity in terms of the effects that places play in residents' identities, the way they describe their community, and the sense of belonging to a social unit it helps generate. Whether it is expressed as cognitions about the physical environment (as in Proshansky's definition of place identity), or as its ability to be "imaged" by its residents (as in the literature on imageability), the objective of this study was to uncover the multiple ways in which Irvinites relate to the physical environment of their villages, and how the landscape is used to describe who they are as individuals and as community members.

The definition of place identity used in this study is multifaceted, and includes emotional attachment, place satisfaction, legibility, and social imageability (Stokols and Shumaker, 1981). The assumption is that place identity is expressed as a "gradient" of the many dimensions of the person/place relationship, and that it is from the coming together of these dimensions that place identity generates, similar to a "gestalt," a psychological construct that posits that "the whole is more than the sum of its discreet parts" (Hester, 2006; Southworth and Ruggeri, 2010).

A corollary to the discussion of place identity is the notion of place attachment, which the literature links directly to a positive place identity (Proshansky et al, 1983; Korpela, 1995). As individuals identify with the places in which they live, work or recreate, they also develop a bond with them. As environmental psychologists and sociologists have shown, place identity is a fundamental prerequisite to place attachment. The stronger one's attachment to a place is, the more difficult it is to leave, and the easier it will be for a resident to develop a sense of stewardship. The literature has found ample evidence that higher attachment (and higher identity) leads to more environmentally sound decisions and a more sustainable society (Opotov and Clayton, 2003).

In light of the discussion in the previous paragraphs, this study set out to ask two fundamental research questions:

*Question 1.* Does urban design have an effect on residents' place identity and attachment? To research place identity and attachment of Irvine residents to the new town, this research identified three villages in Irvine that differed in their planning and urban design,<sup>10</sup> and attempted to highlight whether these differences emerged in the descriptions that residents gave of the place and themselves. In researching this question, this study looked for changes in patterns or subtle differences, rather than very sharp differences.

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<sup>10</sup> Urban design here is defined as the confluence of landscape architecture and planning. In particular, this study tests whether urban design "imageability," as it has been interpreted in Irvine had any discernible consequences on residents' place identification and attachment.



This research found clear indications that differences in the way places are designed and planned lead to idiosyncratic individual results, but when looked at holistically they do not contribute to significant differences in place attachment levels across different villages.

*Question 2.* If a positive correlation between place identity and urban design does exist, an important issue becomes the maintenance and stewardship of this positive influence. What emerged from this research is a difficulty on the part of the residents to deal with an environment that changes at a pace and in ways that differ greatly from the ways in which their lives change. In other words, many Irvine residents live in a fairly static environment, maintained through very strict rules and regulations. This ultimately results in frustration, loss of place identity and place aversion for some, while others' place- identity is so strong and intertwined with the place that they are content with maintaining it the way it is, unchangeable and untouchable (fig. 51).

Directly linked to the discussion on place identity and attachment is a tertiary question related to the sustainability of this place identity over the years. Are Irvine's *overly designed* landscapes and its urban design framework truly sustainable in the long run? What are the challenges that emerge from the need to sustain this designed landscape and maintain it according to the original design? These challenges and their influence on the life of Irvine as a community are highlighted in the final chapter of this dissertation, where future challenges and topics of investigation are introduced.

## **b) Research design**

### 1. Pilot survey

In its final version, the survey mailed to Irvine families was the result of a process of refinement that began in the summer of 2006, when a pilot survey was given to a group of 15 residents of Orange County. The survey contained a number of questions organized into 4 groups: 1) place identity; 2) place satisfaction and imageability; 3) social imageability; and 4) social capital-community life. The intent was to understand the questions' validity and suggest how these may be grouped into a place identity index that would allow comparing and contrasting the results across the three villages representative of the stages of Irvine's urban development. In addition, demographic questions were added to the end of the survey. In addition, the pilot survey included a cognitive mapping exercise, which asked residents to draw their village following a step-by-step process beginning with places of personal value (place identity), places visited on a regular basis and places of particular relevance to the community as a whole.

Overall the pilot survey took over an hour to fill out. When asked to give feedback, respondents mentioned the length of the survey as one of the drawbacks. Moreover, a few questions proved to be redundant, while others needed to be rephrased. In particular, the pilot survey revealed inconsistencies in the use of words like community, village, and neighborhood, and some problems with redundancy. One last comment had to do with the overall graphic organization of the instrument. Pilot survey respondents suggested that the survey be "tightened" to appear shorter, less intimidating and time consuming.

### 2. The survey instrument

Following the pilot survey, the effectiveness of each measurement was evaluated. Redundant questions were stricken or consolidated, and particular care went into the identification of key measurements employed by other researchers in the field. The comments

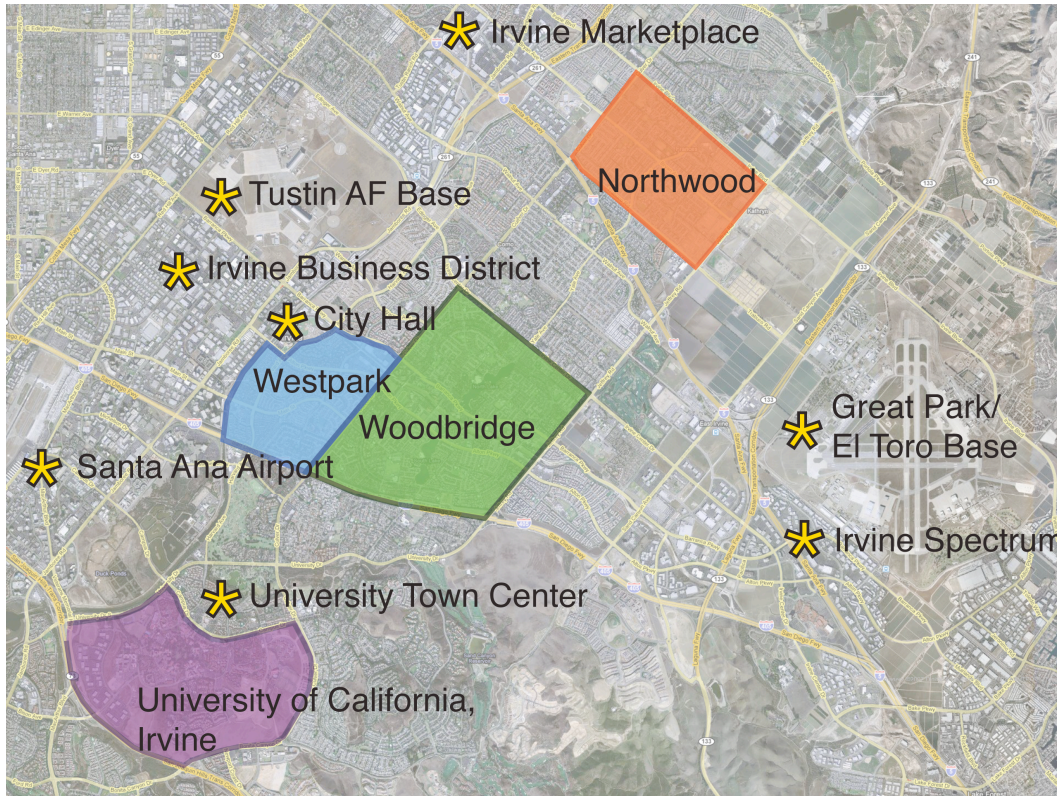
received from pilot survey respondents and the results of the self-assessment were incorporated into the crafting of the final instrument.

The final survey consisted of two 11x17 sheets, with questions organized according to thematic groups (place identity, place satisfaction, legibility, social imageability, social capital, community life and demographics). A release form and an introduction explaining the general goals of the study opened survey instruments, while last page featured questions on demographics and asked respondents to check a box if they agreed to participate in follow-up interviews. A copy of the survey can be found in appendix.

The bulk the of survey consisted of Likert scale questions, which asked respondents to rank a statement with a score from 1 to 4, where one indicated strong agreement, and four indicated strong disagreement. The numeric scale was adopted after consultation with a representative from the U.C. Berkeley Survey Research Center in order to discourage respondents from giving neutral answers (for instance by choosing 3 in a 1 to 5 Likert scale). The survey included open-ended questions and checklists, inspired by Kenneth Craik's "environmental attributes" checklist (Craik and Feimer, 1987). Open-ended questions intended to provide for richer and more detailed descriptions than the ranking ones, and capture some of the reasons for the scores given to each statement. Checklists were used to assess the environmental attributes that contributed to the distinctiveness of a village, which is often considered as a measure of place identity by many in the urban design and planning fields. In developing the checklist of environmental features, careful consideration went into providing a spectrum of features ranging across landscape architecture, architecture, urban design, and planning neighborhood elements.

The survey questions were organized into five different groups. The first group tested place identity, identification and the fit between people and place. All of these measurements have been found to have an influence on residents' identity and have proved successful in measuring place identity. A second group of questions referred to place satisfaction and accessibility, defined by Korpela (1995) as "self regulating" mechanisms by which people develop a sense of attachment to places that offer them the opportunity to fulfill their needs. Emphasis on place satisfaction, privacy and needs fulfillment in this study comes from a personal perception that in suburbia attachment may be largely due to the convenience and accessibility of things. Results from interviews, open-ended survey questions and by checklists confirmed this assumption; satisfaction, accessibility and convenience have a major role in the establishment of a personal connection with a place in master planned suburbia. A third group of questions had to do with social identity. These questions were inspired by social and environmental psychology, cultural geography and anthropology researchers, who have studied the effects of shared discourses on residents' identification with a locale. The ability to have access to meanings shared by other members of a community is potentially a very important condition for the establishment of place identity. Stokols and Shumaker (1981) have called this phenomenon "social imageability," expanding on a popular *Lynchean* concept used by designers and planners. The next group of questions was intended to test the respondent's social capital levels, i.e. their involvement with the life and discourses that made up their community. Putnam (1995; 2003) and (Sander, 2003) have identified 5 factors that comprise the definition of social capital. Questions in this fourth set of inquiries were molded after those variables. Questions focusing on residents' demographics, family history, use of public space and intensity of socialization (useful in explaining variations in levels of place identity and attachment) concluded the survey and are analyzed in the appendix.

One final remark relates to the appearance of the survey, particularly the time and effort that went into the design of a survey that would be both aesthetically appealing and inviting. This resulted in the addition of colored pictures of typical Irvine landscapes chosen from each one of the three villages being surveyed. The addition of color pictures added to the final printing costs, but ultimately paid off in terms of catching the respondents' attention.



**Figure 16 Map showing location of the villages and other Irvine landmarks (illustration by author)**

### 3. Interviews

In addition to the mailing of a survey, interviews were a crucial data gathering method. During the course of this study, the author interviewed a total of 41 people including residents, planners, designers, Irvine Company and City of Irvine officials, academics, and journalists who have written about the place. The interviews were intended to complement the results of the surveys, and provide the people that participated in the study the opportunity to expand on their survey responses. Through the interviews, which lasted in certain cases for over an hour, the author was able to shed light on residents' feelings about their villages, their personal histories, the reasons for choosing Irvine as their home, questions about the values they shared with other citizens, and the importance of landscapes and urban design in their lives.

### 4. Cognitive maps

As part of this study the author asked survey respondents to draw maps of their villages, and the things within their village that they were most emotionally attached to, the places they thought were more convenient and the ones that they felt had more importance as social spots

within their community. In total, 54 maps were collected as part of this study (25 from residents of Woodbridge, 19 from Northwood and only 10 from Westpark). Cognitive mapping, a traditional method employed in research on environmental perception and imageability, offers a snapshot of the mental image of one's neighborhood as it is shaped by their daily interactions with its physical and social environment. In the case of Irvine, cognitive maps would offer us a snapshot of the residents' familiarity and knowledge of the place.

#### 5. Physical landscape analysis and observations

An integral part of this research includes the analysis of Irvine's physical environment, which represents the structuring framework for the development of a strong place identity. The theory points at a few key variables in the creation of places with a strong identity: a diversified, imageable urban fabric, a mix of land uses, a walkable streetscape, a diversified system of open spaces including the presence of natural areas and memorable architectural forms. To this end, the author developed a series of diagrams synthesizing these physical qualities, which were later analyzed and used in the discussion on the urban design frameworks of the three villages.

#### **c) Survey administration**

The survey was initially delivered door-to-door to 1000 households in the three Irvine villages of Westpark, Northwood and Woodbridge (fig. 16). The instrument (see appendix) was very extensive and included questions related to the various aspects of place identity and attachment outlined by the theories described earlier. The distribution occurred over an entire weekend in late November 2006. This initial batch of surveys resulted in a limited number of responses (21 respondents in Westpark, 22 in Northwood and 31 in Woodbridge). As a result, an additional set of surveys was mailed to a randomized sample of 300 households in the three villages, preceded by a postcard announcing the mailing of the survey. A postcard requesting immediate action was sent two weeks after the initial mailing of the survey. This increased the number of responses to a total of 125 (a total of 33 in Westpark, 34 in Northwood, and 57 in Woodbridge).

#### **d) Response rate**

Despite the multiple mailings of the survey, and changes in the delivery method, the overall response rate was very low. This may be explained by a number of factors having to do with external factors, and by challenges related to the survey instrument format and content. Below is a description of a few of those influences:

##### 1. External influences

The survey was distributed to the sample after a local round of political elections, and Irvine residents may have experienced a certain level of "survey overload". Many residents admitted to the interviewer their resistance in filling out the survey due to the large number of surveys they have received over the months. A higher response rate could have been achieved through the endorsement of local HOA associations, community groups or government officials. While the involvement of HOA associations was sought at the very beginning of this research, the absence of an HOA in Northwood and the limited engagement of Westpark's HOAs in the life of the village led to the decision to pursue an independent, door-to-door survey delivery rather than asking for assistance from the homeowner's associations.

## 2. Instrument-related challenges

In the research design stage, the author considered the idea of including a monetary incentive to the survey, to invite more respondents, but quickly abandoned it for lack of funding. This may have contributed to a lower than usual response rate. Additionally, the survey was extensive and very detailed. It asked over 100 questions, including questions on personal attitudes, community involvement, landscape preference and many more. The survey also included a cognitive mapping exercise, which may have overwhelmed the respondents. As a result, many limited themselves to the answering of Likert scale and open-ended responses, while only a minority sketched cognitive maps of their villages.

### **e) Site selection: three paradigmatic Irvine villages**

To investigate the research questions outlined in the previous pages, three villages in the city of Irvine were selected, which represented three phases of urban development on the ranch. The village of Northwood is representative of the earliest development stage, when the name Irvine still indicated an unincorporated place made up of small buildings scattered along the 5 freeway connecting Los Angeles to San Diego. “The Ranch” was the first housing development on the ranch and is often referred to as the “original Irvine” (interviews #25; #7). Early housing developments in Northwood featured ranch-style homes on large lots, segregated in residential areas zoned to limit commercial and retail sites, and fewer parks and trails if compared to later villages.



**Figure 17 Section of a residential "paseo" through the village of Woodbridge  
(illustration by author)**

The village of Woodbridge is representative of a second stage in Irvine's development, planned according to the principles laid out by William Pereira's master plan. Woodbridge was planned as a mixed use, mixed income, self-contained village, featuring a framework of paseos



(fig. 17), trails and a grid of residential streets providing maximum access and walkability. An increased sense of imageability was achieved through the introduction of two artificial lakes acting as focal elements, the design and orientation of arterial and residential streets, and the use of ornamental plants and landscaping to help orient the viewer. In the words of one of Woodbridge's original planners:

*“Woodbridge was the high point of the idealism in planning [...]. It was planned with strong visual form, strong vision, strong activity center, quadrants that have different identity and a loop road that ties it all together. It is a strong community that acts almost as a group”.*  
(Interview #14, Landscape Architect)

Compared to the neighboring Woodbridge, Westpark embodied the profit-driven development model and a radical change from the planning strategies used in Woodbridge. It featured a rigid segregation of housing types, limited open space connectivity, few public facilities, and the location of the retail/community center from the heart of the community to its edge. One of its distinctive traits was the use of the Mediterranean style—stucco walls, terracotta tiles, palm trees and other Mediterranean-inspired elements—which had been used for years throughout Southern California to reinforce its historical Mexican roots. The introduction of this new—to Irvine—formal vocabulary to replace the modernist forms of early villages marked the end of William Pereira's Irvine, with the space-age office buildings and California ranch residences, and opened the door to a new era. The following is a detailed discussion of the physical and social identity of the three villages, focusing on similarities and differences in physical form and appearance.

### 1. Northwood, a “dignified” Housing Tract (neighborhood 2)

Development in the area now known as Northwood began in the late 1950s. Unlike the rest of Irvine, these areas were developed prior to William Pereira's master plan by small developers, with low densities of 4-8 units per acre and according to minimal standards required by county planners. Northwood's first residential neighborhood was named “the Ranch” and consisted of single-family homes on large lots, without the streetscape, playgrounds and pools typical of later Irvine villages. Walkability within “the Ranch” was limited to pedestrian trails built along existing eucalyptus windrows. A few community amenities, including an elementary school, a library and a community center, were built by the County of Orange to serve the small population of self-proclaimed “suburban pioneers”.

*“When they originally started planning the ranch there was no clear idea of a village. That came later. Originally there were incoherent fragments, pieces that were not sufficient to give it a sense of place. It was not until the late 1960s that the idea of creating a series of villages came about”.*  
(Interview #14, Landscape Architect)

The interviews and survey responses reveal a place identity deeply rooted in the farming activities that until a few years ago were still active around them. Lacking much of the services and facilities that would support a more urban lifestyle, early Northwood residents enjoyed living

in a working agricultural landscape and were willing to compromise on the lack of retail opportunities and social spaces to be in close contact with what they saw as a form of nature. To many interviewees, the recent loss of strawberry fields and orange groves to residential development represents a major identity threat and one that cannot be easily overcome by the casual planting of orange trees in someone's yard.

*“When we first moved, there was an ongoing joke that you could not buy shoes for your kid in Irvine. There was a pizza parlor and an orthodontist and a strip mall. So we have seen a lot of growth. [...] In the past, when we had the fields around, we get a sense of seasons and change when they harvested. When you went places you would see green and nature, now we see houses and commercial. My thing is: we live in what was one an orange grove. They cut down the trees and overnight they planted 2x4s. And they did not even plant citrus in the backyards. When we first moved here, we could smell the orange groves, and that was what attracted us to this place. [It was] a sense of nature. Across Yale, and between Trabuco and the freeway it was all orange groves. One thing that would happen was that kids would throw oranges to you. Or when it rained a lot, you would see oranges flow down the sides of the streets”.*  
(Interview #7, Northwood old time resident)

Another unique aspect of Northwood's identity is its “anti-Irvine” reputation, which many interviewees underscored in their narratives. Residents pointed at the affordability of its housing stock, its socio-economic diversity, and to the “funkiness” of its physical environment as element of distinction vis-à-vis other villages and as key identity traits (fig. 18). Over the years, Northwood has developed a unique reputation as the most affordable solution to those seeking to live in Irvine, offering the advantages of a master planned community without the strict rules that come with it.

*“For many years that was the edge of Irvine and you heard crickets, frogs, animals. You felt like you were in the middle of nowhere”.*  
(Interview #4, Woodbridge male resident)

*“They have bigger houses and large yards but they are really run down. They still have the original owners that bought for a few hundred thousands and they are not willing to invest in fixing up the houses. But some people say that they cannot resist having the big yards and having to tear them down”.*  
(Interview #6, Westpark female single resident)

Northwood's affordability has proved to be a double-edged sword, leading to a considerable population turnover as older residents cashed in on the increased values of their homes and new ones moved into the village in search of “more square feet for their buck” (interview #11). Being the oldest Irvine village, and having been built by a number of small developers, Northwood could not count on homeowner associations to ensure the maintenance and control seen in the rest of the city. The lack of HOA regulations, combined with the availability of larger residential lots, has led to radical changes to its physical environment, as older homes have been enlarged or demolished to make room for bigger homes. Residents of

other villages fear this type of physical change, as it represents a departure from the order and cleanliness Irvine is known for.<sup>11</sup>

*“In Northwood you would see things that are not well maintained. Not many, but there are houses that are less maintained and you would not see this in other villages. This will probably detract from housing values”.*  
*(Interview # 11, Irvine planner)*

Over the past few decades, the Irvine Company has produced many plans to retrofit a cohesive visual identity and imageability into Northwood through carefully selected interventions focusing on signage, uniform plant palettes and improved maintenance. New, denser, and socially exclusive communities have begun to surround early tract housing neighborhoods. Old shopping centers have been expanded or refurbished, and new ones have been built to serve the upscale population that relocated here. Even the open space framework has been revamped. Parks have been refurbished; a new bridle trail along Hicks Canyon has been linked to the existing system of greenways and pedestrian paseos. These efforts have re-defined the identity of Northwood, but have also resulted in higher housing prices and a higher mobility among residents.



**Figure 18 Northwood, the "do -it-yourself" Irvine village  
(photo by author)**

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<sup>11</sup> When asked about Northwood, many interviewees used the “Kron castle” to illustrate the negative effects of the change taking place within Irvine.



URBAN FORM ANALYSIS : NORTHWOOD  
 IRVINE CA  
 BUILT FORM

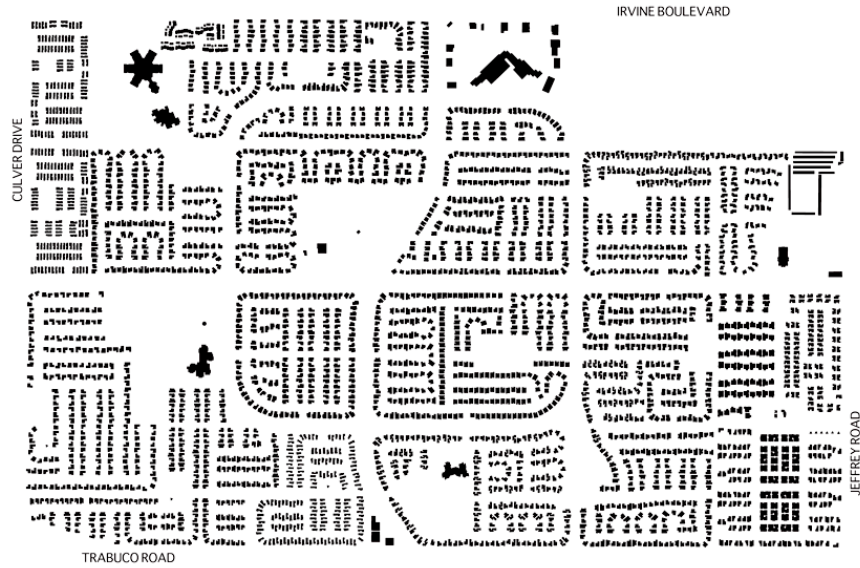


Figure 19 Northwood's figure ground diagram  
 (illustration by author)

LAND USE

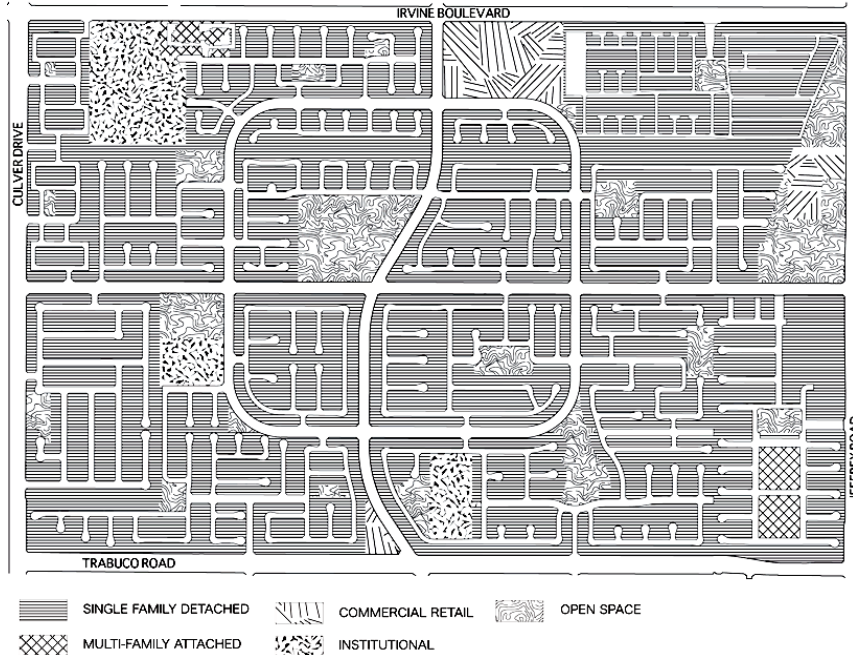
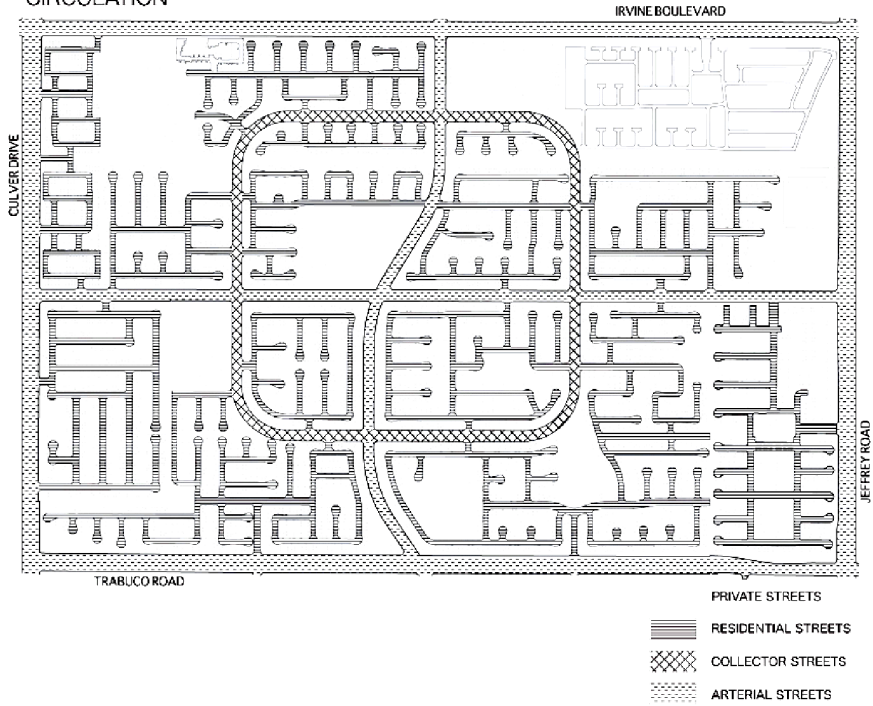


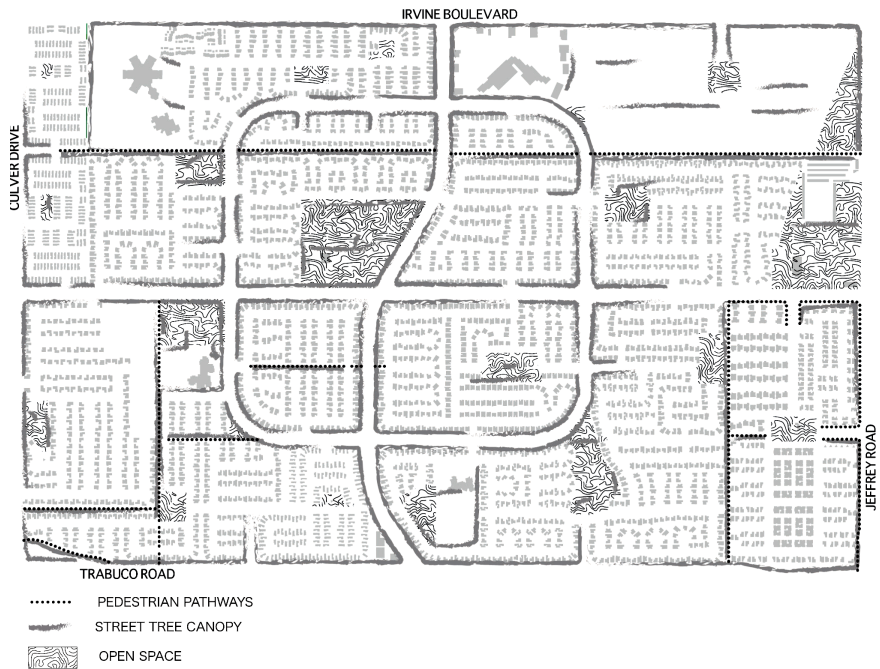
Figure 20 Northwood's land use diagram  
 (illustration by author)

URBAN FORM ANALYSIS : NORTHWOOD  
 IRVINE CA  
 CIRCULATION



**Figure 21 Northwood circulation diagram  
 (illustration by author)**

OPEN SPACE



**Figure 22 Northwood natural features and open space systems  
 (illustration by author)**

### *Northwood's physical framework*

The portion of Northwood studied in this research is often referred to as “old Northwood”. It refers to an area north of the five freeway developed in the late 1950s by various developers according to the Neighborhood Unit model made popular by planner Clarence Perry. Neighborhood units were designed as large residential super blocks centered on either a school or a public park. Commercial sites were limited and located at the intersections of arterial roads, where visibility from the automobile would ensure business profitability. Also integral to the neighborhood unit model was the use of super blocks and dead end streets, which combined with limited automobile access points would improve the safety of residential neighborhoods by limiting traffic (Southworth and Ben Joseph, 1997).

### *Figure Ground*

Northwood's figure ground (fig. 19) shows a coarse fabric of single-family homes on large lots, interrupted only by the location of public and commercial buildings floating in the center of large sites and surrounded by parking and landscaping or by the placing of a few apartment complexes as buffers along freeway corridors a neighborhood type used in many post WWII Orange County residential developments.

### *Land use*

From a land use standpoint, Northwood is dominated by low-density residential homes, while public facilities such as libraries, churches and schools are interspersed throughout the neighborhood, the result of a fragmented, knee-jerk, and piecemeal development process typical of many suburbs (fig. 20). Retail and commercial uses are limited to a few gas stations and automobile-oriented strip malls. Unlike the rest of Irvine, where TIC applied rigid zoning requirements, there is no apparent logic as to the location and juxtaposition of land uses.

### *Accessibility, walkability and street framework*

Although from a housing standpoint Irvine did not offer anything different than other nearby communities, its appeal came from newer homes, the presence of a large employment base and by the easy access to freeways, which made living in Irvine a more convenient, safer and more livable alternative to the traffic and noise of Los Angeles.

*“We lived in the San Fernando Valley. Our decision came down to this tract, which was brand new, and an already built tract in Fountain Valley. It was apple and Oranges. Part of what got us here was that my husband had been community and he said he wanted to be within a 7-mile radius from work”.*  
*(Interview #7, Northwood old time resident)*

Indeed, the square mile grid of arterials was an important element of Irvine's success. Early planning efforts by the county and Pereira's plan reinforced the presence of the automobile. The neighborhood unit model, with its limited access points, facilitated high-speed traffic. This was very appealing to many early residents who continued to commute to Los Angeles for work and to engage in recreational activities that Irvine did not offer. As a few interviewees suggested, the idea that Irvine would be planned to facilitate speed and automobile

access fit Pereira's modernist taste and the auto-driven society that emerged in the Los Angeles region after World War II.

*“Transportation in Irvine was very convenient [...]. It was set up so that there was a mile between traffic lights. The idea was to move traffic through the city at high speeds, with openings into the villages at longer intervals. Since then, many more traffic signals have popped up. [...] They have added stop signs, 6 of them on just my section of East Yale Loop and the result is that it slowed people down, making streets safer but contrary to the design principles set in place by Pereira”.*  
(Interview #24, Woodbridge resident and entrepreneur)

Northwood's arterial roads grid (fig. 21) is similar to the road systems typical of many Orange County cities. The square mile grid is a remnant of the parceling of the Spanish “ranchos” era, when pathways and dirt roads were created to access the fields. Marked by the presence of tall Eucalyptus windbreaks, the grid was adopted as a framework for urban development during the early, pre-Pereira stages of Irvine's development. During this period, the roads rights-of-way were expanded only to accommodate automobile traffic, but without any allowances for open space greenways or green edges. Tall concrete block and stucco walls marked the boundaries of each development, with narrow sidewalks separating them from the arterial roads.

### *Open space*

Built before William Pereira's master plan, and outside of the ‘village’ model set forth by the Irvine Company over the next few decades, Northwood distinguishes itself from the traditional tract housing developments that emerged all over Orange County during the 1950s and 60s because of the relative abundance of landscape features.

