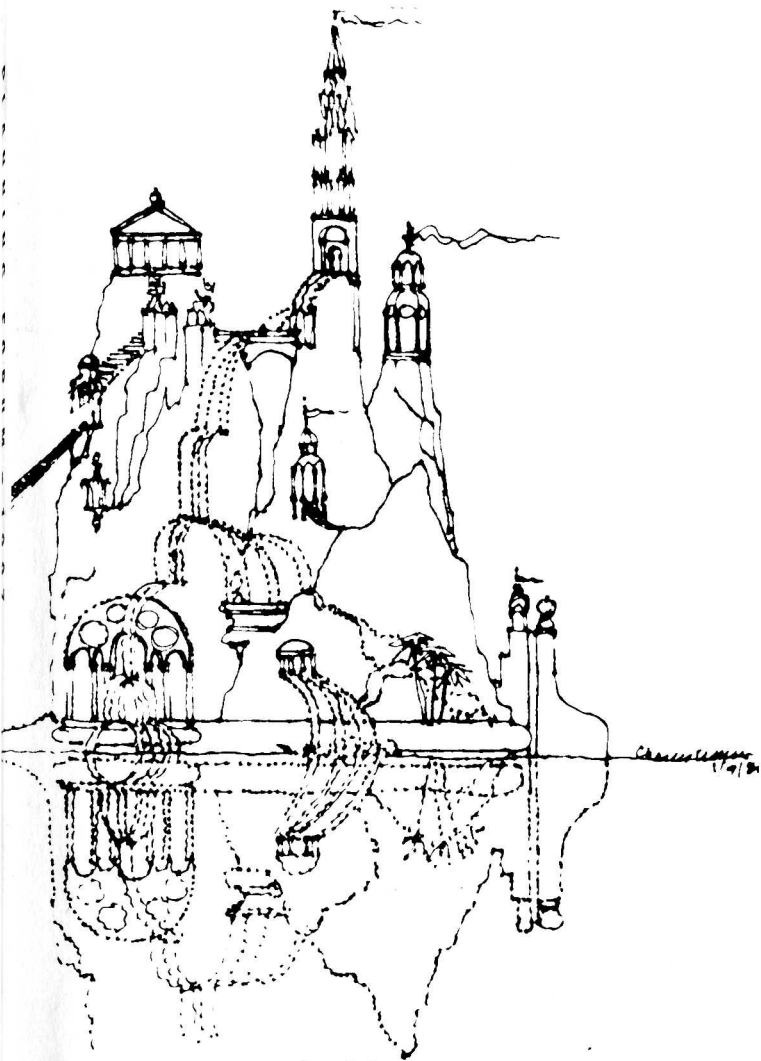


Community and Regional Planning Program  
School of Architecture  
The University of Texas at Austin

Volume 3 • 1997



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# PLANNING FORUM

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## PLANNING FORUM • 1997

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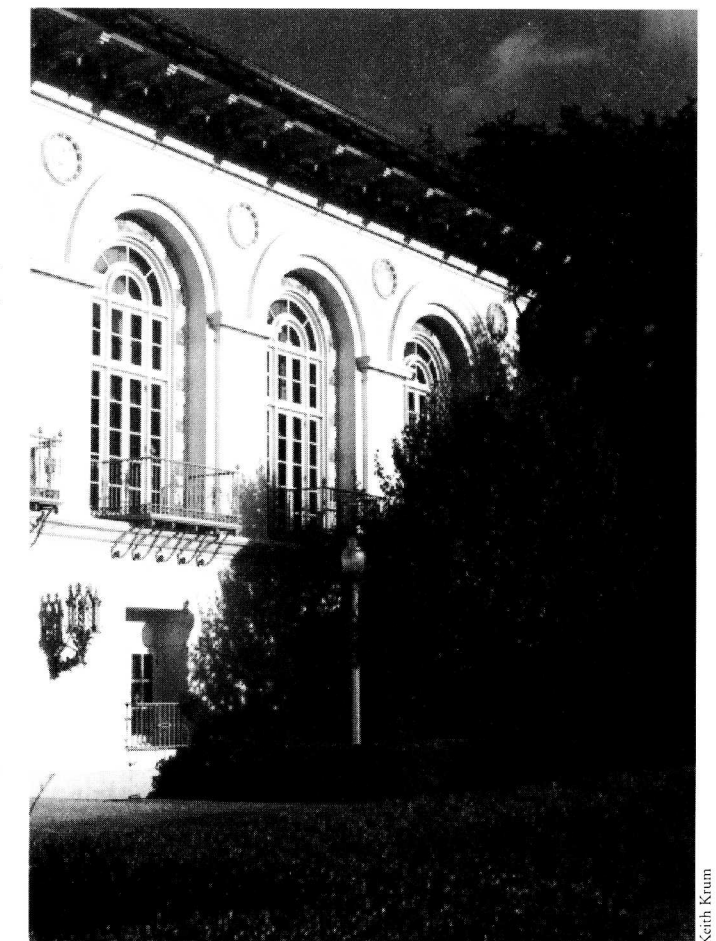
## Editor's Note

Planning has become an impossible term to define. Planners in both formal education and professional practice study and wrestle with the same principles of growth and decline, statistical assessment and community involvement, political methodology and common sense. But how we move on from the fundamentals into our own niches of research and practice and special interest is what keeps the ideals of planning healthy and sound. The same process keeps our communities active and balanced. Every individual effort in the planning process, from undergraduate student to zoning commissioner to neighborhood activist, contributes to the increasingly dynamic definition of what "planning" is and how it effects the quality of our lives. The *Planning Forum* Editorial Board strives to reflect the multidisciplinary, dynamic nature of planning as the study of human communities and their interaction with the social, built, and natural environments. Our hope is to encourage and contribute to the debates about planning issues and how and why we are involved.

Volume 3 of *Planning Forum* includes four articles selected through a blind peer-review process, three solicited feature articles, and several new feature sections. The peer-reviewed articles were chosen from submissions by graduate students at The University of Texas at Austin (UT). Hayden Black-Walker gives an adaptation of an academic paper on the special transportation issues facing children and parents with children, drawing on her own experience as working student mother. Mary Burns reviews and provides an introductory interpretation of two surveys which recorded the utilization and success of community centers in the Texas colonias of El Cenizo and Cameron Park. Avri Beard uses Henri Lefebvre's concepts of how social spaces evolve in a critical analysis of the rebuilding efforts in an El Salvadoran community recovering from civil war. Joseph McRee conducts a rigorous statistical analysis of the relationship between crime rates and neighborhood watch programs.

In addition to peer-reviewed articles *Planning Forum* has solicited articles. Dr. Michael Oden gives an extensive review of the historical development and future prospects of the high-tech industry in Austin, Texas, combining elements of economic development theory and regional planning. The popular "Point/Counterpoint," edited this year by Keith Krum, offers the opinions and positions of prominent individuals and groups on the controversial topic of ISTE funding priorities. Recognizing visual communication is a vital component of many planning and design methods, *Planning Forum* annually seeks out a graphically oriented piece. This past year the School of Architecture at UT commemorated the Charles W. Moore Room, which honors the celebrated architect and ex-faculty member. The Moore Room houses the School's Architectural Drawings collection and the bulk of Mr. Moore's own drawings. *Planning Forum* is proud to publish several "fantastical cities" sketches by Mr. Moore which were selected by Kevin Keim of the Charles Moore Foundation.

In the interest of better serving our primary audience of students and academics, the new feature, "Perspectives," looks at emerging trends in the planning curriculum, soliciting short articles from



Keith Krum

prominent private and academic professionals. This year the focus is on alternative dispute resolution, an increasingly useful and highly recommended skill for planners to learn, especially while still in school. Another new feature is "Off the Shelf." We were curious what professors in planning related disciplines read in their spare time and asked several, on short notice, to do a quick book review. The results from our two respondents demonstrate the broad ranging sources of inspiration and critical thinking.

*Planning Forum*, Volume 4 will expand in several directions. Firstly, we welcome letters to the Editor in response to anything published in *Planning Forum*. We will invite submissions from graduate students in planning and public policy programs at other Texas universities. We will also work to increase the distribution and visibility of *Planning Forum* at other universities and at UT.

*Planning Forum*, Volume 3 gratefully acknowledges the financial support of the UT School of Architecture, The Mike Hogg Endowment for Urban Governance, the Cabinet of College Councils, and Leilah and Laura Powell, without whose support this journal would not have been possible. The *Planning Forum* Advisory Board provided thoughtful support in the form of constructive criticism and guidance to the Editorial Board in the early going. I would personally like to thank Keith Krum and Andrew Grigsby for their considerable time and energy down the stretch.

# Producing Space

## The Repopulated Communities of El Salvador

by Avri Beard

*Designing a completely new community has long been at least a theoretical practice of planners. Central American peasants are doing just that as they rebuild their villages after a devastating civil war. But in this highly politicized environment there are many competing interpretations of their actions.*

This paper uses the theory of space developed by Henri Lefebvre in *The Production of Space* to examine the evolution and organization of the repopulated communities of El Salvador. These communities, constructed by peasants who had been driven from their homes during the twelve-year civil war, are considered by many researchers to be a model for cooperative and democratic community organization.\* Lefebvre's concepts of the social production of space and of spatial codes and their components are employed to help describe the creation of these communities and to analyze the spatial code in the repopulated community of Santa Marta/Valle Nuevo, Cabañas, El Salvador.

### LEFEBVRE'S SPACE

Henri Lefebvre's primary project in *The Production of Space* is to arrive at an understanding of space which goes beyond the false division between "mental space" and the real space of the practico-sensory realm. Lefebvre enjoins the reader to recognize that the space around us is a historical, social development. Space is a social *product*; it is created and recreated as a part of a society's mode of production and its accompanying ideology. Indeed, produced space is a basis for the creation and recreation of the mode and relations of production within each society.

Social space contains—and assigns (more or less) appropriate places to—(1) the social relations of production, i.e., the bio-physiological relations between the sexes and between age groups, along with the specific organization of the family; and the relations of production, i.e., the division of labor and its organization in the form of hierarchical social functions (1994: 32).

Space relays a message, written "by violence (wars and revolutions), by political and diplomatic cunning, and, lastly, by labor" (1994:412). This writing is legible; it forms what Lefebvre defines as a *spatial code*. The spatial code is unique to each particular society and its organization of production.

Lefebvre identifies three distinct elements of a spatial code: spatial practice, representations of space, and representational space. *Spatial practice* springs directly

from the life-world. It is the routes and networks which link up places of production, of home, and of leisure which are created and reproduced by people's daily activity. Thus, spatial practice is closely linked to the mode of production.

*Representations of space* are concepts springing from reflection upon spatial practice. This is the only element of a spatial code that is self-consciously felt and created. Representations of space are inherently ideological, "tied to the relations of production and to the 'order' which those relations impose. . ." (1994:33). They form the space of planners, social engineers, etc. Representations of space intervene in the production of space via architecture.

*Representational space* is symbolic space, created from internalized cultural symbols and images. This space comes directly from the history of a people and place. Representation space is experienced unselfconsciously and its only products are "symbolic works" (1994:42) such as works of art.

Three additional terms that are used in this paper require elucidation. *Dominated space* is space transformed by technology, called forth by abstract representations of space. Its opposite, *appropriated space*, is natural space modified—not transformed—by a group of people to suit their particular, localized needs. Dominated spaces, in contrast to appropriated spaces, generally take unnatural, e.g. rectilinear, forms and are reproduced en masse, like roads, dams, etc. *Diverted space* is space that has for some reason lost or outlived its original purpose and is reappropriated for new uses.

In the modern world, Lefebvre argues, space becomes increasingly abstracted from lived experience. Representations of space predate spatial practice and create only "meaningless forms." The abstract space of the modern world has two essential, though seemingly contradictory, characteristics. Abstract space is homogeneous, in that it is emptied out, considered as simply a medium or an empty milieu. Yet it is fractured—into parcels of private land, spaces devoted solely to consumption, such as "tourist spots," spaces for production such as the factory floor, etc.

Above all, Lefebvre insists that we recognize that space is not a neutral, empty milieu. Space itself is instrumental in defining what occurs within it: "Itself the outcome of past actions, social space is what per-



mits fresh actions to occur, while suggesting others and prohibiting yet others" (1994:73).

Abstract space is a relatively new conception of space which Lefebvre relates to the technological capitalism of the modern world. A shift from one mode of production to another requires and creates a new spatial code. New codes shatter old ones but do not completely erase them. Indeed, elements of former codes remain and continue to impact social space. In effect, space is layered: "(s)ocial spaces interpenetrate one another and/or superimpose themselves upon one another" with a form reminiscent of a "flaky mille-feuille pastry" (1994:86).

Lefebvre does more than analyze the production of space. He envisions an alternative spatial code and invokes "the necessity of reversing the dominant trend towards fragmentation, separation, and disintegration, a trend subordinated to a center or a centralized power and advanced by a knowledge that works as power proxy" (1994:9). This is a revolutionary task and an extremely difficult one to accomplish. Lefebvre remains skeptical of the ability of revolutionary movements to succeed at defining their own space: "(a) social transformation, to be truly revolutionary in character, must manifest a creative capacity in its effects on daily life, on language, and on space. . ." (1994:54). The primary purpose of this analysis is to examine the degree to which the social transformation embodied in the repopulated communities of El Salvador has succeeded in creating such a space.

#### EL SALVADOR

Lefebvre's analysis focuses on the abstract space of the developed world, yet its insights can certainly be applied to other societies. In El Salvador, the advanced capitalist mode of production and the modern conceptions of space that accompany it have spread only recently and very unevenly. Until well into the twentieth century, the international market maintained a feudal system in many developing countries. In El Salvador this system can still be found in the form of large *latifundia* which are dependent on the labor of sharecroppers and tenant farmers.

The *latifundia* and its complement, the *minifundia* (the tiny subsistence plot of the peasant) have evolved from El Salvador's colonial legacy. As in all of Latin America, Spanish colonial settlers carved out urban centers as spaces of financial, political, and military control. Much of rural El Salvador was divided into vast tracts of land granted to Spanish settlers under the *emcomienda* system. The majority of Pipil and Maya, the indigenous populations of El Salvador, were slowly pushed off their communal lands and forced to labor on the *latifundia*. Those who retained access to land were relegated to plots barely large enough for

subsistence. Roads were built for the use of large landowners and ran from the *latifundia* directly to the urban centers. During the colonial mercantilist period, rural infrastructure was built solely to facilitate the export of indigenous products to Spain and to ensure military protection for the rural elites.

In modern El Salvador, the focus of production is still international export. Although rural infrastructure has expanded greatly, the essential form and function have changed very little. Most roads are designed to facilitate the movement of products from the hinterlands to the capital for sale or processing or to major ports for export. In rural areas, this center/periphery model is replicated on the local level. There are fourteen departments (roughly equivalent to US states) which are divided into municipalities. Large or medium-sized rural towns serve as political and military seats for the municipality. These centers are ringed by smaller hamlets or *cantones*, the residents of which are primarily peasant farmers or *campesinos*. *Cantones* are



generally spaced along primary roads which lead directly to the departmental center. The towns are the sole locus of market activity.

In the most remote rural areas, the networks and linkages of the capitalist system are weakly formed and highly unstable. Roads between smaller hamlets are often unpaved, having been forged by peasants traveling on foot or horseback to visit family members. From some parts of the department of Cabañas, for example, it is easier to travel to the capital than to communities in the bordering department, Chalatenango.

Beyond the small *cantones* are still smaller villages, *latifundia*, and other scattered settlements. The *campesinos* in the smaller hamlets are very spatially isolated, living in houses constructed amid their agricultural plots. They are also typically depicted as maintaining strong allegiance to their traditional family land, unwilling to migrate to regions of higher population density. Such allegiance may help explain the traditional isolation of the *minifundia*.

In El Salvador, as in much of the “developing world,” two spatial codes, one predominately urban and intrinsically linked to the global capitalist market and one rural and more closely aligned with a feudal mode of production, exist simultaneously. In the hinterlands, *Latifundia* dot the landscape, and most of the populace lives a peasant or near-peasant life, tied directly to the land. This is not a static picture, however,

the poorest and most rural areas of the nation. Large portions of these departments, particularly the regions bordering Honduras, have maintained only the weakest ties to the larger Salvadoran market and contain the least developed infrastructure (Binford 1991).

Between 1960 and 1980, landlessness among rural residents increased from 12% to 60% (Edwards and Siebentritt 1991:8). The traditional *campesino* lifestyle and its spatial code were pressed towards extinction. The primary appropriated spaces which remained, the *campesino* home and plot of land, were slowly dismantled as the state and advanced capitalist relations of production spread to encompass what had survived in the margins for centuries.

In the late 1960s, resistance to this invasion began to grow, taking the form of several concurrent movements. First, and perhaps most importantly, the doctrine of Liberation Theology, which called for a new Catholicism marked by a “preferential option for the poor,” inspired Catholic priests and missionaries throughout Latin America. Priests from El Salvador and abroad began to travel in El Salvador’s “forgotten land,” espousing Liberation principles and contributing to the formation of Christian Base Communities (CBCs). In the CBCs, priests trained local *campesinos*, tenant farmers, and sharecroppers to become Delegates of the Word (lay preachers) or catechists (lay teachers). Using the teachings of Brazilian educator Paulo Friere, priests and catechists launched literacy campaigns and Bible study groups through which the rural poor were encouraged to develop a critical perspective of Catholicism and of Salvadoran society (López Vigil 1982).

Liberation Theology maintained that “a Christian community is a community of equals before God in which all have obligations to each other and responsibilities to share” (Montgomery 1982:103). This was a new conception of personhood and of community and thus, implicitly, of space. Many CBCs began to develop ideas about alternative approaches to production based on the idea of *autogestión*, or self-managed development. *Autogestión* dismantled the old understanding of the *campesinos* as isolated, essentially helpless producers and gave new meaning to the idea of rural community. As the priests, Delegates, and catechists traveled from village to village organizing masses and teaching sessions, those physical paths and social connections between small, previously isolated communities became new spatial practices. Many CBCs applied these new uses of space through the formation of agricultural collectives and cooperatives. Collectivization of agriculture also profoundly changed the spatial practices within these communities and weakened their already tenuous ties to the larger Salvadoran market.

The Christian Federation of Salvadoran Peasants (FECCAS) was a second rural resistance movement



Avri Beard

Residents gather at a *bodega* to collect their share of salt, oil, and other essentials

for the international market demands increasing quantities of allied space. The slow spread of the “advanced” mode of production and its concomitant spatial code as well as the resulting conflict between the two codes are recurrent themes in El Salvador’s history and contribute greatly to an understanding of the development of the repopulated communities.

#### CHANGING SPACE AND THE DEVELOPMENT OF THE CIVIL WAR

The beginnings of economic diversification and the commercialization of agriculture in the 1950s changed the Salvadoran landscape. The spread of large-scale agricultural production, which required large tracts of land and a seasonal labor force, began to break down the *latifundia/minifundia* rural structure. Peasant tenants, sharecroppers, and *campesinos* were pushed off their land to make room for cattle ranching and the export crops of coffee, sugar, and cotton. In rural areas, these transformations constituted the imposition of a new mode of production, one based on technology-intensive agriculture and wage labor (Edwards and Siebentritt 1991:9).

The effects of this change in production and land ownership were most dramatically felt in the northwestern and northeastern areas of the country, particularly the departments of Chalatenango, Cabañas, San Salvador, Morazán, and San Miguel, and Usulután to the south (see Map). These mountainous regions are

formed during this period. Primarily a reformist political organization, FECCAS recruited *campesinos*, sharecroppers, and tenant farmers and lobbied the Salvadoran government for agrarian reform and democratization of the political process. By 1970, FECCAS included 1,000 *minifundistas* (Edwards and Siebentritt 1991:13). Although FECCAS did little direct organizing in rural communities, its popularity probably contributed to an increased sense of unity and communality of purpose as well as to increased personal interaction among groups of rural residents.

The Salvadoran state was quick to respond to these challenges to the dominant production structure. In 1965, the military government formed the paramilitary National Democratic Organization (ORDEN). With offers of government assistance, ORDEN recruited local farm workers and tenants to spy on their neighbors and report community organizers. By the late 1970s, ORDEN employed as many as 60,000 to 100,000 such recruits (Edwards and Siebentritt 1991:13). ORDEN, in turn, was linked to the burgeoning death squads associated with the Salvadoran military. Community organizers, particularly teachers, cooperative members, and catechists, began to “disappear”; between March and October of 1980 alone, as many as 184 Salvadoran cooperative members were killed (Edwards and Siebentritt 1991:15).

This violence encouraged many rural residents to support an alternative power structure which promised to support the liberation project—the emerging guerrilla army. Formed in the late 1970s from a coalition of five small armed resistance groups, the Farabundo Martí Front for National Liberation (FMLN) had begun to launch large-scale insurgency campaigns in rural areas by 1980. The isolation and weak infrastructures of Morazán, Cabañas, Chalatenango, etc., gave the guerrillas enough freedom to recruit combatants, begin amassing supplies, and gain publicity and support by successfully attacking small military outposts and isolated *latifundia*. Between 1981 and 1983 the FMLN established rearguard posts (*retaguardias*) throughout these departments (Binford 1991).

To the Salvadoran government and military, the *campesinos* and other civilians living in FMLN-active areas gradually became considered as support bases for the guerrillas and thus as legitimate military targets (Edwards and Siebentritt 1991). The military cut off access to and from large portions of the countryside in an attempt to stop the flow of supplies to the guerrilla troops. By 1983, residents of northern Morazán were left with no electricity, bus service, health and education services, or access to local markets (Binford 1991). Roads leading into the “conflict zones”, as the state now titled these areas, were blocked and sometimes even destroyed (Binford 1991).

These tactics backfired. The withdrawal of government services and the destruction of transportation and communication linkages left these spaces open for the kind of reappropriation and diversion of space described by Lefebvre. In the absence of state power, most large landowners in these areas fled to San Salvador. Abandoned *latifundia* were taken over by *campesinos* and the landless. The military maintained posts in the larger towns, but the surrounding hamlets and the hills beyond were often under the control of the FMLN. In Morazán and other departments the guerrillas began to supplant state power and to assume governing roles, often building schools, training and weapons facilities, and hospitals in the zones they controlled (Binford 1991).

In 1980, after receiving material and tactical assistance from the United States, the Salvadoran military launched a large-scale counter-insurgency operation to retake these areas. The Air Force, expanded and supplied with advanced weaponry, strafed FMLN mountain strongholds. The Army supported the aerial bombing with sweeps through the countryside using a scorched-earth policy similar to that used by the United States in Vietnam. In their attempt to “clean” the FMLN zones, soldiers killed thousands of civilians and razed scores of villages (Shrading 1991:20). By the end of the decade, El Salvador had become the most bombed country in the history of the Western Hemisphere, and approximately 1,650,000 Salvadorans had been displaced from their homes (Shrading 1991:13).

The old and developing spatial practices in these zones were demolished. Refugees abandoned these departments by the tens of thousands. Many disappeared into the barrios and slums of San Salvador. Thousands more fled to the United States and other countries. Some were placed in government relocation projects. An untold number of *campesinos* and tenants, particularly adult men and adolescents of both genders, joined the guerrilla ranks.

Some of the *campesinos* who did not join the guerrillas remained in the conflict zones, trying to survive by living in a state of permanent flight. These residents traveled from canton to canton, looking for “places

By the end of the decade, El Salvador had become the most bombed country in the history of the Western Hemisphere and approximately 1,650,000 Salvadorans had been displaced from their homes.

The old and developing spatial practices in these zones were demolished.



Avri Beard

*Harvesting yucca from a collective plot.*

where the army hadn't yet arrived." Others stayed in the mountains, hiding from government raids and trying to find land on which to plant enough crops for subsistence (Shrading 1991:13). Although many of these internal refugees are now residents of repopulated communities, the broad repopulation movement was led by refugees in Honduras.

**THE HONDURAN REFUGEE CAMPS**

From the northernmost areas of El Salvador, many of the displaced fled across the border to Honduras; nine thousand Salvadoran refugees were camped along the Honduran border by the end of 1980. Honduran complaints forced the United Nations High Commission for Refugees (UNHCR) to step in. The UNHCR created three large refugee camps in Honduras: Colomoncagua, Mesa Grande, and San Antonio (see Map). By the mid-1980s, these camps held nearly 20,000 Salvadoran refugees (Paredes 1984:518). The largest of the camps was Mesa Grande which housed over 12,000 refugees during the course of the war. Most of the refugees were illiterate *campesinos*, and the camp populations were almost exclusively women, children, and elderly men. The population of Colomoncagua, for example, was over 80% women and children (Dorst 1991:9).

The refugees' experience in these camps played the decisive role in elaborating and formalizing the cooperative mode and relations of production that now operate in the repopulated communities. Within the camps, refugees were closely grouped together and almost completely isolated from outside contact. The Honduran government, concerned about the "contamination" of the Honduran population, surrounded the camps with barbed wire and armed soldiers in order to prohibit any integration of the refugee population with nearby communities (Cagan and Cagan 1991:11). Refugees who came too near the periphery of the camps were threatened and sometimes killed by the soldiers

on guard.

Living quarters in the camps consisted of longhouses divided into tiny household units. The walls separating the units were paper thin, and most units contained no windows. This forced residents to leave their doors open night and day for circulation and effectively precluded any sense of privacy (Cagan and Cagan 1991). All buildings in the camps were used communally and were located very near the longhouses. Schools, workshops, chapels, and other camp structures were built of the same materials as the houses: wood, mud, and corrugated tin.

The UNHCR could not supply sufficient provisions for the refugees to survive without sharing. Also, the extreme vulnerability of such a large portion of the population—the elderly and young children—encouraged the refugees to establish cooperative mechanisms to ensure every one's survival. The refugees planted communal fruit and vegetable plots on the arid slopes around the camp. With assistance from the UN and international donors, the refugees received training and began to operate workshops in such areas as tailoring, tin-work, embroidery, carpentry, blacksmithing, and electrical repair (Cagan and Cagan 1991). No money circulated in the camps. All production was cooperatively run, and goods were distributed solely on the basis of need (Cagan and Cagan 1991:37). By necessity, women in the camps took on traditionally male production roles.

Aside from visits from donor organizations, the refugees' primary contact with the outside world took the form of occasional, clandestine communications with the FMLN who kept them posted on the progress of the war and on conditions in their home villages. Most refugees wanted to return to El Salvador but needed some assurances that they would be safe from government attacks. The FMLN favored repopulation as a way of increasing their support base and of generating publicity that would embarrass the Salvadoran government.

After years in the UN camps, the refugees began planning their return to El Salvador. Most of the refugees determined to repopulate villages in the conflict zones where the FMLN would help protect them from military attack. Both the UNHCR and the Salvadoran government opposed collective returns; however, the refugees managed to generate enough international support and publicity to force the Salvadoran state to agree to the repopulation plan.

The economic and political structures of the repopulated communities were carefully planned out in the refugee camps with two essential goals: to construct a "popular democracy" and to use collectivization of land and production to ensure economic equity. The repopulations began in 1986 with the return of a small

group of refugees from Mesa Grande to the village San José de las Flores in Chalatenango. By 1990, 10,000 Salvadorans had repatriated collectively from the Honduran camps, and thousands more had returned individually (Edwards and Siebentritt 1991:137). The repopulators (*re pobladores*) were joined in their new settlements by some of the permanently displaced who had remained in El Salvador and by family members and friends among the guerrillas.

#### SANTA MARTA/VALLE NUEVO

In October of 1988, 1,500 refugees from Mesa Grande launched the second major repopulation, to the village of Santa Marta in northern Cabañas. In October 1989, another 800 refugees from Mesa Grande returned to form the adjacent community of Valle Nuevo. By 1990, Santa Marta/Valle Nuevo constituted a community of over 3,000 people. (Although they are two structurally separate communities, the dividing line between Santa Marta and Valle Nuevo is discernible only to residents.) Santa Marta had been a small *canton* of roughly a dozen families before the war; however, every human structure except one school house was destroyed by army bombs and sweeps in the early 1980s. The returning refugees had to start from scratch and organized work teams to clear brush, erect temporary shelters, repair roads, and plant vegetable gardens.

The Salvadoran military quickly labeled Santa Marta and other repopulated communities "oases for terrorists" (Edwards and Siebentritt 1991:155), and repression began almost immediately. Santa Marta was bombed one month after the return, killing two residents. The military continued their attempts to seal off the conflict zones, maintaining military checkpoints in the nearest government-controlled towns (Ciudad Victoria in the case of Santa Marta), and requiring safe-conduct passes for anyone attempting to enter. In the first year after the return, residents of repopulated communities who entered government zones in search of supplies were frequently tortured or killed by government soldiers.

#### COMMUNITY STRUCTURE

Although each repopulated community is slightly different, the organization of Santa Marta/Valle Nuevo reflects the essential elements of the entire repopulation movement. All houses and productive enterprises in the community are collectively owned and equitably distributed. Each family receives a plot of agricultural land which is theirs to farm for life, while the lands of those unable to farm are collectively worked. As a result of the war, the elderly and disabled represent a large portion of the population, thus collective plots demand a considerable amount of both land and labor.

The community runs collectively owned workshops

for tinsmithing, furniture making, and other skills gained in the refugee camps. When production reaches a high enough stage, workshops can vote to become autonomous cooperatives run by the workers with wages based on profits. The community also runs projects such as corn and bean silage and chicken coop construction to supply residents with essential goods. Goods that are not consumed inside the community are sold in the Ciudad Victoria market to help finance community services.

These sales, now legal, were conducted clandestinely during the war. The *re pobladores* are also trying to establish a variety of social services. Health care, dental care, and education are provided at virtually no cost to community members and also to the populations of the nearby, smaller repopulated communities of El Zapote and San Felipe.

The populations of Santa Marta and Valle Nuevo elect Communal Directives which consist of a President, Vice-president, General Secretary, Treasurer, and Security Officer, all of whom serve two-year terms. The President oversees the Directive and communicates with regional representatives and external donors. The Vice-president coordinates economic initiatives for agriculture, housing construction, etc. and serves as the contact with the Women's Directive. The Secretary is in charge of administering the collectives and distributing donations to the community. The Treasurer oversees finances and coordinates projects which require community volunteerism such as the construction of latrines for each household. The Security Officer acts as a liaison with the health and dental clinics and mediates conflicts within the community (Interview with the Directiva Comunal de Valle Nuevo).

Each community also elects a five-member Women's Directive which organizes economic and social projects. Both the Santa Marta and Valle Nuevo Women's Directives run small stores, farm collective agricultural plots, and operate embroidery projects. The proceeds from these ventures are distributed to widows and single women who have difficulty caring for themselves. The Directives also coordinate women's discussion sessions and consciousness-raising workshops on gender issues (Interview with the Directiva Comunal de

Footpaths are the primary guide to the daily patterns of life in the communities. The paths that lead to the road to Ciudad Victoria predate the civil war and reproduce capitalist distribution networks, but most current paths spring directly from new spatial practices and codify the community's cooperative networks of production and exchange.



Mujeres de Valle Nuevo).

Elements of these structures have been attempted, usually with little success, in many areas of the developing world. Lefebvre explains one of the reasons why so few attempts to produce cooperatively are successful: “(a)mong the obstacles that (communal experiments) have run into and the reasons for their failure when it occurs must certainly be numbered the absence of appropriated space, the inability to invent new forms” (1994:379).

The Salvadoran civil war reached a negotiated end in 1992. The repopulated communities today stand as one of the few tangible remainders of the revolutionary movement. Indeed, if a revolution really occurred anywhere in El Salvador, it occurred here. But do these communities manifest the creative use of space that Lefebvre invokes? The following case study examines the spatial code in one community to attempt to an-

swer this question. frames with baked mud walls. In most cases the interior is one room where all the family members sleep. Generally there is little space in this room for anything besides beds and sleeping hammocks. The roofs are of tin sheeting and extend beyond the walls of the houses to form shaded eaves, under which most residents place any tables, chairs, and additional hammocks they possess. The floors of the houses are simply swept dirt. Cooking areas are occasionally constructed as separate structures, but generally are squeezed into a portion of the main room.

Large, swept-earth front yards dominate most lot spaces. Yards generally contain a small animal pen for pigs, calves, or goats (chickens, the most common domesticated animal, roam free in the yards). Families often plant both food plants, such as mangos or hot peppers, and flowers or ornamental shrubs along the periphery of their yards. Each house has a private latrine, usually located towards the rear of the lot. Families obtain water from public wells that are located throughout the community.