Northwood's open space framework included a large city park, which remains a very important asset for the community (fig. 22). Heritage Park is the site of many Irvine festivals and traditions as well as neighborhood events. It includes a community center, and a frequented public library. With the growing number of Asian residents, Heritage Park has become Irvine's tai-chi park. Another landscape related feature that generated in Northwood and was later applied to the planning of other villages is the “paseo,” a linear pathway usually associated with pre-existing eucalyptus windrows, a social landscape used by joggers, dog walkers, students and residents. The importance of these green linkages as a distinctive element in the identity of Northwood, and as an way to position it against other tract housing developments, was underscored by one of the interviewees:

*“Northwood was the original, the typical bedroom community to Los Angeles [...]. It was the Brady Bunch neighborhood, but they had paseos and other green features”.*  
(Interview #35, Lennar representative)

### *The architecture of Northwood*

As previously stated, the architecture of Northwood clearly reflects the 1950s and 60s taste for ranch-style residential architecture. The ranch house emerged as “the” American vernacular of the time. Often replicated and including prefabricated components, the ranch house can be considered the expression of the contemporary infatuation with modernism and progress (Hess, 2005). Unlike other later Irvine villages, Northwood was created in a piecemeal fashion, and lacked the requirements for a uniform architecture. The lack of HOAs exercising control over the “integrity” of architectural form has led to often dramatic changes in the architectural forms, exemplified by the “Kron castle,” a ranch home turned mansion (fig. 55).

Today, the “old Northwood” area features the most diverse housing stock in Irvine (fig. 23). In recent years many homes have been replaced by more contemporary housing types, including, of course, the Mediterranean homes Irvine has become known for. The architecture of the few commercial areas in Northwood also does not stand out, if compared to other Irvine villages, showing a heterogeneous mix of traditional bog-box stores, strip malls, run of the mill fast food restaurants and gas stations.



**Figure 23 Northwood's heterogeneous housing stock  
(photo by author)**

### *Northwood landscape*

Just like its architecture, the landscape of Northwood is heterogeneous, diverse, and unplanned. It is the result of layers of inhabitation, cultural influences, and successive fashions in landscape design. Despite recent attempts by TIC to introduce a level of consistency and uniformity, the landscape of Northwood, both that of its public realm and of the homes does not fit a specific style or definition. It is much more similar to the landscape visible in many of many urban and inner-city neighborhoods, and is representative of a “libertarianism” that characterized Irvine’s identity prior to the master plan. One element clearly stands out in the landscape of Northwood. While the village lacked an overall master plan, the developers of each tract preserved the agricultural windrows that lined the fields in this part of the ranch. Some of these windrows were incorporated in street medians, lined pedestrian trails, or were saved for their



imageable qualities. Today, the windrows represent one of the village's most imageable and distinctive features, as are the views of the hills and the still undeveloped surrounding fields.

## 2. The village of Woodbridge: "Irvine as it should have been" (neighborhood 3)

Development of the village of Woodbridge began in the mid 1970s on 1700 acres of land in the central section of the Irvine ranch. With a total projected population of 26,000 people, it would become the largest and most comprehensive of all Irvine communities. Its plan featured a mix of housing typologies, recreational facilities, schools, parks, commercial sites, and a new village center to replace Irvine's old downtown next to the University Campus. At the center of the village were two bodies of water, the north and south lakes, which were simply a response to the need to drain such large expanse of flat land.

### *Woodbridge's physical framework*

The plan of Woodbridge is divided into four quadrants accommodating roughly 5000 people each. The quadrants are organized around two artificial bodies of water (the north and south lakes). The quadrants were built in multiple phases, beginning with the northwest quadrant, and moving clockwise. The village quadrants were linked to each other by the Yale Loop, a ring boulevard, which would become one of the most imageable features in the plan.<sup>12</sup> The Yale Loop served multiple purposes; first as a neighborhood arterial directing traffic to and from villages. Second, as marketing instrument and an identity shaper, reminding potential buyers of old Los Angeles neighborhoods like Pasadena or Bel-Air. Ray Watson clearly explains the intentions of the original planning of Irvine villages:

*"[At Yale Loop] we wanted from an image point of view to have the look like the old estate housing up in LA, Bel-Air, [...] with very large houses with large front lawns. We put in alleys in the back so there were no garages showing on the front, and if you drive down Yale Avenue it looks like there's somebody's—rich person's house, because they're quite large. But if you look at them very closely there's three entry doors and what they are really are triplexes, and in fact they are the least expensive housing in Woodbridge".*  
(Watson, 2005, p. 259)

Woodbridge planners limited the number of village access points in an attempt to keep automobile traffic out of the residential areas. The extensive system of sidewalks, grade separated bike trails and pedestrian paseos would encourage walkability throughout the entire village, thus creating what Woodbridge planners have called "pedestrian pockets," a concept that anticipating the walkability principles advanced by the Charter of the New Urbanism:

*"The pedestrian pocket idea [...] means you have a pocket of areas where people can walk from where they live to the station, take the tram. [...] We have done all of those things; we just don't have the rail system".*  
(Watson, 2005, p. 299)

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<sup>12</sup> This is clearly visible in the cognitive maps drawn by Woodbridge residents, where the Yale loop emerges as one of the most imageable and recognizable features in the village.

The original Woodbridge plan intended to create a true urban environment, inclusive of amenities such as community centers, pools, parks, libraries, schools, a public transit system (original sketches show a proposed elevated train similar to San Francisco's BART) and a linear park along Jeffrey Road, which would provide easy access to the foothills and the Newport Bay. Despite the changes made to the original plan, Woodbridge has become a prototype for other residential developments on the ranch. Most of all, being the first and largest village in the city, it has become known as the embodiment of Irvine's essence (interview #10).

### *Figure Ground*

Woodbridge's figure ground (fig. 24) reveals a careful mixing of housing types, including single-family detached and semi-attached homes, townhouses and apartments. The intent of the designers was to create a diverse urban form similar in complexity and articulation to the traditional Los Angeles neighborhoods of Pasadena, Bel-Air, and Beverly Hills. Besides the undeniable aesthetic qualities, the variety of housing types responded to the planners' original intent to accommodate a diverse population of families, empty nesters, and young professionals. Such market segmentation was a consequence of extensive research by the Irvine Company marketing department and the beliefs of Irvine's first planner, Ray Watson (Watson, 2005). Subsequent to the construction of Woodbridge, the mixing of housing types has become a staple in the planning of Irvine and a defining characteristic of the Village concept. As Ray Watson himself explained:

*"[The] neighborhoods I grew up in all had diversity of densities and uses. So we decided [...] that in each one of our neighborhoods or villages, we were going to mix the housing types. That seemed not only something that we ought to do, but something that was very comfortable with me".*  
(Watson, 2005, p. 172)

Woodbridge's landscape is representative of planning models inspired by the values of Ray Watson, who disliked the uniform landscape typical of Southern California's suburban neighborhoods. His Irvine would resemble the diverse neighborhoods of Bay Area cities characterized by the integration of market-rate and affordable housing, retail, housing and commercial, parks and public amenities:

*"We wanted villages that were physically distinct, but had a variety of housing types, so it wasn't one big subdivision [...]. We would have some single-family detached housing in it; we would have some row housing in it; we would have some apartments in it; we'd have churches in it; we'd have shopping in it; we'd have schools in it, parks, all the things that you'd think of as being in a neighborhood. We just started calling them villages".*  
(Watson, 2005, p. 155)

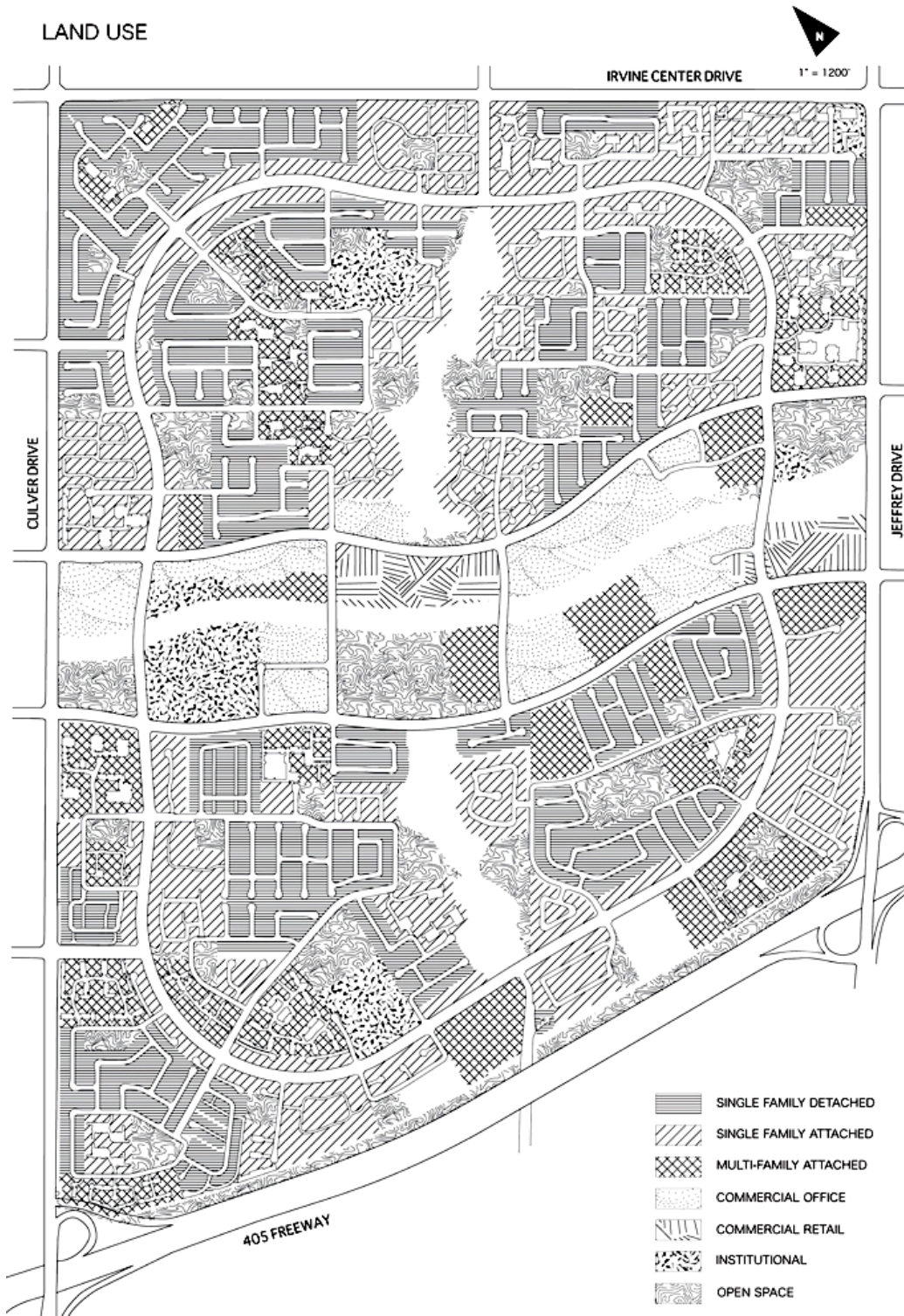


URBAN FORM ANALYSIS : WOODBRIDGE  
IRVINE CA

BUILT FORM

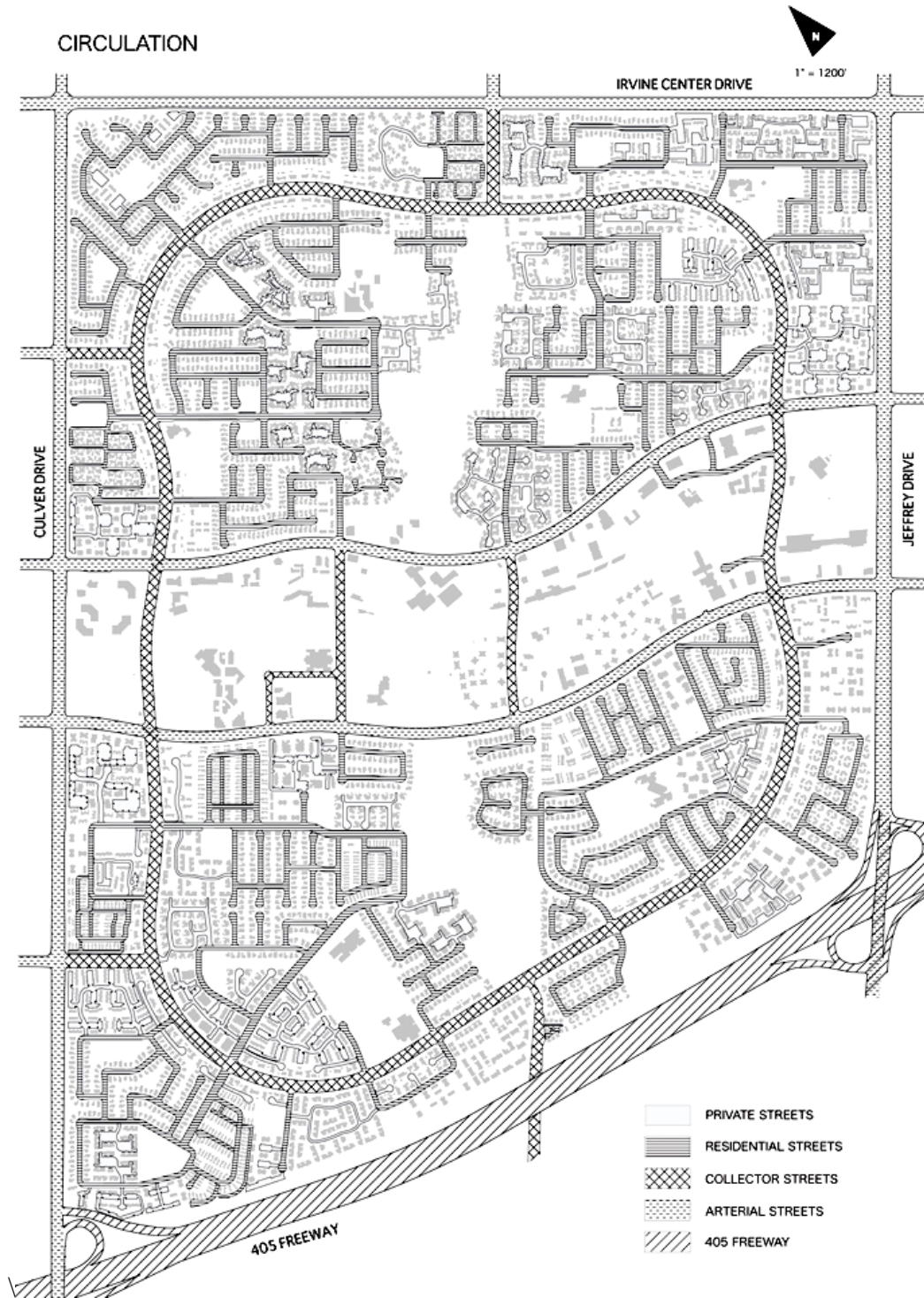


Figure 24 Woodbridge's figure ground diagram  
(illustration by author)



**Figure 25 Woodbridge's land use diagram  
(illustration by author)**





**Figure 26 Woodbridge circulation diagram**  
(illustration by author)

NATURAL FEATURES & PEDESTRIAN PATHS



**Figure 27 Woodbridge's natural features and open space systems  
(illustration by author)**



### *Land Use*

As in the best modernist tradition and consistent with much of the post WWII development in the country, Woodbridge's master plan was based on the strict separation between land uses (fig. 25). Despite adhering to these practices, Woodbridge planners made sure that retail establishments, and public facilities such as schools and libraries would be accessible on foot from any of the residences. This simple requirement meant that schools had to be located in the heart of each neighborhood, often in conjunction with neighborhood parks, libraries, public swimming pools or other community facilities. The recent closing of many of these early elementary schools has led to the re-zoning of these areas in favor of more housing, against the opposition of many early residents.



**Figure 28 Aerial photo of Woodbridge immediately after construction  
(Courtesy: SWA group)**

### *Accessibility, walkability and street framework*

Woodbridge is the quintessential first generation Irvine village, based on a very extensive and diversified framework of streets, pathways, greenbelts, paseos, a trail circumnavigating the north lake, pedestrian bridges and underpasses that would render the automobile unnecessary for most everyday activities (fig. 26). This walkable network connects all major village facilities; the schools, town center, and HOA headquarters. Integral to such framework is the system created by the Yale Loop, the village arterials and the dense grid of neighborhood streets and cul-de-sacs serving the inner portions of each neighborhood. At the center of the village is an east-west commercial spine, part of the linear downtown envisioned by TIC as the commercial and retail core of the new town.

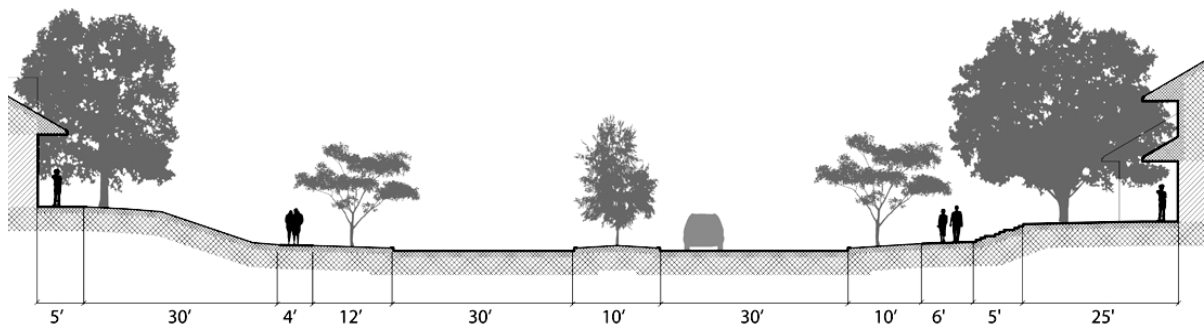
### *Open space framework*

Woodbridge planners placed a great emphasis on the creation of a well-articulated open space system (fig. 27), which includes large parks for active recreation, sports fields and medium

to small neighborhood parks featuring community amenities like pools, playgrounds, tennis and basketball courts. This network is complemented by an extensive system of trails and paseos that allow residents and their children to walk to the parks in a safe environment, away from the automobile traffic. A unique ingredient in this system is the creation of artificial public beaches or “lagoons” along the shores of the north and south lakes. These popular destinations are reminiscent of the signature features in the work of landscape architect John Nolen in the resort community of Coral Gables, Florida (interview #14) and are intended for use by families with young children and infants.

*The architecture of Woodbridge*

While landscape architecture is glue that holds the Woodbridge village together, the architecture of its homes is a fundamental ingredient in the establishment of a physically and socially diverse community (fig. 28). Irvine Company designers planned for a mix of single-family homes, duplexes, townhouses and apartment buildings. Ray Watson believed in the need for a diverse physical environment reminiscent of traditional urban neighborhoods, and convinced the company to invest in the design of housing types that would at the same time be distinctive and complement each other.



**Figure 29 Section through Woodbridge’s “Yale Loop”  
(illustration by author)**

The design of the residential units facing the Yale Loop is among the most important distinctive features in the landscape (fig. 29). The inspiration came from the boulevards of the city of Pasadena, CA, which are lined with mansions and large cottages and planted with wide branching trees, creating a sense of enclosure and intimacy. In the attempt to replicate this type of ambiance, Woodbridge designers planned for “duplex” and “triplex” condominium-type houses that would accommodate multiple families, yet appear as if they were large mansions, framing both side of the Loop Road and creating a peculiar sense of intimacy. The homes have entrances facing the street, thus creating a sense of familiarity and domesticity commonly found in the residential streets of the village, creating a continuous visual edge that lacks in other suburban communities.

*Woodbridge landscape*

As many survey respondents and interviewees suggested, the landscape of Woodbridge is unique when compared to other Irvine villages. It is defined as a combination of hardscape and softscape elements<sup>13</sup> and is often described by residents as “woody”, a clear reference to the use of evergreen trees in the streetscape and village edge landscaping and to the use of cobble stone details such as pedestrian bridges, entry monuments, and retaining walls. Tall eucalyptus windrows, remnants of the once productive agricultural landscape, contribute to the woody feel of the village. Street trees play an important role in defining the identity of Irvine and in helping residents find their way around the village. In particular, flowering Jacaranda trees have been planted along the entire Yale Loop. The second most important landscape element used throughout Woodbridge are the omnipresent lawns, which cover the vast majority of the village public and private spaces. The percentage of land devoted to turf and groundcovers is strictly mandated by the HOA regulations:

*“The following minimum softscape requirements will generally be accomplished if the association must enter upon a lot to install landscaping on the front and or side yard property: Eighty percent of the front and side yards planted in ground cover or grass lawn, or a combination of both; Twenty percent of front yard planted with shrubs as follows: one (1) one gallon shrub for every ten (10) square feet; one (1) 5-gallon shrub for every fifty (50) square feet; and two (2) 15-gallon trees planted. After installation the owner will maintain the landscaping in a clean, safe, viable and attractive condition”.*  
*(Woodbridge CC&Rs, Section 3-226)*

Outside of the designed hardscape and softscape elements installed during the construction of the village, the CC&Rs prevent families from personalizing the landscape of their homes. Regulations forbid the use of decorative elements like mirror balls, statues, sculptures, rock gardens, gravel yards, and split rail fencing in any areas visible from the public realm. Even the use of one’s garage is strictly regulated and enforced:

*“Garage doors are to be kept closed except when moving vehicles or when continued access is required (e.g. while yard work is being done). In no event is a garage door to remain open for more than 4 consecutive hours”.*  
*(Woodbridge CC&Rs, Section 3-12, Page 22)*

### 3. Westpark, Irvine’s Mediterranean village (neighborhood 1)

Beginning in the 1980s, in conjunction to changes in the ownership of the ranch, a major paradigm shift occurred in the planning and design of Irvine. It was during this time that TIC began to abandon the modernist style visible at Newport Center and in the office complexes surrounding John Wayne Airport and in the residential neighborhoods of Turtle Ridge, University Park and Woodbridge. The Mediterranean-inspired forms reminiscent of Southern

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<sup>13</sup> Section 3-224 Landscape. The landscape character of the community is established by the initial development. Subsequent landscape improvements must be compatible with the original design. Landscaping improvements are defined as: 1) hardscape: walkways, driveways, planters, fountains, pilasters etc. 2) softscape: grass lawn, flowers, shrubs, ground cover, trees etc (Woodbridge CC&Rs, page 383)



California and Orange County's Mexican heritage replaced the Modernist taste that had characterized the original Irvine (fig. 30).

Modernism had been adopted in the early stages of Irvine's development to distinguish the new town from the rest of Southern California and from the already established communities to the north and south of the Irvine Ranch. Irvine Company planners and designers were comfortable with modernity, having studied under the influence of modernist designers (Watson, 2005). Moreover, William Pereira himself had become well known for his iconic space-age buildings, which included San Francisco's Trans-Am tower and the library of the University of California, San Diego. Modernism had been the preferred style of many other new town experiments worldwide and TIC's reliance on the modernist idiom would situate Irvine within the context of the international New Town movement.

Contrary to modernism, the embracing of the Mediterranean style was a marketing and profit-driven choice. This housing style would support of a regional identity of leisure and outdoor oriented lifestyles. Stucco walls, palm trees and terracotta roofs were also reminiscent of the region's legacy as a Mexican "rancho". In Orange County, Mission Viejo was among the first communities to adopt the Mediterranean vocabulary wholesale, followed by many other developments. It was in Mission Viejo that these forms were tested and refined by Donald Bren, former president of the Mission Viejo Company. It is no surprise that upon becoming chairman of TIC, Bren brought with him the Mediterranean taste that had proved so successful in his previous master planned community. The shift in aesthetics was successful in attracting new residents to the new villages. Many prospective residents cherished the colorful forms of Mediterranean-style architecture and landscape architecture, which reminded them of Southern European seaside communities after which many of their neighborhood were named. When asked about the most memorable aspect of Irvine's physical environment, one resident said:

*"The palm trees, the foothills, those are the two most imageable things. The landscaping, the flowers. Palm trees are so southern California. Everything is so lush, so beautiful. The Mediterranean style is also one, perhaps because of the area where I live. In Orange County everywhere you look it is that. That adds to the regional uniqueness of this place".*  
(Interview #32, Westpark elderly female)

#### *Westpark's physical framework*

In order to understand Westpark's one must contrast the village with neighboring Woodbridge, which borders it to the south. In the planning of Westpark, TIC designers adopted some of Woodbridge's innovative features but adapted them to fit the thematic Mediterranean landscape and urban design solutions promoted by Donald Bren. Visible from the nearby 405 freeway, the palm trees, stucco homes, pastel colors and terracotta tiles used extensively in its private and public architecture greeted visitors to a new Irvine. These forms became an integral part of Irvine's aesthetic vocabulary and have been used since in every new Irvine Company village.

At the heart of Westpark is the village center, an extension of Woodbridge's activity corridor. The shopping center features 60,000 square feet of commercial and retail space, including a movie theatre, specialty shops, grocery stores, and cafes. Many residents from the surrounding villages, particularly those to the south, visit the village center in their daily activities, both by car and on foot. The village center is located just a few blocks from

Irvine's City Hall and from Bill Barker Memorial Park, the site of many citywide public events. The village center site is adjacent to the San Diego creek, a concrete drainage channel recently retrofitted to include walking and running trails. Just to the north of the village center, TIC has recently built a second commercial center of large big-box stores.



**Figure 30 Westpark, the first Mediterranean village in Irvine  
(photo by author)**

While in earlier villages like University Park and Woodbridge the village centers are connected to the residential neighborhoods by a system of trails, pedestrian bridges and paseos, the Westpark Village center is separated from the communities surrounding it. This is the result of the planning decision to locate this type of center to the edge of the village, where marketing and retail experts predicted the highest visibility and profit. The presence of continuous walls around the residential areas, the limited pedestrian and vehicular access points, and the dense grid of high-speed arterials crisscrossing the village in all directions exacerbate the physical disconnection of the village center from the residences. As a landscape architect explained:

*“Many people don’t like it. It is all Mediterranean, all the same densities; there is a sense of sameness. There are parks but not as many amenities. It is also so long and narrow that it was cut up in all directions by circulation. It resulted in a series of small cut off neighborhoods”.*  
(Interview #15, Landscape Architect)

#### *Figure Ground*

Westpark's figure ground map (fig. 32) reveals of a homogeneous fabric of single-family homes, interrupted only by the use of apartment complexes as physical buffers along the village's edges. Compared to Woodbridge, in Westpark TIC did not attempt to facilitate the creation of a diverse community through the mixing of housing types and residents. Instead, the Irvine Company adopted the strict zoning practices often seen in traditional tract housing developments. The only innovative aspect worthy of mention is the use of small residential lot

sizes in order to facilitate the use of public amenities and, most importantly, to maximize profits (fig.31).



**Figure 31 Westpark housing is denser than other Irvine villages  
(photo by author)**

### *Land Use*

In Westpark, residential, commercial and institutional uses are rigidly segregated, according to suburban zoning practices aimed at removing all uses that may conflict with the peace and quiet expected in residential areas (fig. 33). Unlike Woodbridge, where schools and public facilities are integral part of the village fabric, Westpark schools are located adjacent to large public parks, far from the homes and the village center and virtually inaccessible on foot. Moreover, the removal of the village center from the heart of the village makes it difficult for pedestrians and bikes to reach it without negotiating the heavy traffic along the arterials. The removal of commercial and retail sites from the center of the village undermines one of the key features of Irvine’s master plan, which has envisioned an activity corridor/linear downtown as the structuring element in the new town. In its place, the Westpark plan features apartment complexes and public facilities, which act as unlikely gateways into the city of Irvine.

### *Accessibility, walkability and street framework*

Contrary to Woodbridge’s well-developed grid of streets, neighborhood connectors and arterial roads, Westpark’s street system consists of “loops and lollipops” (Southworth and Ben Joseph, 1997), with winding streets and cul-de-sacs used to organize residential development within each block (fig. 34). Whereas the street grid allowed for a complete permeability within Woodbridge, Westpark’s streets are much more difficult to experience on foot than those of Woodbridge. While trails and pedestrian connections are provided along arterial roads, they are often interrupted when they enter the neighborhoods. The absence of pedestrian overpasses and underpasses greatly challenges Westpark’s walkability, as pedestrians are forced to negotiate numerous six to eight lane arterials when walking to many of the amenities the village offers.

### *Open space*

The presence of open space throughout the city of Irvine is something that both the developer and residents value and consider as a distinctive identity trait. Westpark is no exception to the rule, with large amounts of land dedicated to either parks or to greenways bordering each arterial road. Despite its centrality, Westpark's open space does not add up to a system. Rather, it is fragmented and isolated either at the edge of the village or within the heart of neighborhoods, but without the green linkages and pedestrian paseos seen in Woodbridge and other parts of Irvine (fig. 35). Also absent in Westpark are the pools, lagoons and small playgrounds that populated Woodbridge and distinguished it from other communities in Orange County. Not only these facilities would have raised the cost of the development, but they would have also required maintenance by an HOA association, something that Donald Bren, president of TIC at the time of Westpark's planning wanted to avoid.

### *The Architecture of Westpark*

The architecture of Westpark was inspired by housing typologies seen in Mediterranean climates, such as the courtyard and patio homes, but adapted to fit the need for mass production and contemporary building technologies. These typologies, and the forms and architectural details associated with them have been commonly used in Orange County for decades. Over the years, the Mediterranean vocabulary has become an integral part of the region's "ethos". Aside from being representative of Orange County's genius loci, with their focus on outdoor spaces courtyard and patio houses also required smaller building footprints. This resulted in higher densities and lower housing prices, which were advantageous both to The Irvine Company and homebuyers. While earlier Irvine villages attracted a higher-end, well-to-do population, Westpark was able to appeal to less affluent families that would not have otherwise been able to enjoy the perks that come from living in a master planned community.

### *Westpark's landscape*

The landscape architecture of Westpark represented a radical departure from the aesthetics of the early villages, whose landscapes were reminiscent of the agricultural heritage of the region. Early villages like Turtle Ridge, University Park and Woodbridge made large use of evergreen trees, oaks, eucalyptus windrows and sycamores found on the historic Irvine Ranch. With the advent of Donald Bren's "Mediterranean" re-styling, the woodsy landscape character of Irvine villages was replaced by iconic plantings of palm trees in geometric formations. Italian rock pines, hibiscus and birds of paradise plantings now abound in the village edges and along the few pedestrian greenways connecting the various neighborhoods. Westpark's archetypal Mediterranean landscaping is visible at each village entrance, where groves of palm trees, framed by clipped hedges and accented by colored geraniums are intended to catch the eye of pedestrians and automobile users.

Given the formal nature of the Westpark's landscape, remnants of the native landscape and agricultural past of the Irvine Ranch were kept out of the village fabric. The San Diego Creek was re-routed and transformed into an engineered channel lacking any physical or visual linkage to the neighborhoods, further removed by thick vegetative buffers, layers of barbwire and miles of chain link fences. Only recently the removal of fences and the opening of a few underpasses has reclaimed the creek's important presence as a community asset, transforming a once useless engineered infrastructure into a recreational amenity.