Within both communities there are areas, accessible by vehicle, which function as informal political centers. In Valle Nuevo, the public center of the community is an area around a large, open, grassy lot called *el campo*. *El campo* itself is used primarily by adolescents as a soccer field, although the players must share the space with roaming livestock. Many of the Valle Nuevo ‘public’ buildings border *el campo*. On the western edge one finds the official meeting hall of the Community Directive; to the south lies a large church; to the east is the store run by the Valle Nuevo Women’s Directive and their adjacent meeting hall; and to the north there is a small shack which houses the community television set. From a distance, most of the community buildings are distinguishable only because they do not have kitchens. With a few exceptions discussed below, there is very little differentiation in building materials or architecture within the community.

Many of the public buildings are scattered throughout the community. Warehouses, called *bodegas*, store communal goods and are scattered throughout the residential areas to facilitate distribution of goods to residents. The workshops and chicken coops are also scattered—apparently according to the availability of space when the project was developed. The community’s agricultural plots are located on the surrounding hillsides.

The school buildings that service both communities are located near *el campo* on the “border” between Santa Marta and Valle Nuevo. The schools exhibit unique architecture and are constructed of brick and concrete which are extremely scarce materials. The schoolhouses are also used for adult literacy classes, community dances, and as a place for residents to so-



Avri Beard

Constructing silos in a community workshop

swer this question.

#### A NEW SPATIAL CODE

In order to decipher the still-developing spatial code in these communities, a brief description of both the built environment and the patterns and paths formed by the day-to-day lives of the residents must be presented. Unfortunately, maps of Santa Marta/Valle Nuevo are not available. The following description relies on personal observations gathered by the author while living in Valle Nuevo for three months in the summer of 1992.

Each family in Santa Marta/Valle Nuevo is granted an equal-sized lot for housing purposes. The division of housing lots does not appear to be organized in accordance with any general plan; most residents seem to have chosen their lots in order to be near friends and relatives. There is very little differentiation in the housing stock which is similar to that found in most *campesino* communities. Houses are constructed of reed

cialize with friends. The only building in the community whose use is wedded to a very traditional function is the church. Constructed at the insistence of a nun who lived in Santa Marta until 1990, the church is by far the most elaborate and expensive structure in the community. It is used only for church services and occasional religious celebrations even though its spacious interior and concrete floors make it an ideal site for housing other social services.

Footpaths are the primary guide to the daily patterns of life in the communities. The paths that lead to the road to Ciudad Victoria, the nearest market town, an hour's hike away, predate the civil war and reproduce capitalist distribution networks, but most current paths spring directly from new spatial practices and codify the community's cooperative networks of production and exchange. There are paths forged by labor, which run from houses to the workshops and the agricultural plots. Paths to private plots are narrow and difficult for an outsider to identify, while the paths that lead to the community plots converge and become wide and level. There are paths of distribution and exchange, the smallest of which run from the *bodegas* to the houses, the largest of which connect residential areas to the road to Ciudad Victoria. There are wide paths to *el campo* and to the schools and meeting halls. There are paths of interaction, kinship, and friendship which run from house to house. Almost every lot is crisscrossed by three or four footpaths.

It is overwhelmingly women who create and reproduce these paths, and this may be the most revolutionary change in space embodied in these communities. Although Lefebvre does not address the issue, it is clear that a gender-distinct labor system creates gender-distinct spatial codes. Every society carves out separate areas in space for women and men, through which they forge unique paths and networks. In traditional Salvadoran *campesino* society, the entire spatial world of most women was limited to the house and its immediate surroundings. A *campesina* refugee in Colomoncagua describes women's changing spatial practice: "Before coming here, ...our work was to live in the house, cooking, working, and having children...Here you will see there is not a single type of work that women don't do" (Elisa 1989 cited in Compher and Morgan 1991:43).

In the repopulated communities, women travel along most of the same paths as men, heading for the fields, the workshops, the schools. They can leave their homes for hours or, if necessary, even days at a time without censure (Artiga-Gonzales 1993). In traditional *campesino* society, men often met at the market or in town for recreation, but women were allowed very little contact with other women, or indeed with anyone outside their immediate family. In Santa Marta/Valle

Nuevo, women have both formal gathering places, such as the Women's Directive's meeting hall, and informal places, such as wells and workplaces. The closeness of houses to one another also indicates the powerful role women played in designing these communities, as many women in the community name physical proximity to friends and relatives as one of their favorite things about the community. The women, therefore, maintain the smaller, more individual paths of social interaction as they visit one another throughout the day, while men follow more established routes to their gatherings in common areas such as the agricultural plots or *el campo*.

These are significant changes to the traditional division of labor and power between the sexes in El Salvador. Nonetheless, gender differences remain. Women still do most of the work maintaining the house and raising the children, while projects that they have proposed to help ease their workload, such as a day care center and a communal corn mill, are low priorities for the Communal Directive (Interview with the Directiva Comunal de Mujeres de Valle Nuevo).

Representations of space which emphasize community cooperation and unity, mutual interdependence, and equity spring directly from the community's cooperative production and distribution practices. These representations are, of course, ideological and reflect elements of the ideologies of both the CBCs and of the Marxist FMLN. However, these communities are not simply adopting foreign representations that create "meaningless forms." The cooperative lifestyle has been learned over the course of twenty years in the CBCs and in the refugee camps.

There is very little about the spatial practices of this community which contradict these representations. Santa Marta/Valle Nuevo demonstrate no evidence of the homogenizing grid, and the community's pathways, for the most part, are produced and reproduced directly from cooperative practice. There is some concentration of public buildings, such as occurs around *el campo* in Valle Nuevo. However, neither *el campo* nor the equivalent space in Santa Marta is centrally located within their respective communities. In fact, these areas are quite close to each other, separated only by a five-minute walk. In effect, the two areas act as one central area for both communities, which in this instance may serve an important unifying function

...these communities are not simply adopting foreign representations that create "meaningless forms." The cooperative lifestyle has been learned over the course of twenty years in the CBCs and in the refugee camps.

among residents instead of the hierarchical center which Lefebvre criticizes.

Lack of appreciable architectural distinction among the human-made structures should not be considered an indicator of homogeneity, per se, but rather as a practice reflecting the commitment to equity. The one building which does not reflect the communal representation of space, the church, is a striking anomaly. Although the *repobladores* demonstrate allegiance to an old construction of representational space by their refusal to redefine the function of the church building, most residents will quickly say that they resent having been pressured into constructing it. This resentment seems to indicate a desire to shake off this representational space, tied as it is to an old spatial code which separated religion from the daily life-world.

Representational spaces, because they are neither self-conscious nor necessarily visible to the eye, are the

most difficult elements to define for any community. Perhaps the only immediate indicator of these spaces lies in community artwork. Many of the public buildings in Santa Marta/Valle Nuevo have walls papered with drawings made by children and adults. The vast majority of these pictures depict the army attacks of the

early 1980s. There are drawings of bombs falling on Santa Marta, women and children being shot by soldiers, and people running from airplanes. Many of these drawings were created by children too young to have witnessed these attacks but who have heard stories of the war told repeatedly by parents and teachers. In this way the community as a whole seems to carry a representational layer associated with fear and death.

AFTER THE WAR

In 1992, the Salvadoran civil war officially ended with the signing of the Accords of Chapultepec. Although the FMLN was able to negotiate some stipulations to help protect the repopulated communities, they are probably more vulnerable to peace than they were to war. The peace accords pledge to respect "actual tenancy" in conflict zones when and where the "legitimate owners" agree to sell the properties the *repobladores* have diverted. When owners refuse to sell, however, the Accords allow the government to relocate the tenant (Frente Farabundo Martí para la Liberación Nacional 1992). This provision nearly dismantled Valle Nuevo; the entire community faced eviction in 1992 when the absentee landlord declared his

intent to sell the land to the first bidder. The community was able to gather sufficient donations to secure a down payment on the land, but must raise \$6,000 by the year 2000 to complete the purchase.

As part of the National Reconstruction Plan (Plan de Reconstrucción Nacional—PRN) outlined in the Accords, the state is beginning to reinstitute political control in the former conflict zones. It is also trying to reinstitute the dominant spatial code. With its allies, particularly the United States Agency for International Development (USAID), the government is seeking to create the fractured and dominated spaces called forth by technology capitalism. For example, the Accords stipulate maximum lot sizes for each tenant family based on soil productivity in the region. This stipulation carries the implicit assumption that the *repobladores* will return to individual, parceled production.

The PRN allocates funds for development projects in the former conflict zones. Most of these funds, however, are dedicated to infrastructure development, particularly roads and electrification, and to rebuilding municipal offices. In Santa Marta/Valle Nuevo, PRN and USAID funds are currently being used to pave the road to Ciudad Victoria, even though residents identified this as a very low-priority project. The state has good reason to select this project: a paved road will allow state representatives easier access to the community and may encourage increased involvement by the *repobladores* in the regional (capitalist) market. Neither the PRN nor USAID have been willing to allow community leaders to select the development projects which will receive funding.

The residents of Santa Marta/Valle Nuevo have so far resisted integration into the larger Salvadoran political and market structures. They continue to exercise cooperative production and to elect community representatives. They have even rejected USAID offers to fund development projects that the *repobladores* felt might create divisions within the community. Nonetheless, Santa Marta/Valle Nuevo, like all of the repopulated communities, will doubtless remain under steady pressure to abandon their product, the cooperative community.


CONCLUSION

Lefebvre is skeptical of the ability of revolutionary movements to effect a true change in space and thus to achieve his definition of success: "(i)deas, representations or values which do not succeed in making their mark on space, and thus generating (or producing) an appropriate morphology, will lose all pith and become mere signs, resolve themselves into abstract descriptions, or mutate into fantasies...New ideas (socialism, for instance), though not without force, have difficulty generating their own space, and often run the risk of

With its allies, particularly the United States Agency for International Development (USAID), the government is seeking to create the fractured and dominated spaces called forth by technology

aborting" (1994:416-417).

Nonetheless, a creative change of space has clearly been accomplished by the repobladores. The success of this diversion is in many ways due to the demolition of previous spatial codes during the course of a brutal civil war. The development of the war and the form the conflict took are in turn related to the old spatial codes which left such large areas of the nation marginalized. During the 1970s, the jarring effects of the spread of technological capitalism in peripheral areas created resistance movements which contained new representations of space. Often allying themselves with the Liberation Theology movement, these Salvadorans began to create new spatial practices from these representations. Nonetheless, the cooperatives might well have failed if not for the codification of cooperative spatial practices in the refugee camps.

Lefebvre states, "(t)he possibility of working out counter-projects, discussing them with the 'authorities' and forcing those authorities to take them into account, is...the gauge of 'real' democracy" (1994:419-420). It is unlikely that El Salvador today is a "real democracy." As the repobladores struggle to maintain their unique communal organization and its codes of space, they will likely face the determined opposition of the Salvadoran state. 

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# From Assembly to Innovation

## The Evolution and Current Structure of Austin's High Tech Economy

by Michael Oden

*The evolution of industrial specialization in a particular region significantly affects local growth patterns. Local officials must note the health and prospects of leading sectors, the degree to which they are integrated into the local economy, and the extent to which investment and product development are locally controlled. Increasing endogenous innovation and economic diversity requires creative planning to continuously improve the local labor pool, retain an attractive amenity/cost mix, and anchor new and existing firms to a rich local research and knowledge base.*

The breathtaking growth of the Austin regional economy has made the area among the most studied and admired locales in the nation. Population and job growth in the Austin-San Marcos MSA<sup>1</sup> have far outstripped national growth rates for the last nine years. More impressively, Austin's expansion since 1988, driven by computers, microelectronics, and software, has outpaced that of other medium-sized high technology centers such as Raleigh-Durham, Phoenix, and Colorado Springs. Local boosters are taking well deserved bows for creating yet another silicon topography; in this case either "Silicon Prairie" or "Silicon Hills." Dignitaries from around the globe stop in to study and, if possible, to export Austin's economic development formula. After receiving laurels from numerous business publications for being among the most livable and economically dynamic of cities, Austin was recently designated by *The Economist* as a prime contender to become a global center of innovation, ranking only behind the great mothership, Silicon Valley, in the high tech hierarchy (*The Economist* March 29, 1997).

There does, as Alfred Marshall said, seem to be something in the air. The "something" he was denoting to explain high growth regions in the late 19th century was a rich base of technology and special industry knowhow that circulates widely where companies, skilled workers, and suppliers to an industry are concentrated. These spillovers of knowledge, combined with other economies of co-location, give firms in industry centers distinct competitive advantages over those in less endowed regions, and the superior performance of local firms allows such regions to grow more rapidly over time (Marshall 1986; Krugman 1991). The stylized facts suggest that Austin-based computing, microelectronics, and software companies are exploiting these agglomeration economies to expand their presence in rapidly growing markets. Looking at the last decade, there is also at least some evidence that this process has become cumulative in nature. As the number and size of local firms and facilities increase, thresholds are passed which stimulate the birth or expansion of local supplier companies, further in-migrations of entrepreneurial and technical talent, and new rounds of research and capital investment.

Yet, despite the truly impressive performance of the regional economy, it may be premature to label Austin a global center of innovation. This weighty title should indicate that a region not only exhibits growth in high tech-

nology industries, but also generates new end-products with pervasive impacts on markets. Global centers are the regions where industry standards, strategies, and investment decisions are shaped by local institutions. Despite the astonishing growth and development of the Austin high tech complex, it is important to retain perspective. The level of high technology employment in Austin is still dwarfed by the premier high tech centers. In 1994, employment in the computing and microelectronics industries in Austin was one fifth as large as that of the San Jose/San Francisco region, a third that of Boston, and half that of Dallas/Fort Worth (Texas Department of Commerce 1995; DRI/McGraw-Hill 1995). Also, many of Austin's largest high tech establishments are branches of large corporations headquartered elsewhere. The status of the region as a center of innovation depends upon how much research and new product development is occurring in these local branches versus in divisions or research centers located in other regions.

Moreover, as the 1980s made clear, economic growth is not a seamless, upward process. While euphoria prevailed when employment growth in the Austin MSA reached 10 percent per year in 1984-1985, the accompanying speculative excesses led to huge losses in the banking and real estate sectors which triggered a serious economic slump in 1986-1987. The dip in semiconductor industry sales in the last two quarters of 1996, which led to layoffs at the major Austin microchip facilities and a modest growth slowdown, provided a useful reminder that even high technology growth is a contingent, uncertain process.

The history and causes of Austin's rapid transformation from a state capital/university town into a center of high technology<sup>2</sup> manufacturing raise important questions about the endogeneity and resilience of the local expansion process. How will Austin's high technology and related sectors be affected by increasing business costs, changing technologies and markets, and changes in the strategies and location decisions of large firms headquartered outside of the region? Is the fate of the local economy still dependant on decisions made on Wall Street or in Silicon Valley, or are local firms increasingly regulating the region's growth dynamics?

Exploring these questions should provide important insights concerning future growth rates and possible changes in industrial composition. An improved



understanding of the industrial structure and its dynamics is clearly relevant to planning and growth management decision making. If the expansion of high technology industries slows from its current feverish pace, and software and business service sectors grow rapidly as manufacturing slows, significant changes will have to be made to the region's capital improvement plans, to its employment and training strategies, and even to the design of the built environment.

Secondary data and early evidence from survey research work conducted by a research seminar at the University of Texas (UT) Community and Regional Planning Program are used below to set Austin's growth process and future prospects into clearer perspective<sup>3</sup>. The first section of this paper examines the growth of the local high technology complex in the context of new theories explaining the emergence of high growth regions. The second part argues that, in the earlier phases (1970-1988), Austin's ascent among high technology centers was a function of growing diseconomies of agglomeration in the traditional computing and microelectronics regions, highly attractive local land and labor markets, and a systematic and largely successful mobilization of government resources to build up major research and development facilities. The third section examines evidence concerning the importance of local agglomeration economies and increasing technology transfer and local innovation. Austin is shown to have a specific position in the hierarchy of regions active in the computing and microelectronics complex, one that is based on the functional specialization of its large facilities and on its specific research and product development competencies. Given the historical evolution of the global computer and microelectronics industries, it is not particularly meaningful to talk about Austin as a next Silicon Valley. However, a number of indicators suggest that a foundation is in place for a more locally driven expansion of the economy. In the final section, a number of opportunities and challenges facing the region are briefly outlined. Current trends suggest that the expansion of computer-related industries in Austin will continue at a robust pace over the next five years, with the composition changing slightly from manufacturing to high tech services. However, a number of challenges remain, including the exclusion of significant segments of the community from the benefits of these changes, an underdeveloped high school-to-work and technical training architecture, and the possible deterioration of local amenities due to inadequate growth management.

#### THE MYSTERIES OF HIGH GROWTH REGIONS

Recent studies examining the history, structure, and institutional peculiarities of high-growth regions have yielded new insights into the mysterious phenomenon

of uneven regional growth. Most contemporary analysis builds upon specific prior theoretical developments, starting with the growth pole theories advanced by the French economist, Francois Perroux. He argued that high growth regions host "propulsive industries," or growth poles, which not only enjoy rapid expansion but also create backward and forward linkages within



the region and thereby accelerate growth and create the basis for the localized externalities identified by Marshall (Polenske 1988). An important, dynamic element was added to this idea in the 1960s when the theory of the product cycle was first advanced (Vernon 1960). Major product innovations, this theory argued, typically undergo a specific life cycle: an experimentation and diffusion stage in which profits are negative or low; a maturation stage when the product becomes more standardized, growth in demand is rapid, and profits are high; and a standardization phase at which time production becomes routine, and the growth of both market demand and industry profitability slows. This product life cycle concept seeks to explain changes in the growth and size of firms and in the regions which host them.

In the history of industrial development, major innovations based on new technologies may occur in a number of different places. Yet, as the product and the market mature, firms in one region, or a few regions, achieve dominance within maturing, rapidly growing national or global markets. Firms which are evolving successfully propel their regions to higher growth trajectories as they both hire employees themselves and stimulate job growth in supplier and service firms. Over time, however, rapid growth tends to boost local costs such as wages or property prices, and this often occurs just as production of the product or parts of the prod-

uct has become more routine and thus exportable. At this point it is more profitable for firms to site new production and service facilities in lower cost regions closer to end markets. These branch locations may grow into second tier centers with increasing local linkages and even independent research and product development, or they may remain branch plant platforms basically dependent on external product development and non-local suppliers (Glasmeier 1988; Markusen 1985, 1996).

It is noteworthy that, as product cycles mature and industry activity is dispersed, ongoing industry innovation and corporate control functions typically remain in the original core location. Although U.S. auto production is dispersed globally, Detroit remains the center of new product development and corporate decision making and investment. Likewise, Rochester, New York remains the center of optic and photo-imaging industries; Seattle and Los Angeles dominate aerospace; and Silicon Valley remains the innovative and strategic center of microelectronics, comput-

ing, and software (Storper and Walker 1989). It is rare for an industry center to shift to a new location among the second tier production centers. The shift of the U.S. textile industries from New England to the Carolinas is one of the few instances in which this occurred.

In the 1980s, a number of scholars identified important gaps in the product, or profit, cycle theory of regional growth (Markusen 1985; Piore and Sabel 1984; Storper 1994). First, they asked what factors explain why innovative industries in particular places win out over others as new technologies are transformed into new product innovations in the early phases of the cycle. Contemporary extensions of product cycle theory emphasize peculiar regional advantages based on factors external to individual firms. In particular places, firms gain early advantages from the presence of special expertise or energies residing in regional institutions. Unique advantages may stem from government sponsored research, superior access to capital provided by local financiers, or specific business practices or cultures which uniquely support the commercialization of the technology (Saxenian 1996; Storper and Walker 1989; Storper and Scott 1993). These regional, "extra firm" advantages constitute tipping points allowing local firms to persevere during the early competition to commercialize particular innovations. These

propositions have gained support from empirical studies showing that regional patterns of growth in high technology industries could be explained by factors such as the geographic distribution of federal R&D spending, the location of major research universities, and above average shares of professional and technical workers in the regional labor force (Markusen et al. 1986; Malecki 1981, 1985; Luger and Goldstein 1991). Substantial case study evidence also underscores the importance of access to local finance, local boosters who support the industry in early phases, and unique technical and business cultures as determinants of local success during early innovation periods (Saxenian 1996; Markusen et al. 1991; Markusen 1996; Grey et al. 1996) The seminal role of these external factors clearly called forth major revisions to traditional location theory by emphasizing, in particular, the role of government investment or demand in tipping the balance toward firms in particular regions. This research has had a profound influence, in Austin and elsewhere, on state and local economic development strategies.

The second question left open in the product/profit cycle account, more relevant to the Austin case, is why the branch sites which emerge as innovative industries mature display such diverse development trajectories. Certain branch sites develop more articulated local linkages and innovative capacities, while others remain host to vertically integrated and externally oriented facilities. Recent research has emphasized that the development path of second tier industrial locales is shaped by the extra-firm factors alluded to above but is also highly contingent on the structure and strategy of firms in the innovating industry. Glasmeier developed a more refined specification of the dispersion process in high technology industries which identifies three gradients of regional industrial specialization. There are typical branch plant platforms with few local linkages, advanced manufacturing centers where branch facilities may be independent profit centers with product development capacities and links to local research institutions or suppliers, and innovation centers which retain control over major product development trends, investment, and broader corporate strategy (Glasmeier 1988, 1991).

The particular trajectory that a branch plant center follows is contingent on local institutional advantages, the kinds of technologies and products that are produced at local facilities, and how the functional characteristics of local establishments relate to overall corporate competitive strategies. It is hence important to determine, for example, whether a local microchip facility is a pilot plant for a major new product introduction and draws on local research institutions, skilled engineers, and local equipment makers to implement the latest process technology or is producing earlier

Recent research has emphasized that the development path of second tier industrial locales is shaped by . . . extra-firm factors. . . but is also highly contingent on the structure and strategy of firms in the innovating industry.

generation standard chips with well known production parameters. Even though each establishment would be registered in the same local SIC code industry, the implications for regional growth could be quite distinct.

The closer one gets to concrete local institutions and processes, the more that exceptions, accidents, and idiosyncratic factors of human agency come into relief. But the insights embodied in new regional growth theories are useful for establishing some basic coordinates within which Austin's growth story can be understood. Austin was certainly not an originating center of innovation in any of its key high tech industries. The seeding of the region's industries occurred through the establishment of branch plants by major outside companies. Through a complex and contingent process, Austin developed from a rather typical branch plant platform into a major production and R&D center with unique attributes and a specific position in the global computing and microelectronics complex. On the other hand, given the propositions outlined above about the durability of the innovative industry center, it is unlikely that Austin will challenge the power and scope of Silicon Valley. As local business columnist Kirk Ladendorf commented, "the world only needs, and can probably support, only one Silicon Valley" (Ladendorf 1997c).

#### APPLYING THE THEORY:

##### THE EARLY DEVELOPMENT OF AUSTIN'S HIGH TECHNOLOGY COMPLEX—1968–1988.

Applying the precepts of regional growth theory to the evolution of Austin's high technology complex suggests a rough, three-part periodization. In the first phase of Austin's growth, from the late 1960s to late 1970s, several large outside firms established branch plants, thereby building an initial base in electronics and computer manufacturing. In a second phase—late 1970s to late 1980s—Silicon Valley firms began to site facilities for more advanced production in Austin, several of the original branch facilities began to add considerable R&D and product development capabilities, and the region built up an impressive set of public and private R&D centers and world class university departments in science and engineering fields. In a third phase—1988 to the present—momentum continued to build and the region began to exhibit some of the characteristics of a center of industry innovation.

##### Phase 1: The Growth of Electronics Branch Plants

The nostrum that Austin used to be a sleepy government and university town actually conveys important information about the starting point of the region's high technology development. Regional economic development was tied almost completely to the growth of fed-

eral and state government and university activities until roughly thirty years ago. The region had essentially no private sector growth poles—companies whose growth depended on the exporting of products outside the region. Furthermore, at the onset of the 1960s, Austin could not claim to have a particularly strong research and development base, despite the presence of the University of Texas. Science and engineering departments, with the exception of chemical and petroleum engineering, were not in the upper tier, and the university was linked to only one relatively small federal defense research center, Balcones Research Labs (now the Pickle Research Center) (Smilor et al. 1988). Austin was a minor player compared with other 1960s era university centers like Boston, Ann Arbor, or the San Francisco Bay Area, which were engorged with defense research support.

Two events in the mid-1960s constituted a first seeding of private sector firms in electronics related industries. The first was the founding of Tracor by Frank McBee, UT engineering faculty member and veteran of Balcones Labs. With other faculty, he began consulting part-time in the 1950s, finally resigning from the University to form Tracor in 1962. Tracor grew steadily through the 1960s and 1970s and not only soaked up engineering talent from UT and other Texas schools, but also generated numerous spin-off companies. By 1988 it was estimated that 25 Austin companies supporting nearly 6,000 jobs could trace their roots to Tracor (Ibid.). However, the Tracor story remained the only significant homegrown high tech company until later success stories in the 1980s. Moreover, this company and many of its early progeny relied on Department of Defense contracts rather than emerging commercial markets.

The second noteworthy event of the 1960s was the opening of two major manufacturing facilities in Austin. IBM opened a large plant producing Selectric typewriters and other electromechanical products in 1967, and Texas Instruments broke ground for their new facility the same year (Davis 1994; Gibson et al. 1991; Glasmeier 1991). Initially, each of these establishments were typical branch plant operations of large, vertically integrated firms and were dependant on external product and management direction. Their early attraction to Austin appears to be based on classic locational factors: low land costs; availability of an educated, trainable (although not necessarily technical) work force at relatively low wages; good infrastructure; and access to growing Southwestern markets (Davis 1994; Glasmeier 1991). Each of these facilities grew dramatically throughout the 1970s, creating in the region an electronics manufacturing base centered on large companies.

Through this period, a number of smaller branch manufacturing facilities were established, including a

Westinghouse electric motor plant and a small electronics plant built by the Eaton Corporation. The next major siting of a large manufacturing facility was the 1974 opening of Motorola's Ed Bluestein plant. This plant was a transistor and semiconductor fabrication and assembly satellite of the Phoenix division headquarters.

A snapshot of the Austin economy in 1978 did look substantially different than the picture a decade earlier. The region now had a significant private sector manufacturing base, constituting almost 9 percent of total employment (Austin Chamber of Commerce

1996). Employment was centered in a half-dozen large plants which fabricated and assembled electronics and computers for large, externally-based multinational firms. With the exception of homebred Tracor, Austin facilities were manufacturing nodes in integrated production chains, relying on outside parent divisions for product designs, inputs, and managerial direction. Since the technology and production process of these early facilities was relatively

complex, the educated, technically literate labor pool available in the government and university sectors and basic amenities including climate, housing prices, schools, and recreational opportunities privileged Austin over lower-cost regions. Yet, because research and product development were not centered in Austin, these branch facilities were not fertile beds for local spin-off or start up firms or for local technology transfer. Therefore, the region's private sector growth was based on facilities that were not integrated into the regional economy, not particularly potent sources of regional innovation, and vulnerable to changes in product and investment decisions of outside firms.

#### Phase 2: Government-Led Transformation Into an Advanced Manufacturing Center

At the end of the 1970s, the region's high tech economy began to move to a decidedly higher level. Austin got its first Silicon Valley branch plant when Advanced Micro Devices (AMD) opened a major chip fabrication facility in 1979. This was followed by the opening of a number of small and large plants from Silicon Valley companies which propelled the region's semiconductor manufacturing base to higher levels of scale and scope.

Concurrently, several of the earlier branch plant establishments dramatically expanded and transformed their Austin operations into major product development and advanced manufacturing centers. IBM steadily expanded and upgraded its local plants, moving from electromechanical production to production of personal computers and chips and, later, to workstations and Unix-based and OS2 software. Motorola also dramatically expanded its Austin facilities, opening its Oak Hill complex and making Austin the center of its semiconductor R&D and manufacturing activities. By the late 1980s, IBM and Motorola together employed nearly 15,000 workers in their Austin facilities, were beginning to center major new product development efforts in the region, and were employing increasing large numbers of skilled scientific and engineering personnel.

These relocations and expansions created sufficient scale in the microelectronics and computing sectors to stimulate some growth of product and service supplier companies, both locally and externally owned, to serve the local market. The detailed genealogies of high tech companies developed by Gibson and his colleagues at IC2 show that nineteen relocations, expansions, or start-ups of establishments employing between fifty and five hundred employees occurred in the microelectronics sector in the 1980s (Gibson et al. 1991). At a smaller scale, twenty-one new establishments employing less than fifty workers emerged in this sector over the same period (Ibid.).

Austin's evolutionary path in the 1980s is very consistent with theoretical propositions about factors shaping the transformation of branch plant centers. Provisional research and analysis suggests the shift of Austin's high technology base from a branch plant platform into an advanced manufacturing center is related to two key factors: changes in the structure and competitive strategy of major firms in the industries; and extra-firm factors including the buildup of UT science and engineering departments, government sponsored research institutions, and very intensive support from the local business and government communities.

U.S. firms dominated microelectronics markets in the 1970s. They operated through a conventional, segmented product development and manufacturing system in which research and product development were separated from far flung dedicated fabrication and assembly facilities. By late 1970s, however, Japanese microelectronics firms began pushing U.S. firms out of the dynamic random access memory (DRAM) segments of the market. Japanese companies tended to operate in closely-knit and spatially-concentrated networks of design centers, device producers, and equipment makers. U.S. firms initially responded by building new, large dedicated facilities in low-wage regions and

...specific changes in technologies and product mix, stimulated by intense Japanese competition in microelectronics and computer markets, changed the locational calculus of U.S. companies in the 1980s in ways that favored a select set of second-tier centers such as Austin.

developing countries (Angel 1994). But specific changes in technologies and product mix, stimulated by intense Japanese competition in microelectronics and computer markets, changed the locational calculus of U.S. companies in the 1980s in ways that favored a select set of second-tier centers such as Austin.

By the early 1980s, U.S. producers began to abandon DRAMs and other “commodity” devices and re-focused on design-intensive microprocessor and fast logic chips, markets in which domestic technology leadership could still be translated into competitive advantage and higher profit margins (Ibid.). Success in these segments required a much closer integration of research, product design, and manufacturing. Competitive advantage depended upon fast time-to-market, ability to customize, efficient production at lower volumes, and closer relationships with equipment makers and final customers. Investment in new capacity went to locations that offered superb transportation and communications infrastructure, local research and development assets, supplies of local research and engineering talent, and a cost and amenity mix that allowed for easy transfer and recruitment of technical and managerial labor into the region.

These new requirements influencing location decisions of major microelectronics firms dovetailed closely with a concerted effort to build up a technology base in Austin that offered state-of-the-art support for semiconductor design and manufacturing. The first “extra-firm” factor that boosted Austin’s status was the steady growth and improvement of the University of Texas at Austin (UT). Two decades of generous investment transformed UT into a major research university with

strong, nationally recognized science and engineering departments.

But in 1983, a powerful coalition of state political leaders, the Austin Chamber of Commerce, and University of Texas administrators also began a concerted effort to dramatically upgrade the local research and development base by securing outside investment. This coalition first organized around the site selection process for the Microelectronics and Computer Technology Corporation (MCC), the first private sector consortium to get specific antitrust waivers from the U.S. Justice Department. The formation of MCC was itself an indicator of the pressure U.S. computer and microelectronics firms were receiving from new Japanese competition. The Austin recruitment effort was singular in terms of the degrees of involvement and cooperation among state officials, including then Governor Mark White, a broad based local business coalition, and the University leadership (Engelking 1996; Gibson and Kozmetsky 1993). Since MCC was a unique, privately funded effort to conduct high-risk research, the consortium was looking to leverage as many public sector and university resources as possible, and Austin offered an impressive incentive package. A facility and laboratory was built and leased to MCC for a nominal charge, thirty-two \$1 million endowed chairs were created in University science and engineering departments, and a package of other incentives and benefits equalling \$20 million were offered (Engelking 1996). Winning the MCC competition not only brought recognition and status, but it expanded University R&D assets and emboldened the fledgling high tech growth coalition to build upon this success. Based

	Population Growth* (a) 1980-1994	Effective Buying Power Per Capita** (b) 1995	Per Capita Personal Income (c) 1990	ACCRA Composite Cost Index*** (d) 1993	Median Value Owner Occupied Housing (e) 1990	Median Value Gross Rent (f) 1990	Percent of Adult Population College Graduate (g)
<b>Boston</b>	8.5%	18,890	24,616	139.5	247,441	656	32.9%
<b>San Jose</b>	20.2%	19,245	25,193	na	289,400	773	32.6%
<b>Albuquerque</b>	33.2%	14,998	19,588	102.7	85,300	402	26.7%
<b>Dallas/Ft. Worth</b>	43.2%	17,356	20,158	100.8	76,761	441	25.4%
<b>Portland</b>	35.8%	15,919	18,744	109.3	73,882	445	24.7%
<b>Raleigh/Durham</b>	45.1%	17,401	19,212	98.3	93,821	469	34.8%
<b>Salt Lake City</b>	29.5%	13,195	14,987	96.8	77,904	382	23.9%
<b>San Diego</b>	29.3%	14,609	19,588	130.4	186,700	611	25.3%
<b>Austin</b>	64.8%	16,452	17,236	97.2	77,455	420	32.2%
<b>U.S. Average</b>	14.9%	14,495	18,696	100	79,100	447	20.3%

\* PMSA or MSA Total

\*\* Proprietary estimate of after-tax disposable income in 1995

\*\*\* Composite index of business costs compiled by the American Chambers of Commerce. Includes housing, commercial real estate, energy and utilities

Sources:

(a) U.S. Department of Commerce, Bureau of the Census, *City County Data Book, 1994*, and Statistical Abstract 1995-1996.

(b) *Demographics U.S.A. - County Edition*, New York: Bill Communications Inc, 1996

(c) *City County Data Book, 1994*

(d) American Business Climate & Economic Profiles, Detroit: Gale Research Inc. 1994

(e) *City County Data Book, 1994*

(f) *City County Data Book, 1994*

(g) *City County Data Book, 1994*

TABLE 1: Characteristics of Nine High-Growth, High Technology Regions



on a long-range economic plan crafted by the Chamber of Commerce, continued efforts led to the successful recruitment of a major 3M corporate R&D laboratory and to a continued buildup of university R&D resources, culminating in the successful bid for Sematech in 1987.

Although hard to specify in concrete empirical terms, the rapid expansion of the region's research and development base seems crucial to explaining the expansion and improvement of major branch plant facilities and the region's continued success in recruiting high tech firms in rapidly changing microelectronics and computing sectors. Still, evidence from a survey of Austin high technology firms completed by Glasmeier in 1987 suggested that the linkages between the major firms and local service and supplier companies were still very weak (Glasmeier 1988, 1991). She argued, "In spite of Austin's claim as a next Silicon Valley, the city's high tech base is primarily comprised of *large technical branch plants*." (Ibid., p. 297).

CONTINUED GROWTH AND CHANGE IN THE REGIONAL ECONOMY: EVIDENCE OF AGGLOMERATION AND INTENSIFYING LOCAL INNOVATION.

By the late 1980s, after a decade of strong growth and the establishment of Sematech, the Austin complex definitively graduated into the ranks of significant second-tier high tech cities. Based on an attractive blend of classic locational advantages and the presence of a unique R&D base, the region has continued to attract major high technology manufacturing over the last nine years. But a number of indicators suggest that this latest growth stage is qualitatively different and that the

Austin complex has become much more than an advanced manufacturing or technical branch plant nexus.

Regional Advantages and Accelerating Growth

The region retained a set of characteristics that continued to divert investment from the more expensive innovation centers of Silicon Valley and Boston. These included low living costs, good amenities, and a work force with high levels of educational attainment. Table 1, above, lists the major innovation centers as well as a partial set of the second-tier cities experiencing rapid growth, based upon expansion of high technology sectors.

These data underscore the basic cost and labor force advantages that Austin held into the early 1990s. The Silicon Valley (San Jose MSA) and Boston innovation centers clearly have substantially higher cost structures and exhibit lower growth rates than the second tier regions. Despite extremely rapid growth over the 1980-1994 period, the Austin MSA has retained an attractive cost structure with relatively low wage and income characteristics as well as attractive non-labor costs (composite cost index and housing and rental costs). Additionally, Austin boasts an adult population with the fourth highest educational attainment level in this group. These very general comparisons suggest that the region still offers an attractive combination of low costs and educated labor which explains, in part, the continued growth and development of Austin's core high technology sectors. There has been a notable escalation in housing costs and some evidence of wage increases in select occupations associated with the semiconductor industry since 1994 (Tanamachi 1997; Breyer 1997); however, similar pressures have likely

TABLE 2: Employment Changes by Industry in Austin MSA 1989-1995

	1989	1995	Change 1989-1995	% Change 1989-1995
Total Non-Agricultural Employment	374,400	516,700	142,300	38.0%
Total Manufacturing Employment	46,000	68,400	22,400	48.7%
High Technology Durable Goods	27,643	41,231	13,588	49.2%
SIC 357 Computer and Office Equipment	10,527	15,588	5,061	48.1%
SIC 366 Communications Equipment	2,093	3,011	918	43.9%
SIC 367 Electronic Components	9,622	17,533	7,911	82.2%
SIC 37 Transportation Equipment	1,960	529	-1,431	-73.0%
SIC 38 Instruments and Related Products	3,441	4,570	1,129	32.8%
High Technology Non-Durable Goods	2,119	1,780	-339	-16.0%
SIC 28 Chemicals and Allied Products	2,119	1,780	-339	-16.0%
Total Non-Manufacturing Employment	222,200	319,500	97,300	43.8%
High Technology Services	14,075	24,890	10,815	76.8%
SIC 737 Computer and Data Processing	2,827	8,557	5,730	202.7%
SIC 87 Engineering, Research and Management Services	11,248	16,333	5,085	45.2%
Government	106,200	128,800	22,600	21.3%
Federal Government	12,000	11,100	-900	-7.5%
State and Local Government	94,200	117,700	23,500	24.9%

Source: Bureau of Labor Statistics, Covered Employment and Wages Series  
Produced By: Labor Market Information, Texas Workforce Commission

been felt in other high growth regions.

These generic advantages certainly correlate with recent growth. Since 1988, the regional economy has expanded rapidly, paced by expansion of computing, microelectronics, and research services, as well as a new, burgeoning software sector. Growth in the local manufacturing sector over the period was a remarkable 48.7 percent, in contrast to a national decline of 5.1 percent in manufacturing (Economic Report of the President 1996, Table B-42, p. 328). Employment in the local high technology services sector exploded as computer and data processing services, home of much software activity, grew by over 200 percent.

There were also some losses in high technology sectors due to downsizing and closure of branch plant operations. Employment in the transportation equipment sector plummeted after the closure of Lockheed's Austin plant, and job losses occurred in chemical and allied products due to downsizing at Abbott Laboratories, Austin's single large drug product company. These losses underscore the fragility of industry growth when activity is concentrated in one or two large branch plant establishments.

More broadly, these data indicate that the economic expansion from 1989 to 1995 was based on five major growth drivers: Computer and Office Equipment; the Electronic and Electrical Equipment sectors; Software; Research and Engineering Services; and, significantly, the government sectors. Emphasis on high technology growth has diverted attention from the fact that government is still the dominant employer in Austin, accounting for one fourth of the region's jobs in 1995. The public sector further supports its own array of manufacturing and service industries, from printing and publishing to legal services and civic organizations. Since growth in the state capital-university complex is largely a function of state population growth, its presence adds stability to the local economy. It also provides a crucial labor pool and source of jobs for spouses of workers in the high technology sectors.

These aggregate and industry employment indicators definitely show that the economy sustained remarkable growth into the 1990s, and expansion of the core high technology sectors has been nothing short of phenomenal. However, this evidence does not necessarily overturn Glasmeier's depiction of Austin as a technical branch plant center. It could be that this growth is simply more of the same—a continued proliferation of externally-oriented branch plant facilities. Evidence of increasing backward and forward linkages from the major facilities, increased collaboration among firms and between firms and local research organizations, and increasing innovation and company start-ups would point toward greater integration and vitality in the high tech complex.

#### *Structural Evidence of Increasing Inter-Industry Integration*

More detailed County Business Patterns (CBP) employment data offer circumstantial evidence of growth and increasing interindustry integration.<sup>4</sup> Between 1988 and 1994 there was considerable growth and "thickening" within the high tech manufacturing industries. With the exception of the defense related aircraft and parts and measuring and controlling device industries, both employment and the value of most industry location quotients increased over the period.<sup>5</sup> All industries except aircraft and parts retained a relatively strong export orientation. Within the high tech manufacturing segment there seemed to be an increasing basis for local interfirm trade. The growth of the special industrial machinery industry was related to the emergence of firms producing semiconductor manufacturing equipment, a key input into electronic components and accessories. In addition, there was a basis for forward linkages from electronic components and accessories into the electronics intensive communications equipment and computer and medical instruments and supplies industries. There was also a significant 50 percent increase during this six year period of the number of establishments in high tech manufacturing, again providing circumstantial support for increasing integration.

A similar story can be told concerning high technology services. Impressive increases in employment, export orientation, and number of establishments were registered in computer data services (SIC 737) and business services NEC (SIC 7389), the industries where most software activity is located. Although engineering services and research and testing services saw minor declines in the value of their location quotients, both recorded healthy increases in employment and number of establishments over the period. Clearly, there is a basis for both spin-off and linkage between the high tech service and high tech manufacturing segments. For example, a number of Unix-based software companies were founded by emigres from IBM, and IBM likely contracts with smaller software service companies in ongoing projects (Ladendorf 1997c). Likewise, a number of the large Austin manufacturing companies purchase services from and engage in collaborations with research institutions and local research service firms.

This structural data offers less support for strong backward linkages to suppliers of more conventional materials and manufactured inputs. Supplier industries highlighted in Table 3, above, have been identified as important input suppliers to the microelectronics and computer industries (Texas Department of Commerce 1995, p. 1-12). Yet, with the exception of Electrical Industrial Apparatus (SIC 362), these supplier indus-

TABLE 3: Austin's High Technology Industry Structure

SIC Code	Industry	Employment 1988	Employment 1994	Location Quotient 1988	Location Quotient 1994	Number of Establish. 1988	Number of Establish. 1994
<b>High Technology Manufacturing</b>							
355	Special industry machinery	202	938	0.33	1.38	3	7
357	Computer and Office Equipment	3,565	3,018	3.07	3.23	28	27
366	Communications equipment	1,080	1,340	1.21	1.46	9	14
367	Electronic components and accessories	12,926	25,861	6.75	11.86	26	51
372	Aircraft and parts	1,772	147	0.84	0.08	1	2
382	Measuring and controlling devices	1,717	1,422	1.66	1.36	24	32
384	Medical instruments and supplies	713	1,566	0.96	1.38	9	16
	Total	21,975	34,292			100	149
<b>High Technology Services</b>							
737	Computer and data processing services	2,938	5,981	1.26	1.46	204	492
7389	Business Services (NEC)	1,192	3,457	0.8	1.43	169	258
871	Engineering & architectural services	6,386	7,065	2.37	2.02	372	521
873	Research and testing services	2,118	2,712	1.72	1.46	93	130
	Total	12,634	19,215			838	1,401
<b>Supplier Industries</b>							
281	Industrial inorganic chemicals	2	70	0.01	0.19	1	4
308	Miscellaneous plastics products, nec	668	1,116	0.31	0.38	27	37
335	Nonferrous rolling and drawing	135	502	0.24	0.82	2	3
344	Fabricated structural metal products	690	805	0.49	0.49	28	46
349	Misc. fabricated metal products	349	639	0.37	0.57	9	10
362	Electrical industrial apparatus	384	756	0.65	1.15	8	8
	Total	2,228	3,888			75	108
<b>Key Producer &amp; Business Services</b>							
451	Air transportation, scheduled	809	956	0.44	0.4	21	27
602	Commercial banks	5,263	3,156	1.05	0.5	100	128
679	Miscellaneous investing	218	354	1.21	1.66	37	77
731	Advertising	656	744	0.99	0.85	76	82
732	Credit reporting and collection	322	434	1.1	0.98	20	25
733	Mailing, reproduction, stenographic	471	1,194	0.63	1.12	91	159
734	Services to buildings	3,444	4,201	1.35	1.15	169	259
735	Misc. equipment rental & leasing	750	871	1.13	0.97	115	121
736	Personnel supply services	2,513	9,930	0.59	1.04	66	136
872	Accounting, auditing, & bookkeeping	1,346	1,474	0.79	0.65	286	370
874	Management and public relations	2,275	4,756	1.01	1.33	244	551
	Total	18,067	28,070			1,225	1,935

Source: Based upon County Business Patterns Data as compiled and estimated by Andrew Isserman, regional Research Institute, University of West Virginia

tries have location quotients significantly less than one, indicating that Austin high tech manufacturers purchase a significant share of these inputs outside of the region. However, there seems to be healthy growth of employment and number of establishments in most of these industries, and location quotients generally increased in value over the period. Despite a weak initial presence in the region, these industries may be developing in the local market as the scale of high tech manufacturing continues to dramatically expand.

Growth of business and producer services has also been identified as an important source of strength for local economies and export-oriented firms (Hansen 1990; Illeris 1989). The Austin region shows limited strength in many of these supporting industries, with location quotients close to one and healthy growth in employment and number of establishments. However,

Austin has a relatively weak financial sector, with the interesting exception of miscellaneous investing, an industry that encompasses independent investors and venture capitalists.

Another particularly interesting development recorded in CBP is the expansion of the personnel supply sector, the source of temporary and contract labor. This industry is a key institution in the local labor market, providing high technology firms with labor for a range of high- and low-wage occupations. This contingent labor force increases flexibility and lowers costs, especially for companies in the highly cyclical semiconductor industry. It may also be a source of low wages and poor benefits for many workers. In all nine of the high technology regions listed in Table 1 above, location quotients for the personal supply industry were significantly greater than one, indicating that contin-

gent labor is a structural feature of high technology regions.

This secondary data provides circumstantial evidence that the Austin economy is developing more extensive backward and forward linkages. The expansion of employment and the rapid growth of the number of establishments suggests a deepening and a filling out consistent with increasing economies of agglomeration. Furthermore, rapid growth of the number of establishments almost certainly indicates a pickup in indigenous firm formation. However, this secondary evidence remains circumstantial and is not sufficient to establish the transformation of the high tech complex into a significant center of innovation. Big firms still dominate the core manufacturing sectors. Calculations based on the above CBP data indicate that 60 percent of employment in the computer and office equipment sector and 87 percent of employment in electronic components and accessories is in establishments with more than 1,000 employees. In the absence of qualitative data from firm interviews, the depth and intensity of local linkages suggested in the secondary data remain unclear.

*Indicators of Increasing Local Innovation and Firm Formation*

There is additional secondary and qualitative information supporting the hypothesis that the Austin complex has advanced to a higher level. Over the last eight years, the most direct indicator of Austin's emergence as a center of innovation is the size and significance of local research and development institutions. As a result of its successful recruiting of public and private R&D institutions in the 1980s, Austin has a very rich regional research base. Numerous studies have documented the "incubating" role that major research institutions have had in regional high technology development (Saxenian 1994; Gray et al. 1996; Markusen et al. 1995, Oden et al. 1996). These facilities concentrate talent, transfer technology to regional businesses, generate new firm formation by exiting personnel, and provide valuable services and training to local companies.

The missions of most major Austin research centers are related to basic and applied research on microelectronics related technologies. MCC, Sematech, and the University-based Microelectronics Research and Electronics Research Centers are all engaged in applied research on semiconductor materials, design, or process technology. Somerset is an especially interesting private consortia in the microelectronics area and includes IBM, Motorola, and Apple Computer. This 300 person group created two generations of the Power PC microprocessor based on new RISC architecture in Austin research labs.

The Pickle Research Center is a large University-related institution which has diversified out of its former defense portfolio centered on acoustics research.

The 3M and Southwestern Bell labs, focusing on electronics and telecommunications technologies, primarily serve as R&D centers for their parent corporations. Yet, both of these private labs also participate in collaborations with the other major research organizations. 3M, for instance, has projects with MCC, Pickle, and the Microelectronics Research Center at UT. IBM, not included in the above table, also has a

major research and development presence. One of the company's seven major research labs is located in Austin and has collaborated on research projects with local companies as well as Sematech, Pickle, and UT engineering labs.

More extensive study is needed to establish the significance of these R&D institutions to local innovation and growth. There is at least scattered evidence that this research base of both public and private institutions induces considerable innovation and interfirm collaboration and that it acts as a seedbed for local high technology start-ups.

First, the growing fertility of the region's public and private research base is underscored by the remarkable increase in the number of patents registered by companies and institutions in the Austin MSA. The Austin region registered a little over 200 patents in 1988, but by 1996 this figure had risen to nearly 900, almost double those of Raleigh-Durham and Boston (although the Boston figures are not for the SMSA and do not include some Route 128 companies) (Ladendorf 1997). Austin's large companies were the primary source of patent registrations, with Dell Computer, AMD, IBM, and Motorola accounting for 61 percent of the regional total.

Second, as noted, there are a number of institutional collaborations between the major research institutions and local high technology firms which have led to significant product innovations. AMD works as a Sematech member on chip design and process tech-

Institution	Founding Date	Budget (in millions)***	Employment
MCC*	1982	n/a	150
Sematech*	1990	180	700
Pickle Research Center	1951	72	2,380
Bureau of Engineering Research**	1912	50	280
Somerset*	1991	n/a	300
3-M Austin Center*	1984	n/a	500
Southwestern Bell Technology Resources*	1995	n/a	212

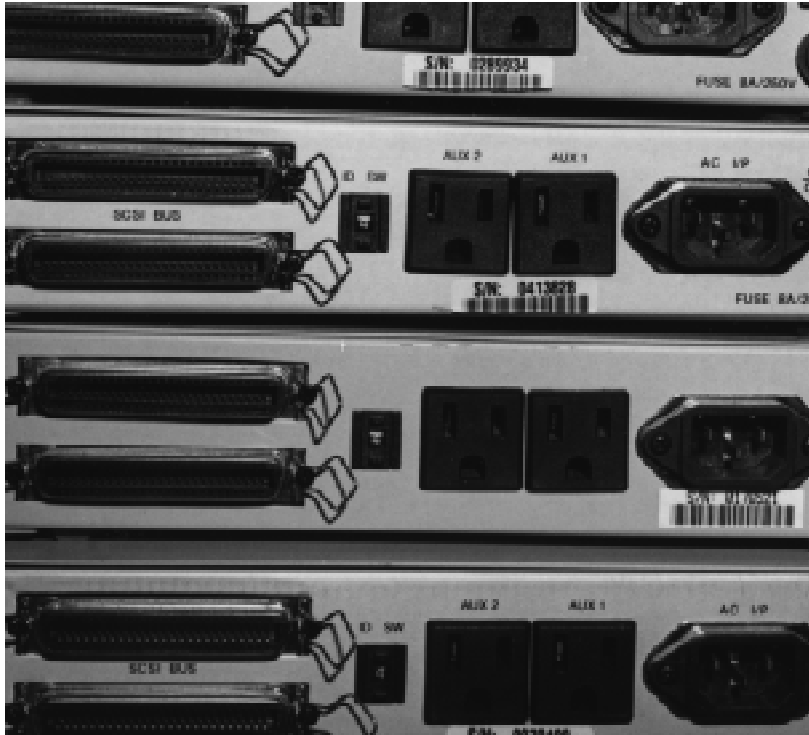
\* Private Research Centers or Consortia  
 \*\* University of Texas Research Center which oversees the Microelectronics Research Center and the Electronics Research Center and other smaller research activities.  
 \*\*\* Budgets and employment for either 1994 or 1995  
 Sources: Texas Department of Commerce, *A Profile of the Microelectronics Industry*, October 1995 and Austin Chamber of Commerce (website) 1996.

TABLE 4: Major Austin Research Organizations

	1994	1996
1. San Jose	2,359	1,550
2. Houston	1,391	894
3. Dallas	1,270	578
4. Austin	760	895
5. Raleigh/Durham	392	453
6. Boston	358	461

Source: Ladendorf, Kirk. "Patents on Upswing," *Austin American Statesman*, January 13, 1997, pp. C-2 and Austin Chamber of Commerce, 1996 Website.

TABLE 5: Patents Issued By Region



Krista Whitson

nology projects. The Somerset consortia drew on the local private and public research base to design the revolutionary Power PC microprocessor in Austin. This consortia has hence been responsible for generating a major locally based innovation which has found a large national and international market. They continue work on new generation Power PC chips in Austin.

Third, a number of spin-off companies can trace roots to the region's major research establishments. MCC spin-offs include Evolutionary Technologies, a 130 person software development company (Ladendorf 1996; Austin Chamber of Commerce 1996). Austin's most successful homegrown software company, Trivoli Systems, which grew over seven years to become a \$500 million 330 person firm, was started by emigres from IBM (ironically they were recently bought out by IBM). Expatriots from Trivoli, in turn, have started up Dazel, another software company, in a process typifying a regionally-based genesis of new, related technology companies. In addition to the major research centers listed above, significant spin-offs have also come from larger, research-oriented manufacturing firms. Examples include PST Technologies, a \$10 million company founded by an ex AMD employee, and SPEC, another Tracor spin-off employing 75 workers.

The expansion of venture capital financing of local start-ups is a final indicator of innovativeness and local high tech company growth. Until the late 1980s there was virtually no local venture capital base in the region. Small high technology companies began to lure modest amounts of venture investment for the first time

in the early 1990s. Total venture investment in Austin grew to \$40 million by 1995, increasing by 65 percent to \$66 million by 1996. By 1997 there were eleven venture capital firms in Austin (Hawkins 1997b). The largest, Austin Ventures, has invested \$84.7 million in Austin companies over the last 12 years. The rapid growth of venture investment is a strong indirect indicator of vibrant small company formation, again suggesting that the growth process is becoming more endogenously driven. It must be noted, however, that Austin's venture investments are still minuscule compared to the \$2.29 billion invested in 552 Silicon Valley companies in 1996 (Hawkins 1997a).

#### The Austin Complex—Circa 1996

A more definitive picture of agglomeration and regional innovative power requires more systematic research. More instances of significant technology transfers need to be identified, the real importance of local research collaboration to business performance must be studied, and a more comprehensive genealogy of start-up and spin-off companies needs to be developed. However, the historical account, together with the partial evidence in the prior section, allows tentative conclusions to be drawn concerning Austin's functional position in the high technology hierarchy and factors which will shape future growth.

The Austin complex remains strongly defined by ten large firms. The dominant industry grouping is semiconductor design and manufacturing centered on Motorola, AMD, and 2 smaller chip fabrication facilities (Ladendorf 1997d). These operations are much more than a cluster of advanced manufacturing plants. Motorola's Oak Hill facility is the world headquarters for their communications and advanced consumer technologies, microcontroller technology, and microprocessor and memory technologies groups. These design and fabrication establishments are linked to local R&D centers and specialized equipment suppliers including Applied Materials, Lam Research, and Tokyo Electron. Backward linkages to other manufacturing and service providers are weak, but perhaps growing. Forward linkages to the region's computer or telecom sectors probably represent a small share of their business, but further research would be needed to establish that proposition conclusively. Dell uses Intel microprocessors, although they will apparently buy DRAMs from the new Samsung plant (*The Economist* March 29, 1997). Fast growing Power Computing uses the Power PC processor, so they may become a significant Motorola customer.

Due to major product development, a unique research base in microelectronics, and the presence of equipment supplier companies, the Austin complex is a leading innovation center in semiconductor design



and process technology. It ranks behind only Silicon Valley, far outstripping incumbent microelectronic production areas such as Albuquerque or Portland. The competitive posture of the complex is as the most important design and production center of Intel alternatives. Both the Power PC and AMD's K-5 and K-6 chips compete on different terms for product applications currently dominated by the Intel-Microsoft combine. In the unlikely event that either the Power PC or AMD alternatives achieve a breakout, the local complex might begin to rival Silicon Valley as a product development center for microprocessors. Even though a much wider variety of microelectronic products are produced in Austin fab plants, a growing dominance by Intel would fetter development of this cluster. With the completion of Samsung's 1000-employee facility in 1998, this cluster may be maturing absent a major, locally-generated product innovation.

Austin has also become a major center of personal computer production based upon the revolutionary organizational innovations of homegrown Dell. Dell has achieved its dizzying ascent in the PC market by providing customized direct sales of high-quality, low-price PC's. They have been able to provide latest generation platforms at highly competitive prices because they have avoided retail overheads, and have learned

to operate in an extreme, low inventory/just-in-time mode (Ladendorf 1997e). Thus, when microprocessor generations or other PC technologies change, they are not burdened by highly depreciated inventory like some of their rivals. Power Computing has hired away a number of Dell managers in an apparent attempt to mimic the Dell strategy in the Apple platform segment. This particular organizational system benefits from close spatial proximity between marketing, customer support, and production. Dell's operations are much more concentrated in the region than rivals pursuing a different strategy. When Dell was planning its recent expansion it considered a number of sites outside of Austin, but finally settled on expanding their already huge Austin campus. These firms are not highly embedded, as they lack strong or vital links to local suppliers. However, the local labor market, with its large numbers of technically literate college dropouts and graduates, remains attractive for marketing and customer support activities. Based mainly on expansion plans of these two firms, the PC business in Austin will continue to grow.

Besides IBM, the software segment is comprised of small to medium-sized firms in niche software markets. The largest of these is Continium, a 700-person operation that designs and supports software for the

TABLE 6: Austin's Leading High Technology Companies

Company	Located or Started In Austin	Total Austin Employment 1996	Ownership	Core Activities In Austin Establishments
1 Motorola	1974	11,000	External	Major semiconductor manufacturing and R&D. Center of advanced microelectronics design. Corporate headquarters for three divisions.
2 IBM	1967	7,800	External	Diverse research, service and production center. Center for OS2 software, advance workstation, and network server development.
3 Dell Computer	1984	7,000	Local	Headquarters, development, and manufacturing center for world's fourth largest PC maker. New organizational innovation based on customized, low inventory sales and production system.
4 Advance Micro Devices	1978	3,500	External	Major production center, including pilot plant for latest generation (K6) microprocessor. Some chip design and considerable process technology development.
5 Applied Materials	1988	3,400	External	Largest manufacturing center for world's largest manufacturer of semiconductor process equipment.
6 Texas Instruments/ Selectron	1968	2,000	External	Diverse electronics fabrication and assembly operation More traditional branch plant in process of downsizing.
7 3M Company	1983	1,800	External	Major research and development center for telecommunications and electronics applications Marketing, sales and manufacturing operations.
8 Abbot Labs	1982	1,500	External	Production center for range of intravenous solutions Branch plant production of products.
9 Power Computing	1994	1,000	Local	New, rapidly growing producer of Apple PC platforms. Applying Dell model to Apple PC products
10 Radian	1969	970	Local	Environmental engineering and research firm Originally a Tracor Spin-off.
<b>Total</b>		<b>39,970</b>		

Sources: Company reports, Austin Chamber of Commerce, *Directory of Austin-Area High Tech Firms*, 1996

banking and insurance industries and also provides services on an out-sourcing basis. The mixed functions of Continium suggest the difficulties of classifying these establishments by industrial activity. The estimate of 33,000 employees attributed to Austin software industries is almost certainly a wild exaggeration of the number of people actually engaged in software design and distribution (*The Economist* March 29, 1997). This figure likely includes business service activities and sales and distribution of software produced elsewhere. Nevertheless, the local software industry is buoyant and includes a large and very heterogeneous ensemble of small companies. In addition to Unix and OS2 specialists, a number of smaller companies are competing in rapidly growing segments such as network server software, internet applications, and multimedia. (Ladendorf 1997b).

Since material inputs are not a significant factor in this industry, companies that actually design software typically have more general linkages to a region. The

software operations of IBM are clearly an important source of skilled designers and pioneers who start software companies. The growing flow of venture capital to software start-ups is another local tie. Much more qualitative elements such as the

presence of a specialist community, artists in the multimedia segment, and specific amenities are probably significant factors contributing to the growth of this segment. On the one hand, there seems to be considerable momentum in this sector, with the rapid proliferation of firms increasing the probability that a local company will hit it big. On the other hand, software firms are footloose and can easily move or be bought out by firms who consolidate outside the region.

Surrounding these main segments are important firms and industry groups such as Tracor in defense electronics, 3M Southwestern Bell and Siemens/Rolm in telecommunications, and a mix of research service, computer consulting, and technical customer support operations. There are some clear backward and forward linkages between these sectors and the above three clusters as well as with the local research base. Austin may find a new growth sector to diversify its high tech base in one of these groups. Particularly promising is the telecommunications sector, which has a number of leading firms in the region and ties to the research base and the local microelectronics complex. While growing a biotechnology sector is a fad for almost every local economic development organization, Austin has little promise in this industry. The only pharmaceuti-

cal firm is Abbott Labs, essentially an isolated branch plant. Austin also lacks a medical school or major federally supported research center in the health sciences. These institutions have proven to be linchpins in locales that have experienced a biotechnology boom (Gray et al. 1995). Austin does have some prospects in the electronics intensive medical device industry, with growth in some medium-sized firms such as Carbomedics which now employs 650 people (Austin Chamber of Commerce 1996).

Mapping specific companies and their functional specializations to the region's high technology industries shows that the Austin complex is currently much more than a center of technical branch plants, yet is still something less than a global center of innovation on the scale of Silicon Valley. Taken together, the evidence suggests that the Austin high technology complex has obtained innovative momentum in microelectronics, computers, and software and offers specific economies of agglomeration that anchor large firms to the region. If the large outside companies stopped coming to Austin, growth would be significantly slowed but not necessarily crippled. Continued expansion of resident firms and the rapid birth of new start-ups would likely sustain development in the short to medium term.

However, a number of dangers lie ahead. High tech regions are always vulnerable to technological shocks or discontinuities. For instance, how will the region's semiconductor and computer firms be affected by a final decline of Apple PCs or a massive move from PCs to low-cost network servers? But the more serious question is how the region will react to more predictable challenges. If Austin fails to continue investing in research, improving the local supply of labor, and dealing with transportation and other growth problems, large anchor firms may begin a process of slow disinvestment.

#### CONCLUSION: WHERE TO FROM HERE ?

Based on current trends and momentum, rapid job growth over the next three to five years seems likely. Austin's microelectronics companies will probably add between 3,000 and 5,000 new jobs as the industry bounces back from the 1996 sales slump and Samsung completes its large fabrication facility. Currently planned expansions at Dell and Power PC could add another 2,000 to 4,000 workers in the computer industry, although technical shifts or possible competitive stumbles make this possibility less certain. Software and related industries could easily continue to add 2,000 jobs per year or 6,000 to 10,000 over the next three to five years. The state government and university can be counted on to contribute new jobs in response to continued robust population growth in the

If the large outside companies stopped coming to Austin, growth would be significantly slowed but not necessarily crippled.

state. Growth numbers of these magnitudes compare to the totals in the 1989 to 1995 period, although rates of growth will be lower due to the larger job base, and composition will shift somewhat to software and related services. The potential for national recession or other exogenous shocks obviously render these numbers speculative, but the Austin boom has considerable forward thrust. This momentum may itself be a problem if it diverts attention from serious, longer-term threats.

Austin is not big enough to grow too fast. The Austin MSA is just approaching a population of one million. The region does not have a huge population or infrastructural catchment to draw upon like exurban growth centers such as Silicon Valley, Boston's Route 128, or Orange County California. New growth must be accommodated by a better use of existing labor and infrastructural resources and a disciplined process of managing immigration and physical growth. Rapid growth and immigration can generate knife-edge problems—if transportation, environmental, and discrimination issues are not managed, a threshold will be reached at which point the amenity/cost mix rapidly deteriorates and the growth process is thrown into reverse. Los Angeles and Long Island, New York are former boom regions that collapsed in part because of a hyperinflation of costs, growing inequality, and declines in quality of life. Austin faces three immediate challenges of this nature: increasing stratification of the region's labor market, communities, and opportunity structure; a shortage of specialized professional labor and skilled blue collar labor; and intensifying transportation and environmental problems associated with sprawl, poor resource management, and lack of transportation alternatives.