URBAN FORM ANALYSIS : WESTPARK  
IRVINE CA

BUILT FORM



Figure 32 Westpark's figure ground diagram  
(illustration by author)





**Figure 33 Westpark's land use diagram  
(illustration by author)**



**Figure 34 Westpark's circulation framework  
(illustration by author)**



URBAN FORM ANALYSIS : WESTPARK  
IRVINE CA

NATURAL FEATURES & PEDESTRIAN PATHS 1" = 1200'

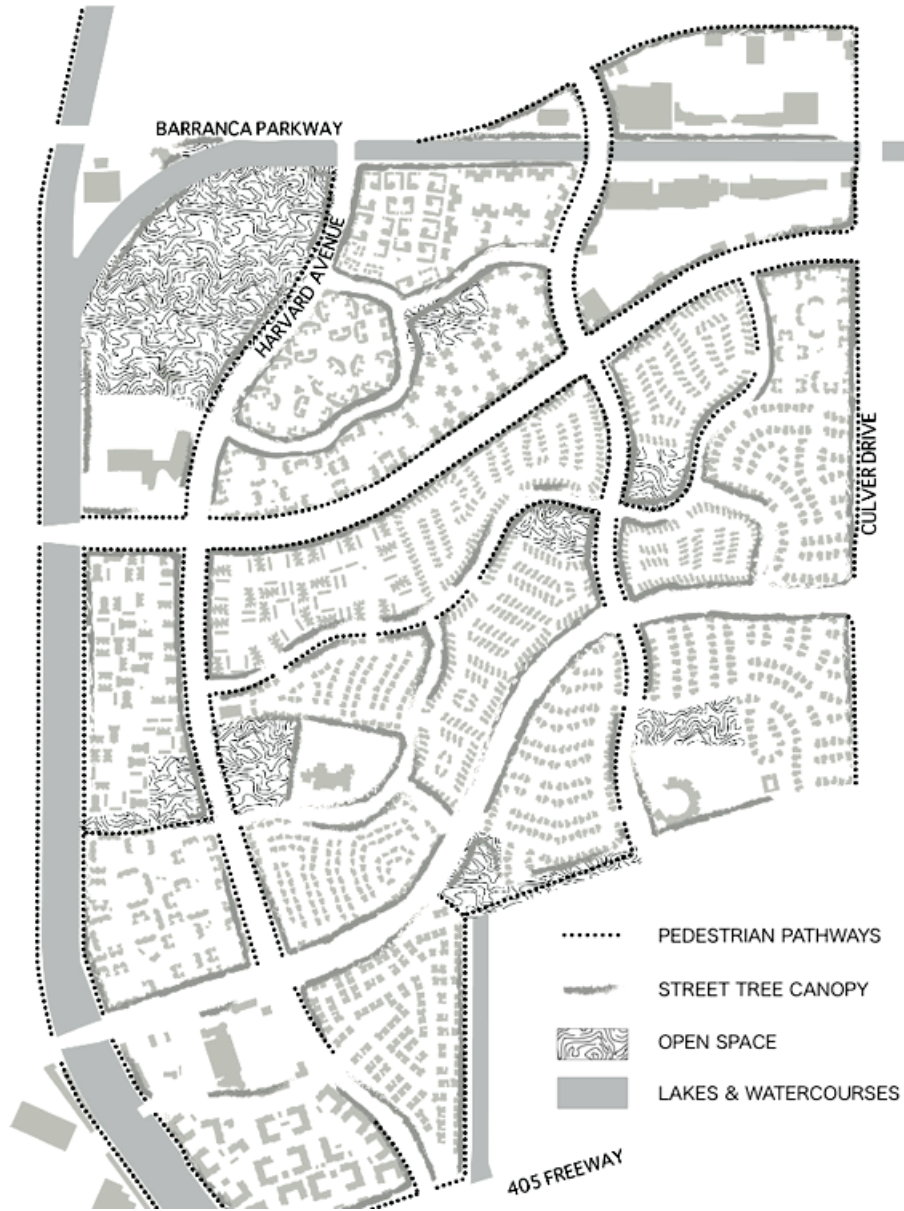


Figure 35 Westpark's natural features and open space systems  
(illustration by author)

## Chapter 4 UNCOVERING THE PLACE IDENTITY GRADIENT

### **a) Place identity And Place Attachment in Irvine villages**

The first and most important research question this study sought to answer is “Does urban design have an effect on residents’ place identity and their ultimate attachment to the places in which they live?” The city of Irvine seems like the perfect case in point, as so much of its identity is the result of deliberate planning and design decisions. While early residential developments like Northwood lacked any specific design intent and represented the traditional tract housing development seen in many other parts of Orange County, the villages planned by TIC after the approval of Pereira’s master plan experimented with various design solutions. The village of Woodbridge was intended to be mixed, both physically and socially, self-contained (i.e. walkable) and promoting a high degree of social interactions. In Westpark—the first of the Donald Bren-era villages—the principles that defined Woodbridge were put aside, in favor of denser, more affordable housing, fewer parks and social gathering spaces, and an increasingly auto-oriented physical framework. The primary goal of this study is to demonstrate that the differences in the planning and design lead to variations in the levels of place identity and attachment across the different village types.

A secondary research question focused on the consequences of place attachment on residents’ community engagement, which was tested through a series of questions on their awareness of the values shared by all community members, the time they spend on neighborly activities, or their belonging to groups and associations. Finally, their responses were analyzed for correlations, in search of potential linkages between residents’ place identity, legibility, social imageability scores and their social capital index, testing the hypothesis that certain expressions of place identity may lead to positive consequences on residents’ socially engagement.

The research questions outlined above were explored through interviews and surveys, which included both Likert scale and multiple-choice queries. From a methodological standpoint, the survey responses to the Likert scale questions from the three villages were analyzed using a univariate statistical analysis, which looked at central tendencies (mean, median, mode) for each variable and analyzed the divergence of responses from each village from such central value. A chi square test was run to evaluate the statistical significance of the results by hypothesizing that the statistical significance is greater than zero. For coding purposes, values showing a p value of 0.10 or less were considered as approaching significance, while p values of 0.05 or less were considered statistically significant and p values of 0.01 or less as strongly significant.

The section that follows outlines the findings for each of the elements of place identity outlined in the theory section of this dissertation: place identity and attachment, satisfaction, social imageability and imageability. The author used both quantitative and qualitative data to speculate on the reasons behind the phenomena observed. The chapter ends with a discussion on the idea of the “identity index”, a cumulative measure of place identity that could be helpful in drawing parallels across various types of communities.

#### 1. Place identity

Simply stated, place identity refers to the human tendency to identify with a place, using it to describe their sense of self (Proshansky et al, 1983). Through this intimate relation

individuals develop a strong attachment, which in turn leads to the desire to steward and protect it (Korpela, 1985; Williams and Vaske, 2003). Place identity was tested in this study using a variety of methods, including Likert scale questions and open-ended questions. Upon review of the literature, a series of concepts were identified as being representative of place identity: fit, belonging, rootedness and place identification. The concept of fit “refers to how well [a place’s] spatial and temporal patterns match the customary behavior of its inhabitants” (Lynch, 1981, p. 151), and was assumed to be the most basic and “pragmatic” level of place identity. Question 3 (“My neighborhood’s appearance fits well who I am as an individual”) led to statistically significant ( $p=0.05$ ) differences between villages, with Woodbridge scoring the highest.

Another measure of place identity tested in the study was the notion of “belonging”, using the statement “my neighborhood makes me feel like I truly belong here”. Finally, question 8 tested the level of place identification of Irvine residents with their village, by asking them to agree or disagree with the statement: “I feel like my neighborhood is part of me”. Responses to these questions showed a strongly significant ( $p=0.01$ ) difference across villages. In particular, while the majority of Westpark (94.1%) and Woodbridge (96.5%) residents agreed with this statement, only 20% of the residents of Northwood expressed agreement with the statement. These are important findings that may have to do with the changes that are occurring within Northwood, which is registering a large number of new (and more ethnically diverse) families moving into the villages as older residents are moving out. One other explanation may come from the dissatisfaction of the residents with the change that is occurring around them, with strawberry fields and orange groves being replaced by dense housing developments (interviews # 7, # 23). Finally, it is clear from the interviews that Northwood is seen as Irvine’s most affordable and less structured of all Irvine villages, thus giving it a more “functional” identity:

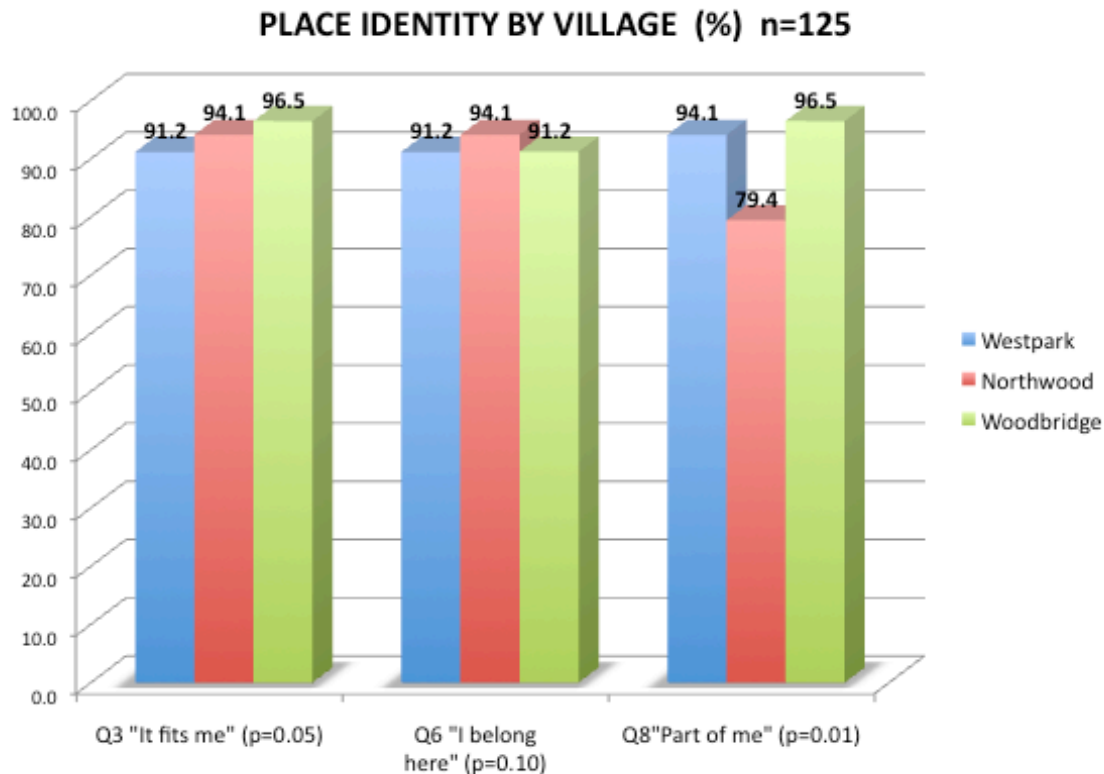
*“It is the “do-it-yourself” part of the city. This is my perception, anyway. People are more likely to build their patio roof here. In the old part of Northwood we always felt like the stepchild because we were not built by Tic. We had the benefits of being in a planned community with more variety and less of the imposed structure”.*  
(Interview #7, Northwood old time resident)

With the exception of question eight (fig. 36) none of the other measures of place identity tested in this study displayed statistically significant differences across villages. These findings seem to go against the study’s assumption that differences in design lead to variations in place identity and attachment. Question 8 did reveal a difference between Northwood, the “do-it-yourself” village of Irvine and the master planned villages of Woodbridge and Westpark, which seems to suggest that while the style of the architecture may not have an impact on identity, master planning does make a difference in the level of attachment.

## 2. Place attachment

The literature describes place attachment as deeply connected to strong place identity. Simply put, the more people identify with their village, the more they talk about it and value it, the stronger their connection to the place will be. In this study, place attachment was tested using a variety of measures previously tested by other researchers as effective in describing emotional attachment. Some of the measures used included the concepts of “home”, “rootedness”, “belonging”, and “overall positive feelings toward the place”, which was consistent with

Proshansky’s definition of place attachment as deriving from positive statements that individuals make about a place (fig. 37). A final question tested the degree of attachment through the statement “if I had to leave tomorrow, I would leave with no regrets” (Hidalgo and Fernandez, 2001).



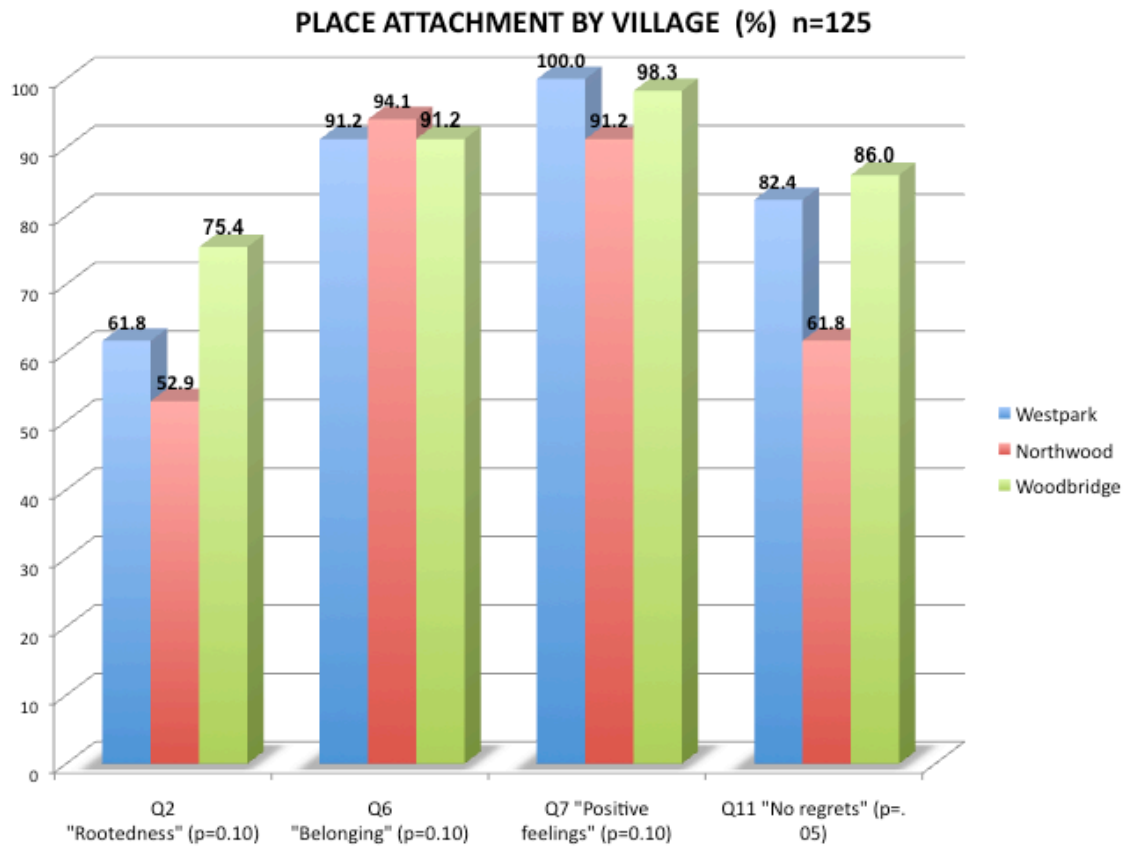
**Figure 36 Measures of place identity and their statistical significance.**

The literature considered rootedness a valid measure of place attachment (Hidalgo and Hernandez). Question 2 asked respondents to rank the statement “I live in my neighborhood but my roots are elsewhere”. The responses showed a fairly significant difference between villages. Three out of four residents of Woodbridge disagreed with the statement, compared to a 60% disagreement among Westpark residents, and a mere 53% of the residents of Northwood. This sense of rootedness seems to be supported by the information gathered during the interviews, whereby Woodbridge residents expressed deep ties to their village, while Northwood and Westpark residents considered themselves part of more “transient” villages:

*“Westpark is a bit more versatile. The ages of people are more young and middle aged. People do not stay here as long, because families are more transient and are still climbing up the ladder. I like it because it is not stagnant, it is constantly changing”.*  
*(Interview #16, Westpark elderly female)*

The low score achieved by Northwood for question two seems to be contradicted by the results of the question related to how long the respondents lived in village. In fact, of the three

Irvine villages sampled, Northwood is the one with the highest percentage of residents who have been living in the neighborhood for 10 or more years (roughly 75%) compared to both Woodbridge (60%) and Westpark (25%). This seems counterintuitive, and should be studied more in depth. One could speculate that the increased level of stress and discontent felt by Northwood residents as a result of the radical changes the village is experiencing if compared to other villages may be responsible in part for these unexpected results. For years, Northwood has been seen as the outsider village compared to the rest of Irvine. Many of its residents chose to live there because of its affordability (interview #19) or because of the lax regulatory framework due to the absence of HOA control (interview #6), which is in striking contrast to any other place in the city.



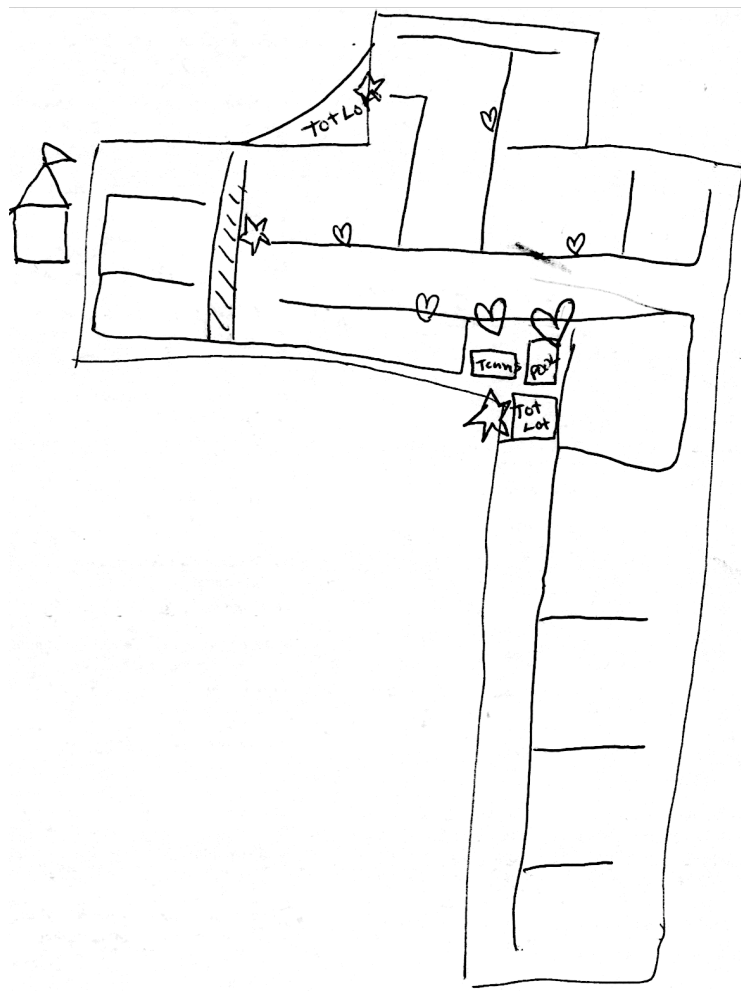
**Figure 37 Place attachment measures by village.**

Another test of place attachment asked respondents to rank the statement “If I had to leave this place tomorrow I would leave with no regrets” (question 11). This measure has been used in past research as a measure of place identity and “emotional,” often subconscious place attachment (Hidalgo and Hernandez). As the literature on place attachment suggests, individuals are often unaware of their attachment to the place, which is revealed to them only in the case of a physical detachment (Proshansky et al, 1983; Milligan; Hidalgo and Hernandez; Cross, 2004). This measure of place attachment sought to simulate this detachment by asking respondents to speculate about what they might feel upon leaving their village. This question revealed significant (p=0.05) differences in terms of place identity and attachment across the

three Irvine villages in question. Once more, Northwood seemed to be the outlier, with 61.8% of the respondents agreeing with the statement, compared to 86% of Woodbridge and 82.4% of Westpark residents.

The variation across villages may be explained by the fact that Northwood has always been considered different than all other Irvine villages. The absence of public facilities and places for socialization in the village of Northwood may have contributed to a lower level of attachment. This would support Hidalgo and Hernandez's own findings that the social components of place attachment tend to be more important in generating positive ties to a place. As one resident of Northwood stated in her interview:

*"[I would be sorry to leave] the people, and our family history. The sense of rootedness. I like the city, but it is not what I feel as attached to as the persons".*  
(Interview #7, Northwood old time female resident)



**Figure 38 Cognitive map by a Northwood resident.**

This could also be explained by differences in design and planning or, more simply speaking, by geography. Unlike the villages of Westpark and Woodbridge, Northwood is physically disconnected from the rest of Irvine due to the presence of a freeway and a railroad that create a physical and even conceptual barrier to their development of a deeper attachment to Irvine as a place. Similarly, while Westpark and Woodbridge are linked to one other and other parts of the city by a system of pathways and trails, Northwood's plan is inward looking, with limited public space in the center of the villages and fewer amenities. It separates people into small, disconnected enclaves, rather than bring them together into a unified whole. This is reflected in the cognitive maps drawn by Northwood residents, which consists of isolated clusters of homes organized along strings representing neighborhood streets and dead-end roads (fig. 38).

### **b) Place satisfaction**

A second group of survey questions targeted the sense of overall satisfaction and fulfillment in the residents (fig. 39). This is consistent with Korpela's theory of place attachment as generated by the ability to maintain a pleasure-pain balance. According to this principle individuals may become attached to certain places in terms of these place's ability to satisfy and fulfill them. It was the assumption of this research that satisfaction and needs fulfillment may be at the heart of suburban identity and to residents' attachment to the place. This explains some residents' mixed feelings towards Irvine. An interviewee described such mixed emotions as a mixture between content and numbness:

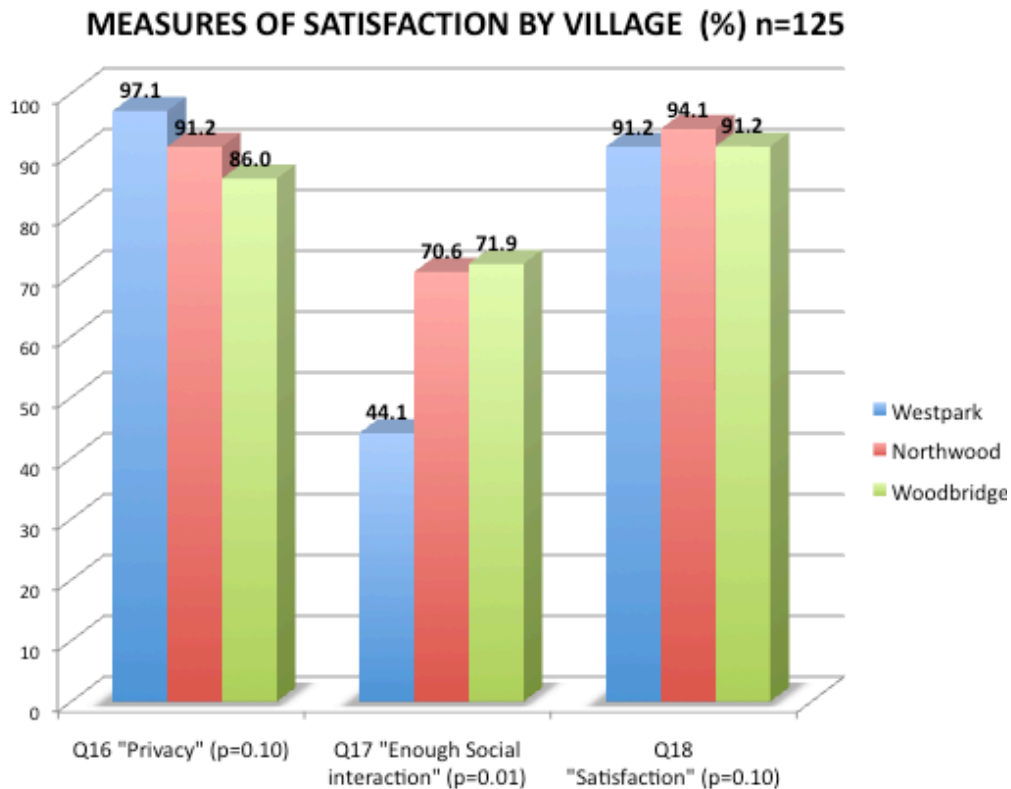
*"I feel like I would get numb and this is something I don't want to pass on to my kids, a sense of an easy life. People tend to enjoy the easy life when it is available to that, but I don't want to make that my life".*  
(Interview #2, Irvine single mother)

The residents' satisfaction with the villages and their offerings was tested by question 15 ("I find everything I need in my neighborhood"). Other satisfaction-related questions included question 16 ("I feel like this place provides the privacy I need") and question 17 ("this place does not provide the social interaction I need"). The results did not lead to major discernable differences, as most residents are satisfied with the level of services and goods offered by the villages. However, with regard to their satisfaction with the socialization opportunities offered, the data showed a strong statistical difference ( $p=0.02$ ) across villages, with Northwood and Woodbridge residents showing similar levels of satisfaction (70.6% the former, 71.9% the latter), compared to 44.1% of Westpark respondents.

The inconsistent level of satisfaction shown by the survey responses is reflected in the Westpark interviews, which revealed a number of idiosyncrasies if compared to other villages. For instance, Westpark is perceived as being the most transient of all Irvine villages (interviews # 13, 16, 35), and the one with the largest Asian population (42.4%). Many interviewees cite these statistics as a source of concern and point at the fact that for many Westpark residents English is a second language (interview #13). The combination of transience, affordability and ethnic diversity has gained Westpark a unique reputation within the new town as "the Irvine ghetto".



*“Lots of density, residual value as well as an influx of Mediterranean architecture that people fell in love with and hence the quantity of it. It feels like an Irvine ghetto”.*  
*(Interview #35, Lennar representative)*



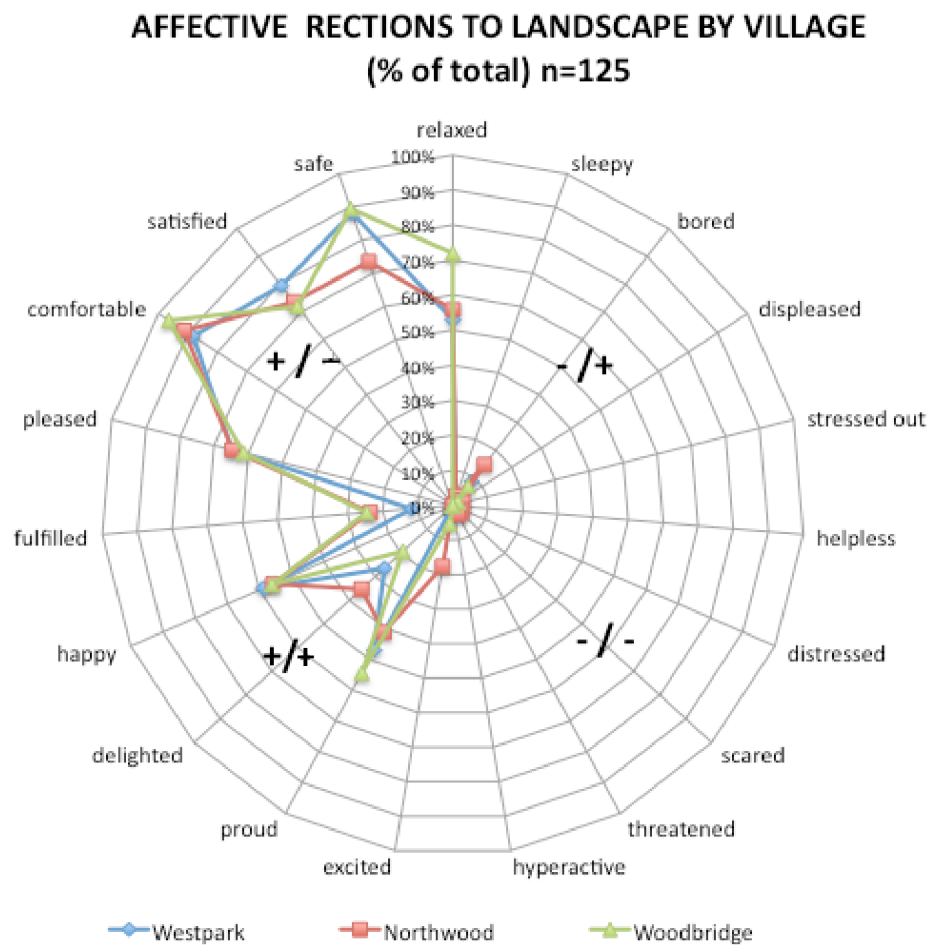
**Figure 39 Measures of place satisfaction in Irvine villages.**

Another facet of place satisfaction has to do with the feelings that a landscape can inspire in its residents. Russell and Snodgrass (1987) have concluded that like landscapes, everyday neighborhood places like cafes and stores are able to inspire positive feelings and thus are likely to be stewarded by residents. Key among the qualities affecting these positive feelings are people’s personal histories, the quality of the settings, the level of maintenance and care they display, and the amount of social interaction and stimulation they provide (Russell and Snodgrass, 1987). This research seems to suggest a utilitarian and pragmatic notion of attachment as a mechanism for the “maintenance of a pleasure-pain balance”, which little has to do with deep emotional ties (Manzo, 2003; Korpela, 1995).

It is the assumption of this study that this type of place satisfaction, rather than place identity, may be the concept that most closely depicts the type of attachment Irvine residents most commonly experience. As the “affective reactions” test shows, residents of Irvine villages consider the new town as conducive to feelings of relaxation, safety, comfort, and to a lesser extent pleasantness, happiness and pride. They rule out “extreme” feelings, negative or positive (fig. 40), which is consistent to interview responses with regard to the things they would miss the most if they were to leave:

*“I think it is a very easy place to live and people that live here tend to be driven, with lots of interests outside of the community, they have a lot going on. This provides an environment that is comfortable and supportive of their other interests”.*  
*(Interview #5, Northwood resident)*

*“[It] goes back to the discussion of community, activities, facilities. All the things that make home, a place where you want to live. There is a tranquility and a peacefulness here, a knowing that you are safe”.*  
*(Interview #24, Woodbridge resident and entrepreneur)*

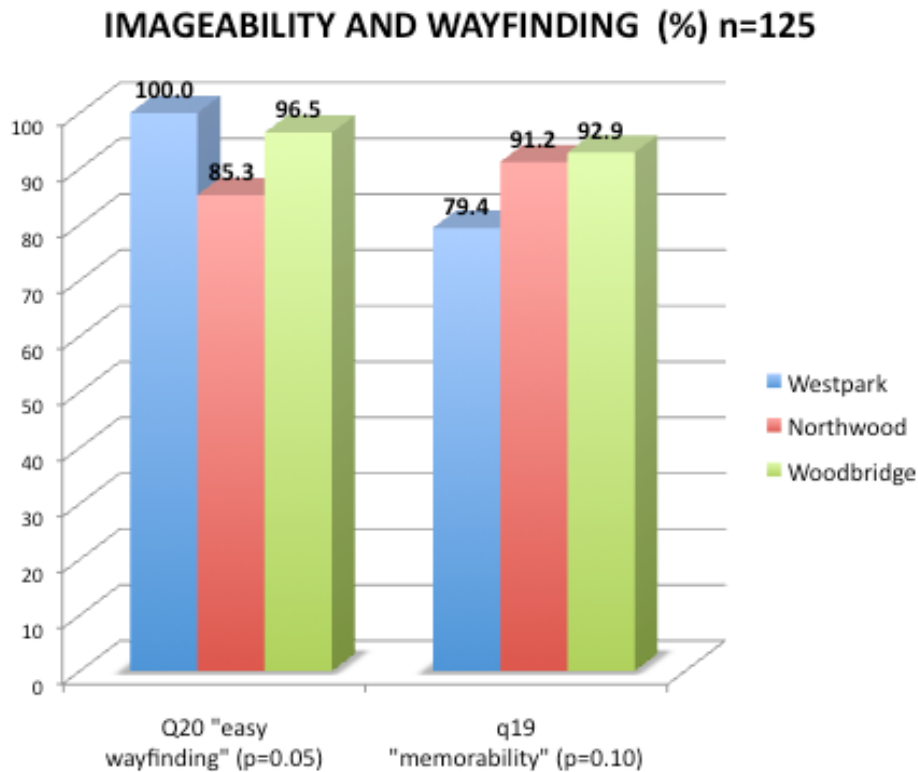


**Figure 40 Irvine residents’ affective reactions to their environment.**

**c) The imageability of Irvine villages**

An integral part of Irvine’s place identity is constituted by imageability of urban form. The belief shared by many designers that a memorable, distinctive, easy to navigate landscape may contribute to stronger place identity and attachment has its roots in the work of Kevin Lynch (1960) and by urban designers like Donald Appleyard and Gordon Cullen whose work he inspired. His findings, based on his studies of Boston, Jersey City and Los Angeles, led him to

develop a normative methodology for the creation of imageable environments based on the choreography of urban design elements such as nodes, paths, landmarks, edges and districts. Because of the relative simplicity of Lynch’s framework many design professionals promptly adopted his strategies in the redevelopment of urban neighborhood and the creation of new suburban communities.



**Figure 41 The Irvine landscape described in terms of imageability and “wayfinding”**

When asked about the imageability of their village (fig. 41), respondents identified Woodbridge as the most memorable (92.9%) followed by Northwood (91.2%), and Westpark (79.4%). These findings contradict the results of questions 20 “it is difficult to find my way around my neighborhood”, which show a strongly significant (p=0.02) difference across villages. While the totality of Westpark respondents show disagreement with the statement, residents of Woodbridge (86.5%) and Northwood (85.3%) have a more nuanced response. These results are significant because they reveal that wayfinding, distinctiveness and memorability may not go hand in hand, as some urban designers would suggest. In fact, Westpark scored the lowest on memorability, yet ranked the highest in terms of wayfinding.

### 1. Imageability through the cognitive mapping lens

Both TIC and City of Irvine consider imageability as one of the defining traits of the new town and a major influence on its identity (Watson; interviews #38, 26). Researchers have historically relied on cognitive mapping to test the imageability of urban environments



depicted by the residents (fig. 42). Woodbridge is consistently drawn as a grid, centered on the lakes and interrupted only by the Yale Loop and the Alton Parkway activity corridor, while Westpark and Northwood are shown as a more or less organized collection of fragmented physical and social spaces scattered over the landscape, which is consistent with the results of similar tests in other suburban and auto-oriented environments. What follows is a description of the findings for each of the villages, their differences and similarities.