A number of studies have documented the increased economic and social divisions associated with rapid high technology growth (Saxenian 1984; Gordon and Kimball 1985). As Silicon Valley expanded, residents of low-income communities had little access to higher-end jobs and were confined to the lower-wage fringes of the high tech economy. At the same time, rising land and housing prices intensified ghettoization as certain urban neighborhoods were gentrified and redeveloped, squeezing lower-income groups into even more segregated enclaves. This process is certainly evident in East Austin, where residents have generally been shut off from the fruits of economic growth. There are some encouraging efforts, spearheaded by community groups such as the Industrial Areas Foundation and various university sponsored groups, to build bridges to good jobs in high tech manufacturing. Still, much more needs to be done to build training and school-to-work institutions that prepare workers from low-income communities for moves into higher-wage jobs which

offer opportunities for advancement. The shift in the composition of growth toward software and services will make this process even more challenging.

To make significant progress, the local growth coalition and economic development actors need a revised and more inclusive vision of economic development. The total fixation on promoting high technology must be changed. The local economy and society are much more diverse, with a substantial "third economy" of lower-wage service and manufacturing businesses which are also crucial to the area's economic performance and quality of life. Local development and educational institutions can help improve skills and productivity in these sectors and create better bridges from low-wage work to business ownership and higher-wage occupations. Austin has a highly successful "high technology" business incubator which has helped a number of entrepreneurs establish growing businesses. Perhaps the University, other public institutions, and the private sector should consider supporting "lower tech" business incubators geared towards helping more conventional manufacturing and service start-ups by Austin residents.

The perceived labor shortage in high-end occupations is due to rapid national growth of the high tech sectors and global competition for top design and engineering talent. This shortage is being felt in all high tech centers and there is not much that the region can do aside from maintaining its amenities and attractiveness. The local shortage of technical and operative workers, however, is linked to Austin's underdeveloped high school-to-work programs and training infrastructure. Progress is being made in this area, with Austin Community College graduating its first classes of certified semiconductor technicians. Still, a much broader and more sustained effort is needed to isolate skill needs, create skill standards, and draw high school graduates into various training schemes. The companies need to exert more leadership and back their need for skilled labor with decent wages and access to internal job ladders.

Broader growth management issues must also be addressed to avoid the diseconomies and declining amenities associated with rampant expansion. The City of Austin has had a revolving door of pro-growth and anti-growth coalitions controlling local government. In a haphazard way this has limited certain abuses of uncontrolled development, yet outlying suburbs have generally implemented aggressive growth and business attraction policies. To avoid sprawl and to develop serious transportation alternatives, a major regional initiative is needed. It is unclear whether or not the region has the discipline or the capacity for the cooperative action needed for effective growth management. Jurisdictional fragmentation and go-it-alone philosophies remain discouragingly prevalent in the region.

In this light, it is crucial to recount the lessons of the Austin success story. Austin did not ascend the high technology hierarchy as a result of unfettered market forces. To an unusual degree, intelligent, patient, and sometimes risky public sector direction explains Austin's development into a major high technology center. An equally sophisticated strategy, involving initiative and cooperation between public and private actors, is needed to ensure future prosperity for all residents of the region. 

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NOTES

- <sup>1</sup> The Austin-San Marcos MSA will be the main regional designation referred to in this essay. It includes Bastrop, Caldwell, Hays, Travis and Williamson Counties and is a reasonably good approximation of an “economic” region defined by commutable distances to workplaces and density patterns.
- <sup>2</sup> Throughout the text high technology is defined according to the share of workers engaged in research and development activities in a given industry. More specifically the definition used here is consistent with the Bureau of Labor Statistics definition specifying 30 three digit SIC code industries as R&D intensive. See David Lyons and Bill Luker, “Employment in R&D-intensive high tech industries in Texas” *Monthly Labor Review*, November 1996.
- <sup>3</sup> This paper is an initial attempt to update what is known about Austin’s recent growth boom. Further primary research on local linkages and the embeddedness of large high tech establishments is being conducted by my research seminar in the UT Community and Regional Planning Program. I would like to thank the members of this research seminar including Matthew Cunningham, Joelle Labrosse, Michael Leach, Maureen Meridith, Dana Merkin, Chris Moore and Bergan Norris for their contributions to this essay.
- <sup>4</sup> This data is broken out to the three digit SIC code level, and unfortunately employs a different industrial classification rubric than the BLS data in Table 2 above. The major difference is that in this CBP data, a significant segment of the computer and office equipment sector is classified in SIC 367, electronic components and accessories.
- <sup>5</sup> Location quotients are derived by comparing regional employment in an industry as a share of total regional employment to national employment in the industry relative to total national employment. For a discussion of the uses and abuses of location quotients see, Persky, J. et al., “Import Substitution and Local Economic Development,” *Economic Development Quarterly*, Vol. 7, No. 1, November 1990: 361-370.

# Crime & Development

## Do Crime Rates Influence the Location of Neighborhood Crime Watch Groups?

by Joseph N. McRee

*The amount of financial and organizational resources that governments and private foundations have to address public concerns of crime is limited. Making sound choices concerning the dispersal of these resources requires knowledge of how crime affects the probability and desire of residents to collectively mobilize against disorder.*

Neighborhood Watch associations are among the most popular citizen-based strategies designed to combat crime and disorder in residential neighborhoods. Garofalo and McLeod (1989) conclude that, while they are not necessarily the most effective or creative forms of crime prevention, Neighborhood Watch associations are the most widely recognized and practiced by citizens and the most championed by law enforcement personnel. In 1981, an estimated 12 percent of American adults claimed membership in a neighborhood organization devoted to crime prevention (O'Keefe and Mendelsohn 1981). In addition, 7 of every 8 police departments nationwide help citizens organize Neighborhood Watch programs, and a recent estimate places the total number of associations in the U.S. at twenty thousand (Peskin 1992).

Neighborhood Watch programs are designed to provide an organizational framework for citizen involvement in local crime prevention efforts. These associations represent an attempt by residents to coordinate and sustain a network of social control in their neighborhoods. A major objective of participants is to identify crime and disorder problems in their neighborhoods before they occur or, at the very least, as they occur. Encouraged and often supported by local law enforcement agencies, association members act as extensions of the eyes and ears of the police.

As the sociologist Mark Warr notes (1994), the significant increase of the number of Neighborhood Watch programs in the late 1970s and early 1980s initially led to high expectations for the successful reduction of criminal activity and for increased feelings of safety among neighborhood residents. One conundrum that has become increasingly apparent, however, is that neighborhoods characterized by high levels of crime and disorder, which supposedly stand to benefit most from collective anticrime efforts, appear to be unlikely to develop such associations (Garofalo and McLeod 1989; Skogan and Maxfield 1981; Taub, Taylor and Dunham 1984; Greenberg and Rohe 1986).

The incidence of violent crime and personal property crime is not evenly distributed throughout all residential areas. Some areas are clearly more plagued by crime than others. In fact, urban residents are remark-

ably consistent at identifying specific areas and neighborhoods in their city that they feel are most dangerous (see Warr 1994). Thus, as Bursik and Grasmick have argued:

Differential rates of criminal behavior and victimization among neighborhoods and the resulting fear of crime that may develop among the residents of crime-ridden areas represent variations in the ability of neighborhoods to regulate themselves through [crime prevention] networks (1993:4).

Residents facing high crime rates in their neighborhoods may settle on one of two tactics. A common response by more affluent residents who perceive pervasive criminal activity in their neighborhoods is to flee to a more secure area. Stark (1987) and Frey (1980) have established that families and members of the middle class tend to leave high crime areas first, often to be replaced by lower-income, unattached, or transient individuals.

Kidd and Chayet (1984) argue that those who cannot leave an area physically may tend to withdraw psychologically. Remaining residents of poor, transitory, and/or crime-infested areas appear to be deeply suspicious of each other and feel that they must watch their neighbors with care (Garofalo and McLeod 1989). Under such circumstances, residents are reluctant to ask neighbors to keep an eye on their home and possessions because these are the same people they view with suspicion. Tactics of physical or psychological withdrawal reduce the sense of mutual responsibility among area residents and thus undermine participation in neighborhood affairs. The disparity between poor neighborhoods and their more affluent counterparts of opportunities for mobilization may explain why efforts to stimulate interest in anticrime associations have generally been less effective in lower-class neighborhoods (Skogan 1990).

On the basis of this perspective, some scholars have proposed that there is a negative and linear relationship between neighborhood crime rates and the propensity of residents to opt for a collective response to threats of disorder in their area (Whitaker 1986; Greenberg, Rohe, and Williams 1982; Dubow and Emmons 1981; Rowhl and Cook 1984; Rosenbaum,

Lewis and Grant 1986; Henig 1978). For example, Bennett and Lavakas argue:

residents of high-crime communities are less likely than residents of lower-crime communities to participate in crime prevention activities...given fewer resources and lower social cohesion, such communities typically have fewer community-based organizations and lower participation in existing organizations than other communities (1989:346).

In this view, the probability of neighborhood crime prevention organizations to develop is a function of both the availability of the resources that residents would need to create associations and citizens' motivation to preserve their area. If disorder problems are frequent, the more well-to-do residents may leave for a less afflicted area; meanwhile, for those who remain, the sense of "territoriality" often shrinks to include only their own household.

Despite conclusions suggesting a negative and linear relationship between crime and collective anticrime efforts in residential neighborhoods, some curious findings have been uncovered concerning inclinations toward collective action in neighborhoods with low crime rates. According to the hypothesis identified above, residents of low-crime neighborhoods are the most likely to develop anticrime associations. However, in a survey conducted by Podolefsky and Dubow (1981), local organizations were less frequently found in the most stable and tightly-knit of residential areas than

in more unstable ones. Research by Skogan (1990) found a similar relationship with respect to rates of criminal activity and neighborhood collective action. In light of such findings, Skogan (1989; 1990) has advanced an alternative hypothesis of a nonlinear relationship between neighborhood crime and disorder and the propensity of residents to form

crime prevention networks.

Skogan argues that, "Those who think their area has virtually 'no problems' might find few reasons to engage in problem solving activities, whereas at the high end of the scale, demoralization and distrust may prevail" (1990:440-441). Thus, while neighborhoods with low crime rates may have an abundance of residents with vested interests in the area, the level of motivation to sustain a collective crime prevention associa-

tion may be low. Accordingly, one may envision a curvilinear relationship between local disorder and resident action: a community's propensity to organize would be highest in areas facing middling disorder, i.e. where there are visible problems but they are not overwhelming; while a lower likelihood of neighborhood organization would be predicted for areas having both very high and very low crime rates.

The literature thus presents two hypotheses concerning the relationship between the rate of crime in a neighborhood and the likelihood of neighborhood residents to form a collective response to disorder. Figure one provides an illustration of the relationship between crime and neighborhood organizations posited by both the negative and linear and the curvilinear hypotheses. It is important to resolve which hypothesis provides a better explanation of the relationship between crime and neighborhood anticrime associations. The amount of financial and organizational resources that governments and private foundations have to address public concerns of crime is limited. Making sound choices concerning the dispersal of these resources requires knowledge of how crime affects the probability and desire of residents to collectively mobilize against disorder. The goal of this work is to evaluate each hypothesis by considering the distribution of Neighborhood Watch programs in Austin, Texas, a mid-sized, growing southern American city.

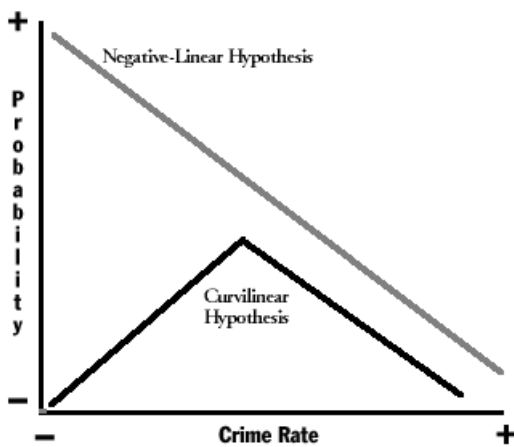
DATA

Independent Variables

A measure of crime comes from the Austin Police Department crime figures for 1990. The Austin Police Department compiles crime statistics by census tract. A variable reflecting indexed crimes per thousand residents for each tract is used to represent the rate of crime and disorder in each area. The measure of indexed crime per thousand residents includes the following crimes: murder, rape, robbery, aggravated assault, burglary, theft, and auto theft. These offenses are "indexed" because of the seriousness and frequency with which they occur. Police departments around the country report this information to the Federal Bureau of Investigation as part of the Uniform Crime Report. The crime of arson is not included in the measure used for this study because the Austin Fire Department is responsible for the investigation and reporting of this particular crime.

In this study, neighborhoods' rates of indexed crime are hypothesized to affect the concern which residents have about local disorder problems and thus the probability of residents to form social control networks to protect their neighborhoods. *The indexed crime rate used in this study is designed to infer residents' perceived level*

FIGURE 1: Probability of Collective Crime Prevention Association





of neighborhood disorganization. There are some potential limitations to this assumption that must be kept in mind. First, it is possible that residents respond differently to crime rates in terms of their individual perceptions of vulnerability (Warr 1994). For example, women and the elderly may report higher levels of anxiety than others to a given crime rate, apparently because these groups tend to have a higher sensitivity to risk. Crime levels, however, likely serve as a *general* indication to neighborhood residents of the overall degree of social disorganization in their area, even though groups of individuals in the neighborhood may perceive their particular risk of victimization differently (Skogan 1990).

It is also true that many neighborhood residents may not be aware of the actual crime rate in their area. However, residents are likely to relate to one another the occurrence of "serious" crimes in their neighborhood, even though many of these types of crimes may occur less frequently than other types of activities that could also signal a disorder problem. Mark Warr (1994) has referred to this phenomenon as a "diffusion ratio." It is communication about these more serious types of crimes (such as those contained in the measure of indexed crime rates) that citizens seem to rely on when assessing levels of disorder.

Actions that residents may undertake in response to changes in their communities are also a function of the particular social and physical composition of their neighborhoods. The capacity for exerting a level of social control in a neighborhood is directly related to the presence of long-standing and open-ended interactions between residents (Carley 1991), particularly those who strongly believe that they have a vested interest in neighborhood affairs (Fischer 1982).

Kasarda and Janowitz (1974) argue that the lengths of time which people tend to reside in a neighborhood is a key consideration in the development of residential networks. It takes time to develop extensive friendship and association ties within a neighborhood. Thus, networks should develop in neighborhoods where residents have longer tenure. In turn, these attachments would encourage increased levels of identification and positive sentiments by residents toward the neighborhood, and thus indicate a higher degree of willingness to sustain those attachments in the face of disorder.

It is also argued that individuals who invest more in their homes and neighborhoods are more likely to respond collectively to threats to stability (Henig 1978; Taub et al. 1984; Rowhl and Cook 1984; Rosenbaum et al. 1986). Typically, neighborhood investment refers to variables such as home ownership and household income which reportedly play a role in generating attachment to an area and motivating individuals to participate in collective crime prevention activities.

Residents with significant ties to the neighborhood may function as resources that the community can rely on to form the organizational base of a social control network. For example, Greenberg et al. (1982) argue that residents who participate in collective anticrime activities are likely to be the wealthier, married, more educated, and longest-residing members of their community. Catherine Whitaker (1986) obtained similar results from the Victimization Risk Survey, administered to 21,016 persons age sixteen and over in 11,198 households in February 1984 as a supplement to the ongoing National Crime Survey. She found that, among those individuals aware of active crime prevention groups in their area, participants in Neighborhood Watch programs were more likely to be moderate to higher income homeowners.

In order to control for variations in these characteristics, this paper includes selected demographic variables in the form of tract-level characteristics for Austin from the 1990 U.S. Census Summary Tape File 3A. Median income for each tract was obtained; the percentage of owner-occupied housing for all occupied housing units in each tract was retrieved; and the percentage of the population remaining in the same residence since 1985 was selected to reflect length of residence. The percentage of whites within each tract and the percentage of respondents who indicated they had attended at least some college were secured to serve as control variables.

#### Dependent Variable

The location of Neighborhood Watch programs was derived using data obtained from the Austin Police Department. In this study, an organization was defined as a Neighborhood Watch program if its representatives contacted the Austin Police Department during 1990 and requested organizational assistance for a crime prevention program and/or information concerning crime statistics for Austin and their neighborhood. Each neighborhood watch association was fixed in a particular census tract according to the location of the watch captain's residence. A dichotomous dependent variable was then created in which each census tract was

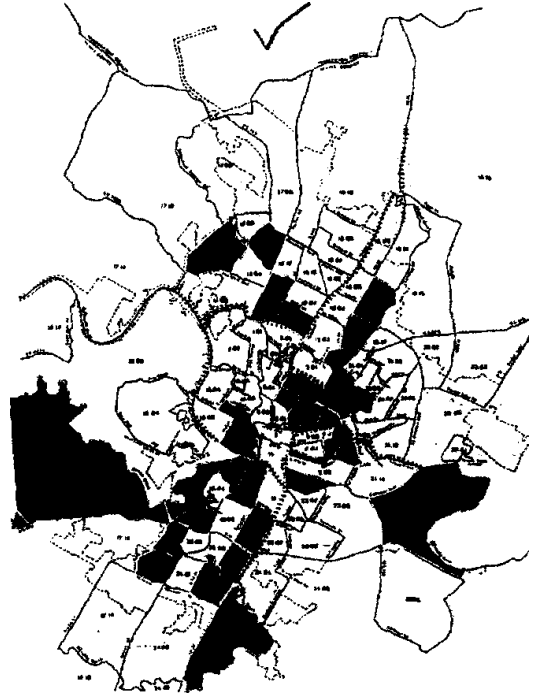


FIGURE 2: Census Tract Map

coded as '1' if it had at least one neighborhood watch program within its boundary and '0' if it did not.

Some limitations of this measure must be noted. First, this study may underestimate the actual number of neighborhood associations which address residents' concerns of crime in their neighborhood. If organizations were established immediately before or after 1990, they would not be included in this analysis. It is also possible that some neighborhood organizations maintain an informal relationship with the local police agency, i.e. they receive information about their neighborhood through channels that are not officially recorded by the central office of the Austin Police Department. Second, the level of commitment of these associations to crime prevention activities cannot be directly assessed. Many of these neighborhood organizations defined in this study undoubtedly entertain interests beyond crime prevention. Nevertheless, if an organization requested assistance or information from the APD it was deemed to be sufficiently mobilized by the issue of crime to be included in the sample. Third, this study assumes that the ecological variables reported in the tract-level data represent relevant information concerning the structural climate and the potential for formal organizational networks in a neighborhood. Because census tracts are used as the unit of analysis, the boundaries of neighborhoods in this study are based on the administrative decisions of the United States Bureau of the Census. This is, of course, a potentially problematic approach, because "neighborhoods" defined in terms of census tracts are only approximations of local communities as they are actually constructed and understood by residents. Nevertheless, this general approach has been employed many times in other contexts, and, given the agenda of this project, the approach seems to be sufficient to isolate the location of neighborhood watch programs in particular ecological contexts.

In some tracts, data that was available in the census data files was not available from the Austin Police Department. This is because the jurisdiction of the APD does not completely coincide with the area defined as 'Austin City' in the census data files. Accordingly, the sample set of census tracts evaluated in this study is limited to include only those for which data was complete (N=75). I attempted to test the possibility that

the amended data set created for this study was unrepresentative of the total sample available from the census bureau. A t-test between means was performed by comparing the sample set of tracts with the population set of tracts available from the census files, where median income for each tract served as the test variable. Concerns of nonrepresentation were found to be unwarranted (t = 1.321, 192df). This t-score provides statistical evidence to support the assumption that the sample constructed for this study does not significantly differ from the population set of tracts contained in the census bureau data. For the data set of 75 census tracts used for all analyses in this study, 33 tracts were identified as having at least one neighborhood watch program within its boundaries, while 42 tracts were coded as not having at least one association. The geographic distribution of the 33 tracts in Austin containing at least one Neighborhood Watch program during 1990 is contained in Figure two.

RESULTS

Tables 1 and 2 provide summary statistics for the independent variables defined in the data set. Table 1 reports the means and standard deviations for each independent variable, while Table 2 provides a correlation matrix between independent variables in the sample. Referring to table 2, the associations are highly positive for measures of income, home ownership and length of residence. This suggests that these variables may be mutually reinforcing elements of neighborhood stability. The level of educational attainment is positively correlated with income, but shows a weak relationship to home ownership levels, and a negative relationship to residential tenure. This set of findings may be explained by the fact that Austin is home to several colleges and universities, and has a student population numbering several tens of thousands. Students often have transient living arrangements, and this probably explains the weak and negative correlations between the measure of educational attainment, and home ownership and tenure, respectively. The variable measuring racial homogeneity, represented as the percentage of whites in each tract, is also positively associated with income, but has negative and weak relationships to both home ownership and residential tenure. Of course, the strongly positive relationship between the racial and educational variables implies that many of the individuals in Austin who have attended some college are also white, and this probably accounts for the negative associations between the racial variable and the apparent transient behavior of the white population of Austin.

Interestingly, there is a significant inverse relationship between indexed crime rates and the other independent variables, with the exception of the racial

TABLE 1: Means and Standard Deviations for Selected Variables (N=75)

Variable	Mean	Standard Deviation
Median Income (INC)	\$25,311.30	\$14,253.60
Owner Occupied Housing (OWN)	36.89%	21.10%
In Residence Since 1985 (TENURE)	32.91%	13.41%
White (RACE)	59.41%	26.01%
Attended Some College (EDU)	59.47%	23.89%
Indexed Crime/1000 Pop. (CRI)	452.4	392.4

\* Units of analysis are census tracts. Source: U.S. Census Summary Tape File 3a for Austin City and the Austin Police Department, both 1990.

composition measure. This provides some evidence that we can consider crime rates as a sign of neighborhood disorder. The uniformly negative relationships indicate that residential areas with higher levels of income, educational attainment, owner-occupied housing, and tenure in the neighborhood tend not to suffer the effects of high crime rates.

The final portion of this investigation is performed using logistic regression as a method of model estimation. In logistic regression, the dependent variable is constrained to two outcomes; "yes" for the attribute of interest and "no" for the lack of it. The appeal of the logistic (or logit) regression method is that one can model the probability of a given outcome, controlling for a set of conditions. Because the dependent variable in the following regression equations is dichotomous (i.e., tracts with at least one watch program coded as '1', otherwise coded '0'), logistic regression is an appropriate method for determining the probability that a particular tract will support at least one Neighborhood Watch program, given particular neighborhood characteristics. The general formula for logistic regression is:

$$\log P_i / 1 - P_i = a + b_1X_1 + b_2X_2 + \dots + b_iX_i + e_i,$$

where the left side of the equation represents the natural logarithm of the odds ratio, and the right side identifies a specified set of independent variables.

For the following set of regression analyses, the value of each independent variable in the dataset was converted from an original metric value to a standardized, or Z score. A Z score is simply a transformation of scores in a continuous frequency distribution by subtracting the mean from each outcome and dividing by the standard deviation. Thus, if a given tract in 1990 had a reported median income level of 25311 (which is the mean value of median income for all 75 tracts in the dataset), the standardized score of INC for that tract would be zero. If a tract had a median income score one standard deviation above the mean (using median income again as an example, we would get  $25311 + 14254 = 39565$ ) it would have a standardized score of one; a value one standard deviation below the mean would get a score of -1, and so forth.

Reporting values in terms of standardized scores may make comparisons with future research efforts easier. Variations in overall wage and crime rates often differ between metropolitan areas, and within the same metropolitan area over time. This means, for example, that cities are likely to register differing average values for each variable. Reporting these variables in terms of standardized scores reduce potential interpretation problems in comparing the results of this work with data from different metropolitan areas.

Some preliminary logistic regression equations were

	INC	OWN	RACE	EDU	TENURE	CRI
INC	---	---	---	---	---	---
OWN	0.7665 ***	---	---	---	---	---
RACE	0.3289 **	-0.0489	---	---	---	---
EDU	0.5104 ***	0.0428	0.7313 ***	---	---	---
TENURE	0.4922 ***	0.8316 ***	-0.1354	-0.2243	---	---
CRI	-0.4950 ***	-0.5600 ***	-0.0299	-0.2315 *	-0.3769 **	---

Source: U.S. Census Summary Tape File 3a for Austin City and the Austin Police Department, 1990.

Note: Levels of statistical significance are denoted as follows:

\*=<.05

\*\*=<.01

\*\*\*=<.001

constructed and tested to evaluate potential direct and indirect effects of variables. With the exception of the variable representing the indexed crime rate for each tract (CRI), no direct or two-level interaction effects for any of the variables included in this data were evident. All beta coefficients were exceedingly small, and none of the resulting p-values for these coefficients were below 0.70. A p-value, of course, is simply an indication of the level of statistical confidence one can attach to the null hypothesis that the regression coefficient is actually zero for the population. Higher P-values (i.e., closer to 1) reflect lower levels of statistical confidence that the coefficient is actually not zero. The apparent lack of any direct effect for any of the independent variables (save for CRI) is surprising. But these findings may make more sense if neighborhood organizational resources are a function of a complex interaction of ecological characteristics.

Other researchers have found independent associations between these variables and Neighborhood Watch programs (e.g., Whitaker 1986; Greenberg et al. 1982; Rosenbaum et al. 1986). But in these studies each of these variables were shown only to have a relationship to the propensity of particular residents to participate in Neighborhood Watch programs. This is not the same as showing the effect of these variables as they serve to create a structural climate to foster neighborhood organization. It is possible that what a neighborhood provides in terms of organizational resources, as this study understands that concept, is likely an outcome of these variables operating in concert, and this is sufficient justification to look into this possibility.

Based on data derived from the Pearson correlation coefficients in table 2, I believe that a three-level interaction term, incorporating the variables of median income, home ownership, and residential tenure, is appropriate to operationalize the notion of neighborhood ecology as a resource which may foster collective mobilization. A tricky issue is to identify the precise nature of this interaction effect. It may be an additive relationship or a multiplicative relationship. It is easy enough to test both possibilities. For some regression equations employed for this analysis, an independent variable (MSTABLE) was created by multiplying the

TABLE 2: Pearson Correlation Coefficients for Independent Variables

Variable	Description
TRACT	Dichotomous dependent variable, coded as '1' if the census tract has at least one Neighborhood Watch program in 1990, otherwise coded as '0'.
CRI**	Reported occurrence of indexed crimes in 1990.
CRI2	Value of squared CRI
ASTABLE***	INC+OWN+TENURE
MSTABLE***	INC*OWN*TENURE

\* Units of analysis are census tracts.  
 \*\* The values of CRI have been converted to Z scores.  
 \*\*\* The values of INC, OWN, and TENURE were converted to Z scores before being combined to construct these variable

TABLE 3: Description of Variables Used in Logistic Regression Equations of Table 4

standardized scores of median income, percent owner-occupied, and percent in residence since 1985 for each tract. Put another way,

$$MSTABLE = INC * OWN * TENURE.$$

To test the possibility that the interaction is more likely additive in nature, a second independent variable (ASTABLE) was formulated according

to the following construction:

$$ASTABLE = INC + OWN + TENURE.$$

Table 3 identifies the variables used in the regression equations reported in table 4.

Table 4 presents results of logistic regression analyses where crime rates, and the various three-way constructs of neighborhood resources are evaluated as independent variables. Each column represents the estimates for a different regression model. Column 1 contains logistic regression results when variables CRI and the additive resource variable ASTABLE are employed as regressors, while column two substitutes the multiplicative resource variable MSTABLE for ASTABLE. All coefficients in columns 1 and 2 appear negligible, accompanied by very high p-values. These particular models apparently do not fit the data very well.

Columns three and four report results when a quadratic term (CRI<sup>2</sup>) for the measure of crime rates is added to the first two regression equations. Introducing this quadratic term makes it possible to test if there are non constant effects of the rate of crime in each tract on the probability of a tract to support a Neigh-

borhood Watch program. The result of adding this term is striking, and really gets to the heart of an evaluation of the two hypotheses under investigation.

In equations 3 and 4, the signs of the beta coefficients for CRI<sup>2</sup> are negative, while the signs for CRI are positive in each case. The coefficients of CRI and CRI<sup>2</sup> are large in both models, as well. These results immediately lend support to the assumption of a non-linear relationship between crime as a sign of neighborhood disorder, and the propensity of a tract to support a crime prevention association. Note also that the coefficients for both ASTABLE and MSTABLE are much larger than those reported in columns 1 and 2, and their corresponding p-values are much lower. In other words, once the curvilinear relationship of crime is accounted for, a more decisive effect of neighborhood ecological characteristics become apparent.

A comparison of the Chi-Square statistics for models one through four indicates a much greater degree of statistical confidence can be attached to regression equations 3 and 4. These statistics also give a hint to how one might decide to answer the question posed above concerning the appropriate construction of a neighborhood resource variable. While certainly not conclusive, the evidence suggests that the multiplicative MSTABLE may be a better fit for the available data. The Chi-Square statistic is significantly larger in column 4, and suggests that this equation provides a better fit for the data than does equation 3. The p-values of the coefficients for the independent variables in column four are significantly lower, which also gives some indication that the variable MSTABLE is more appropriate. In addition, one may also infer that CRI<sup>2</sup> is an important regressor, because the overall model Chi-Square increases considerably in equations 3 and 4 as a result of its inclusion.

Column five in table 4 reports the results when effects of neighborhood ecological resources are omitted from consideration. The purpose of evaluating this equation is to see if the variables representing available neighborhood resources are important in predicting the probability of tracts to have a Neighborhood Watch program. It is true that the p-value of the model Chi-Square statistic for equation five (.09) has the same value as the Chi-Square statistic for column four. This suggests that inclusion of the variable MSTABLE does not significantly increase the ability of the model to fit the available data. However, both hypotheses under consideration place special importance on the role of neighborhood resources in conditioning the probability of residents to organize. In addition, the omission of the MSTABLE variable leads to significant changes in the values of the coefficients for CRI and CRI<sup>2</sup>, and the resulting p-values for these two coefficients are higher. Overall, I conclude that the insertion of a mea-

TABLE 4: Logistic Regression Equations—Effect of Independent Variables on Probability of Neighborhood Crime Prevention Association

Variable [p-value]	Regression Models				
	[1]	[2]	[3]	[4]	[5]
INTERCEPT	-0.2414 [.30]	-0.2523 [.28]	0.2412 [.45]	0.2036 [.51]	0.1545 [.61]
ASTABLE	-0.0101 [.92]		0.1192 [.35]		
MSTABLE		0.0507 [.67]		0.1635 [.22]	
CRI	-0.0679 [.88]	-0.0167 [.82]	0.5727 [.24]	0.5116 [.20]	0.2963 [.34]
CRI2			-0.5608 [.05]	-0.5663 [.05]	-0.4625 [.12]
Model X2 [>P]	0.061 [.96]	0.228 [.89]	5.808 [.12]	6.421 [.09]	4.91 [.09]

Notes:  
 1) Dependent variable is dichotomous (TRACT); each regression equation is modeling the probability that TRACT=1 (census tract will have at least one Neighborhood Watch program.)  
 2) X2 is the Chi-Square statistic for each regression equation.  
 3) Numbers in parentheses are p-values associated with logistic regression coefficients and Chi-Square statistics.

surement of resource availability is important to understand the particular dynamics underlying the motivation of residents to form Neighborhood Watch associations.

Figure 3 shows a graphic representation of the effect of the independent variable CRI in equation 4 on the probability of neighborhood watch formation, controlling for the effect of the other regressors. Because the crime rate can be reasonably thought of as continuous, one can calculate the predicted probability of a census tract having a Neighborhood Watch program, based on the observed values of the rate of crime in each tract, and controlling for other independent variables in equation 4. The following formula is used to calculate this predicted probability:

$$P_i = \exp(a + BX_i) / 1 - \exp(a + BX_i).$$

The vertical axis in figure three provides a scale for estimated probability, while the horizontal axis refers to a standardized distribution of crime rates. (Recall that the values for all variables in the data set were converted to Z scores.) Each point in the scatterplot identifies the predicted probability of finding at least one Neighborhood Watch program for each observation in the data set, where A= one observation, B= two observations, and so forth. The predicted probability appears to conform very closely to the representation of the curvilinear hypothesis illustrated in figure 1. We may assume that crime rates in an area condition residents' level of motivation to organize. The results shown in figure three give support to the hypothesis that, ceteris paribus, areas with very low and very high crime rates are both characterized by low levels of motivation to sustain an organized response to crime.

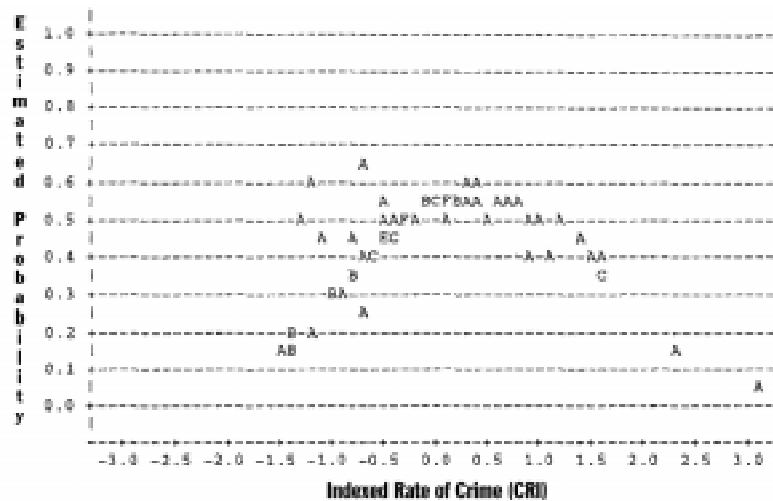
DISCUSSION AND CONCLUSION

Anxiety about crime is an acute concern for many Americans (National Opinion Research Center 1988), and has generated interest in strengthening community-based crime prevention efforts. In 1973, The National Advisory Commission on Criminal Justice Standards and Goals and its Task Force on Community Crime Prevention proclaimed that direct citizen involvement is essential to solve the problems of crime.

The consensus of the Commission and the Task Force is that if this country is to reduce crime, there must be a willingness on the part of every citizen to give of himself, his time, his energy, and his imagination (sic)...unless a worried citizenry can translate its indignation into active participation in the search for and implementation of a solution, governments and their criminal justice systems inevitably must fall even further behind in

their crime control and rehabilitation efforts (1973:2).

Widespread mobilization in this regard, however, is probably a lot easier visualized than accomplished. The results of this study suggest that the ability and motivation of neighborhood residents to organize anticrime associations are a function of a complex web of ecological forces which contribute to the very character of neighborhoods. In Austin, it appears that neighborhoods characterized by a high degree of crime and disorder are faced with a lack of vested individuals, who function as an ecological resource to facilitate



Legend: A=1 observation, B=2 observations, etc.


Note: Scale for CRI is in standard deviation units. One observation is out of range for this reported scale of CRI, but the predicted probability of this observation is close to zero.

the formation of voluntary crime prevention associations. In the face of high levels of disorder many residents have the motivation to mobilize, and withdraw from neighborhood social networks.

On the other end of the spectrum, residents in areas with low levels of crime seem to lack the motivation to form anticrime associations, but for a very different set of reasons. Neighborhoods with low crime rates also tend to be occupied by a larger number of individuals who have cultivated significant social and physical ties to their areas, but these residents may have little motivation to organize against crime when it must seem to be a insignificant problem.

One policy implication of these findings, if they are valid, is clear. According to this research, neighborhoods which experience significant but not overwhelming levels of disorder are most likely to provide conditions to support a crime prevention association. As such, a proactive strategy of targeting these residential areas for organizational support, before the communities slide into chronic disorder, may be an effective method of preventing additional neighbor-

hood decay. If the police and public agencies wait until neighborhoods have overwhelming crime problems before they attempt to assist residents in forming a Neighborhood Watch program, it may be too late. The physical and psychological withdrawal of residents may have run its course.

In fairness, the results of this investigation are far from conclusive. But to the extent that they may be relied upon, the data do provide preliminary evidence to address an important research question that has remained until now untested. It is fair to say that more research in this area is needed, and this paper both highlights some additional questions that would be fruitful to explore, and provides a foundation to continue the investigation. 

*Joseph N. McRee is a doctoral candidate in the Department of Sociology at The University of Texas at Austin. He has conducted research on the relationship between household structure and child abuse. The author's dissertation explores the relationship between the status and timing of sexual maturation in youths, and parent-child relationships.*

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# The Renewal of ISTEA

edited by Keith Krum

## A Point Counterpoint

*The Intermodal Surface Transportation Efficiency Act (ISTEA), passed by Congress in 1991, is widely credited with changing the basic nature of the federal transportation program. With ISTEA set to expire on September 30, 1997, the stakeholders - including state and local agencies, the transportation industry, and community activists - have spent the past year or more debating the merits of ISTEA and generating recommendations for the next transportation enabling act. As this volume of Planning Forum goes to press, Congress has narrowed the alternatives considerably and seems poised to pass an act that continues many of the new provisions of ISTEA. Still, many important issues await resolution, and the debate will likely continue well beyond the passage of the new act.*

Planning Forum sent three questions to individuals, agencies, and organizations actively involved in the implementation of ISTEA. We present the replies of six respondents, including two from public agencies, three from advocates of transportation reform, and one from academia; three provide a national perspective, three a Texas or Austin perspective. In several cases, respondents sent general policy statements on ISTEA and the reauthorization debate which we pared down to fit the format of the other responses, striving to maintain the meaning and intent of the original statement. Although all six respondents affirm the importance of the changes that ISTEA brought about, they differ in significant ways in their assessments of the strengths and weaknesses of the 1991 Act and their priorities for the 1997 Act.

**Kevin Connors** is a spokesperson for the Gas Guzzler Campaign, a nationwide, grassroots effort to create greater accessibility and reduce dependence on gasoline-powered vehicles by encouraging more sustainable land use.

**Roger Baker** is the president of ROUTE, Rethinking Our Urban Transportation Environment, based in Austin, Texas.

**Hank Dittmar** is the Executive Director of the Surface Transportation Policy Project (STPP), **Michele DiFrancia** is an Intern at STPP and a Masters Candidate in Urban Planning at UCLA. The STPP is a national coalition of over two hundred groups who believe that transportation policy and investment should serve people and communities, not just vehicles.

**Susan Handy** is an assistant professor in the Community and Regional Planning program at The University of Texas at Austin. She specializes in transportation planning.

**Tom Griebel** is the Assistant Executive Director for Multimodal Transportation and **Tonia Ramirez** is a Federal Legislative Analyst in the Legislative Affairs Office of the Texas Department of Transportation.

**Jim Robertson** is a spokesperson for the Capital Metropolitan Transportation Authority which operates city bus services and conducts public transportation planning in Austin, Texas.

### 1. WHAT DO YOU FEEL ARE THE GREATEST STRENGTHS OF ISTEA?

**Connors:** ISTEA finally shifted the focus of our national transportation plan from a highways only focus to one that realized the importance and need for mass transit, light rail, pedestrian and bicycle walkway/trails - a true intermodal system. Since the 1920's billions of dollars have been poured into highways at the expense of already existing light rail and trolley's systems across the country. ISTEA has given interests other than those of the highway and auto lobby an avenue to secure funding for their cities, towns and metro areas.

**Baker:** The 1991 ISTEA legislation is actually quite progressive. For example it requires that there must be prioritized long range planning with enough foreseeable income to finance construction and maintenance. Also there must be cooperative regional planning that takes the environment fully into account that must include input from low income and minority populations throughout every stage of the planning process. Also, the plan must be conducted with community and regional goals in mind and must preserve existing infrastructure as well as reduce dependency on the private automobile. All this is in the Act.

**Dittmar/DiFrancia:** ISTEA was developed under certain guiding principles which demonstrate the innovations and strengths of the legislation:

to shift decision making from the federal/state level to the local/regional level; to actively involve the public in the planning process; to provide funding flexibility and equal funding shares for different modes of transportation; to place greater emphasis on efficiency, performance and accountability; to give greater attention to environmental and community needs by providing the option to invest in transportation choices which are more beneficial to the natural and built environment; and, to emphasize the link between land use, transportation and the environment.

ISTEA heralded a new era in transportation legislation. It attempted to create a balance between various modes of transportation, recognizing that massive highway construction efforts of the past and the re-

sultant automobile dependency had serious implications - namely urban sprawl, inner city abandonment and decay, air pollution, congestion, the loss of open space, and a decline in transit service and patronage.

**Handy:** One of the most important elements of ISTEA is its recognition of the need for transportation choices. This recognition takes many forms: funding availability for alternative kinds of transportation projects; flexibility in transportation funding; and greater emphasis on public participation. Rather than providing funding solely for highway expansion projects, ISTEA gives metropolitan regions the flexibility to select the projects that best meet the goals and needs of their citizens. Although this doesn't guarantee that metropolitan areas will choose to invest in alternative kinds of transportation projects, most have recognized the importance of providing transportation choices and have taken advantage of the opportunities that ISTEA gives them.

**Griebel/Ramirez:** The Texas Department of Transportation (TxDOT) is particularly proud to support those provisions of ISTEA which have helped form and strengthen today's important city and state partnerships and which have helped define and build a strong national system for highways and transit. Congress has begun the process of reauthorizing the federal surface transportation programs that shape our transportation system. We must look to this opportunity to work together with our transportation partners to create a new federal transportation program that will build on the strengths of ISTEA while making the vital changes that will bring greater equity and flexibility to state and local decision makers.

Every month, delegations from cities across the state come before the Texas Transportation Commission asking for funding for their highway projects. While these projects are usually always justified, there is never enough funding available for all of them. Under our current federal and state funding structure, we can only meet one-third of our transportation system needs.

**Robertson:** Since the enactment of ISTEA, Capital Metro has been able to more aggressively establish the link between public transportation, communities, and the environment. Through a planned program of investments along major transit corridors like Guadalupe Street, South Congress Avenue, and East 11th Street, we are building a transportation system that will be environmentally sustainable over the long term. By planning for rail transit service, Capital Metro has been able to apply ISTEA's emphasis on

intermodalism and the connection between land use and transportation to focus public attention on issues of access and place - the building blocks of liveable communities. Transit-oriented development - one of the Federal Transportation Administration's major policy initiatives stemming from ISTEA - is central to Austin's rail transit development program.

### 2. WHAT DO YOU FEEL ARE THE GREATEST WEAKNESSES OF ISTEA?

**Connors:** I don't think ISTEA has come to terms with the most serious problems facing our nation which is the declining public transportation infrastructure in our cities and metro areas. The working poor, especially people of color, are not being served by public transit. Bus systems across the US are being slashed - look at Los Angeles, Washington, D.C., Cleveland, and Chicago, to name a few. Federal operation subsidies are being eliminated nationwide, subsidies that are critical to maintaining existing - though inadequate - transit services. ISTEA has not passed the test of improving service for low income residents of the urban core - those individuals who are the most dependent on and the most frequent users of public transit.



ISTEA has not succeeded in making our cities more vibrant places to live and work. It has in many respects helped to facilitate urban flight. We need to make transportation a viable part of every city so the majority of its residents can get to work, healthcare, and entertainment without relying on private vehicles.

**Baker:** The Federal Highway Administration (FHWA) and Federal Transportation Administration (FTA) make almost no attempt to meaningfully enforce ISTEA. They have never denied certification to



any Metropolitan Planning Organization (MPO) and do not try to enforce the spirit of the Act. Therefore the requirement that the plan be either workable or fundable is meaningless, and in fact nobody seriously believes that all the hypothetical new taxes proposed to fund the Austin Transportation Study (ATS) plan will be enacted, nor does anyone think that the plan will actually work, even in theory, since the travel demand models arbitrarily assigned traffic that does not fit on the roads to transit. Nor does anyone believe that the urban sprawl population distribution in the plan actually meets the definition of a compact city as claimed by the ATS planners.

**Dittmar/DiFrancia:** One of the greatest weaknesses of ISTEA is that it simply takes time for states and localities to adapt to the changes envisioned in the legislation. ISTEA is a first step in a long-term process of change. Another barrier to ISTEA implementation is the unwillingness of Congress to set annual appropriations at sufficient levels envisioned under ISTEA. Still another impediment is the inadequacy of inter-governmental cooperation, and the lack of authority or legitimacy of certain MPO's. MPO's typically lack the resources required to properly undertake transportation planning and programming, let alone reaching out to the general public in order to involve them in an arduous and long-term endeavor such as transportation planning.

**One of the greatest weaknesses of ISTEA is that it simply takes time for states and localities to adapt to the changes envisioned in the legislation. ISTEA is a first step in a long-term process of change.**

MPO control, for the most part, is limited to project prioritizing, i.e., ranking projects in a metropolitan area that will be funded. While devolving transportation planning and programming to the local/regional level is a step in the right direction for garnering greater accountability and public participation, MPOs face enormous challenges inherent in large and diverse metropolitan regions throughout the country. These challenges are further complicated by the fact that MPOs vary in size, service area, and constituency.

None of this means that ISTEA has failed; it merely means that changing the way institutions make decisions is a slow process. The highway construction oriented decision process that existed prior to 1991 had been in place for over forty years, it will take more than authorization to change it. Much of the controversy over reauthorization is coming from entrenched interest groups who resent opening up the process to local officials and the public and dislike the greater

emphasis on social, economic and environmental impacts. As we've said before the 'the whining noise you hear is the sound of change.'

**Handy:** ISTEA created several new mandates for the kind of planning Metropolitan Planning Organizations (MPOs) should be doing, but very little direction as to how to do it. For example, MPOs have had to invent new techniques for prioritizing a multimodal slate of projects and for considering social and environmental factors. Old approaches to public participation fell short of ISTEA mandates, so MPOs have had to develop more effective techniques. While they now have greater authority to make funding decisions, MPOs have had to develop new working relationships with state departments of transportation. The learning curve has been steep in many cases, but innovations developed by one MPO are quickly spreading to other MPOs now. Most MPOs seem to be making steady progress toward meeting ISTEA's mandates, although the degree of progress depends on the leadership of the MPO and the effectiveness of grassroots efforts in the community.

**Griebel/Ramirez:** A major culprit [in the lack of funding available for justified highway projects] is the federal funding formulas used to distribute highway funds among the states. Since enactment of ISTEA, funding formulas have been based on the 1980 census, something any Texans will tell you is out of step with reality. Perhaps the most extraneous formula component is the number of rural postal delivery miles in the state - a measure the Post Office quit using over 40 years ago. Keeping these factors in place unjustly benefits a handful of states, primarily in the Northeast, that have not experienced the dynamic expansion of places where more people are calling home, like Florida, California, and Texas. It is time to modernize this funding system.

### 3. WHAT IS THE MOST IMPORTANT CHANGE NEEDED FOR THE NEXT TRANSPORTATION ENABLING ACT?

**Connors:** The next ISTEA needs to work for a ecologically sound and socially equitable transit system that reduces auto dependency and facilitates the growth of pedestrian oriented communities. It also needs to recognize that by ignoring our urban core, we are effectively ignoring our country's economic heart.

**Baker:** The most important change needed is a federal commitment to meaningful enforcement of the next Transportation Act. The lack of meaningful enforcement or politically selective enforcement of vari-

ous federal laws (like the Endangered Species Act or ISTEA) by the federal government discredits all federal law and undermines public trust of the federal government. In the case of ISTEA, proper enforcement of the spirit of the specific provisions of the Act could stop or slow down the urban sprawl that is seriously undermining the economies of many metropolitan areas in the United States.

**Dittmar/DiFrancia:** STPP has formulated 25 recommendations for ISTEA reauthorization which fall under the following categories: maintaining a national commitment to transportation (in contrast to devolution proposals); fixing it first, maintaining the existing federal transportation system of bridges and Interstate highways; providing balanced transportation choices (maintaining flexible funding options for alternatives to highways); protecting the environment and public safety; and assuring accountability requirements for fiscally constrained planning, public participation, and guaranteed funding for metropolitan areas).

STPP recommendations beyond ISTEA include a new emphasis on system preservation, dedicated funding for intercity rail service, a new effort to connect people with jobs as a complement to welfare reform, a comprehensive approach to the environmental effects of transportation, and a new land use and transportation pilot program.

STPP believes that the most important change needed for the next transportation enabling act is to develop new and reinforce existing programs which provide state and local officials with tools that strengthen the transportation and land use connection. In order to truly create a more multi-modal transportation system, thereby improving access, reducing the automobile's impact on the environment, and making communities more livable, investment in programs which support these objectives must become a higher priority. As metropolitan and non-metropolitan areas around the country continue to combat the adverse impacts of sprawl, explicit federal recognition of these problems through reauthorization will set the stage for transportation policy and planning in the next century. The federal approach should be one of funding, flexibility, and tools, not direction. That said, ISTEA reauthorization must continue to dedicate funds to areas of high priority, national interest, system preservation, air quality, the environment, metropolitan mobility and community integrity.


**Handy:** What's most important is that the next transportation act continue the programs and mandates of ISTEA. ISTEA represented a turning point in transportation planning by defining new objectives for the federal role in transportation and by strengthening old

objectives too often ignored. There is certainly room for improvement, but transportation planning must stay on the basic trajectory established by ISTEA.

**Griebel/Ramirez:** Those who benefit from the status quo have said that we should not change the structure of the federal highway program created by ISTEA. While much of the current structure has brought us much needed advancements in the transportation planning area, at the same time ISTEA has tied our hands in our efforts to address our transportation needs. Our proposal provides more funding to Texas and its municipalities with fewer strings attached. Texans should decide what is best for Texas, and our proposal allows us to do just that.

We look forward to continuing our long-standing and strong working relationship with local officials and the public to address our varied and significant transportation needs throughout the state. As the ISTEA reauthorization legislation makes its way through Congress, we must work to ensure that the new federal surface transportation programs and funding structure provide the best possible benefits for Texas and its transportation system. With fairer formulas and true program flexibility, TxDOT and our transportation partners throughout the state will begin the new century with the tools we need to build a stronger transportation system for Texas.

**Robertson:** On a broader scale, ISTEA has given Capital Metro the framework for working cooperatively with other transportation providers toward a more balanced transportation system for the Austin metropolitan area. Through the leadership of our local MPO - the Austin Transportation Study - transportation policy makers have pursued an integrated planning and decision-making process with increased reliance on public involvement and consideration of both highway and transit solutions in corridor planning. One of the basic tenants of ISTEA - to establish a level playing field - is gradually being fulfilled.

As we look to the reauthorization of ISTEA, we believe that our customers, communities and tax payers would be best served through protecting and improving the ISTEA framework. Additional emphasis should be placed on Intelligent Transportation Systems as they relate to transit operations such as paratransit scheduling and dispatching, transit preferential signals, rural transit, and traveler information systems. And it is particularly important that we expand public transportation services to provide access to jobs for low-income citizens. Citizens must have convenient and affordable access for meeting basic needs. Let's continue with what we've begun in this post-interstate highway era and stay the course with ISTEA. 

# Imaginary Cities

## The Graphic Fantasies of Charles Moore

by Kevin Keim

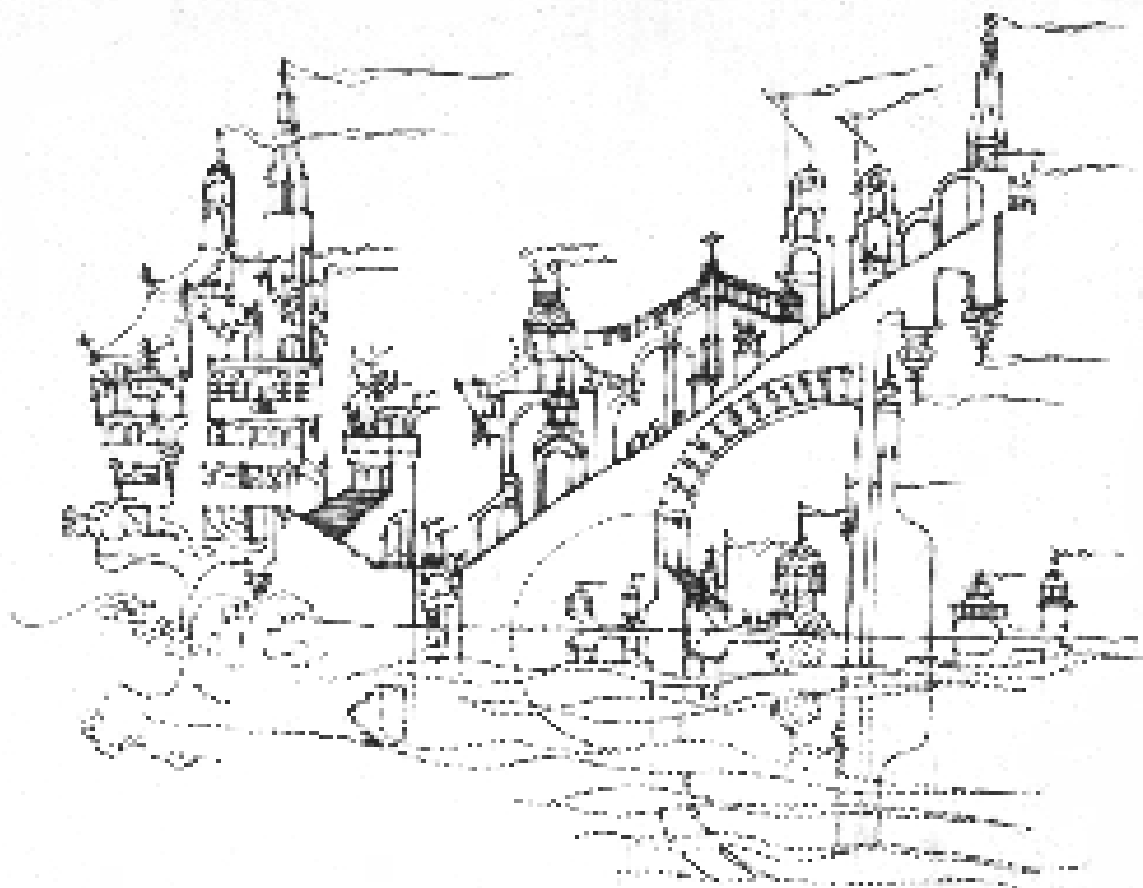
*For more information regarding the Charles W. Moore Foundation please call 512-477-4557. For the University of Texas at Austin Architectural Drawings Collection please call 512-495-4621.*

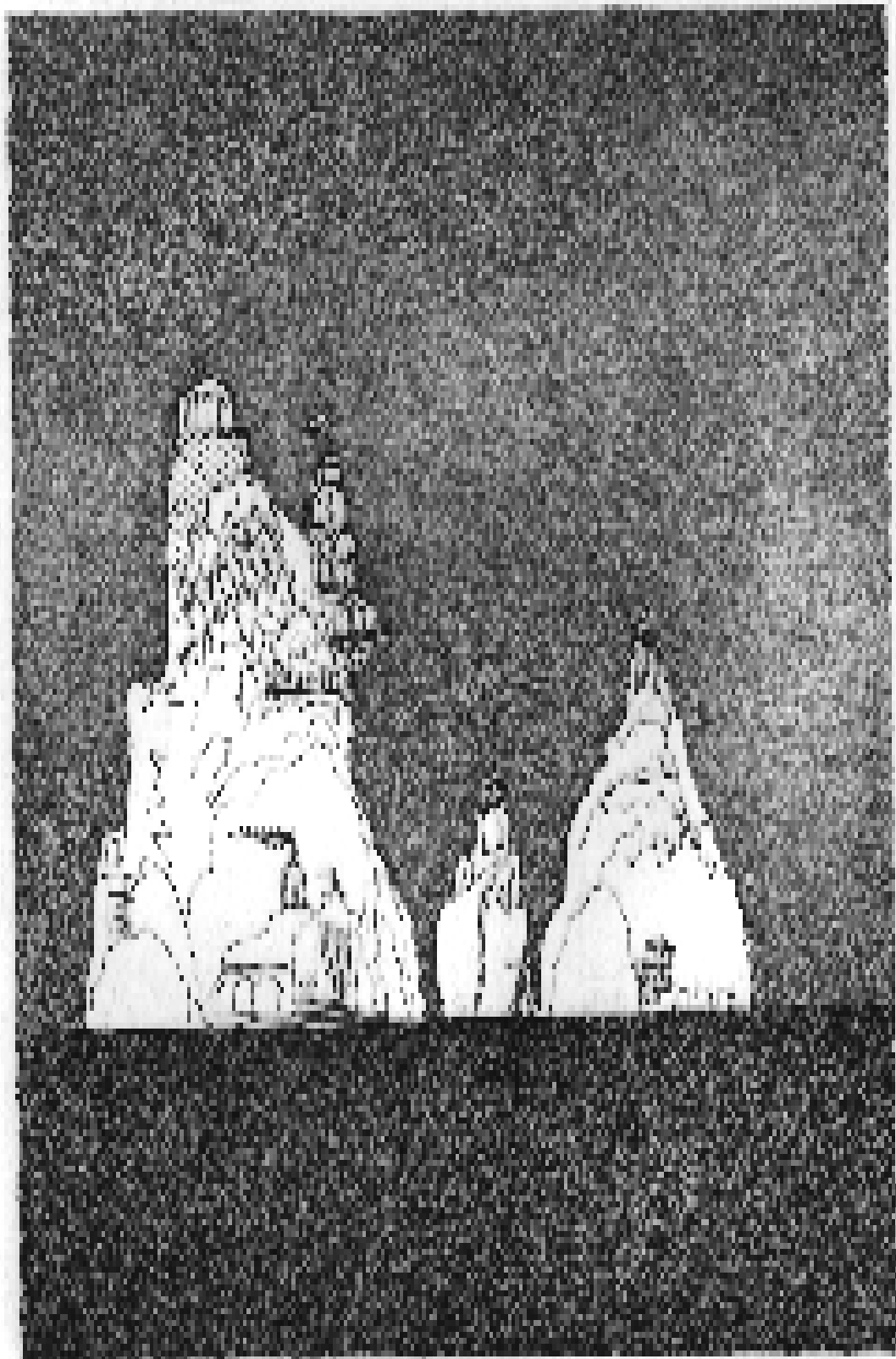
These etchings were made by Charles W. Moore while he was teaching at the University of Texas at Austin between 1984 and 1993. Peter Zweig, a professor of architecture at the University of Houston School of Architecture with whom Moore taught in joint Texas-Houston studios and field trips, assisted Moore with the production of the plates. Moore began making similar drawings and watercolors early in his career and are fantasies of architectural episodes collaged together from his travels around the world, so that bits of Bali, Guanajuato, Santa Catalina Island and Neuschwanstein surface here and there, connected by dazzlingly improbable staircases. Many of them are available for study in the Charles W. Moore Room at the University of Texas Architectural Drawings Collection.

- Kevin Keim, Moore Foundation

The Charles W. Moore Archive was donated to the Architectural Drawings Collection by Lawrence, David, Steven, and Bruce Weingarten, nephews of Mr. Moore. The Archive contains materials related to his professional projects and teaching career, including water colors, drawings, prints, slides, photographs, audiovisual materials, correspondence, books and other publications, as well as twelve large displays known as "memory palaces." The books will be cataloged for the Architecture and Planning Library, but will remain in the Moore House, operated by the Charles W. Moore Foundation in Austin. Several years of work will be required to fully process and catalog this extensive collection of over 5,000 books, 135 boxes of manuscripts, and 96 tubes of drawings..

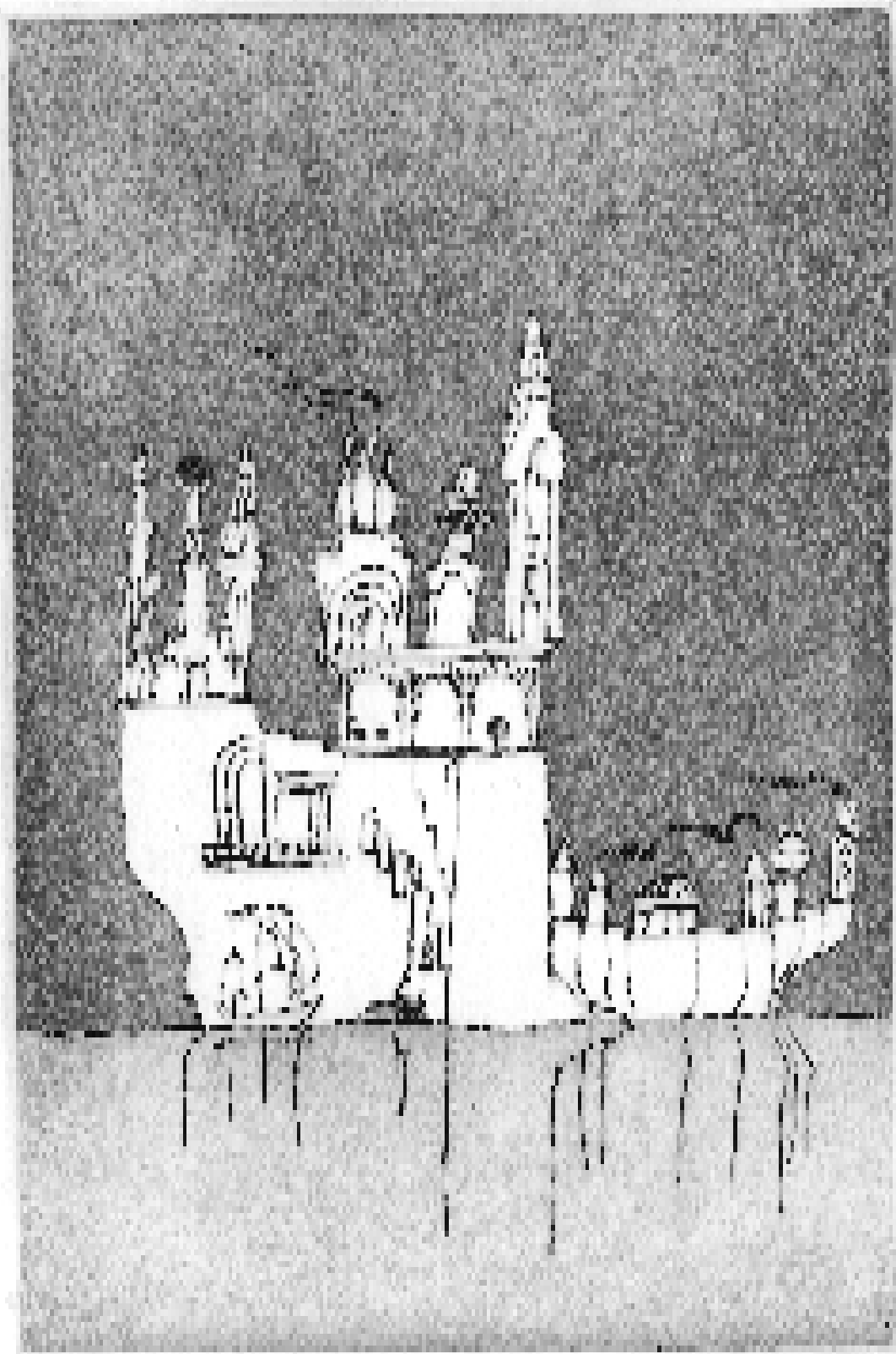
- excerpted from General Libraries Press Release, written by Beth Dodd, Curator, Architectural Drawings Collection