#### *Woodbridge, the lakeside village*

Woodbridge's residents are clearly attached to the parks, lakes and lagoons that make their village so distinctive. Many of its respondents draw the Yale loop and the many greenbelts and paseos as some of the things they are emotionally drawn to, which shows that the imageable framework used by Irvine Company planners is indeed deeply affecting their lives and environmental cognitions. The maps also illustrate the high degree of self-containment, which is consistent with TIC's village concept intended as an autonomous, self-contained, walkable unit of urban development. As a result, Woodbridge residents seem to be more familiar with their village environment and are able to clearly identify its edges and most distinctive public and private spaces.

#### *Northwood, the expanded tract housing development*

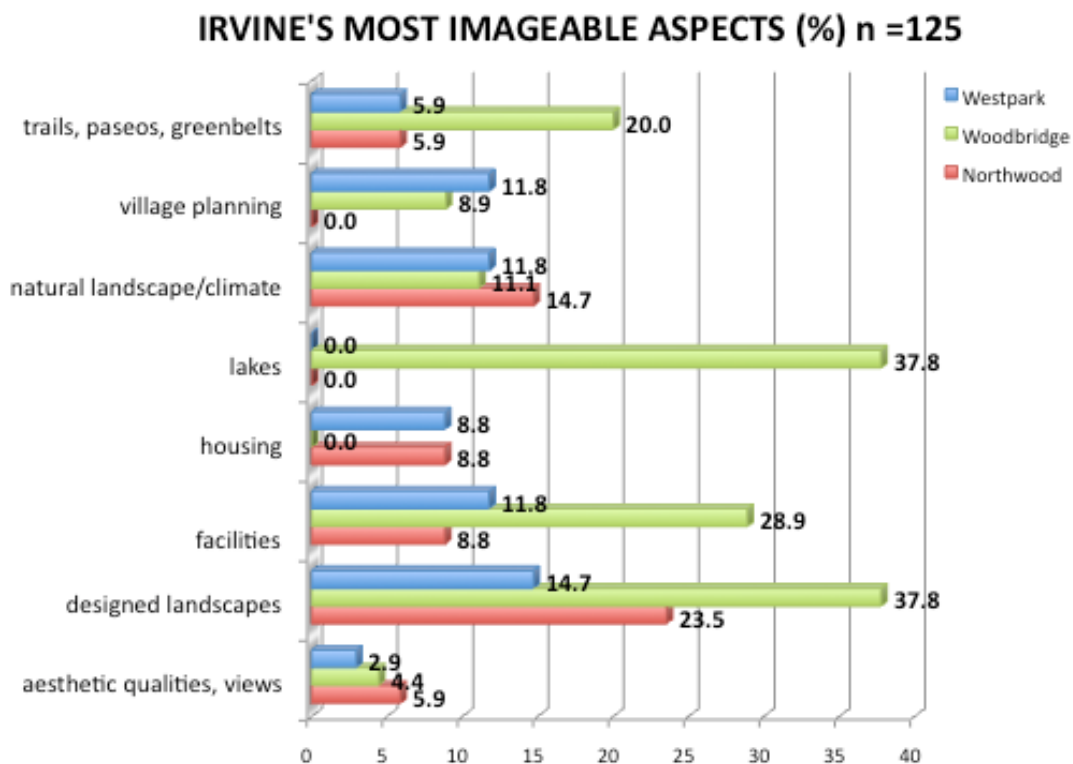
Northwood's cognitive maps show a different set of findings when compared to the other villages. In particular, its maps tend to be limited to the scale of residential block and neighborhood, rather than the scale of the village. In terms of imageability, the presence of Northwood Park, the only city park in the neighborhood, clearly and consistently stands out in the mental maps of the residents. Few other discreet places find a place in these images, including local high schools, elementary schools, and the churches, most of which are located in Woodbridge. Similarly, the lakes in Woodbridge also appear as important elements in the perception of Northwood residents.

This projection toward the rest of the city seems to be a characteristic unique to the Northwood village. This is supported by the evidence that many of the places indicated by the residents as emotionally or socially meaningful—such as the El Toro Base, the Irvine Spectrum, Tustin's marketplace, or the Orange County Performing Arts Center—fall outside of the boundaries of the community. This can be interpreted as a sign that the lack of facilities within Northwood forces its residents to reach out into the rest of Irvine and Orange County. This fact is supported by some interviewees, who described Northwood as a residential neighborhood, planned without facilities and commercial sites that exist elsewhere in Irvine.

#### *Westpark, the village without a center*

The maps drawn by Westpark residents are also indicative of the lack of a clear place identity, and limited influence of urban design and landscape architecture. Whereas in Woodbridge and Northwood parks appear to be key elements in the residents' place identity, Westpark residents seem to give the University of California a key role in their identity. The inclusion of educational and cultural facilities (libraries, senior centers, arts centers and the Irvine Valley community college) in the cognitive maps by Westpark residents also supports the findings of the interviews, which pointed at the importance placed on education by the Asian American families who constitute the majority of its current population.

What these maps also show is the importance of commercial and retail areas in the daily lives of Irvinites. Grocery stores, retail centers, gyms, dry cleaners and regional shopping malls like South Coast Plaza and the Spectrum all make it into the respondents' sketches. The perceived boundaries of the village stretch well beyond the freeways that contain it, and reach into Tustin, Newport Beach but also the nearby villages of Northwood and Woodbridge. As a whole, the cognitive maps seem to support the notion that Irvine's place identity can be seen as a gradient, a flexible entity that is made of physical landscape elements (parks, trees, lakes), spaces of socialization like the trails, the community centers, the schools and many places of socializations, and the public facilities, retail stores and other amenities that support the residents' daily activities.



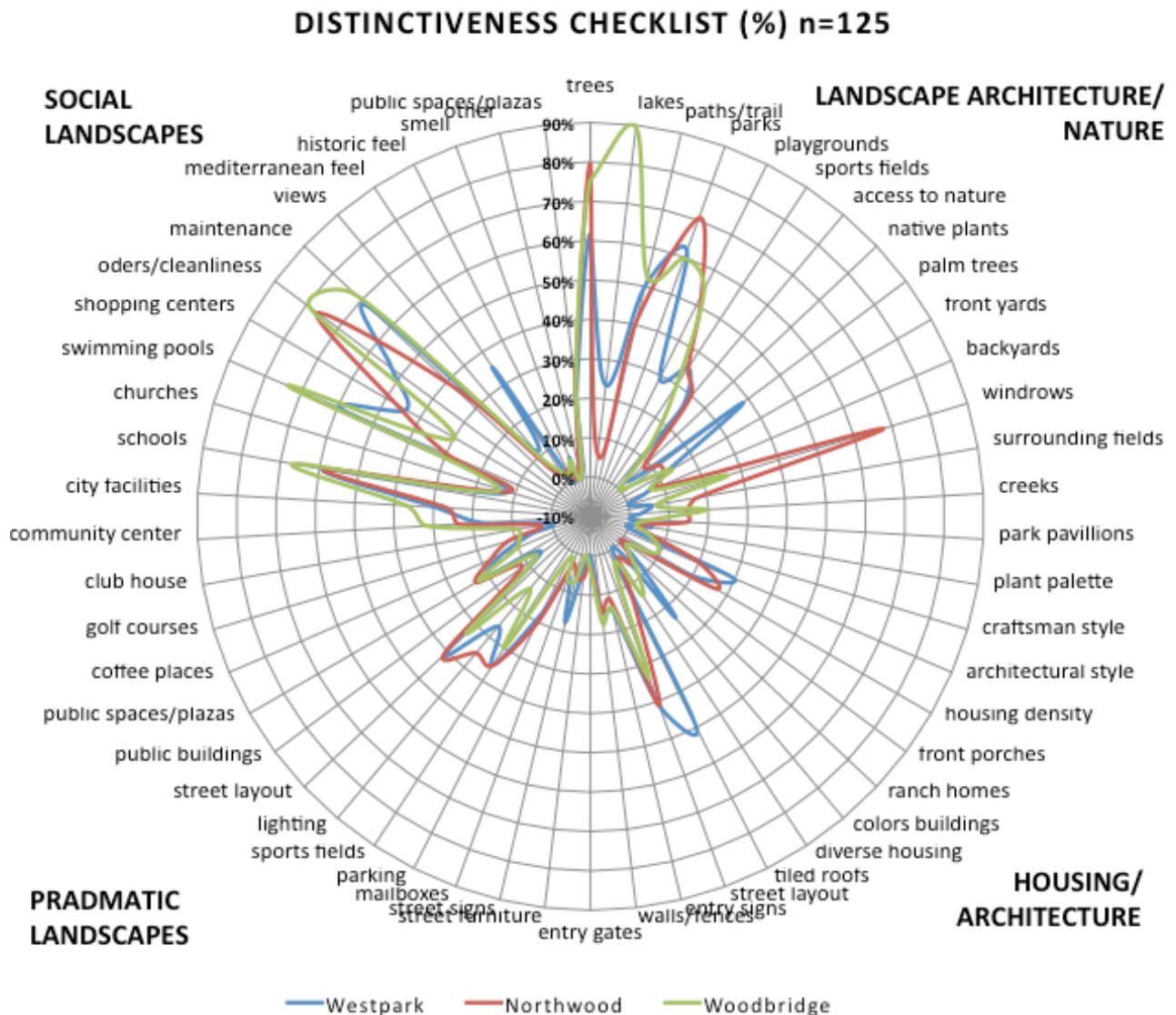
**Figure 43 Irvine villages' imageability tested through open-ended questions.**

**d) Imageability in words: Irvine's distinctiveness**

Data from the open-ended responses support the cognitive mapping findings in revealing the importance of urban design and landscape features, both natural and man-made, to the residents of the new town. In particular, the lakes and well-maintained quality of the landscaping in Woodbridge village clearly, with over 30% of respondents declaring them as the most imageable aspects of the village landscape. These features are followed by amenities like the trails and greenbelts and by community amenities like pools, lagoons, and other social spaces (fig. 44).



The data reveal that Woodbridge residents are more aware of the imageability of their physical environment, to which they are more tuned in, than the residents of other villages. Northwood follows Woodbridge in terms of its imageability, and is slightly more imageable than Westpark. Another important difference between the three village consists of the role played in the distinctiveness of the villages by the walkable infrastructure of paths, paseos, and greenbelts, which is much more extensive in Woodbridge than in the other villages. The environmental preference diagram (fig. 44) based on the checklist responses to question 23 also shows how Irvine's distinctiveness comes from landscape elements, the order, cleanliness and maintenance of such landscape, and from the provision of amenities, shopping and educational facilities.

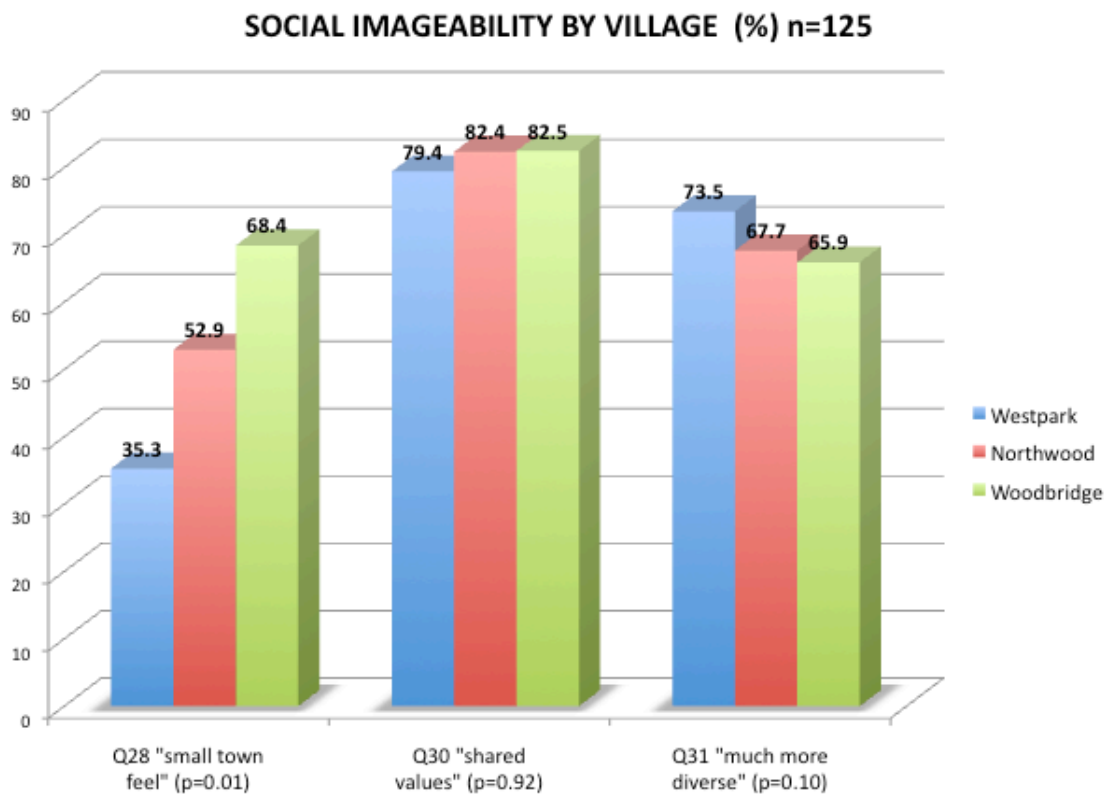


**Figure 44 Distinctiveness of the Irvine landscape. The environmental preference checklist.**

### e) Social Imageability And Shared Values

The literature defines social imageability as the sharing of discourses and meanings between members of a community, which in turn creates shared “social fields” (Stokols and Shumaker). Just as imageability increases in districts that share similar environmental attributes (Lynch, 1960), so the presence of shared values, or the ability to share a particular opinion or label may be symptomatic of a strong social imageability. Lynne Manzo (2006) has discovered that place identity can be considered as a prerequisite for a strong sense of community to develop (Manzo et al, 2006).

To test the level of social imageability, this study asked residents to rank statements about change in the neighborhood (which emerged from the interview as one of the shared perceptions about Irvine) as well as the metaphor of the “small town”, which the literature (Hummon, 1986) has shown to be commonly used by suburbanites as a way to define their neighborhoods (fig. 45). Responses to question 28 (my community has a small town feel) led to a strongly significant difference ( $p=0.01$ ) between the neighborhoods surveyed. The majority of Westpark residents (64.7%) disagreed with this statement, compared to 47.1% of Northwood residents and a small 31.56% of Woodbridge residents.



**Figure 45 Social imageability measures across villages.**

Question 29 (“I feel like my community is changing”) did not lead to the same type of results, showing instead agreement across the board, with a slightly higher percentage of Northwood residents (88.2% compared to 73.5% and 75% of Westpark and Woodbridge respectively) agreeing that change is indeed happening within the village. This shows a degree

of polarization in the discourses about the community. It also shows that while it is hard to agree on relatively positive statement, it is much more likely that people will coalesce as a community around NIMBY issues or issues related to physical and social change.

In terms of the time spent socializing with neighbors, 64.7% of Westpark respondents spend less than an hour socializing outdoors, compared to 37.5% for Northwood and 41.1% of Woodbridge. A similar picture is drawn for those who spend between one to four hours, with 23.5% of Westpark respondents vs. 43.8% and 42.9% of Northwood and Woodbridge respondents. 14.2% of Woodbridge respondents spend four to six hours socializing, compared to 8.4% of Northwood and 2.9% of Westpark residents. In terms of the activities that occur outside of the home, the majority of residents are engaged in gardening, socializing with neighbors and walking (fig. 46), with Woodbridge residents scoring higher than any other village in the extent of their social activities.

In general, one may use these results as indicators of the level of community involvement, giving us a picture of the intensity of lack thereof in Irvine villages. The data show that Woodbridge, and, to a slightly lesser extent Northwood, tend to have more sociable residents, while Westpark registers a generalized lack of socialization. This finding is consistent with the lower (44%) level of satisfaction expressed by Westpark residents with the social life offered by their village, compared to the roughly 70% responses received from Northwood and Woodbridge residents.

### LIST OF OUTDOOR ACTIVITIES BY VILLAGE (%) n=125

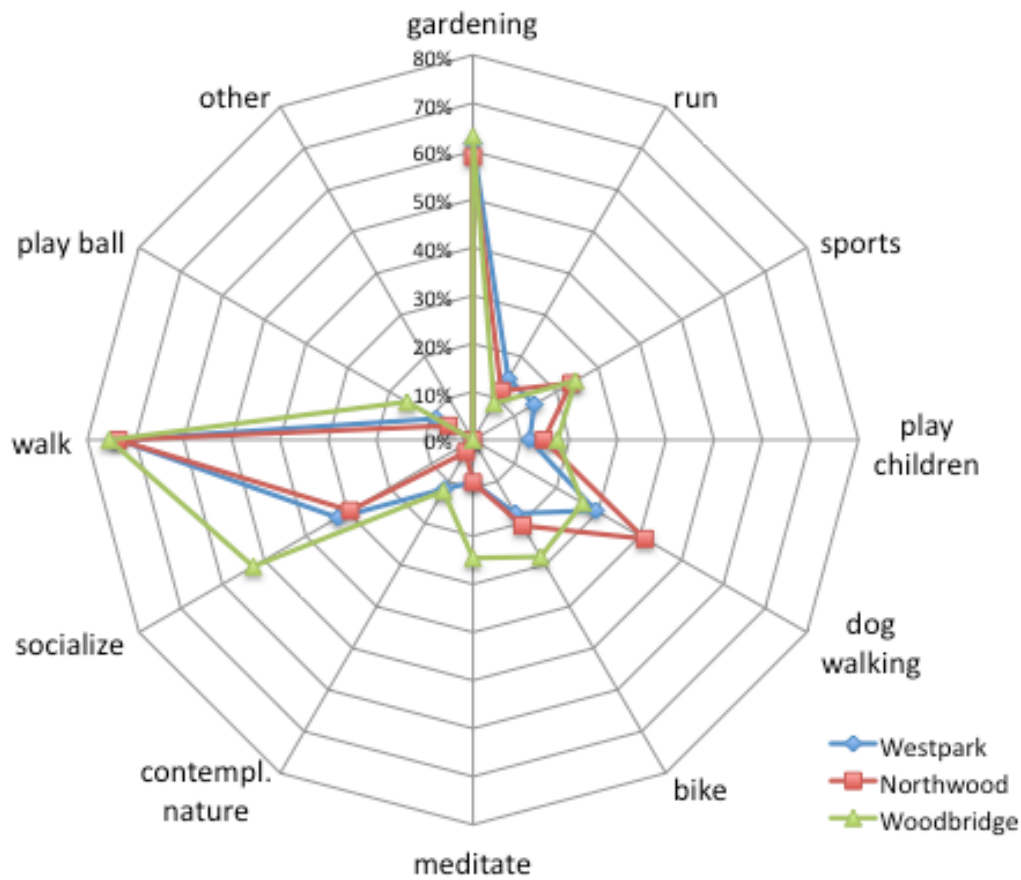


Figure 46 Social activities occurring outdoors in Irvine villages

**f) Identity index: the gradient of identity**

The grouping of the questions into the four categories outlined above; place identity, satisfaction, social imageability, and social capital, led the researcher to develop a series of indices testing the scores achieved by the three villages in terms of place identity, place satisfaction, legibility, social imageability and social capital. The rationale behind the indices was the ability to draw a quick portrait of each neighborhood from the standpoint of the place identity, place satisfaction, legibility, social imageability and social capital. In the original intention of the author, the grouping of questions into indices would offer a quantitative way to quickly compare the results from the three different villages and identify which one, if any, stood out in terms of place attachment and place identity.

The use of indices also underscores recent research and the author’s assumption that place identity and attachment should not be understood in binary terms (either they exist or they don’t) but, rather, as a gradient accounting for a range of expressions, which add up to a complete picture as in a gestalt (Southworth and Ruggeri). The five indices were created by averaging the results of questions testing each of the four components of place attachment: identity, satisfaction, legibility, social imageability and social capital. These indices were then treated as variables and a regression analysis was run to identify potential correlations with other variables (table 1).

Overall, the indices did not show much variation across neighborhoods, with similar scores for the three villages. This seems to suggest that despite conspicuous differences in urban design and aesthetics, Irvine residents share similar levels of attachment to their neighborhood landscape and a similar level of overall satisfaction. Of the three villages, Woodbridge scored slightly higher in social imageability, as expected of a community that has a strong reputation of cohesiveness. Surprisingly, it scored lower than Northwood in legibility, despite the strong visual presence of lakes, windrows, and of the San Diego creek. Woodbridge also displayed higher social capital levels than the other villages, and standard deviations of 0.02, which supports the findings of the interviews and its overall reputation as a tight-knit place.

Indices	Neighborhood 1 <b>Westpark</b>		Neighborhood 2 <b>Northwood</b>		Neighborhood 3 <b>Woodbridge</b>	
	mean	Sd	mean	Sd	mean	Sd
Identity	3.44	0.1	3.41	0.02	3.41	0.02
Satisfaction	3.75	0.17	3.62	0.05	3.53	0.02
Legibility	3.62	0.14	3.51	0.01	3.53	0.02
Soc. Imageability	2.78	0.05	2.81	0.008	2.85	0.02
Social Capital	2.66	0.14	2.64	0.01	2.67	0.02
Total	16.25		15.99		15.99	

**Table 1 Place identity indices results by village**

The place identity index results observed in Irvine village suggest a few important lessons for urban designers:

1) Place identity (and its resulting place attachment) is a complex concept, which cannot be easily grasped quantitatively. In addition to quantitative data, “thick description” (Geertz, 1973) is needed in order to fully understand the degree to which place identity and attachment emerged in the residents of a neighborhood. In the case of this research, interviews and open-ended questions were instrumental in explaining the unique relationship between Irvine residents and the villages, and in supporting the results of the quantitative, Likert scale questions;

2) The place identity gradient cannot be understood in additive terms and should be thought of in terms of a holistic “gestalt”. One of the improvements that could be made to the index would be the weighting of each element differently. As more research on place identity emerges, it would be possible to suggest the relative weight of each variable among the spectrum of elements that compose the identity of a place;

3) Differences in planning models visible across the three villages did not translate into significant variations in place-attachment index levels. When looked at through the lens of the survey responses, the villages did not show noticeable variations. Survey results showed very few differences across neighborhoods in terms of emotional attachment to place. Despite the close margins, there seems to be an overall better performance in terms of all the indices of Westpark and Woodbridge. Compared to Northwood, the first stands out for identity, satisfaction and legibility, while the latter outperforms other villages in terms of social imageability and social capital (fig. 47).



**Figure 47 Social capital at work in Irvine. Woodbridge’s July 4th parade (photo by author)**

## Chapter 5 SIFTING THROUGH PLACE IDENTITY

### **a) Looking for correlations**

Three types of analyses have been conducted as part of this study. The part-whole report looked at correlations between the identity indices and each of the index components, to reveal whether a particular question effectively represented each phenomenon (i.e. place identity, satisfaction, legibility, social imageability and social capital). A second analysis looked at the correlation between the identity indices and various checklist items in the attempt to identify possible relationships between unique urban design elements and their association with place identity and attachment. The third level of analysis looked for correlations between the sample demographics and their indices scores, in order to highlight possible idiosyncrasies and similarities.

The survey data were analyzed for correlations using the Pearson Correlation Coefficient method, which tests whether the degree of linear correlation between two variables is significantly different from a value of zero. The coefficient is expressed in terms of Pearson's "r" or "rho", a number ranging between  $-1$  and  $+1$ . A value of  $1$  indicates a perfect positive linear relationship between two variables, while a value of  $-1$  indicates a perfect negative correlation. Statistical significance "chi-square tests" were also run leading to values of "p" indicating the probability that the two variables differ in value. The closer the probability p value is to  $0$ , the more statistically significant the correlation. This study considered correlations with a probability p of less than  $0.05$  as statistically significant, while p values of less than  $0.01$  were considered strongly significant. In general terms, the higher the value of the Pearson's coefficient, the stronger the relationship between the two variables. Finally, correlations showing a p value of  $0.10$  or less were considered as "approaching significance". The following is a narrative of the key findings with regard to the correlation between variables, their significance and potential explanations.

### **b) The facets of a place identity gradient: correlations analysis**

#### 1. Place identity index correlations

The analysis of the correlations (table 2) helped to explain the dynamics of place identity in Irvine villages and began to spotlight the measures of place identity that were most effective, or that displayed strong associations. Not surprisingly, this study found that two measures were particularly useful in depicting place identity in Irvine village. Question q11 was testing Hidalgo and Hernandez' (2001) theory that place identity and attachment are subconscious feelings that only emerge when a detachment from place occurs. Question q4 tested the notion of "fit" (Proshansky et al, 1983; Lynch), which suggested a strong personal identification with one's village.

Upon careful review of the correlations, one can conclude that question 11, ("I would leave with no regrets") is strongly correlated to the place identity index (with an r of  $-0.27$  and p of  $0.01$ ), which suggests that it may be used as a strong measurement of place identity. The same question shows a significant correlation with the social capital index (with an r value of  $-0.21$ ; p=  $0.05$ ), which also suggests a link between one's place identity and community engagement, which was one of the assumptions of this study. Question four ("in my neighborhood I am able to be the person I want to be"), which tested the degree to which there



exists a fit between residents of Irvine and their villages showed strongly positive correlations with the place identity index ( $r= 0.26$ ;  $p= 0.01$ ). This suggests that the concept of “fit” may be effective in representing place identity, as indicated by Kevin Lynch (1980). The same question also indicated a positive correlation with the satisfaction index ( $r= 0.17$ ;  $p= 0.05$ ) but also with the social capital index, with a strong positive correlation ( $r= 0.27$ ;  $p= 0.01$ ), a finding that confirms the original assumption of this study, linking place identity and attachment to social capital and community activism. Finally, question five (“there are places in my neighborhood that make me unhappy”) displayed a significant negative correlation (with  $r$  value of  $-0.17$  and  $p$  value of  $0.05$ ) with the social imageability index. Suggesting that the degrees to which a person is content with their neighborhood may be conducive to a sense of belonging to a place.

## 2. Place Satisfaction

A similar analysis of the place satisfaction index responses led our attention to question 22 as the most significant of all satisfaction questions in defining the level of satisfaction of Irvine residents. The question, which asked whether the rest of their family was satisfied with what Irvine villages had to offer was included in the survey given the focus on families and children that characterized the planning of the new town and its villages. With  $r= 0.27$  and  $p$  value of  $0.01$ , this question seems to be the most representative of all measures of place satisfaction used in the survey. The following discussion on social capital shows that satisfaction has a crucial role in community engagement, and that in the case of suburban communities like Irvine, where there is a great emphasis on accessibility and convenience, satisfaction may be considered as the most basic expression of place attachment and place identity.

## 3. Legibility index

The legibility index was created by averaging the value of the responses to questions 19 and 20, which asked about the memorability of the village landscape and its ability to facilitate people’s wayfinding. Both questions tested Kevin Lynch’s imageability theory and a commonly held belief among urban designers that a memorable landscape is also one that leads to strong identity and attachment. Of the two questions, q19 (“I find this neighborhood to be memorable”) was the most significant, showing a positive correlation with the legibility index ( $r= 0.17$ ;  $p= 0.05$ ). The same question also proved to be positively correlated with the social imageability index ( $r= 0.19$ ;  $p= 0.05$ ), which suggests that the more memorable one’s neighborhood is, the more an individual will partake in the shared discourses and meanings that community embraces. This finding seems to confirm Amos Rapoport’s (1978) theory that the built environment can become a living text, a non-verbal means of communication, and findings of other researchers, who have investigated the symbolic nature of suburban landscapes (Blake and Arreola, 1996).

## 4. Social Imageability Index

This index included questions intended to test the degree of cohesiveness of Irvine as a community and the degree to which its residents share similar values and feelings about the place. A few questions show significant positive correlation with the social identity index. Question 5, (“there are places in my neighborhood that make me unhappy”) was negatively correlated to the social imageability index ( $r= -0.17$ ;  $p= 0.05$ ). This reinforces the idea advanced by some researchers that place attachment has a positive effect on an individual’s sense of community (Chavis and Pretty, 1999).

Question 17, which asked respondents to rank the statement “this neighborhood does not provide me with the social interaction I need” shows a significant negative correlation with the social imageability index ( $r = -0.17$ ;  $p = 0.05$ ). Given that the question was negatively worded, the question suggests that those who disagreed with the statement also have a higher level of social imageability and are aware of their community. The same level of significance correlated question 22 (“I think the rest of my family is satisfied with what our neighborhood has to offer”) with the social imageability index ( $r = -0.17$ ;  $p = 0.05$ ), suggesting that satisfaction with services and goods offered in the villages may be one of the shared values in Irvine. The same question proved to be strongly correlated with the satisfaction index value ( $r = 0.27$ ;  $p = 0.01$ ), which also reveals that this question is truly representative of the overall satisfaction of residents.

The most significant correlation is found between question 28 (“my community has a small town feel”) and the social imageability index, with  $r = 0.18$  and probability  $p$  of 0.05. The question sought to confirm the findings of prior research that residents have the tendency to use imagery and stereotypes about places to position their place identity against other communities (Hummon, 1986). In particular, suburban residents have been known to appropriate the “small town” imagery to position their communities against the crime and problems found in urban areas. In Irvine, marketers and planners used the notion of a small rural town as a way to position the city vis-à-vis other Orange County communities and still resonates in the discourses of its residents:

*“[Irvine] feels like a small town even though I know the population is fairly large. I run into people I know all the time, on the side of the soccer and baseball fields. My kids went to school in Costa Mesa and there is a large carpool group that goes there. I’d miss these people”.*  
(Interview #25, Woodbridge female resident)

The findings showed a strongly significant correlation between the answer to question 32 (“my community is much more diverse than many other places I know”) and the satisfaction index ( $r = -0.19$ ;  $p = 0.05$ ) as well as the social imageability index ( $r = 0.23$ ;  $p = 0.01$ ). Diversity is a shared value in Irvine, something that the municipality, TIC and residents share as a key value. The strong correlation highlighted in this study may suggest that diversity is indeed in Irvine’s DNA and it is one of the values that are most strongly embraced, as shown by the strong satisfaction index correlation.

## 5. Social Capital Index

Questions 41 to 47 asked survey respondents’ opinions about public life in their village, and about their personal involvement in the life of the community. In particular, question 41 (“when there is an issue, people in my neighborhood come together to find a common solution”) showed a strongly significant ( $r = 0.32$ ;  $p = 0.01$ ) correlation with the social capital index. The same question is also strongly correlated with the satisfaction ( $r = 0.24$  and  $p = 0.01$ ) and legibility indices ( $r = 0.25$  and  $p = 0.01$ ). These findings reveal a connection between Irvine residents’ overall satisfaction with what Irvine offers, the vivid memories they hold of the place, and their sense of belonging to a community. This is an important finding which shows that place satisfaction, and even legibility can indeed play very important roles in the development of attachment to one’s neighborhood and their willingness to become involved in public life.

### **c) Distinctiveness in Irvine and its implications on place identity**

A second focus of the analysis consisted of looking at the correlation between residents' responses to checklist questions and their scores with regard to the conceptual indices. The purpose of this analysis was to reveal potential associations between environmental attributes people consider distinctive or memorable and their overall place attachment and identity.

In the survey, checklist questions included question 23, which asked respondents about the aspects of their neighborhood's environment that clearly stood out—i.e. were distinctive—relative to other neighborhoods they knew. The second checklist question, q24, asked them about the feelings that their neighborhoods inspired in them (along a gradient between threat to excitement). Finally, a third checklist question (q25) asked respondents to check up to five elements of their village that they were satisfied with.

In terms of the level of distinctiveness, a few significant correlations were found. In particular, a significant positive correlation emerged between the checklist item q23f (lakes) and the satisfaction index ( $r = -0.41$ ;  $p = 0.01$ ). Similarly, this variable revealed a strong correlation ( $r = 0.47$ ;  $p = 0.01$ ) with the social imageability index. This is consistent with the findings of the interviews, which reveal Woodbridge residents' deep satisfaction with the presence of the lake, and with perceived sense of community everyone associates with their village. The data suggests that the memorable presence of the lakes could be seen as an element of cohesion for the Woodbridge community. This is consistent with literature (Blake and Arreola, 1996) indicating that environmental features in a neighborhood landscape are often used in discursive terms, as element of one's identity. This is also reminiscent of Cooper Marcus' findings that architecture can be used as an expression of an individual's identity (1995).

Interestingly, this study also found a strongly significant ( $r = -0.22$ ;  $p = 0.01$ ) negative correlation between the item q23g (architectural style) and the social imageability index. This seems to support the findings elsewhere in this study that the architecture of Irvine homes, its density and uniformity has a negative effect on their sense of community and is not conducive to socialization. Significantly strong positive correlations were also found between checklist item q23w (access to nature ( $r = 0.24$ ;  $p = 0.01$ )) and the place satisfaction index; and between the same item and the social capital index ( $r = 0.22$ ;  $p = 0.01$ ). This seems to suggest that access not only to freeways but also to recreational areas are of crucial importance to people's satisfaction and to their ability to socialize with people in the neighborhood. Given that the satisfaction index also included questions on wayfinding and memorability qualities, this could also suggest the importance of nature as an element that could be used to enhance memorability of certain environments, from urban to suburban areas.

A negative correlation was found between palm trees (q23ao) and the social imageability index ( $r = -0.029$ ;  $p = 0.01$ ). This could be explained by the fact that Westpark is the only place in Irvine where palm trees are present, yet it is also the neighborhood where social interaction and socialization are the lowest. In the interviews, this is explained by the presence of a mostly Asian population, which tends to be less engaged in community functions compared to other ethnic groups. Palm trees (q23ao) also had a strong positive correlation with both the legibility ( $r = 0.20$ ;  $p = 0.01$ ) and satisfaction indices ( $r = 0.33$ ;  $p = 0.01$ ). This suggests that memorability goes well beyond wayfinding and legibility, but that it has important effects on people's sense of satisfaction, which in turn affects their attachment (see discussion on satisfaction as a basic place attachment expression).

Item q23ay (tiled roofs) showed a strongly significant correlation ( $r= 0.42$ ;  $p= 0.01$ ) with the satisfaction index, a finding that is reinforced by the strongly significant ( $r= 0.21$ ;  $p= 0.01$ ) correlation of q23ba (Mediterranean feel) with the legibility index. Q23ay also revealed a significant positive correlation with the identity index ( $r= 0.19$ ;  $p= 0.05$ ), which suggests that these architectural features do indeed resonate in the residents' place identity. Tiled roofs also display a significant negative correlation with the social imageability index ( $r= -0.32$ ;  $p= 0.01$ ), which may be explained by the overall lower sociability of Westpark and Northwood—which some of the interviewees related to the peculiar ethnic composition of the villages and the dominance of residents of Asian descent. The importance of the Mediterranean identity generated by the use of stucco walls, palm trees, and exotic plantings to the residents of certain Irvine villages is underscored by the positive correlations between checklist item q23ba (Mediterranean feel) and the place satisfaction index ( $r=0.17$ ;  $p=0.05$ ), which seems to suggest a direct link between satisfaction and the southern European ambiance, but may also be a sign that to many people it represents a reminder of their social status.

*"In Westpark, all homes are stucco with red roofs. What I learned at the time is that before WWII in Asia most homes were built of wood, and that only after WWII homes started to be built in stucco and tiles. [In Asia] homes with wooden details were seen as old. TIC and the developers targeted these populations. This is true today as well. You would see things like the fact that the Asian population favors feng shui and the builders have really taken that into consideration".*  
(Interview #13, Woodbridge resident and professional)

#### **d) Affective responses to place: how does your neighborhood make you feel?**

This checklist question asked respondents to check the feelings they have when thinking of their neighborhood. This was based on past research (Russell and Snodgrass) that linked the affective state of users with their willingness to continue to visit places regularly, particularly in the case of commercial spaces and "third places". In this study, the affective model was expanded and modified to include the landscape of Irvine villages. This allowed the author to test and confirm some of the findings of the interviews, which suggested that Irvinites share a natural attraction towards places that provide comfort, safety, and quiet.

With regard to the affective responses of Irvine residents toward their village, this study found that respondents who are proud of living there (checklist item q24j-proud) show significant ( $r= 0.18$ ;  $p= 0.05$ ) levels of social capital and community activism (represented by the social capital index). Similarly, those that expressed delight (q24k) with their neighborhood showed strongly significant ( $r= 0.22$ ;  $p= 0.01$ ) levels of place satisfaction, and a significant correlation ( $r= 0.18$ ;  $p= 0.05$ ) with their social capital levels. This seems to reinforce the theory (particularly Proshansky's "place identity" model) that linked place attachment to an individual having positive feelings toward one's village. Similarly, the high level of satisfaction recorded also shows that satisfaction is indeed an integral part of one's place identity.

#### **e) What aspects of the Irvine Village landscape are most satisfactory?**

As previously mentioned, and as this research attempted to show, satisfaction is an integral part of place identity and an element that will eventually lead to place attachment. Question 25 ("which aspects of your neighborhood are you most satisfied with?") illustrates this

concept. The checklist sought to identify the specific aspects of Irvine's landscape that contribute to such identity by asking respondents to check at least five items. Item q25i indicated satisfaction with the access to natural areas offered by Irvine villages as being strongly correlated ( $r= 0.26$ ;  $p= 0.01$ ) with the social capital index. This reinforces much of the literature about the positive effects of environmental stewardship on sense of community and community engagement (Opotov and Clayton, 2003). These results could also be explained by the fact that environmentalists and those with an appreciation of nature and its presence within the village may also be more politically engaged. If the link between nature and social capital were to be confirmed, it could potentially have a strong impact in the way suburbia will be planned in the future.

With regard to the satisfaction checklist items, this study found:

- item q25i (access to nature) was significantly linked to social capital ( $r= 0.26$  and  $p= 0.01$ ).
- item q25r (diversity of housing) proved to be significantly correlated with the social imageability index ( $r= 0.20$ ;  $p= 0.05$ ). This could suggest that the physical and social diversity of certain Irvine villages may be well perceived by residents of the new town;
- Q25u (access to freeways) showed a strong positive correlation with place satisfaction ( $r= 0.22$ ;  $p=0.01$ ). This leads to the conclusion that the basic need for quick access to automobile transportation is a shared value of Irvine residents, and has become a part of their identity;
- Q25y (cleanliness) was significantly correlated ( $r= 0.19$ ;  $p=0.05$ ) with the social identity index, and proved to be a common shared value amongst Irvine residents, consistent with survey entries and interviews that clearly revealed the emphasis residents place on the orderliness and cleanliness that are part of Irvine's public image.

#### **e) Correlations between demographics and conceptual indices.**

One last level of analysis could be useful in explaining some of the idiosyncrasies found in the responses by residents of the different villages. The regression analysis showed a significant correlation between the ethnicity of respondents (q55) and their satisfaction with the place ( $r= 0.21$ ;  $p=0.01$ ). Asian, Latino and Black respondents are more satisfied with their village. This could explain the higher level of satisfaction of Westpark residents, which is a bit surprising if compared to Woodbridge, a village with many more amenities.

A surprise came from q60, which revealed a strongly negative correlation between the respondents' level of satisfaction and the time spent living in Orange County ( $r= - 0.21$ ;  $p=0.01$ ). This seems to suggest that the longer the time spent in the Irvine area, the more negative their responses to the place satisfaction questions, which may reflect recent problems with increased traffic and density within neighborhoods compared to the early days of the new town. Also significant is the negative correlation between the age of the respondents' children and their social imageability index values ( $r= - 0.18$ ;  $p=0.05$ ). This finding suggests that families with school age children are more likely to share the same values (and have higher social imageability scores) than older residents whose siblings are no longer living or going to school within the community. This clearly emerged from the interviews, where the majority of residents underscored the importance of education as a factor in the decision to move to Irvine for many families with school age children.

*“The people that choose to live here—and I believe people do choose to live here—have similar values. There is a huge value placed on education, a huge value placed on family activities outdoors. The values of education and family transcend any differences in ethnicity or culture or language. The woman that cuts my hair speaks Farsi but we both want the same thing for our children. We all want our kids to go to college. I’d like my daughter to go to UCI. She is 15, but I am targeting UC Irvine for the research [they] do”.*  
*(Interview #25, Woodbridge female resident)*

<b>SUMMARY OF CORRELATIONS BETWEEN QUESTIONS AND INDICES</b>					
	place identity	satisfaction	legibility	soc.imageab.	social capital
q4 “I am able to be myself”	r=0.26; p=0.01	r= 0.17; p=0.05			r=0.27; p=0.01
q5 “it makes me happy”				(r=-0.17; p=0.05)	
q11 “leave without regrets”	r=0.27; p=0.01				r=-0.21; p=0.05
q17 “no social interaction”				(r=-0.17; p=0.05)	
q19 “difficult wayfinding”			r=0.17; p=0.05		r=0.19; p=0.05
q22 “family satisfaction”		r=0.27; p=0.01		r=-0.17; p=0.05	
q28 “small town feel”				r-0.18; p=0.05	
q32 “social diversity”		r=-0.19; p=0.05		(r=0.23; p=0.01)	
q41 “social cohesion”		r=0.24; p=0.01	r=0.25; p=0.01		r=0.32; p=0.01
<b>distinctiveness</b>					
q23f lakes		r=-0.41; p=0.01		r=0.47; p=0.01	
q23g architectural style				(r=-0.22; p=0.01)	
q23w nature		r=0.24; p=0.01			r=0.22; p=0.01
q23ao palms		r=0.33; p=0.01	r=0.20; p=0.01	(r=-0.29; p=0.01)	
q23ay tiled roofs	r=0.19; p=0.05	r=0.42; p=0.01		(r=-0.32; p=0.01)	
q23ba mediterranean		r=0.17; p=0.05	r=0.21; p=0.01		
<b>affective</b>					
q24j proud					r=0.18; p=0.05
q24k delighted		r=0.22; p=0.01			r=0.18; p=0.05
<b>satisfaction</b>					
q25w socialization					r=0.26; p=0.01
q25i access to nature					r=0.26; p=0.01
q25r housing mix				r= 0.20; p=0.05	
q25u freeway access		r= 0.22; p=0.01			
q25y cleanliness				r= 0.19; p=0.05	
<b>demographics</b>					
ethnicity		r= 0.21; p=0.01			
time spent in village		(r=-0.21; p=0.01)			
children's age				(r=-0.18; p=0.05)	

values in parenthesis ( ) indicate a negative correlation

values expressed as probability p

shaded values suggest strongly significant correlations

**Table 2 Summary of significant correlations grouped by question type.**



The correlational analysis findings helped shed additional light on the multiple and complex facets of the place identity gradient in Irvine. They helped confirm some of the interview findings, with particular regard to the social imageability of Irvine, the values that people share (particularly the emphasis on education, cleanliness and order, accessibility). Also emerging out of this study is the discursive quality of the Irvine landscape. The example that best illustrates this notion is the importance placed by residents on the Woodbridge lakes, and the correlations that were found between this variable and the social imageability index. People not only appreciate and are satisfied with the presence of lakes, but they also use them as symbols of what their community is all about.

Among the most important findings was the one that linked people's place identity measure (q11, "If I had to leave tomorrow, I would leave with no regrets") and a higher score for their social capital index. This seems to confirm one of the assumptions of this study and the findings of other research (Manzo, 2003; 2006) that place identity and attachment are prerequisites for sense of community and social capital. If this holds true, and if design does indeed affect place attachment, then designers must become aware of their political and social role in shaping community.

## Chapter 6

### CONSTRUCTING IDENTITY IN SUBURBIA: EMERGING THEMES

The discussion on the survey findings laid out in the previous chapters offered some explanations for the differences experienced across villages and raised a few additional questions, which are worth discussing in more detail. First and foremost, what are some of the reasons behind the differences noted between villages, and between master planned and non-master planned Irvine? Second, what is the role that landscape architecture played in the establishment of Irvine's place identity and how is it perceived and valued by residents of the new town? Third, how is the primacy of landscape architecture and urban design being maintained and stewarded in Irvine and who is in charge of Irvine's physical landscape? What are some of the values shared by all residents of Irvine and how are these values shaping the identity of the place? Some of the lessons learned through the analysis of survey responses are discussed in an attempt to shed light on the questions outlined above.

#### **a) Design vs. do-it-yourself and implications on place identity**

*“[In terms of place identity], if Westpark is on one side of the spectrum, Woodbridge is on the other end, and Northwood sits somewhere in the middle”.*  
*(Interview #38, Irvine Company)*

Although not as significant as initially thought, survey responses suggest that when it comes to place identity, differences between the planned and unplanned villages of Irvine do indeed exist, with Westpark and Woodbridge (representative of TIC planned communities) scoring more consistently than Northwood, the “do-it-yourself” Irvine village. Also contrary to what this study had initially hypothesized, and this is a surprising finding of this dissertation, the stylistic differences between Woodbridge, with its woody character and ranch architecture, and Westpark, dominated by palm trees, and stucco homes did not lead to dramatic differences in terms of place identity and place attachment.

The findings do suggest that the physical environment does account for the variations recorded between planned and unplanned Irvine villages. In Northwood, the lack of a master plan and the absence of a cohesive landscape framework have important consequences on the residents' perceptions of its distinctiveness and imageability. Urban design also accounts for the better performance of Westpark and Woodbridge in terms of wayfinding, as demonstrated by the results of question 20 (“it is difficult to find my way around my neighborhood”) and by the residents' cognitive maps, which show the limited extent of their knowledge of the village.

The responses to the interview questions suggest that master planning and urban design were also a factor in attracting different types of residents to the villages. Residents of Northwood pointed out that the lack of a master plan and do-it-yourself nature of the village contributed to making their neighborhood more affordable compared to other places in Irvine. Forty percent of Northwood respondents make less than \$100,000, a year compared to 23.3% of Westpark and 29.8% of Woodbridge residents. The affordability that comes from the lack of a master plan and of homeowners' associations is one of Northwood's defining characteristics.<sup>14</sup>

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<sup>14</sup> When interviewed, a representative of the Woodbridge Village Association confirmed: “They tell us (I am not a realtor) that these houses are 100K more expensive because of the amenities compared to Northwood” (Interview #3).

Residents are proud of their “independence” from the master plan. When asked about the things that they would be sorry to leave, none of the Northwood respondents mentioned master planning, compared to 8.9% of Woodbridge and 12% of Westpark respondents. The lack of a strong planning framework and HOA regulations may in fact be at the root of its identity as the self-made, “All-American” village:

*“It is a great place for buying housing for young families with lots of kids. It is more Americana, more homogeneous. [It’s known for] the block parties and neighborhood BBQs”.*  
(Interview #6, Westpark female single resident)

*“I think it s very comfortable. It is easy access for children to go to school. That is a very American quality. A lot of people drive children to school but they can still walk everywhere. I drove my daughters to high school in Northwood but they walked to the elementary school”.*  
(Interview #5, Northwood male resident)

This study did find significant differences in the level of rootedness and in the identification of residents with their village. Both question two and question nine showed inconsistencies between the responses across the three villages. Over 90% of Westpark and Woodbridge residents feel a deep connection with their place, a much higher score than the 79.4% Northwood result. A similar conclusion could be drawn from the responses to q11, which show a stunning 38.2% Northwood residents admitting that they would leave their village without regrets, compared to the responses of Westpark (17.6%) and Woodbridge residents (14%). Planning and urban design seem to make a difference in residents’ lives, offering increased convenience, safety and security in their lives.

Findings from question 42 (“I am actively involved with the social life of the community”) introduce an element of disturbance to the planned/unplanned dichotomy described in this section. When asked about their levels of socialization, Northwood residents acknowledge a high level of involvement (55.9%) compared to 33.3% and 36.8% of Westpark and Woodbridge, respectively. This finding, which approaches statistical significance, seems to be conflicting with the public image of Northwood, summarized by one of its residents:

*“One of the frustrations with Northwood where I live is that there is not much of a sense of community, no 4th of July parades, no block parties, you barely know your neighbors and interact with them except for when you taker out the rash. There is no sense of community. Woodbridge is big on community. West Park, and University Park all have a sense of community. That is the attractiveness of Irvine”.*  
(Interview #9, Male Northwood resident)

## **b) Landscape architecture and urban design as Irvine’s DNA**

This study has clearly confirmed what Forsyth (2005) has suggested: that urban design and landscape architecture are part of Irvine’s genetic material. The efforts put into the planting of half a million trees,<sup>15</sup> and the overall care of the landscape in Irvine Company projects clearly

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<sup>15</sup> Source: [www.goodplanning.org](http://www.goodplanning.org) “40 years plus half a million trees equals...”.

resonate in resident's accounts of their villages. The landscaped areas are by far the most distinctive and imageable aspect of Irvine's environment. When asked about the value of Irvine's urban design and landscape architectural features, a designer estimated at 30% the amount of added investment in open space compared to what he labeled "Texas-type", regular residential developments (interview #15). Two thirds or the residents consider trees and landscaping the most distinct aspect of their neighborhood, followed closely by parks and open space. The importance of landscape architectural elements contrasts sharply with the limited interest in architectural style (19%) and building colors (between 5% and 19%). This contradicts the costly efforts by the Company to create the most authentic "Mediterranean" architectural forms.

Although differences in style and detailing may not be as important to residents, the presence of the landscape affects them both emotionally and practically. When asked about the value of a well-maintained landscape, interviewees' responses combined emotional and monetary considerations. The emotional ties that residents develop with the landscape are clearly reflected in their words:

*"(A well designed landscape) cultivates the soul, the individual and the community. It provides a place to draw you out of your house and also draw people together".*  
(Interview #33, Westpark female resident)

The landscape presence does not only affect the soul. It has much more tangible and pragmatic consequences. Urban design and landscape architecture set Irvine apart and ensure that home value remain higher than other communities in Orange County. Residents clearly understand the importance of the landscape to their personal and financial lives:

*"It is a tangible value and a personal value. The value of a well kept, uniform landscape is that you feel like other people have pride in it and their homes are kept the same way as yours is. The tangible aspect of that is that the home increases in value".*  
(Interview #8, Woodbridge resident)

*"(A well designed landscape) has a big value. You look at it, the visual...it makes it more desirable. It is priceless. It's worth so much more, it's like night and day".*  
(Interview #11, Irvine planner)

But trees and landscapes do even more, and this is perhaps one of the most useful findings of this study. As a resident suggested, the landscape is the glue that holds Irvine together, the "gestalt" that allows residents to perceive the new town as a cohesive place, despite the variety of architectural forms found in the villages. The landscape provides residents with changing views, diverse textures and colors lacking in the architecture of their homes. Most of all, the landscape acts as a place for escape from the tight lots, planned to maximize profit:

*"It brings a lot of pleasure, tranquility. You could take the same homes and compare them to other places in Riverside and you would get a very different feel. The landscaping is what makes the small lots tolerable".*  
(Interview #5, Northwood resident)

*”[The landscape] detracts from the fact that the houses are so homogeneous. The moment you take the landscape out, all you see is the same houses with the big white garage doors. Everyone now is putting in the same cheap roll up garage doors with inserts that are fan shaped or mission or else. That is the type of thing that drives me crazy. So the trees actually take away from the sameness. Now the HOA is allowing a range of garage doors and colors and some people did experiment with colors. But then as they had to replace them they went back to the same white color”.*  
(Interview #6, Westpark female single resident)

Despite the focus of Irvine planners on imageability, urban design and aesthetics, what emerges from this study is also the importance of what Randy Hester (1990) calls “sacred landscapes”. In Irvine these include many “pragmatic” landscape elements like coffee houses, retail stores, neighborhood parks, fitness centers, libraries and all other facilities and places around which the resident’s everyday lives revolve. An average of 34.2% of residents would be sorry to leave behind the village retail establishments; 39.4% would be sorry to let go of the convenience and access provided within Irvine; 25.3% would miss its parks, playgrounds and trails. 15% would miss the excellent school system; 16.5% would miss village facilities like pools, parks and tennis courts, and 13.5% would regret leaving behind the overall sense of safety that the villages provide.

The discussion above shows just how complex the Irvine landscape is, and raises a series of questions with regard to the preservation of the positive influence of the landscape on residents’ place identity and attachment. Following is a discussion of the challenges and idiosyncrasies connected with the maintenance of this delicate balance.

### **c) Preserving Irvine? The role of the HOAs**

*“Whatever village you’re in [...] there is a community association. Once the project is finished and has been sold out, the community association design approval is turned over to the residents, and we no longer have a voice [...]. The experience has been that they are tougher on the applicants than we are, because they are the homeowners. So they turn down houses that will block someone’s view or a garish color that they believe is incompatible with their street, or whatever it is. But it’s up to them. Thankfully, we don’t get involved because those are the most difficult of things to do—the homeowner who wants to remodel their house or tear it down and build a bigger, grander one”.*  
(Watson, 2005, p. 265)

Is the urban design implemented in Irvine conducive to a sustainable/resilient community identity? What aspects of this environment would be worth preserving and who should be in charge of these preservation efforts? These questions raise one of the most interesting aspects of this dissertation. The interviews revealed that the identity of Irvine’s residents is deeply intertwined with its master planned nature, order and cleanliness, and the presence of a strict system of HOA regulations. To this day, 95% of all Irvine residents live in HOA controlled neighborhoods and much of Irvine’s physical appearance is in the hands of these institutions caught between and the tension toward innovation and experimentation and the preservation of the status quo represented by the original master plan. The strong presence and aggressive

landscape maintenance programs of homeowners associations make it almost impossible to introduce any type of change within Irvine villages, as illustrated by the recent defeat of a ballot that proposed to introduce a sustainable light rail project through the Alton parkway activity corridor (Weikel, 2003).

*“The HOA is the vehicle by which communities can sustain themselves, not degrade and collapse and become slums”.*  
(Interview #24, Woodbridge resident and entrepreneur)

As a homeowner association representative told me, HOAs became popular after the passing of proposition 13, which limited the property tax rate applicable to houses to 1%. As a result municipalities could no longer afford to maintain streets and facilities within neighborhoods. The diffusion of HOAs, which occurred in conjunction with the rise of the PUD as a development model (AIA, 1973), allowed the city to give up their responsibility of maintaining neighborhood facilities, thus limiting the financial burden on the public sector, as confirmed by a representative of the Woodbridge Village Association. On the flipside, the empowerment of Homeowners Associations has generated a situation whereby their control has expanded to include all aspects of the neighborhood environment. Their approval of building permits and home remodeling runs parallel to the one of the city. As a city official admitted:

*“If you are in an HOA the city works with the association. If someone wants to build a patio cover we make sure they know that they need an HOA approval. Technically by law we can issue a permit if it is up-to-law but we like to work with HOAs to prevent that people from building things that may meet the codes but may not be consistent with the CC&Rs”.*  
(Interview 26, City Official)

While HOAs are not a unique Irvine phenomenon, the city is home to some of the most powerful associations in the United States, including the notorious Woodbridge Village Association (fig. 48). Established as a “pseudo-governmental entity” at a time when Irvine was still unincorporated, the WVA was created to maintain the physical integrity of what was once one of the largest villages of the new town. Indeed, with 10,000 housing units and 31,000 residents, Woodbridge’s HOA is one of the largest and most powerful associations in the entire Irvine. The WVA is responsible for many of the community recreational facilities (pools, clubhouses and tennis courts) as well as many programs for residents of all age. However, its most important function is the monitoring of Woodbridge’s design guidelines and planning.

During the early years of the new town the Woodbridge Village Association’s board of directors was directly involved in all major decisions regarding urban growth and development, from planning of neighboring Westpark village to the development of more recent villages like Oak Creek. Its original members consisted mostly of Irvine Company employees, appointed to represent the interests of the Company. As the WVA executive director told me, the association has had a major say in many of the historical planning decisions made by the city and often engaged in long negotiations. These included some key victories, like the approval of the Great Park and the rejection of the proposal for a rapid transit system (interview #3). The WVA has become a training ground for many City officials, and former board members have been elected to city council and to mayoral positions. The informal veto power of the WVA against all



new initiatives became such that after its establishment the Irvine Company decided to abandon the practice of having village-wide HOAs in favor of smaller associations for each of the sub-developments. This move emptied them of their potential veto power, leaving them with maintenance responsibilities, events planning and the publication of newsletters.

Membership in the HOA is based on ownership of single-family houses, and excludes owners of apartments. During the initial stages of an HOA association a privileged role is played by TIC, which is entitled to three votes for each of the housing lots it owns. This allowed the company to maintain control well beyond the initial development stages and to curb any opposition.

*Section 5*

*“Classes of voting members Class A refers to all owners with the exception of the declarant [Irvine Company] and the apartment Area Owners. Class A members shall be entitled to 1 vote for each lot in which they hold interest. Class B member shall be the declarant. The declarant shall be entitled to three votes for each lot in which it holds the interest required for membership; provided that class B membership shall cease and be converted to a class A membership on the happening of either of the following events, whichever occurs earlier:  
a) When the total votes outstanding in the class A membership equals the appropriate number set forth on exhibit H; b) On December 31, 1984”  
(Woodbridge village CC&Rs, p. 13)*

By law, HOAs are responsible for the maintenance and preservation of the architectural and urban design integrity of the place. This is reflected in Woodbridge’s CC&Rs, which include numerous references to the quality of a development in its initial form. This is true of both the architecture and the landscape architectural elements, and covers large and minute landscape details, from trees to hardscape, from decorations to the type of mulch used in planting areas. An extract from the document clearly illustrates the extent of their control on the landscape:

*“The architectural character of Woodbridge is established by the initial development, consisting of single-family detached homes, townhomes, condominiums, and apartments with a variety of architectural expressions. Subsequent architectural improvements must be compatible with the original design of the tract”.  
(Woodbridge village CC&R, p. 363)*

*Section 3-224 Landscape “The landscape character of the community is established by the initial development. Subsequent landscape improvements must be compatible with the original design. Landscaping improvements are defined as:  
1) Hardscape: walkways, driveways, planters, fountains, pilasters etc.  
2) Softscape: grass lawn, flowers, shrubs, ground cover, trees.  
a) The following landscape materials are not permitted within the front and visible side yards, without a home improvement application and the approval of the architectural committee:  
Decorative rock, wood chips, sand, gravel or any other rock-like substance”.  
(Woodbridge village CC&R, p. 383)*



**Figure 48 The Woodbridge Village Association headquarters in Woodbridge  
(photo by author)**

Although most of the homeowner associations operating in Irvine are not directly involved in making decisions about the city, except in the case of planning and design decisions impacting them directly, their day-to-day operations have the potential to affect the physical appearance and overall quality of life in the neighborhoods they are managing. This is clearly outlined in the CC&Rs, which make many references to lifestyle and quality of life:

*“[The Irvine Company] has deemed it desirable to establish covenants, conditions and restrictions upon the covered property and each an every portion thereof, which will constitute a general scheme for the management of the village and for the use, occupancy and enjoyment thereof, all for the purpose of enhancing the value, desirability and attractiveness of the Covered Property and enhancing the quality of life within the village”.*  
*(Woodbridge Village CC&Rs, p. 5)*

Irvine residents have mixed feelings about HOAs, as evident in their evaluations of their work, which range from a pragmatic embracing of the need to maintain the value of one’s property to the more neutral acceptance of the associations as part of the local “way of living”.

*“It’s in the CC&Rs; you cannot have a garage door open for more than a few minutes. They also come by and tell you if you have things sitting in your garage that could go in storage”.*  
*(Interview #6, Westpark female single resident)*

*“There has to be a certain sense of ownership and responsibility to keep your house and lawn up to a certain level so you don’t stand out or run down the neighborhood”.*  
*(Interview #9, Northwood resident)*

Other residents are frustrated by the rigidity of the HOA rules, strictly enforced by special inspectors patrolling the neighborhoods to discourage any form of personal expression outside of the boundaries of one's home. Many CC&Rs forbid landscaping materials that do not match the original neighborhood style, specify the color and texture of mulch to be used in planting beds, and the planting of favorite trees and flowers. They even go as far as mandating the use of approved garden ornaments, trashcans and even real estate signs.

*“This is a highly controlled environment: colors, structural materials, asking permission to do what you want to do with your house. There is a list for approved vegetation, paint colors. I am illegal. I was the first in my neighborhood to say I want a tree that is not on the list, not a Mediterranean tree. There are committees checking what you plant. We call them the tree Nazis”.*  
(Interview #32, Westpark female resident)

The level of control exercised by the HOA is in addition to the power the Irvine Company holds as original owner of the land to oversee every development and transformation within the new town. While this study has found no specific evidence in the municipal code of this oversight, the Irvine Company's approval stamp has become a requirement for all new development, including the efforts by TIC competitors like the Lennar Corporation, who is currently engaged in the planning of Orange County's "Great Park".

*“We oversee the design of everything. You cannot build a building on the Irvine Ranch—and that's been true for forty years—without our approval of the design. [...] We look at the design of every building as to whether it enhances that sense of place, not just how it looks by itself. If you go to Greece, people are always bragging about how much the unity, how much the sense of architecture all comes together, both in color and materials, and so forth. In this country, you know we have every ethnic group in the world, we have every taste in the world, and so forth. But we try in different villages to have a flavor of architecture”.*  
(Watson, 2005, p. 263)

The framework of rules and regulations described in this section, including the entities in charge of upholding them, has enormous consequences on Irvine's ability to adapt to present and future challenges. This is perhaps one of the key lessons learned in this study: despite much research suggesting the need for individuals, places, and communities' identities to be flexible and adaptable (Erikson, Appleyard), this flexibility is impossible to achieve in Irvine as in many other suburban communities because of the rigid framework of regulations and institutions that can veto any change, positive or negative. This demands a revision of this model that allows communities to evolve at the same pace as the rest of the world.

#### **d) Experimentation on the Irvine Ranch**

Throughout its history, the Irvine Ranch has been an experimental place in many aspects. Experimentation occurred at the agricultural level, with the contribution of the University of California experimental station at El Toro. TIC tested the strategic use of insects to fight pests that might affect the crops, and divided plots and used different chemicals on them to test the

consequences of various strategies (Watson, 2005). At the planning level, the team-based planning process used in the planning of Irvine village was unprecedented, and set an example of collaboration between public and private institutions. This process had other beneficial consequences on the city as a whole. TIC's hiring of landscape architects and urban designers as consultants ensured innovation in urban design and helped balance the power differential between a landowner that was also the main developer, and a municipality with limited control powers (Campbell, 2006; Forsyth, 2005).<sup>16</sup>

The involvement of top-rated design firms in the planning of Irvine village led to the testing of new planning models and strategies for community development. University park was one of the first examples of integration between residential and university uses. It also featured an extensive system of paseos and greenways providing easy pedestrian access to the neighborhood, according to the garden city model seen in Clarence Stein's Radburn, NJ. Irvine planners did not seek to invent a new urban form. Instead, they focused on improving existing development practices by applying the best design and planning practices available, often using places like old Pasadena and San Francisco as precedents. Most recently, villages have seen the influence of the principles of New Urbanism, with narrower street sections, front porches, mixed use neighborhoods and enhanced walkability.

*“One of the new developments to the north of town is a New Urbanist neighborhood. It is progressive, tries to apply some of the New Urbanist ideas and people are looking for these types of things these days in terms of a sense of community. Irvine has always had those qualities (i.e. supporting community through design) but today that is coming in through a different form because of the influence of the Congress of New Urbanism”.*  
*(Interview #1, Irvine critic and journalist)*

The Irvine Company's philosophy with regard to neighborhood planning has always been based on an enlightened pragmatism, whereby design innovation was constantly evaluated against overall construction costs and feasibility (Watson, 2005). The ultimate goal was to make Irvine into a model planned community, with the understanding that if mistakes or false steps were made, they would be resolved at the time of the planning of future villages:

*“What we were doing was trying to transform a special piece of property in a special location, into a series of living places which families would transform into their living communities. The size of the ranch allowed us to experiment and learn from what we did. Our goal was people would want to live there enough to buy there. The concern was there were more failures in the history of community development than successes. Our successes would be judged by those who live and/or worked here”.*  
*(Watson, 2005, p. 169)*

The flexible nature of Irvine's planning process is an asset and a unique characteristic that is worth preserving, as it represents a first step forward toward the sustainability of its villages. When interviewed, many designers praised the experimental method by which

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<sup>16</sup> Hideo Sasaki, Peter Walker, Ian McHarg, Kevin Lynch, Garrett Eckbo are just a few of the most famous designers who were hired as consultants for many Irvine Company planning efforts.

incremental changes were introduced, evaluated and eventually replicated in the planning of villages (interviews #10; 14). This experimental process has been responsible for the introduction of New Urbanist concepts and sustainable practices, like the installation of native landscaping and the introduction of gray water recycling in newer villages (interviews #29; 14).

The experimental process described above is only possible if it occurs as part of the privileged dialogue between the Irvine Company and the municipality of Irvine. The innovative strategies used in the planning of Irvine villages do not always translate into city laws and regulations, and may be applied at the discretion of planners and city officials. This is a source of great frustration for small, non-TIC developers, designers and residents, which are often kept out of this dialogue (interviews #24; #27). As Irvine land is undergoing a second round of planning, the city has the opportunity to study this process and adopt it with developers other than TIC. However, as the recent efforts around the construction of the towers at Jamboree, the city does not yet have all the instruments needed for this process to succeed, and has brought in consultants and designers from other parts of the country and the world to help craft policies to guide such process (interviews #37; #11).