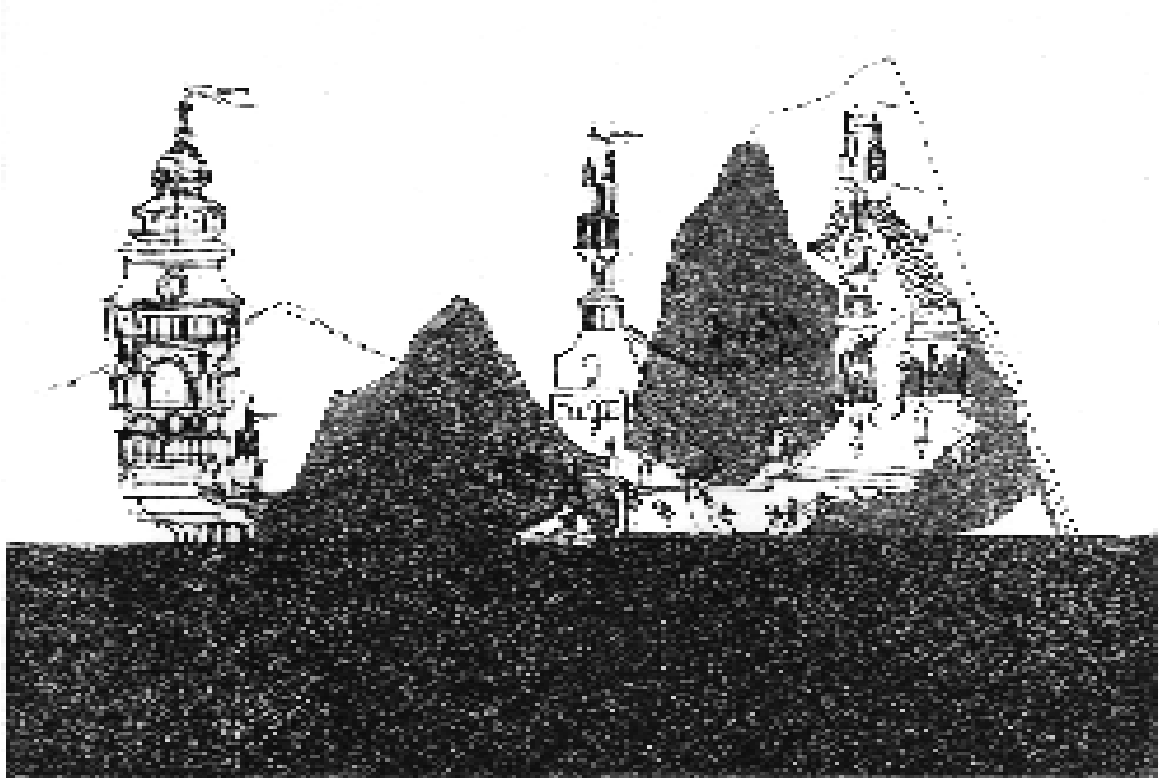
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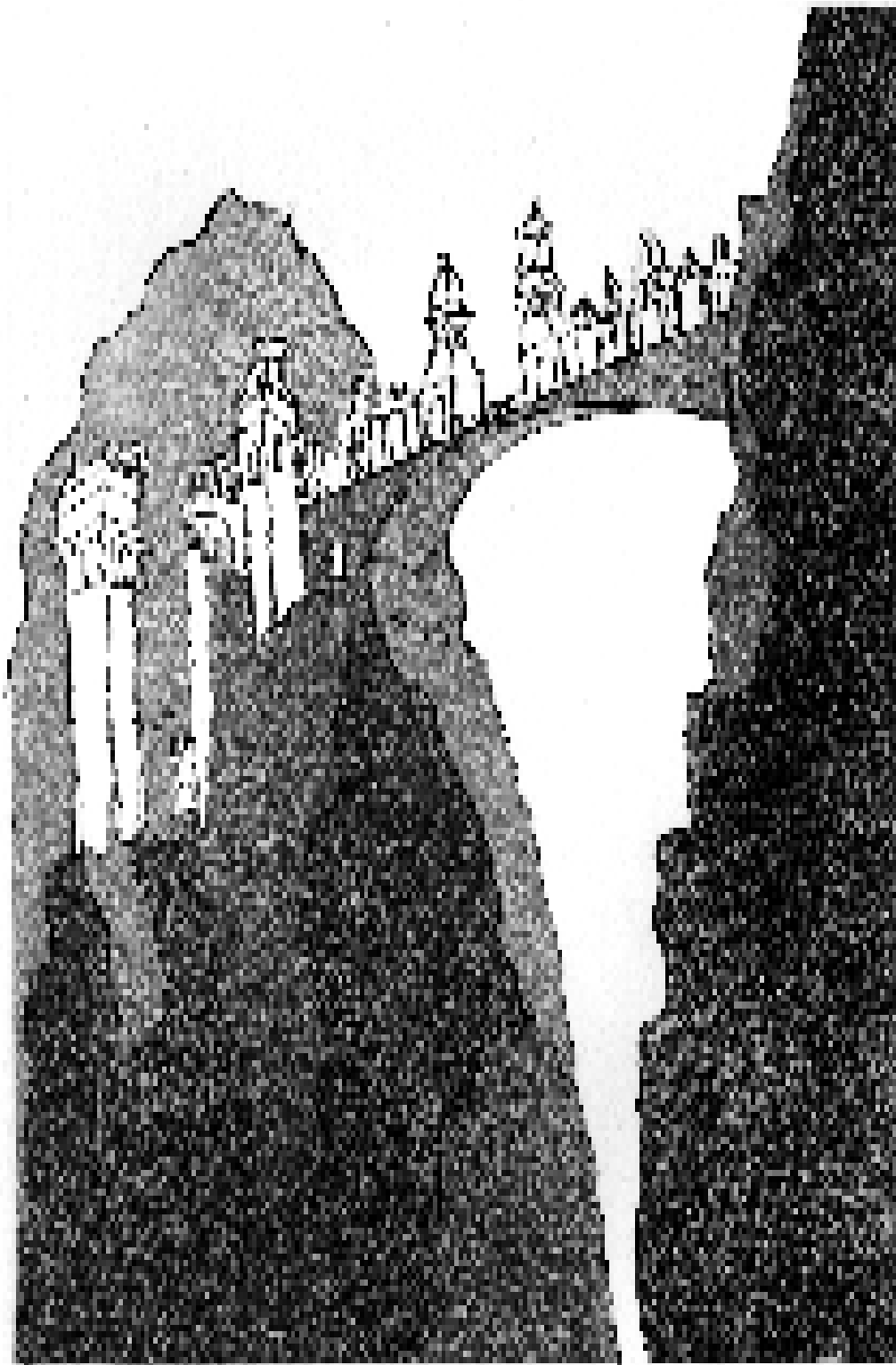
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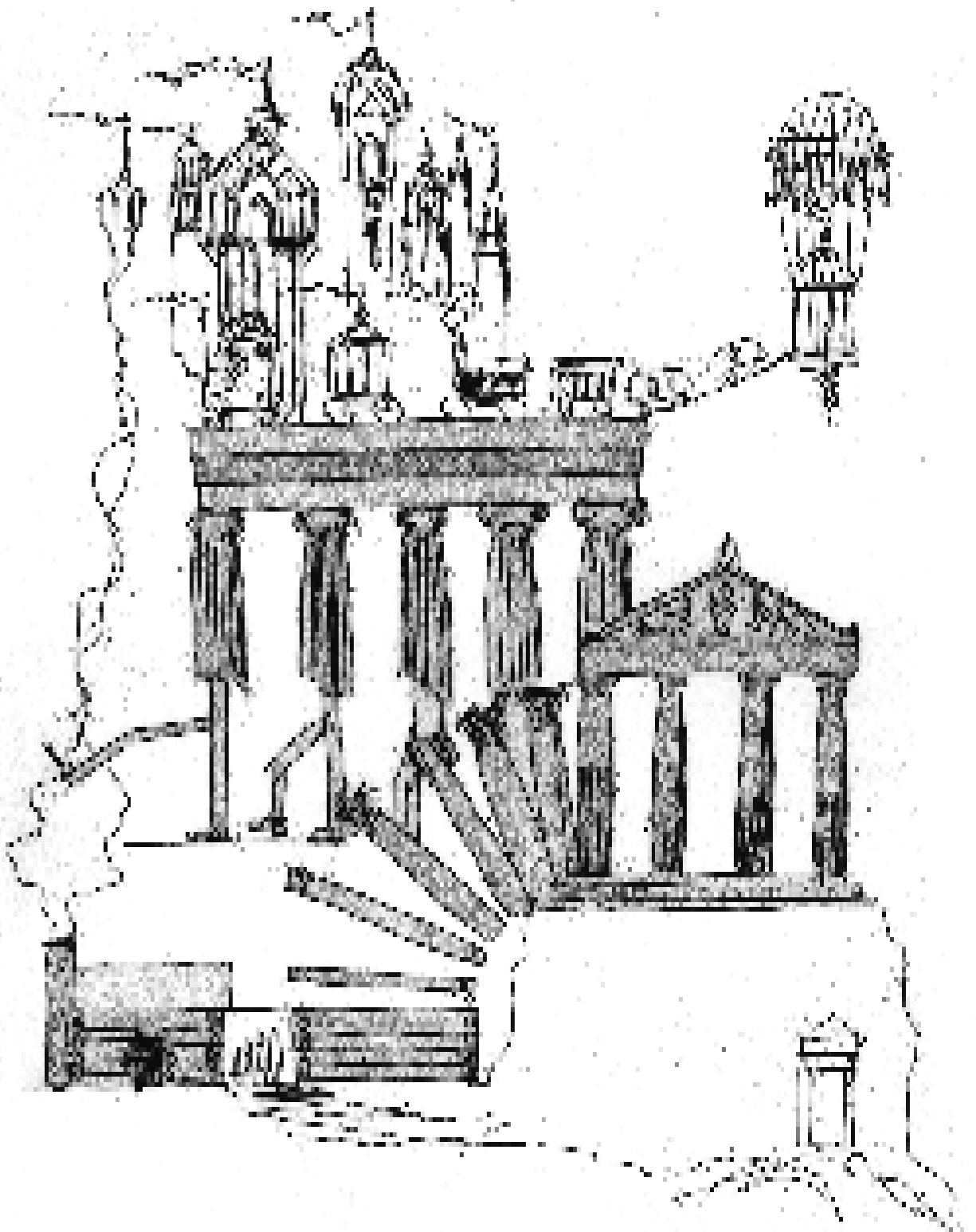
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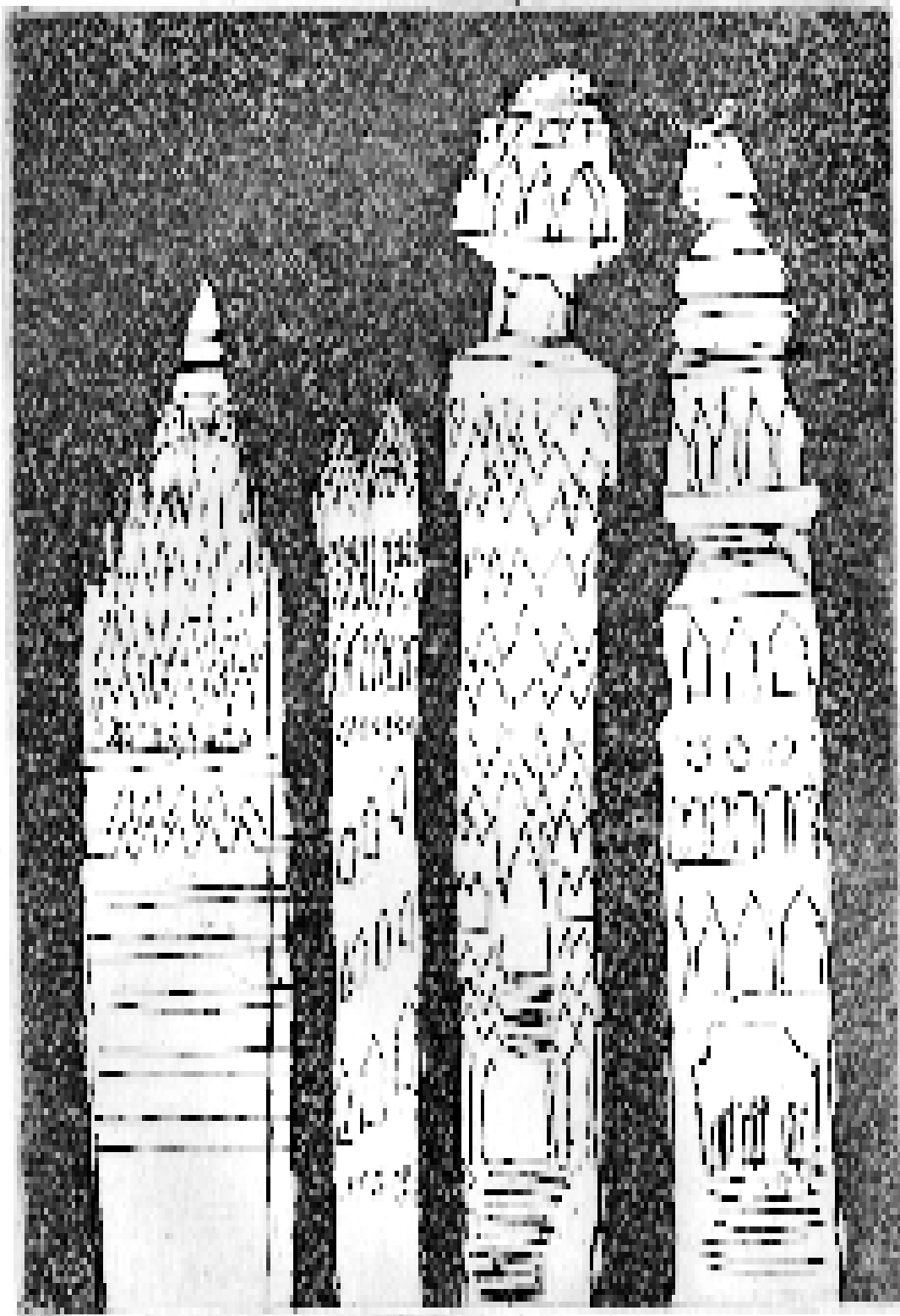
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# Horizontal Integration

## The Formation and Use of the Community Centers of Cameron Park and El Cenizo

### OVERVIEW

The following report will examine the formation and operations of Texas A&M's community centers<sup>1</sup> in El Cenizo and Cameron Park, and the manner in which these centers address and redress the social and physical privations of these colonias. Specifically, the report will assess the role of community centers as agents of horizontal integration in both El Cenizo and Cameron Park. In light of such encompassing goals, the report has two general objectives. The first is an examination of community center utilization among residents of the Cameron Park and El Cenizo colonias in Cameron and Webb Counties in South Texas. The second is an evaluation of the community centers by these same residents.

This report is not intended to serve as an in-depth analysis of the successes and shortcomings of community centers or of the centers' interactions with the communities they serve. Rather, it presents baseline data in both a quantitative and qualitative fashion, with some explication for seeming conclusions. The results presented are done so with the understanding that those providing services to colonias can use this data in formulating short and long-term planning goals and strategies.

The survey results, while often quite narrow in scope, do shed some light on the economic and social conditions within the colonias, and in this sense serve as a microcosm of both colonia needs and the logistical and financial impediments in addressing such needs. Although focusing on only two colonias—Cameron Park and El Cenizo—many, if not most, of the problems faced by these two colonias are illustrative of general conditions across all colonias along the US–Mexican Border.

### COMMUNITY PROFILE

#### Cameron Park

Cameron Park, located 5 miles northeast of downtown Brownsville, is the oldest colonia in Texas, having first been settled approximately 30–35 years ago. Officially, 5,000 residents<sup>2</sup>—most of Mexican origin or antecedence—reside on 1,624 lots in this community. Per capita income is below \$8,000 per annum, compared with \$13,000 for Texas and \$14,000<sup>3</sup> for the United States as a whole. Cameron Park suffers not

only from the social, employment and educational privations that distinguish low-income communities in general, but also from the infrastructural deprivations and linguistic isolation associated with Border settlements in particular.

Based on rough empirical observations, it appears that housing conditions—in contra-distinction to most low-income areas—vary dramatically according to income and length of residence in the colonia. Indeed, as would be expected, consolidation and affluence are linked to longer lengths of residence.<sup>4</sup> Logically, these households would have had more time to accumulate resources and upgrade property.

#### El Cenizo

El Cenizo is located approximately 20 miles southeast of Laredo and comprises 920 housing units. The Rio Grande—or Rio Bravo—forms the western boundary of El Cenizo. The colonia is relatively young<sup>5</sup>—between 12 and 14 years old, with most residents having arrived in the past 7 years. Consequently, one sees less consolidation and fewer resources than in the more established Cameron Park colonia. El Cenizo has gained some public attention as of late because of the legal and financial difficulties of its principal developer, Cecil McDonald. Existing contracts-for-deed are currently being converted into low-interest mortgage rates for residents. Many of this incorporated<sup>6</sup> colonia's 5,000 residents, along with residents from the adjoining Rio Bravo colonia, are primarily of Mexican descent or origin, and have arrived at the colonia within the past 3 years as immigrants or as "refugees" from Laredo's affordable housing squeeze. Adult unemployment is high—between 20-40%<sup>7</sup>—and semi-skilled, service, agricultural, and construction work form the bulk of employment. Per capita income is among the lowest in the state of Texas—at \$3000 per annum<sup>8</sup> and El Cenizo also suffers the attendant social and infrastructural privations associated with Border settlements.

### SOCIAL INFRASTRUCTURE

In order to provide a context for the genesis of the community centers, a general explanation of the social infrastructure in Texas colonias is necessary. The pur-

by Mary Burns

*Measuring the actual and perceived effectiveness of community service programs over time is a vital component of the long-term success of these programs. Planners need to evaluate and address inequities in community service provision, particularly in the chronically underserved colonias developments along the U.S.-Mexico border.*

pose of discussing colonia development and characteristics is to illustrate how a community's conception, as well as its relation to the government, yields different types of social integration.

Rather than being formed through a groundswell of mass mobilization and mutual aid, as is prototypical in Mexico, colonia formation in Texas is a protracted, incremental, top-down process. Typically, the developer sells a piece of unserved land, in a somewhat physically remote area, to a purchaser on a contract-for-sale basis. This highly insecure arrangement puts the purchasers at the mercy of the developer, and finds them in the paradoxical

Such an economically dysfunctional patron-client relationship serves as the paradigm for all subsequent social connections in that power is only achieved vertically with authority figures, at the expense of horizontal integration in the community.

position of hoping for and colluding in the financial success of the very person exploiting them. Such an economically dysfunctional patron-client relationship serves as the paradigm for all subsequent social connections in that power is only achieved vertically with authority figures, at the expense of horizontal integration in the community. A "zero-sum" mentality ensues in which individuals view another's actual gain as their potential loss. Any al-

liances that do form typically devolve into factional disputes. Horizontal integration does occur from time-to-time, but typically only in the face of an external threat.

Such social isolation is compounded by the state's perceived hostility to colonia formation and development. Residents appear to adopt a "circle the wagons" mentality to defend themselves from state neglect (for the most part) or potential/actual harassment. Private assistance projects that do operate in the colonia tend to focus on discrete projects resulting in sectoral divisions. This further stifles horizontal integration and impedes holistic development.

The level of community participation appears positively correlated to the age of the settlement. As individual households and the overall settlement consolidate and become more populated, they create a larger pool from which leaders can emerge. As leaders gather more followers, information begins to be disseminated and collective demand for formal service provision and physical infrastructure begins to congeal.

In summary, the Texas mode of colonia development—a highly individualistic, top-down process with low levels of mutual aid—provides a weak foundation for the construction of horizontal integration. Com-

pounding this is a context of perceived federal and state hostility toward the settlement itself, and toward many residents for their illegal status. In this tremendously isolated and dysfunctional environment, horizontal integration cannot take hold and physical needs often remain unmet.

#### COMMUNITY CENTERS

The community centers of Cameron Park and El Cenizo were intended to remedy the above situation. First, and most immediately, they would serve as clearinghouses through which colonia residents could have easy access to much-needed health, education, housing, etc. services<sup>9</sup>. More importantly, they would provide a forum where residents could come together to discuss community strategies for addressing needs, thus fostering horizontal integration. Texas A&M—the centers' author and architect—envisioned these multi-purpose centers as "walking centers"—which it defined as "community-based centers with a service area limited to a distance approximately equal to what could be walked comfortably in an hour."<sup>10</sup>

The centers have been operational since 1994. Capital funds—\$920,000 annually—are disbursed on a biennial basis by the Texas Legislature, through the General Revenues Fund, for the centers' construction, facility costs, and economic development work.<sup>11</sup> Funds for recurrent expenditures are disbursed through Cameron and Webb Counties, respectively, and cover the salaries of the director and ancillary staff, as well as all operation and maintenance costs and administration expenditures.<sup>12</sup> The amounts received by the centers to cover such expenditures are minimal: the Cameron Park community center, for example, receives \$50,000 per annum.<sup>13</sup>

The centers are both 3,154 square feet in area and provide 2000-3000 contacts a month to 25-30 service providers,<sup>14</sup> ranging from the Women, Infants and Children program (WIC), Food Stamps,<sup>15</sup> aerobics, General Equivalency Diploma classes (GED), English as a Second Language (ESL), Co-prima,<sup>16</sup> and a medical clinic. Because of the previously mentioned budget constraints, the centers rely on volunteers and donations for their operation.

#### METHODOLOGY

Field work was carried out by two teams of graduate students from the LBJ School of Public Affairs at the University of Texas on three weekends in April 1995. Since households form the basic demographic unit of any community, a household survey was conducted. Because socio-economic imperatives consign women to more time within the community and traditional gender roles define her as the family's primary caretaker, it was felt that women would have more interac-

tions with the community centers. As such, surveys were directed toward female heads of household.

The survey consisted of five parts: an informational section (a mini-demographic profile), a section for service non-recipients, a section for service recipients,<sup>17</sup> a center profile, and a section on Texas A&M's involvement. The surveys were written in both English and Spanish, but as a result of linguistic patterns, the English version soon ceded to the Spanish version. Interviewers conducted the surveys in pairs with one interviewer posing the questions and the other recording responses. Respondents who used the community centers were asked all 38 questions, except for Section II, number 9, which examined the reasons for non-use. Non-recipients were asked questions from Sections I, II, and IV. Survey responses were subsequently coded and statistically analyzed in SPSS.

A sampling frame was established for each area by first obtaining plat maps from local planning offices. The plat maps delimited residences by both block and lot. The exact sample frame and survey trajectory varied according to locale.

#### Cameron Park

Fifty-two surveys were conducted on a random basis by one two-person team on two consecutive weekends in April. Cameron Park contains approximately 60 blocks. In an effort to reach the broadest possible cross-section of colonia residents, interviewers attempted to survey one household from each block. The middle lot on the south side of each block was arbitrarily decided upon. In the event of non-availability or non-compliance of respondents, interviewers moved one lot east from the designated lot until a participating household was discovered.

#### El Cenizo

The El Cenizo surveys were carried out by five graduate student interviewers during the weekend of April 8-10. Forty surveys were conducted on a random basis in which interviewers chose four numbers (4, 18, 28 and 40) and interviewed residents from those numbered lots. In the event of absence, vacancy, or respondent non-compliance, interviewers proceeded to the next ascending-number lot. For example, if lot 18 was empty, interviewers proceeded to lot 19, 20, etc. Such a method was undertaken with the aim of covering as much physical terrain of the colonia as possible. In this fashion interviewers could capture those recent arrivals on the periphery of the colonia as well as more consolidated households in the colonia interior, thereby assessing patterns of use based on household location.

For both colonias, contact rates were high, possibly because surveys were conducted over the course of the weekend when residents typically tend to be at home.

Response rates were also high—over 70% for El Cenizo and close to 90% for Cameron Park. Such a high response rate may be rooted in cultural norms: hospitality appeared to be a paramount consideration among respondents and the level of horizontal integration seemed quite high. Colonia residents were more willing to talk with interviewers than might be residents of other US neighborhoods. However, completion rates for the El Cenizo surveys were somewhat low, necessitating adjustments in the interpretation of the El Cenizo data.

#### SURVEY LIMITATIONS

##### Survey Design

Survey deficiencies may be more readily discernible to the reader than to the author, but three obvious limitations in terms of survey design are apparent. The first two are “market research” deficiencies; the third an intrinsic weakness of (statistical) surveys themselves. First, the survey was geared primarily to recipients of community center services and as such, many of the questions were inappropriate for those who did not use the center since the questions failed to fully capture reasons for non-use.

Second, the survey reflected an inherent assumption that those who used the center did so on a regular basis and for the procurement of multiple services. It was soon obvious that utilization tends to be infrequent, uni-modal, and geared toward a service that allows for little interaction with center personnel (e.g. WIC, Food Stamps).

Finally, many of the questions did not allow for flexibility of responses and often led to stilted responses or approximations of responses—the interviewer coding the answer that best fit the response. While such structure makes the task of quantitative analysis much easier, it makes for a rather diluted or truncated qualitative analysis.

##### Survey Implementation

The most obvious weakness is the interviewer “leading” the respondent to a certain response. This tends to occur when the respondent is unsure of a question or when the interviewer unwittingly begins to frame the questions in such a manner as to arrive at a preconceived conclusion.

However, a more fundamental weakness may have an even greater impact on survey results. Many respondents seemed reticent about voicing needs, expressing opinions, and stating preferences. The recipe of the formal and potentially intimidating nature of such an interview process itself, a certain amount of wariness toward interviewers, a genuine desire to express gratitude for any services rendered, and difficulty in voicing needs, may have resulted in respondents being less

candid than otherwise interpreted.

*Survey Results*

Survey results were analyzed using SPSS. Generally, uni-variate results were analyzed in terms of their frequency. In order to determine the impacts of variables on one another, bi-variate responses were analyzed through cross-tabulations. Results

are expressed in this report as percents.

Because of the relatively small sample size, sampling error can be quite high. Such errors are corrected by the finite population correction factor (f):  $f = \frac{n}{N}$  where  $N$  is population size and  $n$  is sample size.<sup>18</sup>

**SURVEY RESULTS: CAMERON PARK/EL CENIZO**

*Informational Questions: Demographic Profile*

To employ a facile analogy, Cameron Park and El Cenizo may be likened to adult and child. Cameron Park is an "old" colonia as is evidenced in its residency patterns. A substantial number of respondents—44%—have lived in Cameron Park for over ten years and an overwhelming proportion—78%—own their own homes. This ownership figure, it must be noted, is much higher than the national average of 66%. Most households consist of a married couple (77%) with between 2 and 5 children (54%). Of the 52 women interviewed, 46% reported using the community center, while 52% did not use it—or used it so sporadically as to constitute non-use.<sup>19</sup> Of the 46 women who

had children, only 6 (13%) replied that their children used the center independently of them. Utilization was lowest—7.5%—among male heads of household.

Although Cameron Park and El Cenizo share a roughly similar demographic profile, El Cenizo's lower home ownership and length of residence patterns are indicative of younger settlements and populations. A slightly smaller majority—69%—own their own homes. The marriage rate is quite high—64%—as is the fertility rate: 89% of the female heads of household have children, with the vast majority—59%—having between 2 and 5 children.

Utilization of the community center in El Cenizo corresponds to length of residence in the community. Unlike Cameron Park, however, El Cenizo shows a more predictable relationship between the two variables. Community center utilization among all groups is much higher in El Cenizo than in Cameron Park, with survey results revealing that 51%, 33%, and 18% of all women, men and children<sup>20</sup> respectively, use the community center. This is in contrast to the 46%, 7.5%, and 13% utilization rates for Cameron Park. This higher utilization is most likely the result of El Cenizo's higher overall community need as revealed by per capita income data and the by the relative newness of the community. Surprisingly, given the lower socioeconomic position of renters vis-à-vis home owners in the US, fewer renters—42% in El Cenizo and 21% in Cameron Park—partake of community center services. Such a statistic is illustrative of the low level of consolidation in El Cenizo, yielding a greater utilization of services.

As Chart 2 illustrates, community center utilization in Cameron Park is not linked to any specific length of residence. Rather, it appears to be somewhat evenly spread across all residential cohorts. The highest use—33% and 38%—occurs among 2 groups: those households who have lived in Cameron Park between 2 and 5 years, and those residing in the community for more than 10 years.

This high utilization by long-term residents is dramatically different from the utilization patterns in El Cenizo, where a seemingly illogical nexus exists between length of residence and community center utilization. As indicated in Chart 2, 21% of those householders residing in El Cenizo fewer than 2 years report using the center. This rate nearly triples to 59% for those residing in the community between 2 and 5 years, before dropping precipitously after 10 years of residence. These figures are somewhat biased since only 2% of households interviewed have resided in El Cenizo for longer than 10 years. Nonetheless, utilization of community centers by this cohort is well below that of other residence cohorts.

Such a huge jump in utilization between the first

*CHART 1: Community Center Utilization—Cameron Park Females*

*CHART 2: Community Center Use by Length of Residence (Years)*

two categories of residence at first appears anomalous. Presumably, utilization should be inversely proportional to length of residence as households increasingly consolidate and accumulate resources. Such an increase is probably best explained by the assumption that many of the newcomers to both Cameron Park and El Cenizo are married couples who began having children—and thus needing services—during the first 2 to 5 years of marriage. Once children reach age 5, a number of community center services are no longer appropriate for them and utilization diminishes. This supposition is given credence in Chart 2 which displays the utilization drop-off that occurs after 5 years of residence.

Finally, while only 7% of the Cameron Park male heads of household reported community center use, that figure increases almost fivefold to 33% for El Cenizo. Such a huge disparity may be attributed to differences by the interviewing teams in recording responses, or may be the result of the feelings expressed by many of the males in Cameron Park that the services are geared toward women. Most likely, however, it is a function of traditional male roles vis-à-vis the actual service offerings. Center officials and household respondents themselves state that men use the centers for services typically related to their traditional and socio-economic roles as household provider—e.g. regularization of papers, acquisition of infrastructure permits, legalization matters, canine rabies vaccines, etc. Since few of these “provider” services are offered through the community centers, men may lack the impetus use the center, feeling perhaps that the services offered are more appropriate to the female role of primary caretaker.

Despite this official non-involvement, however, it is apparent, through talking with community center directors and colonia residents themselves, that male involvement is more pronounced than these survey results illustrate. In the El Cenizo community center, for example, many men serve as volunteer teachers and janitors, while in both community centers, men are well represented at the monthly juntas (gatherings).

**Non-Recipients**

Since non-use is as an important indicator of need as use, this section will present and examine findings of non-use among colonia dwellers. As illustrated in Chart 3, non-utilization in each colonia is quite high, but varies by community. Whereas 49% of the El Cenizo households surveyed said they do not use the community centers, 53% in Cameron Park identified themselves as non-users.

Table 1 presents the most common reasons for non-use: The three most commonly cited reasons for non-use in Cameron Park were:

- “Other” (lack of child care provision, transport, and knowledge of services)

- Mismatch between services offered and services needed
- Alternative acquisition of services
- Time constraints
- “Other” (a miscellany of lack of knowledge of service offerings, child care and transportation difficulties, fatigue)
- Receipt of services at an alternative location

In El Cenizo, the most common reasons cited were:

These findings illustrate the difficulties in matching household needs to service offerings. In Cameron Park, for example, respondents mentioned wanting garbage collection, recycling containers, pavement, drainage, and water—services obviously beyond the scope of the community centers. Further, many Cameron Park residents reported being unaware of the services offered, citing the lack of a telephone and frequent absence from the home as impediments to receiving such information.

In El Cenizo, in contrast, many respondents cited time constraints and conflicts—in terms of their schedule in relation to center hours of operation—as the principle reason for non-use. Although the center is open on most evenings to accommodate those who

*CHART 3: Community Center Utilization—Cameron Park vs. El Cenizo*

*TABLE 1: Reasons for Non-Use of Community Centers (%)*

Reason	Cameron Park (n=28)	El Cenizo (n=19)	TOTAL: (n=47)
<b>Time Constraints</b>	8%	43%	52%
<b>No Interest</b>	5%	4%	10%
<b>Mismatch Between Needs and Services</b>	27%	9%	36%
<b>Personality Conflicts With Center Personnel</b>	3%	0%	3%
<b>Services Provided Elsewhere</b>	14%	13%	27%
<b>Poor Quality of Services</b>	0%	0%	0%
<b>No Need of Such Services</b>	11%	9%	20%
<b>Other*</b>	32%	22%	54%
<b>TOTAL</b>	100%	100%	

Above percents indicate frequency of response. Respondents could give more than one answer per question. Total responses: Cameron Park = 37.; El Cenizo = 23.  
 \*Included such reasons as child care difficulties, lack of knowledge of services offered, illness, absence, etc.

work during the day, the distance between Laredo and El Cenizo may prevent potential clients from arriving in time for evening classes, particularly if public transportation is used. Moreover, staffing limitations and fiscal constraints in both community centers preclude the centers' being opened on weekends, when residents would be most likely able to access services. Conceivably, such a problem could be overcome by having community volunteers run the centers on weekends, but reported volunteerism appears low in both communities.

The miscellany of reasons collapsed under the "other" category points to a lack of support services for community residents. Many non-users expressed a desire to receive services, but cited a lack of child care in particular, and knowledge of center offerings in general, as impediments to doing so. In El Cenizo, many residents felt that a lack of advertising on the part of service providers was a deliberate attempt to freeze them out of much-needed, but scarce, services. Clearly, remedies to correct such situations will have to be undertaken if center utilization is to increase.

In addition to identifying the relationship between household needs and community center services, reasons for non-use paint a larger picture of the socioeconomic conditions of the two colonias themselves. Because Cameron Park is older in terms of both settlement and demographics, it appears that slightly fewer families have young children and are not therefore potential or actual service recipients. In addition, Cameron Park's higher per capita income would indicate that it has a larger proportion of its population in the workforce. In addition to receiving a wage and pension, which would disqualify them from receiving services, these individuals are presumably receiving other amenities and benefits (e.g. health insurance) through formal employment or Social Security. Moreover, Cameron Park's proximity to Brownsville means that residents can more easily avail themselves of alternative services/service centers than can residents of El Cenizo who are located much farther away from Laredo.

TABLE 2: Most Frequently Sought Services

Service	Cameron Park (n=24)	El Cenizo (n=20)	TOTAL: (n=44)
<b>GED</b>	10%	0%	10%
<b>Health</b>	31%	48%	79%
<b>Social Services</b>	33%	13%	46%
<b>Recreation</b>	0%	13%	13%
<b>Social Events</b>	3%	0%	3%
<b>General Education</b>	8%	0%	8%
<b>Other*</b>	15%	26%	41%
<b>TOTAL:</b>	100%	100%	

Above percents indicate frequency of response. Respondents could give more than one answer per question.  
 Total responses: Cameron Park = 39; El Cenizo = 23.  
 \*Includes infrastructure provision, bow making, juntas.

A significant number of non-users, however—46% in Cameron Park and 68% in El Cenizo—knew someone who used the center and was satisfied with the services provided. These non-users felt the center was open to all people and amenable to suggestions. Overall, 100% and 70% of Cameron Park and El Cenizo non-recipients felt the centers benefited the community.

Recipients

Fifty-one percent and 46% of the El Cenizo and Cameron Park households surveyed reported using the community centers. As Table 2 indicates, services sought vary by colonia. In Cameron Park, social services (particularly WIC and Food Stamps) and health services (Family Planning, Co-prima and the clinic) were by far the most sought-after services—together comprising nearly two-thirds of all visits to the community center. The drop-off between these and other services is quite dramatic. The type of services sought obviously affect utilization rates.

El Cenizo's pattern of community center utilization is similar to that of Cameron Park in that it concentrates on two services. Health and "other" (the collapsing of such miscellaneous services as legalization clinics, juntas, etc.) account for well over two-thirds of all community center visits. The remainder of visits were split evenly—at 13% each—between social services and recreation. No one reported using the center for social events or education.

Three observations are worth noting: First, aerobics is a big draw. El Cenizo's aerobics class (captured under "Recreation") is quite popular, accounting for 13% of all reported service receipt. In contrast, Cameron Park's aerobics class has been a less than constant occurrence, according to those surveyed. Consequently, "recreation" accounts for no reported utilization. Second, the almost threefold disparity in El Cenizo and Cameron Park's use of social services is attributable in part to the absence of the Food Stamps program in El Cenizo, but may also have to do with temerity in soliciting services on the part many of El Cenizo's respondents because of their recent arrival/ undocumented status in the United States.

Finally, utilization patterns serve as an indicator of community-center relations. Those services that foster horizontal integration—social events and recreation—evidence very low utilization, particularly in El Cenizo. Those services that are reflective of vertical integration—health, social services—show very high utilization. Services that provide an economic benefit (in the form of medicine, milk, Food Stamps, etc.) and require little participation and interaction, are the most popular. Horizontal integration, as measured by utilization rates and patterns, is lacking. Vertical integration best categorizes the relationship between the

community and center. Indeed, the role most frequently assumed by respondents vis-à-vis the community center is that of a consumer.<sup>21</sup>

Because the majority in both colonias solicit non-recurrent or fixed services (the clinic, for example), overall utilization is low. Over 90% of all respondents in both colonias reported using the center less than once a week. Such infrequent utilization is possibly the result of low levels of horizontal integration. Residents don't see the centers as gathering places for the community; rather they view them as repositories for goods and services.

A significant number of questions in this section dealt with respondents' perceptions of their neighbors' use of community centers. In Cameron Park, the greatest number of respondents—48%—felt that their neighbors used the community center more than they, while in El Cenizo a slim majority did not know. A significant proportion—32% in Cameron Park and 24% in El Cenizo—knew or would hazard a guess about their neighbors' use of the centers. Few in either colonia thought that their neighbors used the centers less frequently than they. Such perception of use indicates that, particularly in Cameron Park, respondents acknowledge their use of the center as minimal. The assumption that their neighbors exhibit higher utilization rates may be indicative of a tendency to see the center as having a more general—as opposed to individual—relevance. Lack of awareness of neighbors' utilization may be indicative of either the center's marginal importance in residents' lives or a lack of social interaction among neighbors.

Horizontal integration appeared as an important determinant of not only the respondent's use of the community center, but also his/her knowledge of neighbors' use of and satisfaction with the center. A strong correlation existed between the following variables: respondent use, perception of equal utilization patterns between respondent and neighbor, and a high degree of respondent and neighbor satisfaction with the center. Likewise, lack of center use, lack of knowledge of neighbors' use and satisfaction with the center, and lack of awareness of whether the center benefited the community, were highly correlated and indicate low horizontal integration.

Proximity to community centers seemed to be an important predictor of utilization in El Cenizo, although not in Cameron Park. Fifty-seven percent of all respondents in El Cenizo—versus 48% in Cameron Park—said that more proximate households were more likely to use the center. In terms of the actual households themselves, utilization appeared influenced by residential location within El Cenizo in that increased household distance from the community center resulted in decreased utilization. Many of these non-users lived

on the periphery of El Cenizo and listed the heat, distance, and lack of transport as impediments to community center use. Thus, Texas A&M's notion of "walking centers" appears not to hold true in El Cenizo. In Cameron Park, in contrast, interviewers found an ambiguous relationship between proximity and center use. Those living next to the center were as likely not to use it as those living at the farthest point of the community.

Ironically, given the contrasting importance of distance to utilization, 41% of households interviewed in El Cenizo reported that people from outside the community use the center, compared to 17% in Cameron Park. Such an occurrence may be a consequence of the two communities' varying geography. El Cenizo is contiguous with the community of Rio Bravo, and Rio Bravo's residents have similar need for the services offered at the El Cenizo community center. Cameron Park, on the other hand, is not physically proximate or juxtaposed to any other settlement. Thus, the center would have a smaller outside pool from which to draw.

Within the communities themselves, women form the overwhelming bulk of the centers' clientele, although the exact percentage varies by community. Seventy-one percent of El Cenizo respondents viewed women as the primary users of center services—compared to 96% in Cameron Park. Two rationales were most commonly cited for this pattern: The first was that center offerings were directed toward women. The second was that women, by virtue of being at home with their children, had greater access to the center.

This trend unearths both a public relations and a marketing issue, and has implications for further dualistic gender utilization of the centers. In the public relations domain, the personage of Gloria Moreno<sup>22</sup> looms large. A majority of female service recipients interviewed in Cameron Park had been personally lobbied by Gloria Moreno. Such networking may also explain why there are a greater number of older female users in Cameron Park than in El Cenizo. However, the perception exists among many households that she has not directed herself adequately enough to the task of recruiting men, who have therefore stayed away. In El Cenizo, low rates of male participation notwithstanding, this absence of a female "cult of personality" may account for a much more active male role in community center participation.

Horizontal integration appeared as an important determinant of not only the respondent's use of the community center, but also his/her knowledge of neighbors' use of and satisfaction with the center.

	Equal	More Affluent	Less Affluent	Don't Know	No Opinion:	Total:
<b>El Cenizo</b>	24%	0%	21%	48%	7%	<b>100%</b>
<b>Cameron Park</b>	36%	4%	24%	32%	4%	<b>100%</b>
<b>Total:</b>	<b>60%</b>	<b>4%</b>	<b>45%</b>	<b>80%</b>	<b>11%</b>	

TABLE 3: *Economic Status vs. Community Center Use*<sup>24</sup>

Related to this public relations issue, is a second—somewhat tangential—issue of supply and demand. More appropriately, it is a chicken and egg issue: Which came first: programs directed at women or a predominantly female clientele? In spite of contentions and perceptions of gynocentric services, the majority of programs offered at both centers are aimed at both men and women. Overwhelming female participation and male non-participation is due more to traditional caretaker roles within the family and—in the exclusive case of Cameron Park, to perceived male ambivalence regarding Gloria Moreno.

In spite of the fact that the overwhelming majority of respondents viewed women as the primary consumers of center services, a much smaller majority—58% in El Cenizo and 66% in Cameron Park—saw women as occupying primary leadership roles. This is a dramatic differential, particularly for Cameron Park, where 96% of respondents indicated that women were the main service recipients, while 66% of respondents viewed women as community center leaders.

Two possible explanations exist for this lack of parity: First, the type of service accessed by the respondent necessarily shapes the view of both clientele and leader. For example, if those interviewed were primarily attending WIC, they would see more women in the roles of both consumers and producers/leaders. In contrast, if these respondents attended only ESL,<sup>23</sup> they would most likely find a male teacher in an obvious leadership role.

Second, such a contrast between gender utilization and leadership is a likely reflection of the different cultural and social roles of men and women. Even in traditional female professions in the US, such as education and social work, males occupy a disproportionate number of leadership positions. In Mexican and US society, men are socialized to attain positions of leadership while women are socialized to defer to this ambition.

Finally, residents were asked to define the socio-economic status of center users. The non-responses to this question are potentially as interesting as the responses because they illustrate the equivocations and ambiguities that sometimes make for less than reliable data interpretation.

As Table 3 indicates,<sup>25</sup> 60% of all responses indicated that community center users on average tended to be of an equal socio-economic status with the average community member, while 45% of responses indicated that community center users tended to be poorer

on average. Overall, “Don’t Know” was the most frequent response.

This was a sensitive question because, in an indirect manner, it asked the respondent to define her socio-economic position, particularly if she had previously identified herself as a service recipient. Moreover, it asked respondents to make very delicate determinations about the socio-economic status of community center users. Out of a sense of pride, those who use the center may not have felt comfortable defining recipients as “poorer” because such an identification would obviously include them. Alternatively, because of anxiety about possible elimination of services, many respondents may have been unwilling to define service recipients as “better off”—even if some were. The easiest answer would seem to be to define recipients as being of the same socio-economic status or to defer the question. This, in fact, is what most respondents did. The reader may determine the worth of such suppositions and consider the responses in light of such concerns.

#### Center Profile

This section mainly deals with service provider/community center outreach and an evaluation of the center and service providers.

**Community Center Outreach:** Social networking, either formally, by the center itself, or informally, through social relationships, appears to be the key determinant in community awareness of the center’s existence and activities. The centers differ tremendously as regards the extent of their outreach and networking. Whereas 31% of El Cenizo’s respondents said they first learned about the community center via community center advertising, the figure was 56% for Cameron Park. Roughly the same amount of respondents—28% for Cameron Park and 26% in El Cenizo—first heard about the center via word-of-mouth.

Regarding continued community outreach, the Cameron Park community center has enjoyed much greater success than the community center in El Cenizo. Such success is probably due to the efforts of Gloria Moreno, who is the most universally known community center affiliate. This strong identification with the center serves as both a benefit and bane for the center: she has recruited a large number of women who would otherwise never have used the center, but, in so doing (according to many residents), has alienated many potential male recipients.

The most common source of community center information in Cameron Park is the center itself: Sixty-eight percent of all responses indicate that households receive information from the center through flyers, printed matter, phone calls, etc. Word of mouth is also an important source of information, with 48% of an-



swers indicating that households receive information on the center from neighbors and friends. “Other” forms of advertising—which includes such miscellaneous forms of advertisement as the *vocina*,<sup>26</sup> radio announcements, reading the community center calendar, and announcements at local schools—seem ineffective, with only 12% of respondents getting information through such media.

Such extensive social networking does not seem to exist in El Cenizo. Only 31% of answers point to community center outreach as a source of service information, while an even fewer 26% receive information from neighbors. The vast majority of the time, residents claim, they either receive no news, or 20% of the time, receive information through “other” means (the radio, school, etc.).

Two conclusions that can be drawn from these responses are that formal social networking by the community center, and informal social networking among neighbors, are the largest single source of information dissemination about the centers. This networking translates into higher rates of utilization. When individuals feel they are personally invited—either by neighbors or service providers—they are more likely to access the services offered. Although the services sought present a pattern of vertical integration, horizontal integration seems to be the key to greater frequency of service utilization.

The quality of information is linked to the particular form of advertising deployed, and in the case of Cameron Park at least, the quality of information diminishes as it moves farther from the original source. For example, 76% of those who receive information from the center rated its transmission as “very adequate” or “adequate.” Approval dropped to 50% for word of mouth dissemination, and to 13% for “other” types of publicity. Such a trend is far less apparent in El Cenizo. Approval ratings seem fairly constant among all types of outreach. Forty-five percent rated center advertising as “very adequate” or “adequate,” while 50% regarded information transmitted via word of mouth as adequate or above.

In spite of these formal expressions of approval of information dissemination, a number of residents expressed their concern and dissatisfaction with the frequency and methods of center advertising. Such dissatisfaction was especially prevalent among those who resided farther away from the centers. These individuals often felt that no efforts were made to contact them, and they therefore felt less comfortable in soliciting services.

Service providers do attempt to contact residents through a variety of methods—flyers, the monthly community center calendar, radio, etc. However, manpower and financial constraints preclude the extensive

face-to-face outreach that community members appear to want. Even if they had the funds to do such outreach, many households—because of a lack of telephone, migrant work, etc.—would still be inaccessible.

**Center Evaluation:** Advertising difficulties notwithstanding, satisfaction with the community centers is generally high. Table 4 associates satisfaction levels with center facilities, services and employees in greater detail than will be done in this narrative. Generally, satisfaction with the centers is high, particularly in the case of Cameron Park, where facilities, services, and employees were given ratings of “good” or “very good” in 96% of cases. Only one respondent had anything bad to say about the Cameron Park community center and is the sole source of any negative reviews in Table 4.

Overall approval ratings dip significantly in El Cenizo, although general satisfaction with the community centers is high. Sixty-nine percent, 56%, and 64% rate the facilities, services, and employees as “good” or “very good.” Such disparities in approval must be considered in light of differences in interpretations of answers on the part of interviewers in each community. More importantly though, lower approval ratings, especially for employees, may be rooted in two possible causes. The first is the belief or perception that many community center workers use service provision as patronage, and those who are not friends or family are denied. (However, the charge of patronage might be more attributable to Gloria Moreno, yet she and the center are universally well-regarded.) The second reason for this low rating in El Cenizo may be the lack of profile by the community center director.

Somewhat counter-intuitively, satisfaction with center employees did not appear to be linked to friendship or acquaintances. In El Cenizo, a surprisingly small proportion of respondents—17%—claimed to know community center workers. Of this subset, 42% gave them a good approval rating. This was the same approval rating given by the 83% who claimed not to know any employees.

	Facilities	Services	Employees
<b>El Cenizo</b>			
Very Good	30%	14%	14%
Good	39%	41%	50%
Satisfactory	26%	36%	21%
Bad	3%	5%	7%
Total <sup>28</sup>	98%	96%	92%
<b>Cameron Park</b>			
Very Good	92%	68%	92%
Good	4%	28%	4%
Bad	4%	4%	4%
Total	100%	100%	100%

TABLE 4: Community Center Ratings by Facility, Services and Employees<sup>27</sup>

In Cameron Park, 76% of those interviewed knew a community center worker (usually Gloria Moreno). Of this subset, 92% regarded these employees as “good” or “very good.” Again, only one respondent (accounting for the 4% remainder) categorized relations as bad. Interestingly, the highest approval rating for employees—100%—came from those respondents who didn’t know any.

Not surprisingly, given previous indicators and a seemingly high level of horizontal integration, 82% of Cameron Park respondents categorized employee–community relations as “satisfactory” or better.

Surprisingly, given low levels of horizontal integration and community concern about withholding services, 26%, 48%, and 21% of El Cenizo respondents deemed employee–community relations as “satisfactory,” “good,” or “very good.”

...El Cenizo and Cameron Park were built atomistically: one household at a time by families who did not depend upon one another for sustenance or success...

Finally, in somewhat of a surprise, 92% of El Cenizo respondents, as opposed to 81% of Cameron Park respondents,<sup>29</sup> reported that overall, the centers had benefited the community.

**Improvements:** Asking residents to list the improvements they wanted to see was a difficult task. The majority of those interviewed seemed truly grateful for all the community centers were doing on the community’s behalf, and appeared uncomfortable and unfamiliar with any expression of preferences or needs. Almost all improvements suggested fell into one of three areas:

- **Larger Space:** Many felt the centers were far too small to accommodate all of the activities going on. An addition to the center could accommodate a community day care center, which, it was felt, is desperately needed.
- **More Advertising:** Community members want more personalized outreach, especially those living farther away from the centers.
- **Provision of Infrastructure and Services:** Most residents stated that above all else, the community needed adequate water supply, drainage, roads, and garbage collection.

**CONCLUSIONS**

Despite Texas A&M’s desire that these community centers be vehicles for horizontal integration, this has not yet occurred. The majority of community residents view the centers, not as the implements with which to craft stronger intra-community bonds, but as places where they procure a service and leave. Thus, levels of


horizontal integration in terms of interacting through and with the centers are low, while levels of vertical integration are high.

Given the perinatal conditions of the birth of Texas colonias, horizontal integration is difficult to attain. Typically, these families did not come to the community together; they did not build each other’s homes, or form community groups to petition a sympathetic government for basic services. Rather, El Cenizo and Cameron Park were built atomistically: one household at a time by families who did not depend upon one another for sustenance or success, but who, because official channels were closed to them—a result of poverty and/or immigration status—became locked in a dysfunctional relationship with developers who exploited the financial and political weaknesses of residents and cultivated social divisiveness within the communities.

In a sense, the centers have attempted to be the tail that wags the dog—the agents of horizontal integration in communities where little or none exists. Yet, paradoxically, their very success is contingent upon this crucial missing ingredient. Monthly juntas have perhaps been the most effective tool in such an undertaking. Turn-out is high and participation animated, particularly in Cameron Park. However, it must be remembered, the juntas provide a venue at which individuals can discuss increasing vertical integration—i.e. getting more services from the center itself or from various state agencies.

As communities settle and households consolidate, horizontal integration takes hold, and should manifest itself in resident appreciation of the centers more as gathering places and less as service depots. One can see such a transition already in Cameron Park. Comfort can often breed charity. Many Cameron Park residents have a relatively comfortable lifestyle. They no longer need social services or food baskets and can look beyond fulfillment of their own physical needs to a higher Maslowian level of helping the community. Thus, whether or not they used it, most residents interviewed appreciated the endeavors of the community center and were less inclined to judge it solely on the quality and quantity of services offered. Such magnanimity does not imply that individuals do not see deficiencies in service provision, or that the primacy of the center is in something other than its ability to deliver services.

El Cenizo is a younger community with lower levels of consolidation and higher levels of poverty. These factors, coupled with Cecil McDonald’s divide and conquer business practices and personal politics, have borne low levels of horizontal integration, which in turn provide a tenuous foundation for the perceived success of the center. Although most appreciate the center, fewer seem to appreciate its larger purpose and judged it purely on the quantity and quality of its services.

Thus, a community like Cameron Park can produce a Gloria Moreno, who in turn, channels horizontal integration in its seminal form into enthusiasm for the center. A positive rippling effect occurs. By bringing people (women) into the center pale, levels of horizontal integration are further increased and the center is perceived as beneficial. In contrast, a community like El Cenizo produces few leaders, and those that do emerge are immediately viewed with suspicion. This suspicion of leaders, combined with a poor formal and informal network of disseminating community center information, results in a view that the centers are oligopolistic and service provision merely a form of patronage. Not surprisingly, the higher levels of horizontal integration in the first community yield a more favorable view of the community center, while higher levels of vertical integration in the second yield a more negative view. 

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#### NOTES

<sup>1</sup> The community centers in the Cameron Park, El Cenizo, and Montana Vista (El Paso County) colonias. A total of 5 such centers were planned for South Texas.

<sup>2</sup> Community Center officials believe the population is much higher.

<sup>3</sup> 1990 Census: STF3C. All figures are rounded.

<sup>4</sup> Consolidation is presumably tied even more strongly to income indices, but interviewers had no access to such information.

<sup>5</sup> Colonias in general tend to have young populations.

<sup>6</sup> The colonia was incorporated as a city within the past two years.

<sup>7</sup> See Texas A&M CHUD document: *Las Colonias del Alto Rio Bravo*, p. v.

<sup>8</sup> Per Kermit Black: CHUD, Texas A&M.

<sup>9</sup> Kermit Black: CHUD, Texas A&M.

<sup>10</sup> Texas A&M CHUD: *Cinco Colonia Areas: Baseline Conditions in the Lower Rio Grande Valley*, p. 5.

<sup>11</sup> Per Kermit Black: CHUD, Texas A&M.

<sup>12</sup> Per Marbelia Moreno: Director Cameron Park Community Center.

<sup>13</sup> Ibid.

<sup>14</sup> Per Kermit Black: CHUD, Texas A&M.

<sup>15</sup> Offered in Cameron Park only.

<sup>16</sup> Co-prima is a primary health care program for those ineligible for Medicaid. Participants pay a nominal amount for receipt of medical services.

<sup>17</sup> "Center user" and "service recipient" are used interchangeably, as are "center non-user" and "service non-recipient."

<sup>18</sup> Texas A&M CHUD: *Las Colonias del Alto Rio Bravo*, p. 11.

<sup>19</sup> It should be noted that household use is synonymous with female head of household use, since she most often acquires services on behalf of her children.

<sup>20</sup> Child utilization is counted as such if the child uses the community center independent of the mother.

<sup>21</sup> Such a disparity is a derivative of the teams' failure to define "use" or "utilization." In Cameron Park interviewers tended to classify male heads of households as non-users if they had only used the community center once. In El Cenizo, it appears that one-time visits were counted as utilization.

<sup>21</sup> This contention is borne out by the fact that 100% of respondents from both communities described their primary interactions with the community centers as recipients of services.

<sup>22</sup> A Cameron County employee, and a resident and very active member of Cameron Park.

<sup>23</sup> In January, 1995, ESL in the El Cenizo community center was taught by a male.

<sup>24</sup> Numbers do not equal 100 because of missing data and more than one answer given by some respondents.

<sup>25</sup> A loud speaker attached to a car.

<sup>26</sup> Of the remaining 19%, 12% "didn't know" because they hadn't used the centers. Seven percent (one respondent) stated that the community was "worse off" because of the community center.

# Perspectives

edited by Ali Peet

## Planning and Dispute Resolution

### THE CORE ADR CURRICULUM IN PLANNING SCHOOLS

David Landis

Imagine a city council public hearing on a zoning change to accommodate a shopping center in an older, residential section of town. The developer reviews a map of the project while she explains how all traffic, lighting, setback, parking, and square footage standards are fully satisfied. New jobs, increased sales, and economic benefits are detailed, and the city's comprehensive plan is cited as supporting this kind of growth.

Then it's the neighbors' turn. One by one they come up and say, "You are killing the residential quality of our neighborhood. The city always picks on our side of town; put it somewhere else. We did not ask for this; we don't want it. Would you like to live next to a shopping center? Elected officials aren't elected to run roughshod over the wishes of the citizens."

Two hours later it is time to vote. The planner has given full reports on existing plans and standards, and it is now up to the council to decide.

In the classic planning paradigm, this process passes muster. Rational decision-making has been insured by rigorous analysis of the project plan, code compliance, market studies, and a computer modeling for every other conceivable variation of cost/benefit analysis. The comprehensive plan has guided the outcome; a full and complete public hearing with adequate legal notice and copies of all relevant documents has been held; and yet, the outcome is unsatisfying since it pits parts of the community against each other in a winner-take-all contest. And just wait. If both sides have sufficient resources, the city will find itself in court as the project drags on, no matter who wins the majority vote of the council.

Substitute another picture: a roundtable in which neighborhood representatives and the developer sit together with a representative of the city as mediator. The developer goes through her presentation, handling clarifying questions raised by the neighborhood representatives. The mediator says to the neighbors, "I know you have objections to the plan. Can you tell us what they are?"

"The whole thing will kill our neighborhood; it's as simple as that."

"I can tell your neighborhood means a lot to you. How will the project kill what you hold precious?"

"It just will. Think of the noise, the lights. Come on, you have to be kidding."

"So the center could be noisy and very bright. I see. What else?"

"Well, the kids hang out at these places. They litter, they vandalize, they race their cars, it won't be safe to live within six blocks of this monstrosity."

"I can understand why security would be a real concern."

"You bet, and the only recreation we have is the empty lot the kids use as a ballfield. When this gets done, it'll be asphalt. Then where do the kids play?"

Do you recognize the difference? A conflict resolver refers to this process as focussing on interests rather than positions, and it is a hallmark of the most assigned textbook on conflict resolution in the alternative dispute resolution (ADR) curricula in North American planning schools, *Getting to Yes*, by Roger Fisher and William Ury.

Behind the "Don't build it!" position of the neighborhood are several interests: litter, noise, light, security, traffic, parking, and recreation. Only one result, no shopping center, satisfies the neighborhood's position. But there are multiple ways to mitigate their concerns. What if the developer provides landscaping to reduce the light spillover? What if the developer's security force patrols the surrounding neighborhood four times a day? What if the developer buys an empty lot, deeds it to the neighborhood association, and puts some playground equipment on it? This kind of discussion does not occur in the public hearing setting, but it can occur in the multiparty mediated negotiation processes described in *Breaking the Impasse: Consensual Approaches to Resolving Public Disputes* and *Managing and Public Disputes*, both of which are common ADR planning texts. These books include suggested ways for parties to negotiate with each other directly to resolve conflicts among the underlying interests that motivate the major stakeholders.

The basic tool used in our second scenario is principled bargaining. Parties reveal their underlying interests, invent multiple options, and then select those options which maximize mutual gain while meeting objective standards of fair dealing. The goal is to find a solution that improves the status of both sides. The neighborhood would be faced with a very different situation if the developer agreed to plant trees, provide better recreation

than currently exists, conduct security patrols, send out a litter crew, and contribute radios to a neighborhood watch program. The neighborhood would have valuable offsetting gains to consider, and the cost to the developer should be minimal compared to a costly legal battle or council disapproval.

The transition from the classic paradigm of the public hearing to the mediated negotiation of the second scenario lies at the heart of ADR courses in U.S. planning programs. David Godschalk, a professor at the University of North Carolina, says, "Twenty years ago, planners worried about getting adequate public participation. Today, it's no longer a problem to get public participation. We get lots of it, but it's conflictual. We need to turn towards finding agreement." This desire to find agreement is the motivation that prompts the rapid growth of ADR classes in the curricula of many North American planning schools.

How do planning schools teach the sprawling field of Alternative Dispute Resolution? That was the focus of my research in Community and Regional Planning at the University of Nebraska-Lincoln in 1995. Course syllabi from fourteen classes specifically dedicated to ADR in North American planning schools were analyzed for recurring themes. Six professors who teach in the area of dispute resolution were interviewed to identify teaching methodology, learning objectives, and the learning levels (the degree to which students are expected to master the material) for those objectives. I will not venture an answer to the question, "what should an ADR course teach?" But I can, for the most part, answer, "what do ADR courses teach?" Let us start with methodology.

Almost all planning ADR courses are based on experiential learning. The overwhelming number of courses surveyed use a series of exercises as the gateway to conceptual understanding and skill building. Students are routinely called upon to do stakeholder analysis, conduct negotiations, and facilitate group meetings. Professor Robert Paterson at the University of Texas at Austin has his students serve as facilitators for neighborhood groups, various meetings, and at a workshop on nominal group technique. Applying their skills in a real-world setting gives students confidence in their professional abilities. While lectures, readings, and guest speakers are common, the teaching methodology is dominated by interactive exercises with debriefings that illuminate, clarify, and test learning objectives.

Four core subjects appear in syllabus after syllabus. If there is consensus about the content of a planning ADR course it is these areas. Three of the core subjects are dispute resolution processes. The first of these is the principled negotiation method previously described. Over 90% of planning ADR courses require Robert Fisher's, *Getting to Yes*, the seminal work on

principled or collaborative negotiation. Scores of texts are available on negotiation, but the nearly unanimous selection of this book makes it clear that this is the core content of negotiation theory and method. Some teachers go to lengths to critique Fisher, but the consensus concerning studying the text is startling.

Michael Elliott at the Georgia Institute of Technology says of *Getting to Yes*, "We teach it, then we critique it extensively from a positional negotiation approach, an accommodating approach, and from a cultural approach." I personally believe that principled bargaining is taught because it is consistent with ethical standards imposed on a profession carrying out a public trust. In the traditional, positional bargaining style, parties often misrepresent or withhold information to gain strategic advantage. Such tactics may not comply with the American Institute of Certified Planners/American Planning Association (AICP/APA) Ethical Principles in Planning or the AICP Code of Ethics and Professional Conduct.

A second core subject is multiparty mediation. Over 80% of surveyed planning ADR courses assign either Lawrence Susskind's *Breaking the Impasse* or Susan Carpenter's *Managing Public Disputes*. Both texts examine the use of a neutral third party in bringing disputing parties to the table for a mutually agreeable, ad hoc solution. Mediators are often brought in to courses as guest lecturers. Unlike principled negotiation, mediation is not extensively taught at an experiential level. Kem Lowry at the University of Hawaii says, "We would not expect students to be able to mediate a difficult conflict. The task is too subtle to grasp in the amount of time we have to explore it. They should know they need more training when they leave the class." Says Lowry, "I want students to know that mediation and facilitation are just as much a part of the planner's tool kit as regression analysis." The consensus appears to be that students should be familiar with mediation as a tool available to the planner, but would not typically leave the course able to perform the function without more professional training.

The third core subject is group management and facilitation. Over a third of planning ADR courses assign Doyle and Straus's *How to Make Meetings Work*, the Interaction Method of group facilitation. Over 80% of course syllabi make group management an explicit learning objective. Barry Rosen taught "Techniques in Mediation, Group Process and Conflict Resolution" at

**While lecture, readings, and guest speakers are common, the teaching methodology is dominated by interactive exercises with debriefings that illuminate, clarify, and test learning objectives.**



the University of California, Berkeley, for ten years. He is now a senior fellow in Interaction Associates, a company that licenses and trains facilitators. More than half of his course was dedicated to simulations and debriefing the facilitation process. "I think the reason the course was so popular was because it focused on implementation. This is especially true for the students who were in the field but completing appropriate professional degrees in planning," he said.

Kem Lowry recounts a meeting held ten years ago by ADR specialists in Hawaii to predict the future of the field. "The area where we were most wide of the mark was the growth of the importance of facilitation. You can't seem to go any place these days without somebody pulling out a flipchart." Like principled negotiation, facilitation is often taught by experiential skill building which prepares the student to facilitate meetings in the professional world.

If these three core subjects were the only content, an ADR course would have very little to distinguish it as a planning course. It could as easily be a business administration, communications, or public administration course. The simulations might be grounded in planning conflicts, but the course would be about conflict resolution per se, not planning. The fourth core subject places these courses in the context of the planning curriculum.

The most distinctive characteristic of the planning ADR course is an attention to the strategic choice of conflict resolution techniques in planning. Bruce Dotson at the University of Virginia dedicates the second half of his course to a group project in which students analyze a real dispute and propose a resolution process. "Students should see themselves as strategists rather than 'wannabe' mediators, negotiators, or facilitators," says Dotson. Six months after the course is over, he wants his students to be able to do three things. First, he wants them to expect controversy; it should neither come as a surprise nor be seen as an anomaly in the planner's work. Second, he wants the planner to view conflict as an opportunity to be strategically managed. Conflict is an opportunity to demonstrate the planner's professionalism with a strategic response that produces better outcomes than would occur without the planner's intervention. Third, Dotson wants the student to be able to formulate a strategic response. Planners should be able to identify stakeholder interests and formulate a resolution process that brings parties to the table. Students should know a spectrum of consensus building processes such as shuttle diplomacy, nominal group technique, mediation, facilitation, and so on. The planner's unique role is to understand the conflict well enough to suggest an appropriate process option to resolve it. The person who actually carries out the process may be someone else, perhaps a hired

mediator, a city official, or a consultant.