#### **e) Urban design, landscape architecture and marketing on the Irvine Ranch**

*“[We] would first you do market demand size and research to understand what people need and how much of it. Then we looked at the economy to understand the price range [.] Then we would develop product segmentation for that market demand. These were turned over to UPND (Urban design) and they would start planning based on these market data [...]”.*  
*(Interview #35, Lennar representative)*

As planner Ann Forsyth argued in her recent book *Reforming Suburbia* (2005), Irvine embodies the quintessential urban design-inspired new town. Pereira’s master plan and its future modifications were the result of a collaborative process involving architects, city planners and, most of all, landscape architects. The planning decisions that informed the development of the new town were deeply rooted in the contemporary theoretical work on imageability and urban legibility generated as a result of the seminal work by Anselm Strauss (1976), Gordon Cullen, Kevin Lynch (1960), and Donald Appleyard (1976, 1979). In addition to aesthetic concerns, Irvine’s plan was informed by the ecological design theories and methods set forth by Ian McHarg, who was personally involved in authoring the *Urban design Implementation Plan* of 1977. These precedents were adopted and reinterpreted by TIC planners to fit into the economic and marketing goals established by other departments within the company.

*“Part of what we began to develop in the Irvine Company from a lot of the community builder is market segmentation. We did research in this. We did focus studies. We did sales studies in this. We interviewed people [...]. So I allocated a portion of all of our marketing money for research. What do the people really want? What images do our ads and sales programs create?”*  
*(Watson, 2005, p. 223)*

One of the unique aspects of the Irvine urban development model is the idea that urban design and landscape architectural decisions could be assigned a monetary, market driven value. TIC engaged in numerous marketing studies, focus groups and other forms of user-input to

clearly define what “sold” in urban design terms. Unlike other developers, who saw design merely a decorative addition to social and land use planning, urban design considerations were an integral part of the planning process, and as such they were instrumental in the survival and long-term success of the community. However, each urban design decision was made carefully and only if supported by the findings of market studies. The notion that marketing is an integral part of Irvine’s place making process is a value that users, consumers and critics of the new town all share (interviews #11; #29). This is illustrated by some of the interview responses:

*“For a huge city like this imageability has been great, having split it into more manageable areas. Even though you don’t live in Woodbridge you know where it is. Imageability makes sections of the city more easily manageable [...]. When you buy there you buy into an image. This is all for marketing reasons. It would be apparently less successful if they did not do it. There must be some economic advantages or else they would not do it”.*  
(Interview #11, Irvine planner)

*“In Woodbridge there had to be a compelling reason for people to move i.e. the lakes. The presence of lakes made it very different from LA. Lakes had been the first development to be structured around a lake. The marketing people drove the vision then the execution was just solid urban design”.*  
(Interview #29, Irvine Company)

*“I think [the planning process in Irvine] is very market driven. It is based on whatever TIC thinks is marketable at the time. If you look at the communities, they all vary a bit because of that”.*  
(Interview #5, Northwood resident)

The dominance of marketing and its role in support of planning decisions is a blessing in disguise. While it is one of the sources of change within the city, it is not always motivated by the right reasons. Because of the extensive research that goes into the planning of new villages, TIC is at all times aware of the moods and problems of the community, through its extensive use of residents’ surveys and focused groups. (interview # 6). The information collected by the Company’s marketing department could be more useful if it were made public, transparent and accessible by all residents. This would institutionalize the evaluation process, creating a continuous feedback loop between consumers, producers and evaluators of the Irvine landscape, leading to a more sustainable community.

#### **f) The many souls of Irvine**

Ann Forsyth (2005) has identified three phases of urban development of Irvine, embodied by the villages of Woodbridge, Westpark and the new Northwood. This distinction does not seem to be reflected in the opinions of many interviewees. Through the interviews, a much simpler distinction in two key phases emerges: the first corresponds to the early years of Irvine, when the Irvine Company was structured as a not-for-profit foundation. During those years, Irvine became known as a laboratory of new planning and urban design ideas. This phase is well represented by the village of Woodbridge. Developed beginning in the late 1970s, Woodbridge was planned as a self-contained village centered on two large bodies of water,



storm water management solutions which also became a source of pride and identity for the community.<sup>17</sup>

### 1. The “original” Irvine

The early history of Irvine is deeply intertwined with the history of the Irvine Family and its financial arm, the Irvine Company. Established during the late 1800s under the laws of West Virginia, TIC was responsible for making economic decisions regarding the farming and land use of the Irvine Ranch.<sup>18</sup> The company had been structured as a not-for-profit, with profits reinvested in the ranch, and its control had always been in the hands of the descendants of James Irvine. The Irvine family commissioned William Pereira the master plan for a new town, and it was under the auspices of the Irvine Company that the early neighborhoods of University Park and Woodbridge were developed. The not-for-profit status created a “virtuous circle” by which large amounts of company profits were re-invested in planning and design activities. The company was able to hire some of the best planners and environmental designers in the country, and planning of the neighborhoods occurred according to the latest urban design principles (Forsyth, 2005).

Instrumental in the early development of Irvine as a new town was the influence of Ray Watson, the planner by the Irvine family to implement Pereira’s plan and later president of the Irvine Company. Watson is a unique figure, one that has been written about by many as the most influential in developing the Ranch, as it is known today. Trained as an architect at the University of California, Berkeley, and having practiced planning and architecture in California’s Central Valley, Watson brought with him extensive experience in planning neighborhoods and schools (Watson, 2005). He clearly understood the importance that schools played in the development of a strong, cohesive neighborhood identity, as well as the importance of a mix of housing types in shaping healthier, more diverse neighborhoods. A modernist at heart, Watson never rejected the notion that Irvine would be a car-oriented community, however he encouraged the Irvine family to adopt the PUD (Planned Unit Development) model, creating self-contained communities, which he named villages, rather than separate subdivisions planned as neighborhood units (Watson, 2005). Watson believed that the job of creating a community was a complex one, which required the input of sociologists, planners, architects and landscape architects. Every detail of the planning of early neighborhoods like University Park and Woodbridge, and the costs associated with the hiring of landscape architects and urban designers were easily absorbed by TIC because of its not-for-profit nature.

The status of the company as a not-for-profit entity continued well into the 1970s, when a state law required the distinction between of profit-driven and not-for-profit activities. This

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<sup>17</sup> Interviewees made frequent mention of the lake’s presence as a source of place identity and as one of the most important environmental presences in their lives (see the section on imageability for a detailed discussion of the lakes and their importance to the residents of Irvine villages).

<sup>18</sup> “It was originally alleged that The Irvine Company was incorporated under the laws of the State of West Virginia and was doing business in this state with its principal place of business in Orange County, where it owned approximately 93,000 acres; and that it “is principally engaged in the development, sale and leasing of said property for residential, industrial, commercial, agricultural and related purposes”. By the proposed amended complaint it was further alleged that the lands in Orange County are a portion of total holdings of approximately 205,000 acres located in Orange and Imperial Counties in California, and in Montana; that the 93,000 acres have a value in excess of \$100,000,000; that the Company was founded in 1894 by James Irvine, Jr. [...] who acted as president thereof until his death in 1947, when he was succeeded by his son Myford Irvine who served until his death in January 1959; that the issued and outstanding shares of stock in the Company are owned by fewer than 12 shareholders, many of whom are members of the Irvine family”(Source: <http://davis-stirling.com>).

forced the sale of financial side of the Irvine Company to a group of buyers headed by Donald Bren, while the not-for-profit side of the company was restructured into a foundation headquartered in San Francisco. The end of the Irvine Company as a foundation also coincided with the departure of Ray Watson from the presidency of the Irvine Company, and its replacement by young developer Donald Bren.

## 2. The developer-driven Irvine

*“Donald has a great taste for architecture and a great respect of the planning, and the fact is, by the time he came into the company, the reputation of the company as a community developer, as a planner, was so ingrained it was taken for granted. By 1983 he was smart enough to see that, indeed, planning was something they needed to bring back in, and it was part of the criticism he had of his partners when he bought them out. He had written a long paper that has never been published but was critical of what had been happening over the previous years, so he wanted to change the company back to that mode”.*  
(Watson, 2005, p. 390)

*“I think that my concern about the company is no longer a concern. I think that Donald Bren has brought an element to this equation that we’re very—I think everybody is very fortunate that he is an owner of this property, because I know the business well enough to know what most owners would have done with his property. It wouldn’t have been a disaster. It would have been financially successful. I mean, it’s a great location”.*  
(Watson, 2005, p. 467)

The year 1983 marked the beginning of a new era for Irvine. That year, Donald Bren took over control of the Irvine Company from the Irvine family and became its first chairman.<sup>19</sup> Bren had been the developer of Mission Viejo, a master planned community just a few miles south of the Irvine Ranch. There he developed a unique taste for mission-style, Mediterranean-inspired architecture, which would become one of the most imageable aspects of Irvine’s environment.

Donald Bren’s approach to residential development is referred by many as a “developer” approach (interview #9; #24), which refers to a much more straightforward and profit oriented practice of planning neighborhoods. In the era of Donald Bren house lots became smaller, and investment in social infrastructure limited. Bren was particularly concerned with limiting the power of HOA associations as they had been established by the early Irvine plans. In his first large scale development in the City of Irvine, the Village of Westpark, he chose to create small HOA rather than a large one. This would allow him more freedom and prevent Homeowners Associations from opposing his development plans.

Another important change that occurred during the Bren era was the change the early Irvine Company practice to create town centers at the heart of the villages, as in the villages of University Park and Woodbridge. Instead, village centers (a fancy name to indicate village shopping malls) were moved to a more traditional and financially profitable location at the

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<sup>19</sup> Donald Bren was able to acquire control of the Irvine Company as the president of an investment group that included, among others, the Exxon Corporation.

intersection of arterial roads, visible from the automobile traffic but far from being walkable and accessible.

*“It came upon with the Bren era. They [the Irvine Company] wanted to create something different, they wanted to show Irvine what it should be. Lots of density, residual value as well as an influx of Mediterranean architecture that people fell in love with and hence the quantity of it”.*  
(Interview #35, Lennar representative)

*“Since Mr. Bren (...) it has evolved into his vision. Not that it is not about place making, because he is really concerned about place and has exquisite taste and he is a visionary. But it is pretty much about the place that he sees Irvine is. He has a huge affinity to Mediterranean, Italian and later Tuscan architecture. He also believes that with or climate he aspires to architecture that goes with that kind of atmosphere and the brush landscape of the area. He loves the coastal village look, like Crystal Cove (he has gotten a lot of criticism for his like-for-like architecture in Irvine and Crystal Cove”.*  
(Interview #35, Lennar representative)

While most residents appreciate the detailed planning, care and maintenance that goes into preserving and maintaining the Irvine landscape, many raise questions with regard to the uniformity and extent of the Mediterranean influence. The sameness of the architecture has also been the target of attacks by designers and planners who have called Irvine and its environs “variation on a theme park” (Sorkin). In the interviews, residents often complained about the stylistic rigidity and lack of flexibility that characterized the city of Irvine. The uniformity of the Mediterranean architecture found everywhere in Irvine is both a source of identity and source of frustration. On one hand, the Mediterranean design vocabulary helps situate Irvine within the regional “ethos” of the southern California region. On the other, the use of the Mediterranean style is seen as a major limitation to any forms of personal expression, with important consequences on residents’ place identity (Cooper Marcus, 1995).

*‘The Mediterranean style is also one, perhaps because of the area where I live. In Orange County everywhere you look it is that. That adds to the regional uniqueness of this place”.*  
(Interview #32, Westpark elderly female)

*“I also would like is a bit more diversity in the architecture. Many people from the outside say that the architecture is the same, it is good but very much “the same”.*  
(Interview #15, Landscape Architect)

The tension between the Irvine of the early days, focused on social planning, diversity, and the creation of cohesive community and the Mediterranean place envisioned by Donald Bren is not a superficial one, and should somehow be resolved. As the quotes from the residents suggest, many have a problem with the architectural forms not only because they are monotonous, but also because of the type of citizenry they tend to imply. The small lots, lack of walkability, and automobile-driven planning of Westpark is seen as “anti-Irvine”, while Ray Watson’s Woodbridge is held as an example of what Irvine should be, as the “epitome” of the

self contained, cohesive community (interview #38). Its planning contains all the elements of the original Pereira plan, and constitutes the essence of a place that should be preserved (Ruggeri, 2009).

*”[Woodbridge’s] founding fathers wanted to create destination [...]. They created the lakes, social centers. They did not build tracts, they built clusters of architecture carefully organized similar to some of the old neighborhoods. So you don’t have hundreds of the same houses everywhere you go [...]. Some of the apartments at the corner were not terrific, but some of the greatest things were on the inside”.*  
(Interview #35, Lennar representative)

*“Woodbridge is the epitome of what Irvine is all about. If someone asked me what is Irvine I’d say it is Woodbridge: a lake, planned community. I think it is very nice. In most people’s minds it is Irvine”.*  
(Interview #29, Irvine Company)

#### **g) Irvine and the importance of children and education**

*“[...] I was convinced, from a political/social point of view, that part of the problem of creating community is to get allegiance within where you live, to your city and to your school district. And yet, school districts are a separate political body from the city council of a city. My goal for the future new town was have the boundary for both school and city the same. [If] we had one city and a school district with the same boundary [...] the sense of community would be reinforced, because most of the people that live in Irvine are family”.*  
(Watson, 2005, pp. 161-2)

Ever since the early examples of suburban residential communities, the presence of good schools at the heart of a neighborhood was a defining characteristic of suburbia and one of the main attractors for families and potential residents. The fundamental presence of educational institutions was institutionalized as early as the 1920s by Clarence Perry’s “neighborhood unit” model, quickly adopted by community builders as a paradigmatic model for community development (Southworth and Ben Joseph, 1997). While many residents began to flee inner-city neighborhoods, leaving behind empty homes and a shrinking tax base, suburbs began to grow in population and resources, building bigger and better schools and hiring the best educators available. This virtuous loop has contributed the establishment of a myth that living and studying in suburbia would lead to educational and professional success.

A recent report by the Manhattan Institute shows that this myth continues to be at the heart of many families’ decision to relocate to suburbia (Greene and Fosters, 2004). However, that same report suggests that educational success of suburban schools goes hand in hand with higher levels of drug use and teen pregnancies, as witnessed by the death of 19 suburban teenagers in the large suburb of Plano, TX (Durlington, 2007). Irvine’s superiority in terms of schools and education, like the rest of its characteristics, is not accidental. It is the result of a calculated decision by the Irvine Company and the city of Irvine to establish an ad-hoc school district corresponding to the boundaries of the city. By making the boundaries of the Irvine Unified School District coincide with those of the city, the Irvine Company was able to simplify

the relationship between city and school district, so that decisions made by the former would coincide with the interests of the latter.

*“Irvine is definitely a family oriented place. I asked Ray Watson one day about the most important thing he did as a planner. He told me that the most important thing was to try to make the city boundaries coincide with the school district boundaries. When he first came here there were a number of school districts and now there is one. So the city and the school district can work together and there is a symbiotic relationship”.*  
(Interview #38, Irvine Company Representative)

The apparently simple political move also acted as a filtering device because it limited school enrollment to residents of Irvine and thus excluded residents of nearby poorer communities, like Santa Ana, Tustin, and Costa Mesa. As the fame of Irvine schools grew, the Irvine Company was able to use their high rankings and academic performance standards as marketing tool, attracting a large number of families interested in providing children with the best possible education. In *The Irvine Ranch*, a recent picture book/marketing brochure published by TIC an entire chapter was dedicated to schools and academics. Company web sites stressed Donald Bren’s commitment to helping Irvine’s schools through grants and scholarships. Bren has distinguished himself as a patron of local schools, making generous donations for the improvement of curricula and the creation of competitive scholarship programs. The establishment of specially funded programs within Irvine schools has kept the performance level of Irvine school’s very high, and has given TIC a marketing tool to promote Irvine as an ideal location for families looking for the perfect environment to raise their children. Many of the residents share the Irvine Company’s commitment to education, resulting in large amounts of funds invested in improving the quality of the education and in attracting the best educators.

*“The Irvine school district is so good that many people [...] choose Irvine because of the school system. I did not like my house for 600k and would have wanted to pay 500k, but I had to buy in Irvine because of the school district. So if that is your goal, you are stuck. Bren gives away millions of dollars to schools, he understands that this is the mechanism”.*  
(Interview #24, Woodbridge resident and entrepreneur)

The importance of academics in defining Irvine’s identity is such that residents often refer to schools as a key distinctive element of Irvine compared to other nearby communities. When asked about the values that all residents of Irvine share, 44% of Northwood respondents, 34% of Woodbridge respondents and 25% of Westpark respondents mentioned education as one of top values. 67.8% of the survey respondents selected schools as one of the most distinctive things about their neighborhood compared to other nearby neighborhoods. Similarly, 77.6% of the respondents choose schools as one of the top five factors affecting their satisfaction with Irvine.



**Figure 49 Woodbridge High School consistently ranks among the top schools in California (photo by author)**

The presence of highly ranked schools within the Irvine Unified School District contributed greatly to its success as among Asian American families (fig. 49). As many interviewees pointed out, Asian American families have been attracted to Irvine by the outstanding results of its education system. This is reflected in a new phenomenon whereby potential homebuyers actively seek to purchase their homes in specific zip code areas by virtue of their association with some of the best high schools, like in the case of Northwood High and University High, to ensure their children's educational success.

*“I know a lot of people, particularly Asian people (Japanese, Chinese, Iranian) move here because of [...] very good school system that is highly accredited”.*  
(Interview #16, Westpark elderly female)

*“I have people coming in and offering cash to get into my house, especially Asians, to have their kids go to the right high school. They know the value of a good education. [University High] is “the” school right now. It is number two or three in the state. I don't have kids but you know when you buy your house that that is the draw”.*  
(Interview #6, Westpark female single resident)

This research also revealed the importance of schools as agents of community life and social capital construction. In a society where time for neighboring is limited, the time parents and families dedicate to the education and growth of children becomes critical in shaping a sense of community. This is recognized by residents of all ages, whether they have children or not:



*“My only social life is through doing sports. When you have kids, you meet everyone through the kids. Church, school, sports. There isn’t much here for teenagers. They don’t want to live here. I hear that a lot from kids. It’s a bit too sanitized”.*  
*(Interview #20, Westpark male resident)*

The influence of education on Irvine’s place identity is likely to remain strong and continue to make Irvine competitive in both attracting new residents and retaining old ones. This is in itself a lesson for urban designers seeking to make places like Irvine sustainable. While maintaining a healthy, beautiful environment is of the utmost importance, making sure that schools provide top-notch education should remain a priority for the “producers” of Irvine. However, as the population ages and as “empty nesters” become more numerous, it is important that new programs and activities for adults, teenagers and seniors be introduced to complement those dedicated to children and their families. This is one a key challenge faced by those who want Irvine to become a more resilient, sustainable and diverse community.

## Chapter 7

### CONCLUSIONS: URBAN DESIGN LESSONS FROM IRVINE

#### **a) The future of Irvine: recipe for a lasting place identity**

This dissertation is the outcome of a long process that began in 2001, when the author began practicing landscape architecture in Irvine. It was during that time that the research questions began to take shape. What is the true role design plays in the shaping of place identity? Can the work of urban designers affect in any way the level of attachment people develop with their neighborhoods, and what other factors may play in the establishment of a strong place identity? Are there inconsistencies between what the experts believe, and the lived experiences of residents with regard to what really matters in the planning of residential neighborhoods? And, finally, what is the outcome of strong place identity on the sense of community and social capital of a master planned community?

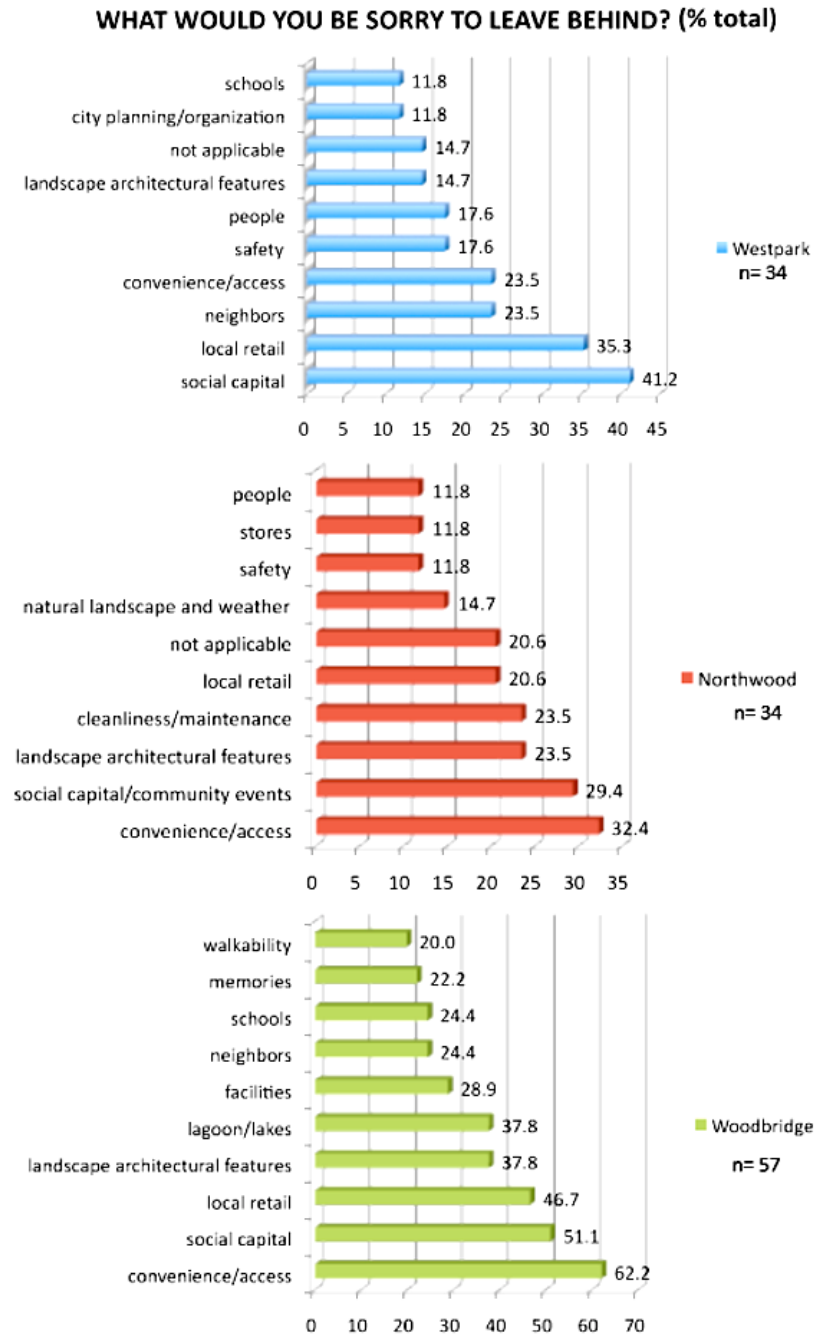
In this section, the author attempts to reflect on this long process and highlight possible action items that can help urban designers and landscape architect further strengthen place identity and attachment in Irvine. Like Irvine, America is filled with residential neighborhood built in the post WWII period, which are entering their mature stage. This dissertation ends with a few concluding observations, which may apply to Irvine as well as any other new planned residential development currently experiencing changes as a result of their age.

#### 1) The place identity gradient in Irvine

Historically, designers have seen identity as a dichotomy, as either something that exists or does not, and suburbia was an example of the complete lack of identity. Edward Relph (1976) was extremely influential in promoting the place vs. placeness duality. He suggested that suburbs, lacking the physical definition, density, and vitality of urban environments fell in the “placeless” category. The complexity of the post-industrial city has made our work as urban designers more complex: traditional cities are now shrinking, with densities, opportunities and problems shifting toward areas at the urban edge, which in turn are becoming denser, more populated and socio-economically diverse. As older suburbs are aging, they are taking on qualities and characteristics usually associated with older urban centers. The high-rise condos, office towers, and infill developments visible in many parts of the Irvine landscape are representative of this new era of maturity.

As Southworth and Ruggeri (2010) suggest, Edward Relph’s distinction between placeness and placelessness may have become outdated, and certainly requires us to take a fresh look at the suburban phenomenon. Designer must give a more nuanced look at the multiple expressions of identity in the contemporary city as if identity were a “gradient” that expresses itself in multiple and often very subtle ways. Irvine clearly illustrates how this identity gradient finds its way into the lives and identities of its residents. While urban design was the force that shaped the original identity of the new town, it is today only one of the aspects affecting Irvine’s place identity. As Irvine has grown and matured, social life has filled the carefully designed spaces between buildings, the village center storefronts, and the imageable parkways and open spaces. Socialization in Irvine villages may not be as intense as that of a traditional urban neighborhood, but opportunities for socialization exist, and more and more people are taking advantage of them. Residents who moved to suburbia in search of better living conditions, good schools and easy access to jobs and retail are now actively engaging in public activities. While, as Putnam (2003) pointed out, many of these activities revolve around faith-based organizations

(on average, 42.7% of survey respondents belong to churches) and children (15%), 11% of residents surveyed in this study belong to charities and devote their spare time to volunteering. The same percentage of people is actively involved in sports, professional organization, fitness clubs, or local universities and community colleges. Overall, three out of four residents seem to be engaged in some type of social activity. As a result, social life, and neighboring is among the top ten things people would be most sorry to leave behind (fig. 50).



**Figure 50 Top ten things residents would be sorry to leave behind.**

The realization of the existence of social life within suburban neighborhoods—something that sociologist Herbert Gans (1967) had observed in his participant observation study of Levittown as easy as the mid 1960s—calls for the work of urban designers as social scientists, and for a more sophisticated and research-driven practice that is able to evaluate places not only for their physical appearance, but also for the health and livelihood of their social life. Tools like the post occupancy evaluations in vogue during the 1960s and 70s can help us achieve a deeper knowledge. Community-based planning and design processes can also be helpful in helping designers learn from the present as they attempt to plan a more sustainable future of those communities. While many of these processes are underway, prompted by state legislation and by changes in worldwide economics, it is essential that urban designers are trained to collect, analyze, and evaluate the input of communities.

## 2) Place satisfaction: the pragmatic roots of place identity in suburbia

Another key lesson learned in Irvine is that place attachment does not always express itself in deep, emotional terms, but also in terms of the pragmatic satisfaction with what one's community offers in terms of access, convenience, cleanliness and overall ease of living. As the analysis of the open-ended questions shows, among the ten things residents of Irvine villages attach to the most are landscape elements like street plantings and parks, along with other qualities like the convenient access to freeways, the presence of community amenities like pools and playgrounds, schools, stores, and the reliance on HOAs to keep their neighborhoods clean and in order.

The existence of such a basic form of place attachment—what Korpela (1995) calls a “self regulating mechanism”—may be considered as the most basic expression of identity, yet as the correlation analysis shows, it provides the foundation for much of the community engagement and social capital seen in master planned communities like Irvine. Given the importance of satisfaction in establishing further bonds with a place, it is crucial that designers engage in satisfaction surveys and other forms of post occupancy evaluation methods to gauge the fit between the residents' lives, their needs and what the place can offer than. Most of all, it is important that they acknowledge and foster as much as possible the accessibility, convenience, maintenance, cleanliness and other pragmatic goals in addition to beauty and distinctiveness when planning neighborhoods and cities.

## 3. HOA associations are a presence to be dealt with

The emphasis placed by residents of Irvine villages on the maintenance and convenience offered by the Homeowners' Associations system suggests that one of the responsibilities that urban designers have is to become directly involved in envisioning inclusive systems of governance beyond the ones we currently employ, which may be able to steward the original vision, address the daily needs of residents, and provide a high level of care for the landscape without running the risk of freezing them into their original state, which is often the result of a strict HOA oversight. While integrity of urban design schemes may be important, it is almost as important that master plans be designed to accommodate for flexibility and capacity to adapt to changing socio-economic conditions and new forms of community living, and that design guidelines and regulations that accompany the plans be crafted to allow for the overall adaptability of the neighborhoods to changing socio-economic and environmental conditions.

As the vicissitudes around the creation of a rapid transit for Irvine demonstrate, the rigid HOA governance framework in place in the new town makes any changes difficult to achieve, and often leads to solutions that either fail to address the real needs of the community or are not sustainable. One of the lessons learned in Irvine is that in the context of change, those who seek to maintain the status quo often make use of master plans, design guidelines and planning documents as instruments for the promotion of NIMBY attitudes. As the discussion on the values behind the maintenance of the Irvine landscape illustrates, urban design and landscape architecture are far from being neutral fields. Ramifications of urban design decisions can be highly political, and designers must become aware and skilled at addressing them during the planning stage as well as after construction.

#### 4. Imageability and distinctiveness of the landscape

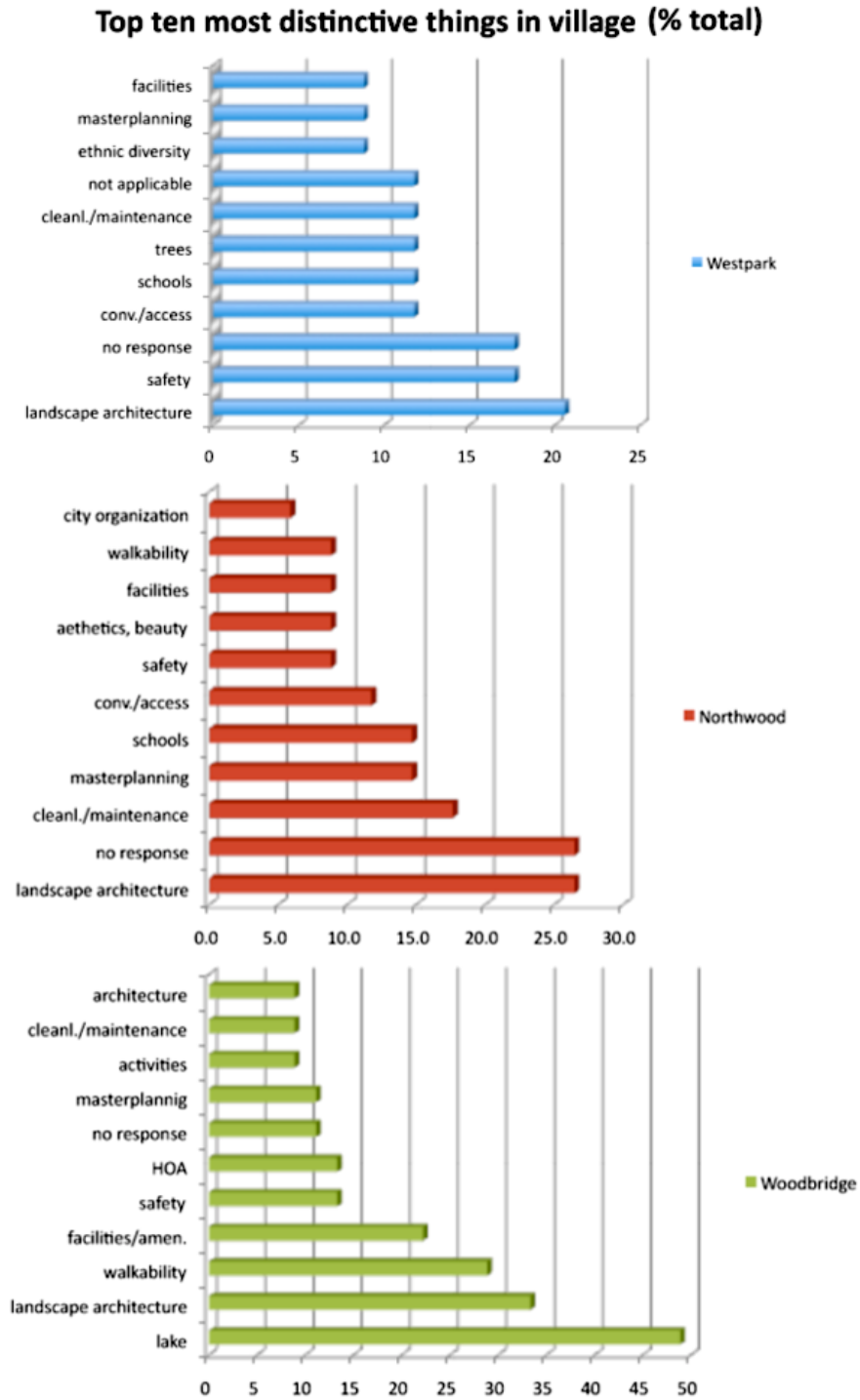
This dissertation focused on Irvine because of its paradigmatic nature as the exemplary urban design-inspired new town. It chose three villages that differ in style and hoped to find a connection between landscape and urban design aesthetics and place identity. However, the findings suggest that urban design—at least in its peculiar, iconic interpretation by TIC and its consultants—may not be sufficient in shaping unique place identity in Irvine villages. This study showed similar values in terms of place identity between Woodbridge and Westpark in spite of their obvious stylistic differences. While it may not be sufficient in establishing strongly distinctive place identities, urban design does contribute to increase the overall level of place identity and attachment, as shown by the consistent underperformance of Northwood, the unplanned village, vis-à-vis the planned communities of Woodbridge and Westpark.

Clearly, of all the tools that urban designers can use to foster a sense of place identity, landscape architecture in its various expressions—open space design, streetscape plantings, signage, and the presence of natural systems within neighborhoods—is the one that resonates the most in the lives, narratives and opinions of residents. According to 25% of the residents surveyed, landscape architecture makes their neighborhoods distinctive and sets them apart from other communities in Orange County and the rest of California, while only 8% think that architectural style and detailing are sources of distinctiveness (fig. 51). The distinctiveness and imageability of Irvine's landscape and urban design ultimately affect the residents' sense of attachment to the neighborhood. It is no surprise that when asked about the preservation of their village identity, residents consider landscape architecture and its preservation among the top ten necessary things to safeguard in the future (fig. 52).

#### 5. Preserving identity

One of the surprising results of this study comes from a question asking residents about the things they would want to see in place to preserve the identity of their villages. The majority of respondents has either no opinion, or thinks no specific action is needed. In many cases interviewees use the term “they” to indicate those in charge of the preservation of Irvine. This generic term refers to Irvine Company, HOA Associations and City of Irvine, the three entities in charge of the correct implementation and stewardship of the original master plan. The overseeing of planning activities by these institutions generates in residents a passive attitude toward the stewardship of the villages. When asked about her knowledge of the master planning process, a resident clearly illustrates the acceptance of the master plan and its goals as something that should/could not be changed:

*“I think the grand plan that they have, the map you looked at and the goals. It was defined and abided by. They did what they said they wanted to do. I do not feel like we are growing too much”.*  
 (Interview #16, Westpark elderly female resident)



**Figure 51 Ten most distinctive village elements.**



### Top ten actions to preserve Irvine's identity (% total)



**Figure 52 Top ten actions to preserve the identity of Irvine villages.**

Despite their rejection of some of the stricter regulations, a high percentage of residents seem to value the work that HOA are doing in the neighborhood. In Westpark and Northwood, respondents even call for more active associations, which they would like to be modeled along the lines of Woodbridge's Village Association. Given these findings, it is plausible to deduce

that HOAs will continue to act as the stewards of Irvine’s urban design integrity, and designers will have to take a more active role in collaborating with them to develop new types or rules and regulations that will allow for change and adaptability to be built into the villages fabric.

While landscape architecture is distinctive, interviews and surveys clearly suggest that the presence of natural elements like creeks and lakes within villages is particularly meaningful to residents. Over 50% of the Woodbridge respondents mention the lakes as something that sets their neighborhood apart from other places, transforming what was a pragmatic solution to a very practical problem (the need for effective storm water management) into an opportunity for the strengthening of place identity. By comparison, architectural details disappear in the background of people’s lives or, as residents clearly suggested in the interview.

Just as the original planners of Woodbridge decided to center the new village on the lakes, there is the great opportunity to intervene into the fabric of the neighborhoods by simply addressing functional needs. For instance, as the aging infrastructure needs to be replaced or reconstructed, there is a great opportunity for a “green infrastructure “ approach to be retrofitted into it (fig. 53). Green streets, bio-detention swales and pools, pervious pavements, native plantings are only some of the tools that landscape architect can use to solve this imminent problem and re-introduce nature and habitat into suburban neighborhoods.



**Figure 53 A Woodbridge community garden reclaims an engineered detention basin  
(photo by author)**

## **5. More density in Irvine?**

A separate discussion has to do with the infill of density and high-rise towers clearly one of the key concerns for the residents of Irvine (fig. 54). Over the past few years 5-7 story apartment buildings and high-rise condominiums have been built on land previously zoned as office or commercial and no longer owned by TIC. With their steel and glass facades, these buildings contrast with the “country” feel of the new town. Residents are fearful of this new architecture as it represents too dramatic a change compared to the calm and static residential neighborhoods of the past. They see high-rise residential towers as warning signs that the “city of

villages” may have matured into an urban area. Whether these fears are real or artificially induced, they are a factor that urban designers must begin to address.

The addition of higher densities in the context of a low-density environment is a cause for concern for some of the residents. A survey respondent summarized his feelings toward density this way: “lots of houses being built; streets more crowded; schools more crowded”. While The Irvine Company quickly dismisses the new high-rise developments as “a different animal” (interview #29), some urban designers see the towers as sign of positive change (interview #15). Neither of these opinions accurately reflects the feelings of the residents, as they expressed them during the interviews, and represent a fundamental disconnect between experts and laypersons and a gap in our understanding of suburban life that must be filled by future research.



**Figure 54 Change in Irvine: the high-rise towers at Jamboree  
(photo by author)**

Although the necessity for higher densities and their positive effects on the livelihood and long-term sustainability of suburban master planned communities are undeniable, their introduction of density and infill development within the low-density fabric of suburbia should be sensitive to the context. In Irvine, opposition to the towers comes from a complete misunderstanding on the part of the developers and their consultants of the true character of a place, and of the important bond that residents have developed with its landscape. To current Irvine residents, the new glass towers speak of a new type of citizenship, one that is more concerned with the commanding views from his 30th floor condo than with the social life of its villages. A more sensitive design of high-rise buildings, or the introduction of more compact, low-rise developments would help tie new development into the physical fabric of the surrounding neighborhoods as well as to their social and cultural milieus, and address the concerns of residents through involvement in the planning process and education:

*“We never had high-rise, but now they seem to be everywhere. [...] I don’t understand what is going on. Somehow the older industrial parks are turning into urban residences and high-rise condos. And then they are building more of these residential towers next to new office complexes. Where are these people going to go? They will drive on our roads. They will be congesting the freeways, squishing in and out of our small airport that cannot expand”.*  
(Interview #6, Westpark female single resident)

*“The best thing about Irvine is the small neighborhood feel. It is what makes us humans. And I think that if we loose that we loose our humanity, and I think that is where we are going. High rises are being built. There is no greenery, but a giant concrete mess with no open space around it. [They are] not about coming out and walking around. [They are] about driving home, getting out of your car into the elevator, to the 20th story, and getting into your flat”.*  
(Interview #33, Westpark female resident)



**Figure 55 Change in Irvine: The “Kron castle” in Northwood  
(photo by author)**

## **6. Future topics of investigation**

This dissertation had very ambitious goals, which were partially met in spite of such constraints as a small return rate, a lower level of statistical significance of the data, and the limited timeframe and resources of a doctoral research. While it was unthinkable to complete a full-scale survey on place identity and place attachment, this study did succeed in filling a major gap in the literature on Irvine, offering a consistent sample of residents, planners, and city officials the opportunity to discuss through surveys and interviews their place identity and overall feelings about the place. In terms of cost-effectiveness, the hours of interviews collected over the course of a few months led to rich and compelling data, accompanied by very insightful observations regarding the role that landscape plays in the lives of Irvine residents. The interviews also offered residents the opportunity to expand on the various topics related to the subject of place identity, suggest names of friends or neighbors that could have contributed



useful insights (snowballing), as well as interesting leads to some of Irvine's hidden "treasures". For instance, the discovery of the Irvine castle, of the Woodbridge community gardens, Northwood Park, and many other community spaces in the different villages came from references made by residents during the interview process.

Despite these limits and challenges, many of the original research goals were met. This research should be understood as a tool for Irvine planners and those responsible for environmental design decision in the new town, which should give them a better sense of how effective the work of previous designers has been in shaping a strong place identity and attachment in the new town. The author wishes that other researchers will take on similar studies in other communities, and contribute to creating a database that will allow drawing parallels across various master planned communities, types of suburbs, and between suburbia and the historic city.

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*California Land Use legislation*  
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*US Census Bureau (census data)*  
[www.census.gov](http://www.census.gov)

*City of Irvine (Official Web Page)*  
<http://www.cityofirvine.org>

*The Irvine Company (Corporate Web Page)*  
[www.irvineco.com](http://www.irvineco.com)

*University of California, Irvine*  
[www.uci.edu](http://www.uci.edu)

*Irvine Housing Blog (for info about the housing market in the city of Irvine)*  
<http://www.irvinehousingblog.com/>

*The Villages of Irvine (Marketing Web Page)*  
<http://www.villagesofirvine.com/>

*Woodbridge Village Association (HOA)*  
<http://www.wva.org>

## APPENDICES

### Appendix a) List of Interviewees

Interview #1 (AH) 6.15.2007, Irvine critic and journalist  
Interview #2 (BP) 6.18.2007, Northwood elderly female  
Interview #3 (BF) 2.5.2007, HOA executive  
Interview #4 (BS) 5.23.2007, Woodbridge male resident  
Interview #5 (CL) 5.11.2007, Northwood resident  
Interview #6 (CC) 6.21.2007, Westpark female single resident  
Interview #7 (CF) 6.21.2007, Northwood old time female resident  
Interview #8 (CB) 7.23.2007, Woodbridge resident  
Interview #9 (DT) 4.16.2007, Male Northwood resident  
Interview #10 (DK) 2.1.2007, Marketing executive and resident  
Interview #11 (DM) 2.13.2007, Irvine planner  
Interview #12 (DDM) 4.16.2007, Northwood female resident  
Interview #13 (DF) 7.6.2007, Woodbridge resident and professional  
Interview #14 (RL) 5.11.2007, Landscape Architect  
Interview #15 (ED) 2.12.2007, Landscape Architect  
Interview #16 (EP) 6.16.2007, Westpark elderly female resident  
Interview #18 (EW) 5.28.2007, Young Woodbridge resident  
Interview #20 (GS) 6.20.2007, Westpark male resident  
Interview #21 (JMK) 2.12.2007, Landscape architect  
Interview #22 (JT) 6.2007, Northwood resident  
Interview #23 (JK) 5.18.2007, Northwood single mother  
Interview #24 (KM) 5.10.2007, Woodbridge resident and entrepreneur  
Interview #25 (KMC) 5.14.2007, Woodbridge female resident  
Interview #26 (XL) 5.8.2007, City official  
Interview #27 (LG) 5.25.2007, Resident of Woodbridge and landscape design professional  
Interview #28 (LJ) 6.16.2007, Woodbridge mom  
Interview #29 (LLO) 2.12.2007, Irvine Company  
Interview #30 (LG) 7.23.2007, Woodbridge female resident  
Interview #31 (LW) 5.28.2007, Woodbridge elderly female resident  
Interview #32 (MR) 6.18.2007, Westpark female resident  
Interview #33 (MB) 3.26.2007, Westpark female resident  
Interview #34 (LA) 9.2007, Irvine City official  
Interview #35 (MC) 5.7.2007, Lennar representative  
Interview #36 (PD) 2.9.2007, Irvine Planner  
Interview #37 (PF) 1.31.2007, Irvine planner  
Interview #38 (BE) 6.21.2007, Irvine Company  
Interview #39 (RP) 6.19.2007, Woodbridge Resident and Entrepreneur  
Interview #40 (RPE) 2.8.2007, UCI academic  
Interview #41 (SS) 5.21.2007, Woodbridge young mother

## Appendix b) Survey instrument



### UNIVERSITY OF CALIFORNIA, BERKELEY

*College of Environmental Design*

*Department of Landscape Architecture and Environmental Planning*



### *What makes your neighborhood a special place?*

*Letter of introduction and consent to participate in research*

The Department of Landscape Architecture and Environmental Planning at the University of California, Berkeley is researching Irvine and its neighborhoods. You are part of a small group of residents who have been invited to answer questions about their neighborhood and what makes it a special place. During the second phase of this research we would like to interview a few residents. If you would like to be interviewed please fill out the box on the last page of this survey.

It will take approximately 40 minutes to complete this survey, but you may take as much time as you want; your candid answers are extremely valuable to this research and in the process you may learn something about your neighborhood. At any time you may refuse to participate, decide not to answer one or more questions or withdraw without penalty or any other loss. Participation in this research may involve loss of privacy, but your personal information will be handled as confidentially as possible. Data collected through this interview may be used for future research. However, if information from this study is published or presented at scientific meetings, your name and other personal information will not be used. We have enclosed a stamped envelope so you can return the survey as soon as you have completed it at no cost to you.

Please do not hesitate to e-mail us at [irvinesurvey@lists.berkeley.edu](mailto:irvinesurvey@lists.berkeley.edu) or call us at (510) 848-5646 with questions. Should you have any questions regarding your rights or treatment as participant in this study, please call (510) 642-7461 or e-mail [subjects@berkeley.edu](mailto:subjects@berkeley.edu). A copy of this consent form is attached to this survey for you to keep. If you have read and understood the information presented above and agree to participate in this research, you may sign and date below.

**Thank you for participating in this research!**

A handwritten signature in black ink, appearing to read 'Deni Ruggeri'.

Deni Ruggeri, Ph.D. Candidate  
Michael Southworth, Professor and Faculty Advisor

Signature of survey respondent \_\_\_\_\_

date signed \_\_\_\_\_

Thank you for agreeing to participate in this survey. In the following pages, you will be asked to rank statements and/or answer simple questions about what makes your neighborhood special to you. Remember: there is no right or wrong answer, and every answer counts!

A few questions about **you and the place where you live**

<i>strongly disagree</i>	<i>disagree somewhat</i>	<i>agree somewhat</i>	<i>strongly agree</i>		<i>Please indicate how much you agree or disagree by circling the number next to each statement.</i>
1	2	3	4	←	1. My neighborhood is home to me.
1	2	3	4	←	2. I live in my neighborhood, but feel like my roots are else where.
1	2	3	4	←	3. My neighborhood's appearance fits well who I am as a person.
1	2	3	4	←	4. In my neighborhood I am able to be the person I want to be.
1	2	3	4	←	5. There are places in my neighborhood that make me happy.
1	2	3	4	←	6. My neighborhood makes me feel like I truly belong here.
1	2	3	4	←	7. If somebody asked me about my feelings about this place, I would say they are mostly positive.
1	2	3	4	←	8. I feel like my neighborhood is part of me.
1	2	3	4	←	9. I have barely explored my neighborhood beyond my own backyard.
1	2	3	4	←	10. Considering my neighborhood, there is no other place I'd rather live.
1	2	3	4	←	11. If I had to leave this place tomorrow, I would leave with no regrets.

12. Imagine you had to leave this neighborhood tomorrow. What places, things, people and memories would you be sorry to leave?

13. If you left, what aspects of your neighborhood would be easy to leave behind?

a few days    weeks    months    years    I'd never adjust    14. Imagine you had to leave your neighborhood. How long do you think it would take you to adjust to the new place?

A few questions about **your neighborhood**

<i>strongly disagree</i>	<i>disagree somewhat</i>	<i>agree somewhat</i>	<i>strongly agree</i>		<i>The following questions ask you about the physical environment of your neighborhood and what it has to offer</i>
1	2	3	4	←	15. I find everything I need in my neighborhood.
1	2	3	4	←	16. I feel like this place provides me the privacy I need.
1	2	3	4	←	17. I feel like this place provides me all the social interaction I need.
1	2	3	4	←	18. I am satisfied with the services, goods and other things that my neighborhood has to offer.
1	2	3	4	←	19. I find this neighborhood to be memorable.
1	2	3	4	←	20. It is difficult to find my way around my neighborhood.
1	2	3	4	←	21. It is easy for new visitors to find their way to my house in my neighborhood.
1	2	3	4	←	22. I think the rest of my family is satisfied with what our neighborhood has to offer (leave blank if this statement is not applicable to you).

**23. What aspects of your neighborhood's environment clearly stand out from other neighborhoods you know? (Check at least five)**

<input type="checkbox"/> trees/landscaping	<input type="checkbox"/> swimming pools	<input type="checkbox"/> maintenance	<input type="checkbox"/> eucalyptus wind rows
<input type="checkbox"/> street layout	<input type="checkbox"/> paths/trails	<input type="checkbox"/> smell	<input type="checkbox"/> surrounding fields
<input type="checkbox"/> entry signs	<input type="checkbox"/> lighting	<input type="checkbox"/> views	<input type="checkbox"/> creeks, water channel
<input type="checkbox"/> walls/fences	<input type="checkbox"/> parks	<input type="checkbox"/> mailboxes	<input type="checkbox"/> public spaces/plazas
<input type="checkbox"/> entry gates	<input type="checkbox"/> children playgrounds	<input type="checkbox"/> colors of buildings	<input type="checkbox"/> street furniture
<input type="checkbox"/> lakes/ponds	<input type="checkbox"/> shopping centers	<input type="checkbox"/> sounds	<input type="checkbox"/> coffee places
<input type="checkbox"/> architectural style	<input type="checkbox"/> parking	<input type="checkbox"/> golf courses	<input type="checkbox"/> park pavilions
<input type="checkbox"/> public buildings	<input type="checkbox"/> sports fields	<input type="checkbox"/> club house	<input type="checkbox"/> diverse housing
<input type="checkbox"/> order/cleanliness	<input type="checkbox"/> access to nature	<input type="checkbox"/> fountains	<input type="checkbox"/> tiled roofs
<input type="checkbox"/> community center	<input type="checkbox"/> flagpoles	<input type="checkbox"/> front yards	<input type="checkbox"/> plant palette
<input type="checkbox"/> city facilities	<input type="checkbox"/> housing density	<input type="checkbox"/> backyards	<input type="checkbox"/> Mediterranean feel
<input type="checkbox"/> schools	<input type="checkbox"/> front porches	<input type="checkbox"/> native plants	<input type="checkbox"/> historical feel
<input type="checkbox"/> craftsman style	<input type="checkbox"/> California Ranch style	<input type="checkbox"/> palm trees	<input type="checkbox"/> other _____
<input type="checkbox"/> churches	<input type="checkbox"/> monuments	<input type="checkbox"/> street signs	

**24. When I think of my neighborhood I feel (check all the adjectives that apply).**

<input type="checkbox"/> bored	<input type="checkbox"/> comfortable	<input type="checkbox"/> stressed out	<input type="checkbox"/> distressed	<input type="checkbox"/> threatened
<input type="checkbox"/> excited	<input type="checkbox"/> pleased	<input type="checkbox"/> proud	<input type="checkbox"/> safe	<input type="checkbox"/> scared
<input type="checkbox"/> helpless	<input type="checkbox"/> satisfied	<input type="checkbox"/> delighted	<input type="checkbox"/> relaxed	<input type="checkbox"/> fulfilled
<input type="checkbox"/> hyperactive	<input type="checkbox"/> sleepy	<input type="checkbox"/> displeased	<input type="checkbox"/> happy	<input type="checkbox"/> other _____



25. Which (five or more) aspects of your neighborhood are you most satisfied with?

<input type="checkbox"/> affordability	<input type="checkbox"/> good schools	<input type="checkbox"/> parks/landscaping	<input type="checkbox"/> orderliness
<input type="checkbox"/> buses/transit system	<input type="checkbox"/> access to nature	<input type="checkbox"/> security guards	<input type="checkbox"/> social life
<input type="checkbox"/> stores/shopping	<input type="checkbox"/> privacy	<input type="checkbox"/> social activities	<input type="checkbox"/> views
<input type="checkbox"/> resale value of homes	<input type="checkbox"/> walkability	<input type="checkbox"/> diverse housing options	<input type="checkbox"/> cleanliness
<input type="checkbox"/> quietness	<input type="checkbox"/> children's safety	<input type="checkbox"/> attractiveness of homes	<input type="checkbox"/> exclusivity/luxury
<input type="checkbox"/> diversity of ages	<input type="checkbox"/> lots of parking	<input type="checkbox"/> safety	<input type="checkbox"/> other _____
<input type="checkbox"/> restaurants/entertainment	<input type="checkbox"/> social mix	<input type="checkbox"/> freeway access/location	

a) \_\_\_\_\_  
 b) \_\_\_\_\_  
 c) \_\_\_\_\_

26. What two or three things are currently missing in your neighborhood?

a) \_\_\_\_\_  
 b) \_\_\_\_\_  
 c) \_\_\_\_\_

27. Compared to neighboring places, what two or three things make your neighborhood different and distinctive?

A few questions about **your community...**

<i>strongly disagree</i>	<i>disagree somewhat</i>	<i>agree somewhat</i>	<i>strongly agree</i>	
1	2	3	4	← 28. My community has a small town feel.
1	2	3	4	← 29. I feel like my community is changing.
1	2	3	4	← 30. I feel it is important that people in my community share common values.
1	2	3	4	← 31. People in my community are less cohesive than the residents of surrounding neighborhoods.
1	2	3	4	← 32. My community is much more socially diverse than many other places I know.
1	2	3	4	← 33. My community is much more ethnically diverse than other communities I know.
1	2	3	4	← 34. I feel like my community is being threatened.

a) \_\_\_\_\_  
 b) \_\_\_\_\_  
 c) \_\_\_\_\_

35. If a new neighbor asked you about the three values that everyone in your community shares, what would you say these are?

a) \_\_\_\_\_  
 b) \_\_\_\_\_  
 c) \_\_\_\_\_

36. Name two or three events that occurred in your neighborhood involving the entire community.

37. Do you and your neighbors have a name you use to indicate people from your community?

38. Imagine you had to describe your community to someone who has never been there. How would you describe it?

39. How has your community changed since you moved in?

40. What concerns you the most about the future of your community?

A few more questions about **public life in your neighborhood...**

<i>strongly disagree</i>	<i>disagree somewhat</i>	<i>agree somewhat</i>	<i>strongly agree</i>		<i>The following questions center on you, your values and the role you play as a member of your community.</i>
1	2	3	4	←	41. When there is an issue, my neighbors come together to find a common solution.
1	2	3	4	←	42. I am actively involved in the social life of my community.
1	2	3	4	←	43. Most of my friends live outside of my neighborhood.
1	2	3	4	←	44. My friends are very similar to me in terms of class.
1	2	3	4	←	45. My friends are very similar in terms of ethnicity.
1	2	3	4	←	46. It is difficult for a newcomer to meet and get to know other neighbors.
1	2	3	4	←	47. The HOA plays an important role in the life of my community (leave blank is not applicable).
a)	_____				48. List the public activities involving other neighbors you have been a part of in the recent past.
b)	_____				
c)	_____				

49. Please name some of the institutions, associations or groups you belong to.





50. What concrete actions would be necessary to preserve the identity of your neighborhood?

51. Where do you see your neighbors most often?
- |  |   |  |  |
|--|---|--|--|
| <input type="checkbox"/> at home                             | <input type="checkbox"/> bars/restaurants | <input type="checkbox"/> trails                              | <input type="checkbox"/> driveway/stairway |
| <input type="checkbox"/> local stores (dry cleaner, grocery) | <input type="checkbox"/> post office      | <input type="checkbox"/> park/playgrounds                    | <input type="checkbox"/> school            |
| <input type="checkbox"/> at church                           | <input type="checkbox"/> at the mall      | <input type="checkbox"/> outside of the community            | <input type="checkbox"/> community center  |
| <input type="checkbox"/> at the beach                        | <input type="checkbox"/> public meetings  | <input type="checkbox"/> golf course                         | <input type="checkbox"/> bowling           |
| <input type="checkbox"/> tennis courts                       | <input type="checkbox"/> in the street    | <input type="checkbox"/> coffee house                        | <input type="checkbox"/> swimming pool     |
| <input type="checkbox"/> at the mailboxes                    | <input type="checkbox"/> laundromat       | <input type="checkbox"/> sport events (soccer/junior league) | <input type="checkbox"/> other _____       |

52. What are the primary sources of information about neighborhood affairs you rely upon? (Check all that apply)
- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> spouse/roommate  | <input type="checkbox"/> neighbors/residents   | <input type="checkbox"/> newsletters/bulletin board | <input type="checkbox"/> groups/associations |
| <input type="checkbox"/> television/media | <input type="checkbox"/> blogs/chat room       | <input type="checkbox"/> children                   | <input type="checkbox"/> municipality        |
| <input type="checkbox"/> posters/fliers   | <input type="checkbox"/> homeowner association | <input type="checkbox"/> e-mail                     | <input type="checkbox"/> other _____         |

Now we need you to sketch your neighborhood...

53. On the next sheet I would like you to sketch a map of your neighborhood. Do not worry about your drawing skills. Focus instead on the things that are important to you. You may find it useful to follow the simple steps below:

-  **STEP 1:** Start by drawing the streets and the physical/natural boundaries of your neighborhood.
-  **STEP 2:** Name the public or private places you are most attached to. These could be public spots, friends' and relatives' houses, places that no longer exist and those that may have memories and stories attached to them. Draw a heart to indicate where they are and how much they mean to you (e.g. big heart= high attachment).
-  **STEP 3:** Now call out the most memorable and distinguishable features in your neighborhood, the places you are able to recall as you close your eyes and think about your neighborhood. Use a star to indicate these places (the bigger the star, the more memorable and distinguishable the places).
-  **STEP 4:** Finally, name the places that are important in terms of use, historic or cultural significance or symbolic value for the identity of the community. Use a house symbol to indicate them (the bigger the symbol, the more memorable and distinguishable the places).



*Have you drawn the streets, boundaries and physical features that define your neighborhood?*



*have you drawn the places that you are most attached to?*



*Have you drawn the most memorable and distinguishable places?*



*Have you drawn the places that are socially important in terms of use, history, cultural significance or symbolic value?*

**You are done!!!**

Finally, some questions about your demographics.

54. How old are you?

.....

55. What is your gender?

- male  female

56. What is your ethnicity?

- White/Caucasian  Hispanic
 African American  Other
 Asian/Asian American

57. What city and street do you live?

.....

58. Do you rent or own your house?

- own  rent

59. What is your family's yearly income?

- less than \$ 35,000  \$ 75,000 - \$ 100,000
 \$ 35,000 - \$ 50,000  \$ 100,000 - \$ 150,000
 \$ 50,000 - \$ 75,000  \$ 150,000 and over

60. How long have you lived in your neighborhood?

- 0-12 months  3-5 years  10+ years
 1-3 years  5-10 years

61. How long have you lived in Orange County

- 0-12 months  3-5 years  10+ years
 1-3 years  5-10 years

62. In how many places including the current one have you lived during your life?

- 1 place  10-15 places
 2-5 places  15 or more places
 5-10 places

63. When looking for your current home in Irvine, which sources of information did you rely upon?

- first hand visit  realtor
 friend/coworker's advice  internet
 Irvine Company Homefinder  marketing material
 newspaper/magazines  other

64. How many children do you have (if applicable)?

.....

65. How old are your children?

.....

66. What is your level of education?

- high school  graduate school
 college  other

67. Do any of your children study in Irvine?

- yes  no  not applicable

68. Where do you work or study?

.....

69. How do you get to and from work/school?

.....

70. How long is your commute to work?

- 0-15 minutes  30-60 minutes  2+ hours
 15-30 minutes  1-2 hours

71. What is your favorite mode of transportation when running errands?

.....

72. What is your favorite mode of transportation during your free time?

.....

73. How much time do you spend outdoors in your neighborhood each week?

- 0-15 minutes  30-60 minutes  2+ hours
 15-30 minutes  1-2 hours

74. What do you do outdoors?

- gardening  think/meditate
 run  contemplate nature
 sports  socialize/hangout
 play with children  walk
 dog walking  play ball
 bike  other

75. How much time every week do you spend socializing with other residents of your neighborhood? (check one)

- Less than 1 hour  1-4 hrs  4-6 hrs
 6-8 hrs  8+ hours

Do you want to be interviewed?

RESPONDENT CODE

- Yes, I am interested in participating in phase II of this research

Name

Phone

Best time to call

## Appendix c) Research sites comparison

POTENTIAL RESEARCH SITES COMPARISON			
	neighborhood 1	neighborhood 2	neighborhood 3
<b>Neighborhood name</b>	Northwood	Woodbridge	Westpark
<b>location</b>	Irvine	Irvine	Irvine
<b>period</b>	1960s	late 70s	1980s
<b>developer</b>	Various	Irvine Co.	Irvine Co.
<b>designer</b>	n.a.	SWA	POD
<b>unit/ac*</b>		<b>9.4</b>	
<b>socio-economics</b>	middle class	middle-upper	middle class/upper
<b>CENSUS DATA</b>			
<b>tract number</b>	525.25	525.13	525.22
<b>median age</b>	35.3	37.8	24.8
<b>median household income</b>	\$85,284	\$70,203	\$88,365
<b>median household size</b>	3.08	2.54	2.88
<b>median housing value</b>	\$302,300	\$292,300	\$371,200
<b>% own</b>	75.8%	58.8%	50.4%
<b>DESIGN CHARACTERISTICS</b>			
<b>street system type</b>	grid/warped grid	warped grid/lops	loops and lollipops
<b>architectural design</b>	craftsman/medit.	ranch	Mediterranean
<b>types of houses</b>	single family	single/multifamily	multifamily/single
<b>retail presence</b>	no	yes	yes
<b>gated?</b>	no	no	no
<b>public trail?</b>	yes	yes	no
* density figures are approximated (www.irvineco.com) all others: source: Census 2000 Summary File 4 (SF 4) - Sample Data, Detailed Tables)			

**Table 3 Summary of key data on the three Irvine villages surveyed**

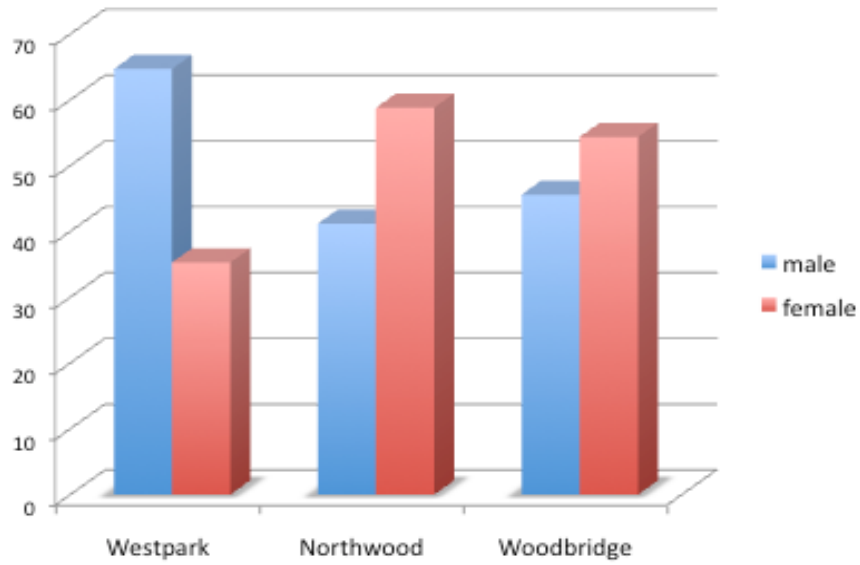
## Appendix d) Sample demographics

The last section of the survey instrument (page 8 of the survey instrument) was dedicated to questions about demographics, information about family and children, as well as questions about commuting patterns and use of public facilities in each village. Most of the questions were pre-coded, with only a few questions left open-ended. Below is a summary of the responses to all demographic questions:

### 1. Age and gender

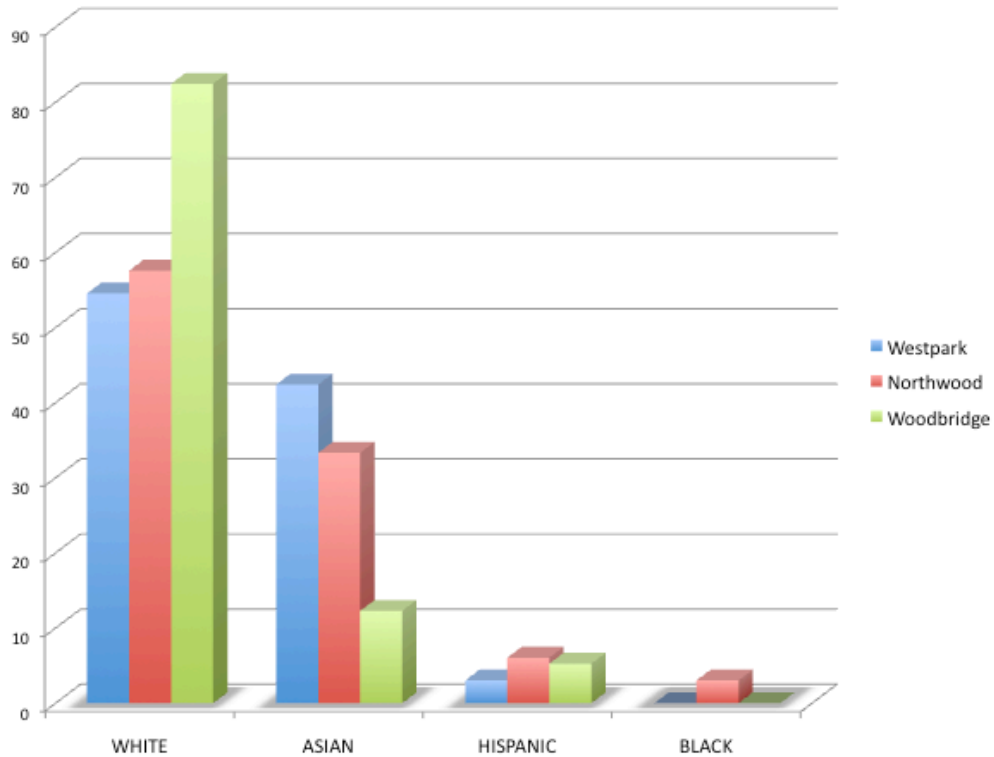
The survey specifically sought responses from residents 18 and older. The majority of respondents fell within the 40-59 years old cohort. With the exception of Westpark where most respondents were men (64.71% vs. 35.29% females) both Northwood and Woodbridge respondents were slightly skewed toward women. Northwood respondents were 41.18% male and 58.82% female similar to Woodbridge, where the percentages were 45.61% and 54.39 respectively (fig. 56).