Conflict analysis and choice of process are the most critical functions taught in ADR courses. David Godschalk's students do stakeholder analyses before every simulation, no matter which process is utilized. Following the simulation, students evaluate the process, emphasizing possibilities for improving future performance. The same emphasis on preparation is reiterated by Professor Paterson: "I want students to know how to analyze a situation, prepare to deal with conflict, recognize the style of others, and respond effectively." The advantages and disadvantages of various dispute resolution techniques are taught so the student can strategically choose an appropriate process.

The topics of negotiation, mediation, and facilitation are well covered in texts dedicated to those subjects. This fourth, and perhaps most subtle subject, the planner's strategic decision-making concerning conflict resolution, is not well covered by any existing textbook I have encountered. This seems to be the particular forte brought to bear by the planning teacher in the classroom. Teachers draw from many sources, recount real world examples, and provide personal expertise in the teaching of this subtle decision-making strategy. If one book needs to be written, it is a text which explicates the range of conflict resolution processes and directly challenges the planning student to think systematically and strategically about their appropriate uses for furthering the aims of good planning. ■

*David Landis has been a Nebraska State Senator since January 1979. His degrees include a Master of Public Administration, a Master of Community and Regional Planning, and a Law degree, all from the University of Nebraska.*

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#### NOTES

1. For a real life example of a negotiated settlement of a neighborhood's dispute with a proposed shopping center see Sullivan, Timothy. 1984. *Resolving Development Disputes Through Negotiation*. New York: Plenum Press.
2. All quotations are from interviews summarized in an unpublished professional project, David Landis, "A Curriculum for Teaching Dispute Resolution for Planners," (MCRP professional project, University of Nebraska, 1995).

#### TEACHING NEGOTIATION TO PLANNERS

Connie P. Ozawa

In *What Planners Do: Power, Politics and Persuasion*, Charles Hoch portrays three planners negotiating as part of their jobs. "Tim" negotiates with a subcontractor concerning the contents of a report; "Sam" negotiates with his client concerning how to include the neighborhood in the design of a development proposal; and "Jeff," a community development advocate, reflects self-doubt about his success while negotiating a partnership with a private developer (Hoch, 1994). Traditionally, planners have negotiated one-on-one and in small groups in situations like these and many others. Even over-the-counter planning work presents opportunities for negotiations as planners aim to help individuals achieve their objectives within the constraints of city ordinances and codes (e.g., obtaining a permit for a home remodeling effort).

More recently, planners have become involved in highly structured, multiparty negotiation procedures. As demand for interjurisdictional coordination, more intensive citizen participation, and private sector cooperation heightens on issues ranging from growth management and natural resources planning (Innes et al. 1994) to facility siting (Rabe 1992), planners are finding themselves sitting at a rather large negotiating table more and more frequently.

Negotiation is a critical subject to planning students for several reasons. First, negotiation is important simply because planners negotiate so often. And, unless our system of governance undergoes radical change, the need for planners to collaborate with others is likely to increase steadily. Less obviously, negotiation theory and techniques can augment planners' analytical toolbox and improve their performance even in situations where negotiations do not occur. Finally, negotiation skills and techniques can also help planners to interact more productively with others.

This article focuses on the teaching of negotiation theory and skills to planning students. It will argue

that an introductory negotiation component belongs in the core planning curriculum, and an opportunity for more in-depth exploration and skill-building ought to be offered as an elective. Furthermore, more thought needs to be given to the future of the dispute resolution field and how planning programs ought to adjust to accommodate possible changes.

Before proceeding, a quick diversion to clarify terminology is necessary. "Dispute resolution" refers to methods of making decisions that are intended to resolve, or settle, disputes. Disputes are manifestations of conflict. That is, while conflict may be rooted in social, economic and political relationships that are difficult to change, disputes are the visible and/or vocal expressions of such conflict which is related to a specific issue. Agreements can be reached that will settle or resolve the dispute at a given point in time, but the underlying conflict may persist. The term "conflict management" encompasses dispute resolution and is often used interchangeably with it, but includes efforts aimed at conflict prevention and deflection as well as resolution. Dispute resolution methods include an array of formal procedures. The term "alternative dispute resolution" (ADR) was coined by the legal profession. The dispute resolution method to which ADR is an alternative is adjudication. "Alternative dispute resolution" therefore includes negotiations, assisted negotiations (mediation and facilitation), arbitration, and even mini-trials. Finally, "negotiation" is the most basic building block for dispute resolution methods in which the parties themselves, not a judge or an arbitrator, make decisions regarding settlement. Therefore, negotiation is the fundamental building block of dispute resolution procedures in which control remains with the stakeholders, or their representatives, and such negotiation is the central element of dispute resolution that planners need to understand.

#### NEGOTIATION FOR PLANNERS

Negotiation is a bit like prose. We have been doing and speaking them almost all of our lives, we just didn't realize it. And, most of us aren't particularly good at negotiations, at least not in formal, professional settings. Few of us approach negotiations involving issues of significance without experiencing great anxiety. What "natural" ability we exhibit in interpersonal or one-on-one negotiation quickly dissipates in the context of multiparty, public negotiations.

There is both an art and a science to negotiations. While artfulness, it may be argued, is a blend of those mysterious qualities called "natural talent" and "intuition," the "science" component of negotiations can be learned. The "science" is not a set of hard and fast rules or principles that will determine the outcome of negotiations. That would be a rather naive expecta-

tion for processes involving interactions among humans. Rather, the "science" of negotiation implies a systematic approach to the consideration of the myriad of factors and "facts" involved in negotiations and their interrelationships. It is a set of frameworks and theories for ordering, interpreting, and assessing strategies and tactics and for anticipating future actions.

### COMPONENTS OF A NEGOTIATION CURRICULUM

There are three critical topics that ought to be covered in teaching negotiations to planners: theory, individual skill-building, and the structure and design of multiparty negotiation procedures.

At a barest minimum, core planning curricula ought

to include a solid introduction to negotiation theory that imparts the ability to distinguish between different negotiating strategies. Planning graduates need to understand the distinction between "compromising" positions and "integrating"

**Planning graduates need to understand the distinction between the "compromise" of positions and the "integration" of interests.**

interests. The value of negotiations, especially in public dispute resolution, is questionable when distributive bargaining strategies dominate. All negotiations are not equal, and planners must have the ability to evaluate negotiation processes in order to determine whether the "alternative" approach is indeed preferable.

Importantly, analytical frameworks can be applied even without explicit negotiations occurring. For example, a critical step in preparing for a negotiation, as suggested by the Fisher and Ury model in *Getting to Yes* (Fisher and Ury 1981), is to analyze the interests of all parties. These interests are the motivations, concerns, and values that lie behind the demands (or negotiating positions) that people make. The negotiation process is used to affirm or contradict one's pre-negotiation analysis. While the definition of interests themselves may change during the exchange of information, this "stakeholder interest analysis" is useful in attempting to gain a sense of possible options that may be supported by all parties involved. Therefore, even without negotiations, this type of pre-negotiation analysis can provide planners with a best estimate of the possibilities for consensus on a course of action as well as provide clues as to where opposition is likely to arise and for what reasons. Fisher and Ury's concept of BATNA (best alternative to a negotiated agreement) further defines not only whether particular groups will oppose a given proposal, but also what other course of action they are likely to pursue. As this example illustrates, negotiation theory can suggest an orderly approach for

assessing the political viability of alternative planning options.

How important is negotiation skill building for planning students? Skill-building is always important. Yet, how much time in a planning curriculum ought to be devoted to enhancing negotiating skills rather than developing competency with other important technical planning tools, such as GIS or qualitative research methods? Since we all negotiate on a daily basis, one might wonder why skill-building cannot occur outside of the classroom. To some extent it can and does, but we rarely experience a series of negotiations that are suitable for formal negotiation. A key element of skill-building is repetition. Musical scores are mastered by playing notes in the same sequence and with the same rhythm over and over. Skill-building in baseball incorporates repetitive plays: throwing, catching, hitting, and fielding. Improving negotiation skills can similarly benefit from carefully arranged exercises allowing students to apply key concepts and then to reflect on that application, especially with reference to the theoretical guides. Real life is too varied and too unpredictable to ensure consistent opportunities for practice. Moreover, classroom exercises also create a common experience with multiple perspectives for collective discussion and reflection.

The third topic area essential for planning students is a review and evaluation of formal, multiparty negotiation procedures. As all negotiations are not equal, neither are all negotiation procedures equal in their implications for the distribution of political and substantive gains and losses. To the extent that planners care about issues such as social equity, environmental integrity, and long-term economic sustainability, planning students must develop the capacity to critically assess these procedures both in terms of process and substantive outcomes. For example, a multiparty negotiation procedure that does not attempt to provide equitable access to technical information and expertise systematically undermines the ability of resource-poor groups to articulate their needs. Planners as responsible participants in such a process ought to demand the inclusion of techniques such as joint factfinding to address the disparities. Planners must be educated and encouraged to be critical consumers and designers of multiparty procedures.

Exposure to the varied forms and fields of the application of these procedures will also equip planning students with group process issues. The dispute resolution field offers techniques for handling common group process issues including setting meeting agendas, keeping discussions focused, responding to emotional outbursts, and getting disgruntled participants constructively involved. Since the ability to behave appropriately in group processes depends on prior experience

and the ability to learn from past experience, negotiation exercises that allow for experimentation and reflection on various behaviors, tactics, and strategies will produce more confident and competent team players and leaders.


While the core curriculum should enable students to recognize different negotiation strategies and expose them to the range of formal dispute resolution procedures used in planning, an in-depth examination of negotiation theory, alternative procedures, and skill-building can be offered as an elective. Such a course would serve the needs of a planning student who is preparing for a position immersed in the thick of planning practice as opposed to those planners who will serve primarily as specialized technical support professionals. To extend and deepen one's understanding of the dynamics of negotiations and the subtle value of strategic choices, weeks of practice, reflection, and active discussion are needed. Simulation exercises as well as "real life" negotiation experiences can provide the backdrop for testing theories, experimenting with tactics and techniques, and enhancing personal competency and confidence in negotiations.

### THE FUTURE OF NEGOTIATION IN PLANNING EDUCATION

Until recently, planning graduates (and most other professionals) had little opportunity to acquire training in negotiation theory and skills. Negotiation tools are now widely recognized as valuable assets in a variety of professional fields. In a recent survey of planners in Oregon and southeastern Washington, practitioners identified negotiation and conflict management skills as essential assets to a prospective entry-level planner. Moreover, these attributes were mentioned independently of questions concerning the value of working well with colleagues, working with the general public, and understanding what the public/client wants, all tasks in which performance also can be enhanced through negotiation training. Competent negotiators will continue to be highly valued among planners. Planning programs not currently offering negotiation explicitly in some component of their core curriculum should, and those that do should feel assured the class time is well spent.

Awareness of the value of dispute resolution skills is permeating many facets of society and our education system. School mediation programs across the United States train students as young as elementary school age to deal with conflict constructively. As conflict management skills become more commonly taught (in elementary and high schools as well as undergraduate institutions), planning students will enter our graduate programs with a more sophisticated understanding of the human side of dispute resolution practice,

specifically in interpersonal situations. The theoretical underpinnings of alternative negotiation models and strategies, however, will not be well covered at the lower levels. Planning graduate schools must fill this gap and provide instruction on the profound differences between private and public disputes.

As the landscape of public governance changes, so ought planning education. Grassroot community groups are becoming better organized and will continue to demand a voice in decision making. Increasingly, implementable public decisions and place-based planning decisions will be attained only if a broad consensus is forged among key groups within the community. Whereas in days past, the necessary consensus might have consisted of agreement between politicians and dominant economic players, effective governance of the future will rely on a consensus that includes community-based citizen groups, businesses, and a multiplicity of local public and non-private agencies. Regardless of where planners view themselves in the changing landscape, an understanding of the negotiations going on around them is essential. 

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# Are We There Yet, Mom?

by Heyden Black-Walker

*Too often planners and other urban dwellers forget about the special transportation needs and accessibility challenges facing children and parents who need to make trips with children. A student mom offers another perspective on the dangers of auto-dependent urban design and transportation.*

Few will contend the fact that children need safe places to walk, ride bikes, and use buses in order to get around in their environments. A look at the transportation and accessibility constraints and needs faced by children and parents reveals limited and expensive child care, unsafe neighborhoods and streets, and physical barriers to mobility—all of which add up to economic and opportunity costs for families. Parents must fulfill unmet needs by spending large portions of their income on day care and after school care. Many destinations are no longer safely accessible by walking or biking, further limiting the mobility of children and parents (mostly mothers) who must drive their children between destinations. Parents spend significant amounts of time, energy, and money providing for their children's accessibility needs, increasing their dependence on cars, and limiting their ability to participate in the labor force.

## THE PROBLEM

The way that cities are designed is one of the biggest impediments to accessibility for children. Andres Duany, one of the first of the 'New Urbanist' architects, observes that children are 'victims' of suburbs which isolate them by separating land uses with wide streets designed for the convenience of automobiles. Children who live on cul-de-sacs surrounded by major streets in single-use residential areas are isolated from the other amenities of a city. Because of dangerous barriers such as major streets and highways, these children are unable to travel to commercial areas, play dates, and extracurricular activities outside the immediate neighborhood without a parent to drive them. Children's accessibility problems, however, go far beyond inhospitable urban forms. Family composition, income levels, and the way our social institutions are organized must also be taken into account to fully understand the transportation challenges facing children and their parents.

Sandra Rosenbloom, who studies women's travel patterns, found that women between the ages of 16 and 64 in both rural and urban areas make more trips per day than men, and that their trips are shorter than men's. She states "the NPTS [National Personal Transportation Survey] data clearly show that while the presence of children affects both men and women, having children has a profound impact on the trip rates of women and a far less impact on the travel patterns of men. The number of trips and the distance traveled by

women is much more responsive to both having children and to changes in the age of their children" (Rosenbloom 1994). Rosenbloom also found that women usually make shorter trips between multiple destinations. This practice of linking trips together, as well as concerns about children's safety, has created a greater dependence on the car.

Research indicates that working women with children are particularly dependent on the car because it offers the best — and perhaps only — way to balance the child care and domestic responsibilities women retain when they enter the paid labor force. Societal constraints which contribute to this situation include inadequate child and elder care, limited housing options, segregated labor markets, poor transportation options for children, inaccessible service in suburban areas (where more than 70% of all jobs are located), and unsafe alternative modes of travel (Rosenbloom 1994).

The accessibility and mobility problems of children and their mothers affect a large portion of our society. Over one third of households in the United States have children (persons under 18) according to the 1990 U.S. Census, and those children make up one quarter of the entire U.S. population. The presence of children also has a profound affect on family income. Poverty is common among young, single mothers with more than one child and is increasingly likely for younger mothers with more and younger children.

Because single mothers are statistically much more likely to live in poverty, marital status becomes an important factor affecting their ability to pay for child care as well as other family expenses. Of single women 25 to 34 years old, 74% of those who have two or more children under the age of six live in poverty (U.S. Census, Current Population Surveys). This statistic is important to keep in mind when considering child accessibility issues because of the huge impact both poverty and child care have on a family's transportation needs and options. Accessibility for children must be examined in terms of how child care needs affect parental access to jobs, the special considerations affecting the transporting of young children, and the accessibility needs of school age children.

## ACCESSIBILITY AND CHILD CARE

The effect of income and employment on families and single mothers alike becomes especially apparent when considering that accessibility to jobs is dependent on

adequate child care for children. Small children cannot be left alone during the work day, thus parents must secure day care and after school care for their children while they work. Child care in the Austin, Texas area generally costs between \$300 and \$400 per month, but can be as high as \$750 per month (Herrera and Gandara 1996). Researchers have also found that child care, even when affordable, can be limited by the age of the child: 40% of the child care centers in Texas do not accept infants (Herrera and Gandara 1996).

Rosalie Ambrosino, a professor of social work at The University of Texas at Austin (UT), observes that “already, many parents probably are choosing unlicensed, sometimes unsafe environments for their children because they can’t afford anything else” (Herrera & Gandara 1996). In addition, low income wage earners are more likely to work late shifts when no formal child care is available, thereby exacerbating this problem even further.

A single mother, “Kerri,” described how transporting her young children affected her life. While working part-time in a downtown office, she enrolled her two children, ages one and three, in child care, but at different places because of their different ages and different care availability. The family would leave the house at 7 a.m. with packed lunches, diaper bags, and other necessities to arrive at the care facilities as soon as they opened. Because she could not drop the kids off any earlier, by the time she arrived downtown she did not have enough time to park in her assigned lot five blocks away and walk to work. Usually she would have to park at a meter, report to work, and then hope to be able to leave the office long enough to move her car. She accumulated \$400 in parking tickets during the course of that job.

Parents are forced to accommodate their own needs and the needs of their children, calculating the trade-offs in child care availability and quality, time restraints, family priorities, resources, geographic location, and flexibility needs. Parents must look for transportation solutions that achieve a compromise. Linking trips, carrying necessary items like a stroller, booster seat, and extra diapers and wipes for emergencies, accommodating multiple schedules, and ensuring safety en route all contribute to many parents’ dependence on the car.

#### TRANSPORTING YOUNG CHILDREN

Safety is always a concern of parents which directly affects their choice of transportation modes. Because young children cannot be left alone, they must accompany parents to run errands, shop, etc. A parent’s time is limited; studies show that parents who transport children generally link trips together, making them reliant on the car (Rosenbloom 1994). Cars are con-

sidered to be more convenient than public transit options in most American cities which can take more time and may present other difficulties such as transporting children and any accompanying gear between stops and destinations. In addition, most modes of public transportation do not have seat belts or child carseats.

Young children may be pushed in a stroller while the parent walks, but strollers are very vulnerable to traffic, especially in the absence of sidewalks or when crossing major streets. Pushing a stroller is not a solution to transportation problems unless critical destinations are nearby. In an urban neighborhood or small town a parent may be able to walk with a stroller to the grocery store, pharmacy, library, etc., but in a suburb, a parent is often unable to walk to a variety of shops or uses. Commercial areas are usually quite distant from residential areas and often separated by major streets. In addition, zoning codes in most American



Andrew Grigsby

suburbs mandate large amounts of parking, which is usually placed between the street and the building; to get to each shop a parent must cross an unfriendly ‘sea of cars.’ Pushing a stroller to destinations in this environment is usually unpleasant and unsafe.

In my own neighborhood I sometimes put my toddler in the stroller and walk to errand destinations. We live two blocks from a grocery store, a pharmacy, a public library, a photocopy shop, a video rental store, and other commercial amenities. To reach these, we cross two major streets whose lights are timed for vehicular flow, walk in the street because of lack of sidewalks, bump up over high curbs without ramps, and cross many commercial driveways and parking lots.

I used to ride public transportation to UT with my young son who I left at day care while I attended classes. I used a stroller to transport him to the bus stop, which meant I had to carry the stroller on the bus, along with my son, my book bags, his lunch, diapers, and a change of clothes. The bus ran every 10 minutes, stopped two



blocks from our house, and dropped us off right in front of UT. The bus was convenient because parking at UT was very limited and costly, and the bus stop was much closer to my destinations than I could ever park. Nevertheless, dropping a child off at day care is difficult when using public transportation, and my husband and I are not comfortable with our son's traveling without a car seat.

#### Accessibility and School-Age Children

With the help of her family, Kerri recently bought her first house, close to a good elementary school, middle school, and high school. She feels her situation has improved greatly now that her children are able to bike or walk to and from school. Nonetheless, even this environment is not trouble-free. Children like Kerri's, who live closer than two miles from a school, are not offered school bus service by the Austin Independent School District (Osborn 1996). "Sarah" and "Buddy" ride their bikes to and from the elementary school, which is about a mile away, but this can be dangerous too. They ride down a neighborhood street which carries a lot of traffic. The bicycle lane runs immediately adjacent to the Missouri and Pacific Rail line. The rail line is only 30 feet from the road and is unfenced, so Kerri has ensured her children understand how dangerous trains are.


The problems of walking and biking are not limited to children. Before they moved into their current house Kerri did not have a car for a month and a half. She would walk with her kids to their elementary school because they had to cross a major thoroughfare and then continue by bicycle to her job downtown. Because the kids were too young to be walking home alone across busy streets, she had to hire someone to pick them up, take them home, and watch them for the rest of the afternoon.

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Children's extracurricular activities are a priority for any family. But practices, meetings, and games are often held outside of immediate neighborhoods and at times conflicting with parents' work schedules. Many commentators appear not to understand how these extracurricular schedules and locations affect families and create more dependence on the car. Since buying a car, Kerri drives to work downtown and the kids bike

to school. They then bike home when school ends in the afternoon and stay home alone until Kerri returns from work. On Mondays, the oldest rides her bike a couple of miles to gymnastics class at a community center, travelling along several stretches of road without sidewalks or bike paths and crossing a major thoroughfare. Kerri worries about her daughter's safety, especially at the street crossing. While gymnastics class is always in the same location, soccer practice rotates among three different locations. Kerri originally expected that the kids would be practicing at the neighborhood school, but when she realized that this wasn't the case she had to ask the children's father (her ex-husband) to pick the kids up and drive them to these various locations outside of their neighborhood. Kerri is quick to acknowledge that without her ex-husband's sense of responsibility and helpfulness, as well as the increased level of safety in her new neighborhood, extracurricular activities for the children would be impossible.

#### CONCLUSION

The accessibility and transportation difficulties of families with children is a complicated issue. Child care is absolutely necessary if parents are going to be able to work at full-time jobs. Child care has long been considered a private, family concern, but it should be reconsidered as a social policy issue. Greater sensitivity to the special requirements of parents and children is needed in the planning process. Just because residential areas are geographically close to shops and services does not mean that those shops and services are accessible. Both accessibility and child mobility could be significantly improved with safer streets and a greater awareness to transportation issues by city planners, school planners, and people who organize extracurricular activities. Until there are more transportation options and profound changes in the design and planning of most suburban neighborhoods in the U.S., parents and families with young kids will continue to be dependent on cars and will continue to listen to the plaintive whine: 'Are we there yet, Mom?' 

*Heyden Black-Walker is a student in the Community and Regional Planning program of the School of Architecture at the University of Texas at Austin. She received her BA from UT Austin in 1987. Since then she has worked as a professional planner, backpacked around the world with her husband, and stayed actively involved in parks and trails planning in Austin. She currently works for the Trust for Public Land and stays busy raising her two year old son. Ms. Walker would like to thank Dr. Susan Handy for her invaluable input while writing this paper.*

Sensitivity to the needs of parents and children could significantly improve children's accessibility; just because residential areas are close to shops and services

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# Off the Shelf

## Views and Reviews of Books and Planning

*We were curious about what professors in planning related disciplines read in their spare time and asked several to do a quick book review. The results from our two respondents demonstrate the broad ranging sources of inspiration and critical thinking.*

A LOVE OF STONES

*The Hunchback of Notre Dame.* Victor Hugo.

Reviewed by Lawrence Speck

Over the past year or so I have been reading nineteenth century French novels for their vivid descriptions of buildings, places, and cities. Novelists of that era seem especially dedicated to the settings of their tales as an integral part of their storytelling. French writers, in particular, lavish pages and pages on rich portrayals of streets, squares, palaces, cathedrals, and gardens, giving extraordinary insight into the way the physical environment and the culture of the city meet.

Alexander Dumas and Victor Hugo, for example, are masters at describing urban life and its relationship to a physical infrastructure. Dumas' novels were generally serialized in the cheap and very popular Parisian newspapers of his time. Because his audience knew Paris so well, specific descriptions of quarters of the city, complete with street names and even local landmarks, could virtually place the reader in the midst of the novel's action. In historical novels such as *Queen Margot* (set in the sixteenth century) or *The Vicomte de Bragelonne* (set in the eighteenth century) Dumas could remind Parisians of what the city used to be and highlight contrasts over time. In novels set in his own era, such as *The Count of Monte Cristo*, he could target very specific contemporary haunts, lending immediacy and reality to his story.

Victor Hugo's primary works were not serialized, but they are written with the Parisian audience very much in mind. If the reader knows even contemporary Paris, it is possible in *Les Miserables* to follow Jean Valjean's changes of residences through various parts of the city as he seeks to escape detection. It is also possible to understand the enormous changes that were occurring in what was the periphery of the city in Victor Hugo's time—districts now very much a part of the urban core. The author notes that he had, "long been a wanderer around the gates of Paris" and that to him they were "a moving source of memories." He is intrigued by "that mixture of wild nature and urban landscape" which he calls "the limbo of Paris." *Les Miserables* is peppered with many insights into urban growth and into the transformation of open landscape into urban form.

It is in *The Hunchback of Notre Dame*, however, that Victor Hugo provides his strongest and most direct declarations about architecture and the city. His interest in built form springs from his interest in culture, and in buildings and urban form as expressions of cultural values. He observes, "The greatest productions of architecture are not so much the work of individuals as of society—the offspring rather of national efforts than the outcome of a particular genius; a legacy left by the whole people, the accumulations of ages..." He speaks of fifteenth century Paris, the setting of *Hunchback*, as, "not only a beautiful city, but a homogeneous one, an architectural and historical product of the Middle Ages—a chronicle in stone."

Much of the novel is spent making parallels between built form and ideas. One of the mysterious portals of Notre Dame becomes a vehicle for probing the veracity of magic and witchcraft. The massive, but mostly empty, towers of the cathedral house a priest and his deformed companion, and become symbols for a defiled and empty religious order. The maze of crooked streets in the university district depict the convoluted confusion of intellectual pursuits. An abandoned district at the edge of the city reclaimed by gypsies and thieves reveals Hugo's admiration for the energy and vividness of anarchy.

The author's compunction to draw the abstract idea into concrete substance in order to feel and understand it more intently is played out through the book's philosopher character, Pierre Gringoire, who gains, at a certain point, "a fervent interest in architecture." Hugo notes, "This new craze had supplanted in his breast a passion for hermetics. This is understandable because there is an intimate connection between hermetic philosophy and stonework. *Gringoire had passed from the love of an idea to the love of substance.*" Gringoire later says, "First I loved women, then animals. Now I love stones. They are just as diverting as animals or women, and not so perfidious."

"Loving stones" is, in part, what *The Hunchback of Notre Dame* is about. The chapter titled, "This Kills That" notwithstanding, Hugo comprehends the power of the physical environment to both embody/express cultural values and to shape them by powerfully affecting people's lives and patterns of living. He finds, in the city, a vivid and palpable portrayal of ideas and

values—one which, if fully felt and understood, can speak volumes.

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The Emperor is Stark Naked!  
The Hype of Globalization and  
Convergence

*Spaces of Globalization: Reasserting the Power of the Local.*  
Kevin Cox, (editor). 1997. Reviewed by Peter Ward

As an urban geographer and a development specialist working primarily in Latin America, for several years now my ire has been raised: first, by those scholars and analysts who have been swept up and unthinkingly intoxicated by arguments of globalization and of economic, political and cultural convergence. The second wellspring of my irritation comes from the fact that these conventional wisdoms emanate, almost exclusively, from research that is anchored firmly in the heartland of modern economies of Europe, the US and Japan, and is conducted by those who have little interest in analysing in a nuanced way how those processes engage and interact in other peripheral and usually less developed countries.

Both features of academic production seem to me to be in danger of reproducing the mistakes of dependency theory of the 1970s in which many of us were schooled, and cut our scholastic teeth. The argument was that the overarching processes and rationality of production in the “metropole” created an economic and political dependency in the colonies and in less developed countries, generating convergence in urban structures, social relations and behavior. Thankfully, although it took a decade to achieve, these ideas were set aside as research from the periphery demonstrated that while these nations were often locked into assymmetric and dependent relations with the more advanced industrialized countries, it was the way in which these relationships *engaged* with national and local structures that was important in generating outcomes. Moreover, that these outcomes were different from place to place. Just as well, perhaps, otherwise “area” specialists like myself and many others at this University would probably have never gotten a job.

So, when it comes to contemporary globalization theory, I hope that I may be forgiven for having a sense of *déjà vu*. I selected this book for review because it does, very effectively I believe, begin to challenge some of the myths, generalizations and simplifications associated with globalization theory, and to assert the power and the analytical importance of understanding the local. It goes some way to suggest that this particular emperor, if not totally naked, is very scantily dressed.

Typically globalization theses assert a number of

common features, *inter alia*: growing internationalization of trade and foreign investment; the rise of multi- and transnational corporations; a new-international division of labor; intensified competition associated with new industrializing countries; the emergence and changing functions of “World Cities”; the hypermobility of capital, and the existence of 24-hour financial markets, and so on. This leads to a loss of sovereignty on the part of nation states, and to a convergence process whereby social and cultural relations increasingly conform to a common global culture, exhibited through globally recognized icons. Readers may find themselves more or less nodding at this stage. My point (and that of the authors of this book), is that much of this is not new (echoes of dependency), and much of it denies the existence of important spatial, social, and political configurations. Nations and regions are not helpless within this process, even if their macro-economic freedom for maneuver is often constrained. Nor are the significance of local territorial arrangements and meanings being set aside: Rather they are being reconstituted as the local engages with the national and with the global.

The nine contributors to this benchmark volume (well known geographers mostly), seek to bring us back to these latter themes. The first set of chapters relate to the economics of globalization. Michael Storper argues that much economic development remains territorialized (rather than globally footloose and deterritorialized), and that the globalization of markets frequently enhances place specific production potential that offers some insulation from the forces of global competition. Meric Gertler’s chapter exemplifies precisely this, illustrating the difficulties that may arise where advanced machines and systems do not take full cognizance of social relations surrounding their use, as was the case he studied of Canadian adoption of techniques that depended upon the products of German machine tool firms. Even a multinational corporation like Honda demonstrates that the numerous dimensions of corporate globalization-localization strategies are, in fact, highly nuanced to, and sensitive of, local cultural and economic markets and contexts (Andrew Mair’s chapter). The trick is not to assume convergence, but to assume divergence, and to strategize the firm’s activities in order to take best advantage of different local conditions. Similarly, in their examination of investment houses which are often supposed to operate according to a globally understood rationality and conformity, Gordon Clark and Kevin O’Connor demonstrate that certain arenas of investment are less easy to

Just as capital is not nearly as mobile as people often suggest,

predict since they are less transparent: indeed they may only be “translucent” or even quite “opaque.” Local investment brokers and analysts are best placed to assess such opportunities, and some product markets will have a strong national, regional, and even local emphasis.

The second set of chapters focuses more on politics of space and territorialization. Cox’s own chapter argues that notions of flexibilization, rolling back of the welfare state, the retreat of labor unions, and so forth, oversimplifies a much more complex ensemble of forces. Notions such as deskilling, faster and more immediate transportation and communications systems are seriously overgeneralized. Just as capital is not nearly as mobile as people often suggest, nor is labor immobile. Interactions between and within arenas can be defined in scale terms, and there is a rescaling of regulatory practices that Eric Swyngedouw refers to as “glocalization”—a contested reconstruction of scales that sees interventions of the nation state being scaled downwards to the level of the city or region on the one hand, and upwards to the new institutional structures of global and economic cooperation (EC, NAFTA, G-7 etc.), on the other. Global or local, and less of the national, hence “glocalization.” Andrew Herod demonstrates this in his analysis of labor as agent, showing how some labor representative organizations in the US, through their own international organizations and linkages, have countered the detrimental effects of capital’s globalized structures. Nor does the declining room for maneuver of the macroeconomic powers of the state

go unchallenged, and Ton Notermans shows how such “straightjackets” are not new, and that the discipline that they impose is far from total. Finally Murray Low brings us back to the (now) more familiar dimension of *Thinking Global: Acting Local*. He is concerned that the “politics of place” which seeks to view politics in spatial terms is too constricted. He argues that there are also transnational social movements which are not tied spatially—Greenpeace for example. For him, the intensification of democracy requires both the areal and networked forms of space to be interwoven.

This is an excellent and welcome text, measured both in terms of the quality and authority of the contributions, as well offering an intellectual breath of fresh air to the globalization thesis swamp. But, unfortunately, it only goes halfway to alleviating my ire. Why so? Because it falls into the second “trap” of being exclusively informed by analyses anchored in advanced economies. Granted, it moves between the local and the global with dazzling elegance and virtuosity, but there is no contribution from the periphery. Although not so titled, this book is really only about spaces of globalization in advanced economies. Doubtless when you or I produce something about Latin America or Africa, the book or article will, perforce, be tagged with an area label—“in Mexico,” “in Latin America,” in “South Africa.” Unfortunately that “tag” will also determine that it will probably not be read by the likes of Storper, Cox, *et al.* Ah, well, back to the coalface.

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