**RESPONDENTS GENDER (%total) n=125**



**Figure 56 Survey respondents' breakdown by gender**

**SAMPLE ETHNIC COMPOSITION (%total) n=125**



**Figure 57 Breakdown of survey respondents' ethnicity by village**



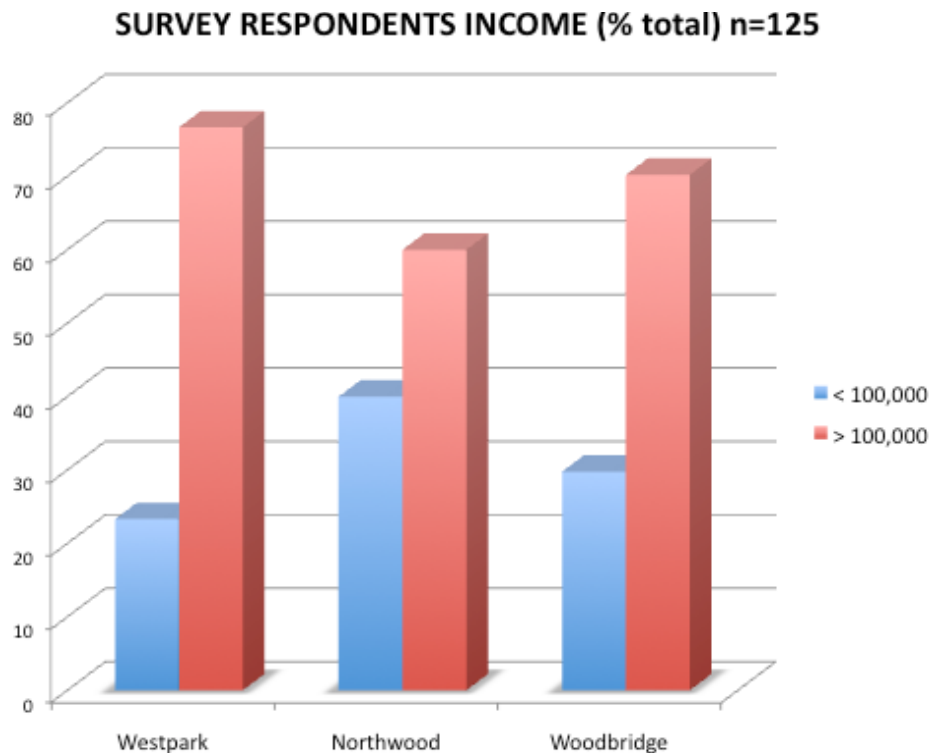
### 3. Ethnic profile of the sample

Findings with regard to ethnicity (fig. 57) show strongly significant differences ( $p=0.05$ ) between neighborhoods with regard to the percentage of Caucasian respondents. The majority of Woodbridge respondents (82.5%) were white compared to the much lower percentages found in (54.5% and 57.6%) in Westpark and Northwood respectively. As expected, Westpark had the largest percentage of Asian respondents, 42.4% compared to Northwood (33.3%) and Woodbridge (12.3%).

The demographic data for Woodbridge were slightly skewed toward Caucasian respondents if compared to the US Census data for the City, which show the population of Irvine as being 67.8% Caucasian and 23.8% Asian. The percentages of Caucasian and Asian residents for Westpark and Northwood seemed to reflect the US census findings for Irvine. Differences between official census data and survey findings could be explained in cultural terms or with language barriers. This is consistent with other studies, which found that the percentage of those that refuse to respond to surveys and other forms of polling tends to be slightly lower in Asian populations (Wong, 2004).

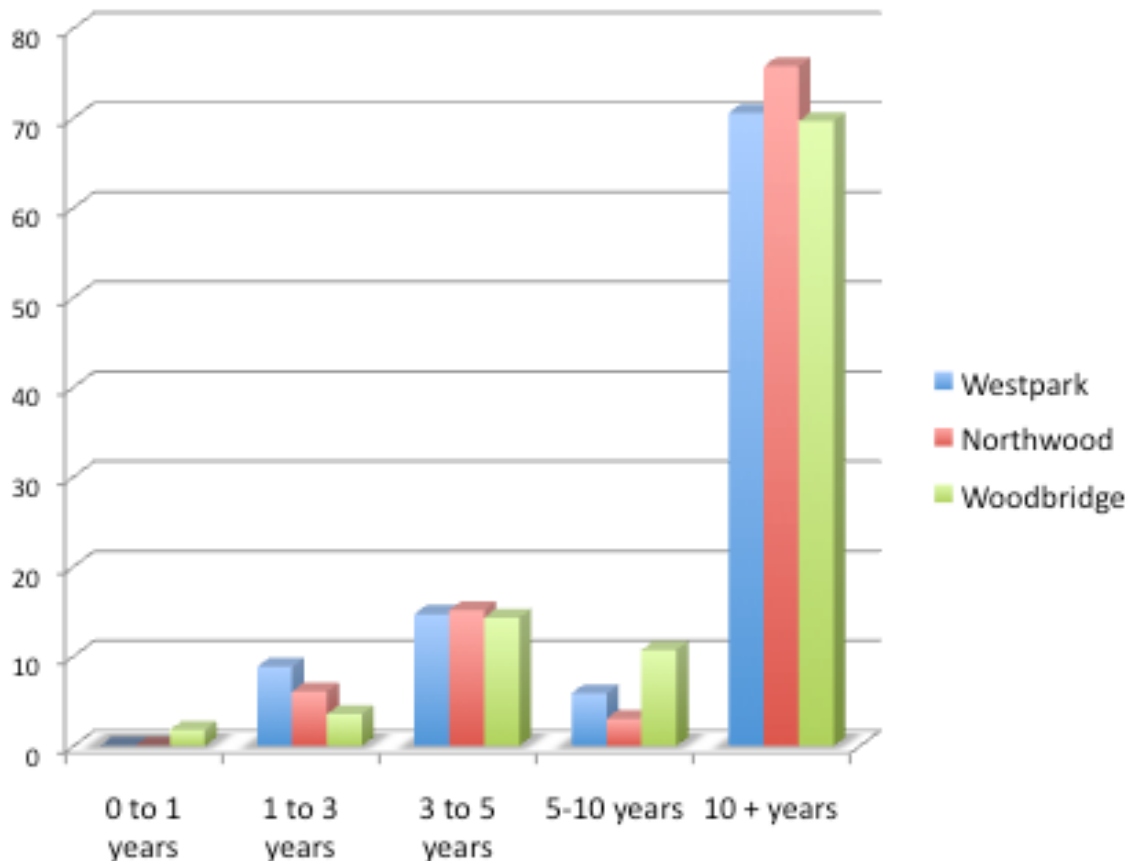
### 4. What is the respondents' family income?

In terms of income (fig. 58), the majority of the survey respondents falls in the  $> \$100,000$  group, with 76.7% of Westpark, 60% of Northwood and 70.2% of Woodbridge respondents. This data is striking if compared to the median income of Irvine family according to the 2000 US Census, which is set the median income figure to \$72,057, considerably higher than the \$47,493 recorded for the rest of California.



**Figure 58 Income of survey respondents by village**

## TIME SPENT IN VILLAGE (% total) n=125



**Figure 59 Time survey respondents have spent living in village**

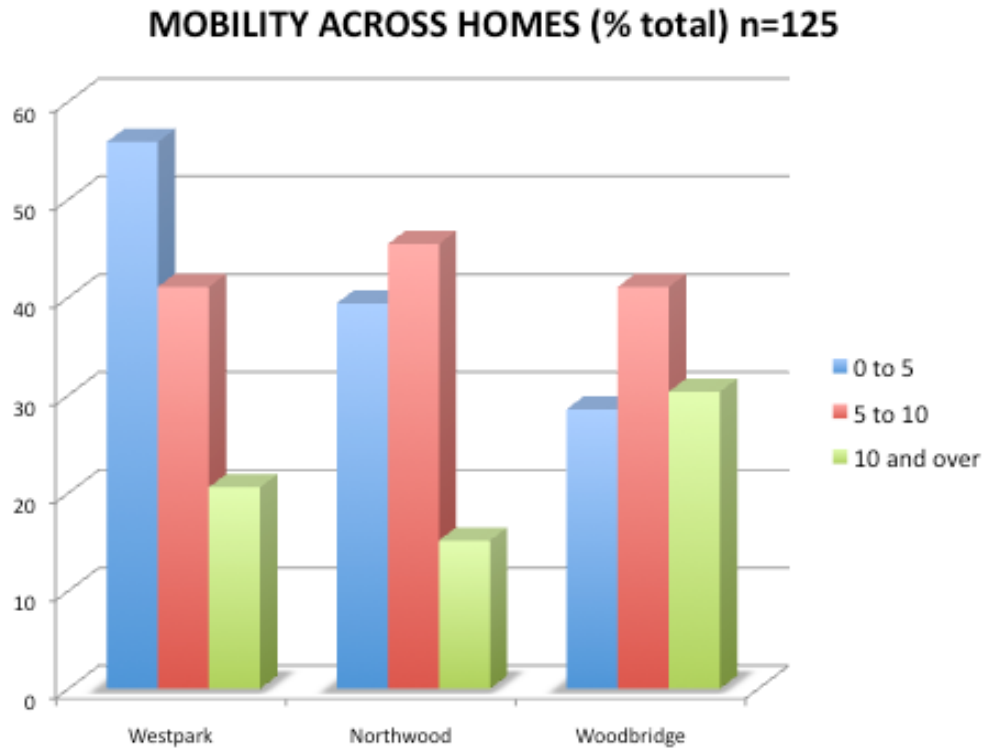
#### 4. How long have the respondents lived in their village?

Approximately three out of four residents of Northwood (75.8% of total respondents) and 70.6% of Westpark residents have lived in their villages for over ten years (fig. 59). These values are slightly higher than the value found for Woodbridge, where 69.6 % of the survey respondents have lived in the village for more than ten years. The data show that there are no major differences between the levels of attachment in each neighborhood. It also suggests that the notion that Woodbridge is a much more stable community does not seem to be founded. In fact, there seems to be a higher turnover in Woodbridge, perhaps because of the higher increase in value of the homes in this village when compares to others.

In terms of their mobility, i.e. the number of homes they have lived in during their lives (fig. 60), survey data show a close to significant statistical difference across villages ( $p=0.05$ ) in terms of the times they have moved in their lives. In Westpark, 55.9% of the respondents have moved between two and five times, against 39.4% of Northwood and 28.6 of Woodbridge respondents. The percentages drop to 23.5% for Westpark and 45.4 and 41.1 respectively for Northwood and Woodbridge for individuals who moved 5-10 times. Finally, 20% of

residents of Westpark and 15.1 % residents of Northwood moved more than 10 times, compared to 30.4% of the Woodbridge respondents. This is consistent with the overall sense of attachment that emerged out of the interviews and with the identity of Woodbridge and Northwood as more “stable” communities.

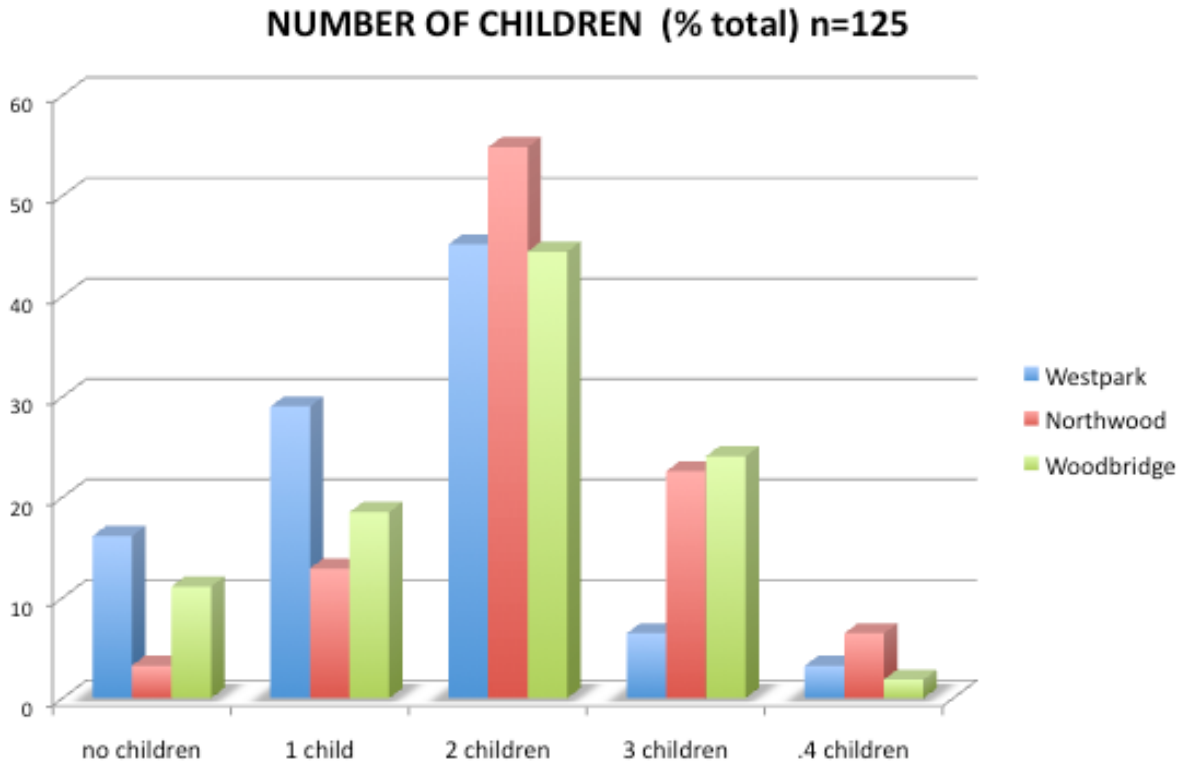
In the interviews, Westpark residents suggested that their neighborhood might be more transient due in part to the small size of the homes and lots. This would also explain the higher number of vacancies and for sale signs visible throughout the village during the author’s site visits.



**Figure 60 Mobility of the survey sample across homes**

7. Number of children in respondents’ families

Based on the survey data (fig. 61), approximately one out of two respondents have two children (an average of 47.4% across villages). Westpark respondents have considerably smaller families, while Northwood has larger families, which is consistent with the housing types of each neighborhood. In general terms, Northwood is known within Irvine as the neighborhood with the largest housing units and where one “gets more for his money”.

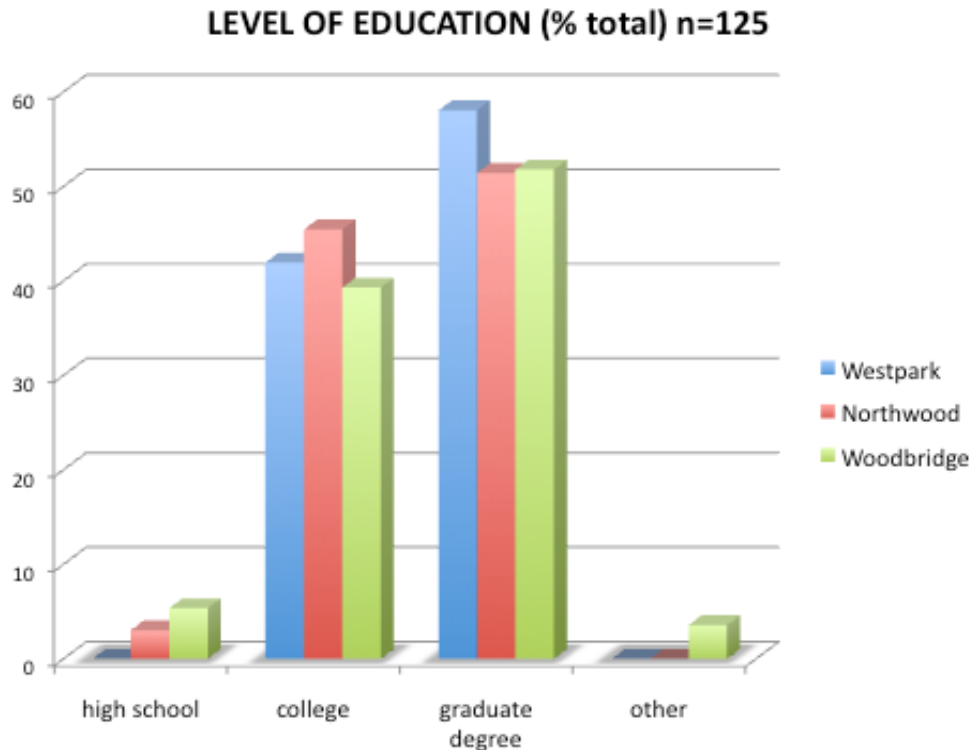


**Figure 61 Number of children per family**

16.1% of Westpark respondents have no children, compared to 3.2% and 11.1% of Northwood and Woodbridge residents. In Westpark, 29% of respondents indicated they had one child, against 12.9% and 18.5% for Woodbridge. In Northwood and Woodbridge most respondents have three or more children (22.6% and 24% respectively) compared to a 6.4% value for Westpark. Finally, 6.4% of Northwood residents have four children or more, compared to 3.2% of Westpark residents and 1.8% of Woodbridge respondents. These figures are consistent with the census figures for the entirety of the new town, which set the average size of Irvine families to 3.17, a size consistent with the national average of 3.14 ([www.census.gov](http://www.census.gov)).

**9. How educated is the survey sample?**

As shown in figure 62, approximately one out of two respondents (an average of 53.3%) possesses a graduate degree or equivalent. 41.7% of the residents surveyed have a college degree, while only 3.3% indicated they had only received a high school diploma. These percentages are consistent across the sample, with no significant differences across villages, which suggest an image of Irvine as a highly educated community. This finding is confirmed by many of the interviews where residents spoke of educational achievement as a value that defines Irvine as a community.

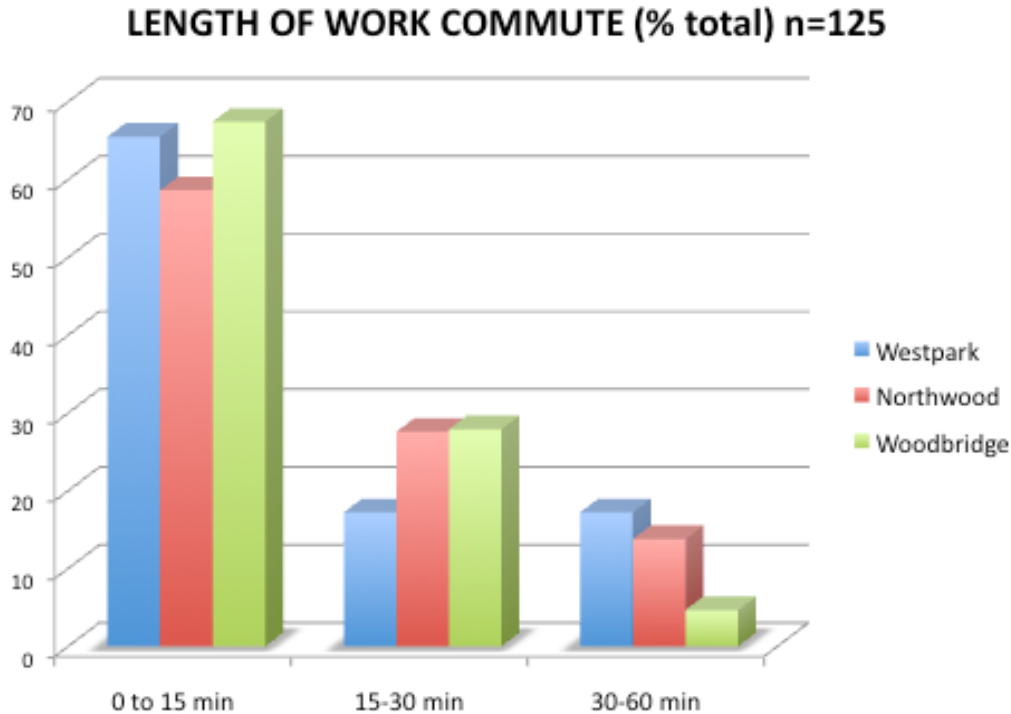


**Figure 62 Level of education of the survey sample**

10. Where do the survey respondents work?

Irvine prides itself with being a “live and work” community, offering more jobs than the residents can fill. This is supported by US Census statistics and by recent studies, which have revealed an impressive number of technology related jobs, thus the term *technoburb* that has been associated with the city (Lang and LeFurgy, 2007). The “live and work” nature of the new town is clearly supported by the research findings. Of the residents sampled by our survey, one out of two work within the boundaries of the City of Irvine. The number is considerably higher for the Village of Woodbridge, where the percentage is close to two out of three respondents (50% in Westpark, 53.8% in Northwood and 66.7% in Woodbridge).

Of the residents that do not work within Irvine, the majority still works in close proximity to home or within the Orange County region. Only 15.4% of Westpark respondents work outside of the county of Orange, versus 11.5% of Northwood and 2.2% of Woodbridge. These findings support the live and work nature of the place and the claim made by Irvine Company officials that it deliberately planned to create a city where the commuter dynamics seen in Los Angeles and Southern California would be reversed (Watson, 2005). The above finding is also supported by the data on commuting time introduced below.



**Figure 63 Length of daily commute of survey sample**

**11. How long is the daily commute in Irvine villages?**

Figure 63 shows the findings for question 70, which asked the sample about the length of their commute to and from work. On average, 64.4% of the survey respondents commute less than 15 minutes to reach their workplace; 24.7% of the respondents commute within 15-30 minutes, while only 10.9% of them commutes for 30 to 60 minutes. Compared to the California average of 27.1 minutes<sup>20</sup> and to the United States Census figure for Irvine, which was set to 22.8 minutes, this study found lower commuting lengths, which may be seen as either a sign of success in balancing residential and commercial uses on the part of Irvine planners, or as a consequence of the self-selected nature of the sample.

**12. How much time do survey respondents spend outdoors?**

Answers to this question (fig. 64) show strongly significant differences across villages ( $p=0.01$ ) with regard to the time residents spend outdoors. The fact that 78.2% of Woodbridge respondents spend more than two hours outdoors in their village compared to the 54.6% of Westpark and 48.5% of Northwood could be explained by the presence of a dense infrastructure of trails, parks, paseos, village playgrounds and overall increased walkability of Woodbridge compared to the other two.

The low figure found in Westpark could be explained by the fact that homes in this village have very small backyards, as a result of a deliberate choice by the developer to limit the size of backyards to encourage the use of parks and outdoor facilities (interview #13).

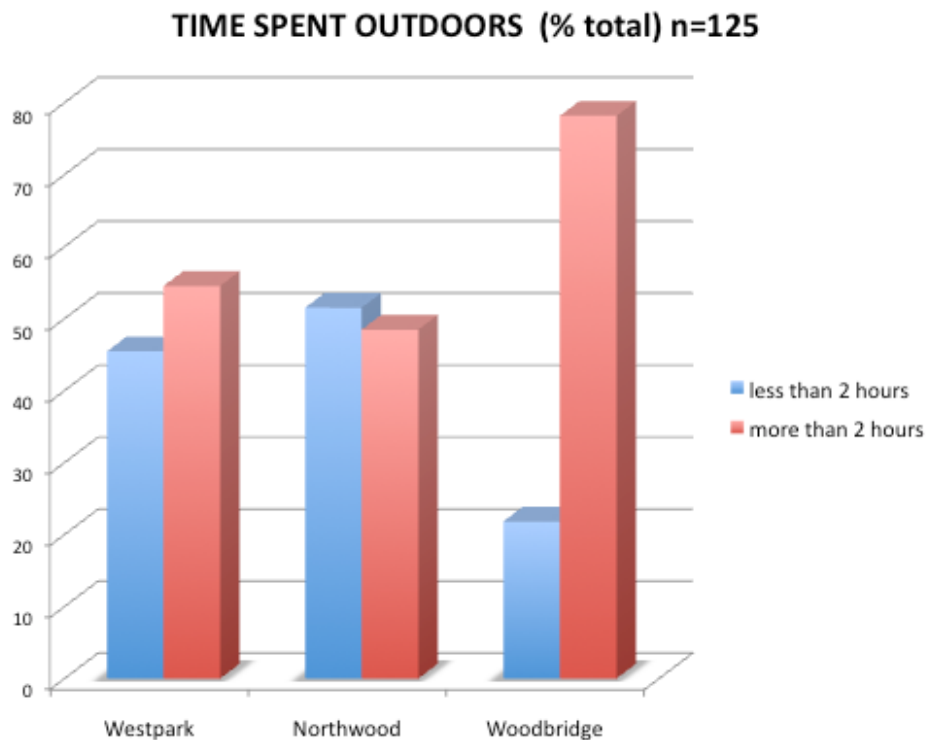
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<sup>20</sup> Information on average commuting time was retrieved online on 7/26.2009 from the Public Policy Institute of California website found at <http://www.ppic.org>.

Northwood’s results could be explained by the relative shortage of playgrounds, public pools and neighborhood parks in the village, particularly if compared to the number and extent of public parks in Woodbridge. Moreover, Northwood homes have much larger backyards, which in many cases have allowed residents to build pools and other recreational structures, making the use of public open space more limited.

13. How much time do Irvine residents spend socializing?

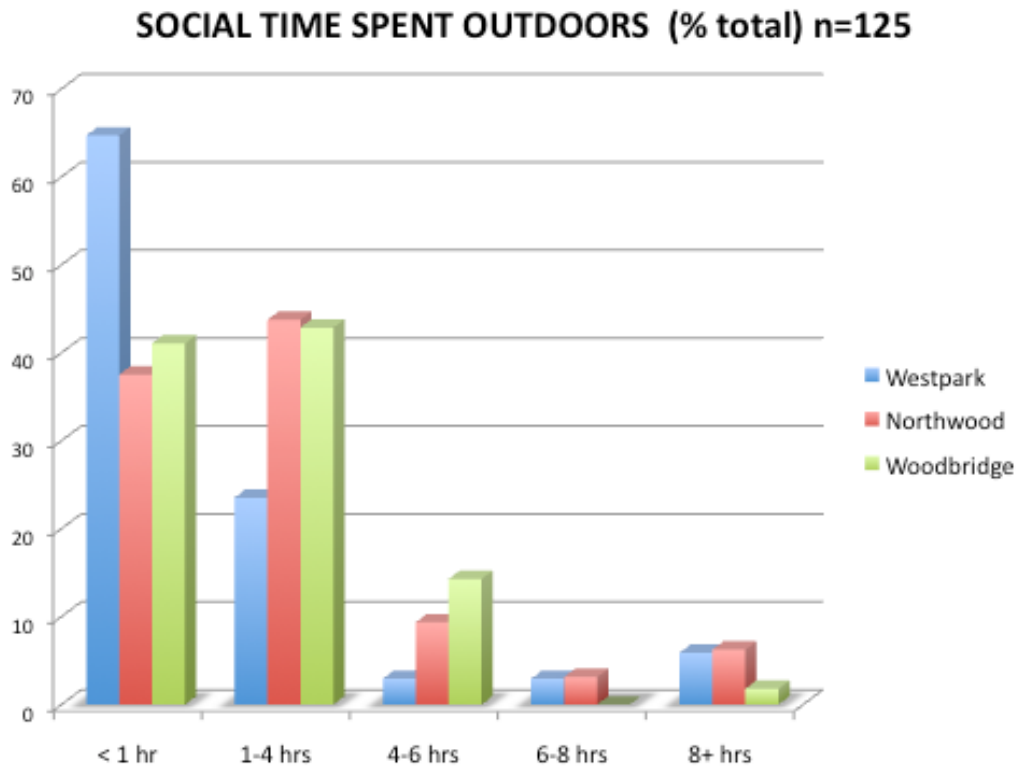
In terms of the time spent socializing with neighbors (fig. 65), 64.7% of Westpark respondents spend less than an hour, compared to 37.5% for Northwood and 41.1% of Woodbridge residents. A similar picture can be drawn for those who spend between one and four hours socializing in their neighborhoods, with only 23.5% of Westpark respondents versus 43.8% and 42.9% of Northwood and Woodbridge residents. A percentage of 14.3% of Woodbridge respondents spends four to six hours socializing, compared to only 8.4% of Northwood and 2.9% Westpark residents.



**Figure 64 Time survey respondents spend outdoors in their village**

In general terms, these results may be interpreted as indicators of the level of community involvement. Woodbridge and Northwood tend to have more sociable residents, while Westpark registers a generalized lack of socialization. This finding is consistent with their responses to question 17, which asked them about their satisfaction with the opportunities for socialization offered by their village, which led to 44.4% of Westpark residents expressing satisfaction with the social interaction their village had to offer, compared to the figures registered by the villages of Northwood and Woodbridge, which add up to roughly 70%.





**Figure 65 “Social” time spent outdoors by survey respondents**

**e) Coding and data analysis procedures**

Data from the surveys was originally tabulated using Microsoft Excel. The Excel spreadsheet was later cleaned up to be converted into an ASCII file. The cleaning required converting all the “refused” or “do not know” responses into missing data, which were assigned a value of nine.

A few problems were encountered in the analysis of the data, which required the manipulation and correction of the original data. Ranges of many variables did not make sense and had to be fixed. In particular, variables q22, q25aa, q29, q31, q41, q42, q43, q47, q50x, q53, q55, q58, q59, q60, q61, q63, q64, q65, q66, q68, q69, q70, q72, q74 either had ranges that were not valid ranges (such as a value of zero) or had values of 9 which needed to be converted to missing data for the purposes of the analysis.

In terms of coding, the data from the Likert scale originally included responses from ranging from 1 to 4. Because of the small size of the sample, and upon consultation with an expert on surveys, Likert scale questions were collapsed into agree/disagree response categories, with response of strongly agree, and agree collapsed into the “agree” category (with a value of one) and responses of strongly disagree and disagree collapsed into the “disagree category” (which was assigned a value of zero). The collapsing of variables was used only for the purpose of analyzing the descriptive statistics, while the original format was maintained for the analysis of correlations.

In computing the indices, the sign of certain variables was reversed to account for their negative wording. In particular, the variables that were reverse coded were: q2, q5, q7, q11, q17,

q29, q31, q43, q44, q46. Out of the variables, five indices were created testing place identity in its various expressions:

- 1) Identity index. This index was the mathematical average of: q1, q2 (reversed), q3, q4, q5 (reversed), q6, q7 (reversed), q8, q10, q11;
- 2) Satisfaction index. This index was the average of all questions having to do with functional qualities of the Irvine landscape: q16, q17 (reversed), q18, q22;
- 3) Legibility and imageability = average of: q19-q20 (reversed);
- 4) Social imageability index = the social imageability index was obtained from the averaging of q28, q29 (reversed), q30, q31 (reversed), q32, q33. It intended to test the degree to which the village instilled in its residents a sense of cohesiveness and belonging to the same community, and to what extent respondents shared the same values.
- 5) Social capital index. This index was obtained from the averaging of q41, q42, q43 (reversed), q44 (reversed), q46 (reversed).

#### **f) Statistical significance test**

Finally, Chi-square tests were run for each of the variable to assess the statistical significance of the results across villages. A p value of  $<0.05$  was labeled as statistically significant. P values of  $< 0.01$  were deemed strongly significant, while values between 0.1 and 0.05 were considered to be approaching significance. Finally, p values of 0.10 or less were considered to be approaching significance.