

The Urban Structure of *El Centro* in Border Cities: A Case Study of Reynosa, Tamaulipas, México

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Abstract

The urban structure and built environment of the downtown area (*El Centro*) in Mexican cities bordering Texas are significantly different from those of their sister cities on the other side. The Mexican imprint on the urban structure of the *El Centro* is identical in many aspects to that of other interior Mexican and Latin American cities. However, the proximity of the United States and the relatively free exchange of goods and people along *La Frontera*, particularly in the Rio Bravo/Rio Grande Valley, have altered the urban structure of border cities resulting in a distinct variation of Latin American urban structure. With the advent of NAFTA accompanied by the increasing industrialization of the borderland and an accelerated interchange of goods, services and people; the urban structure of these areas is changing even more rapidly. Such a juxtaposition of a developed country adjacent to a developing one and the associated urban structure can be found in very few places in the world. This paper will explore the built landscape of the downtown area of Mexican border cities in an urban morphological framework using Reynosa as a case study to focus on the urban models that have been used to describe border cities

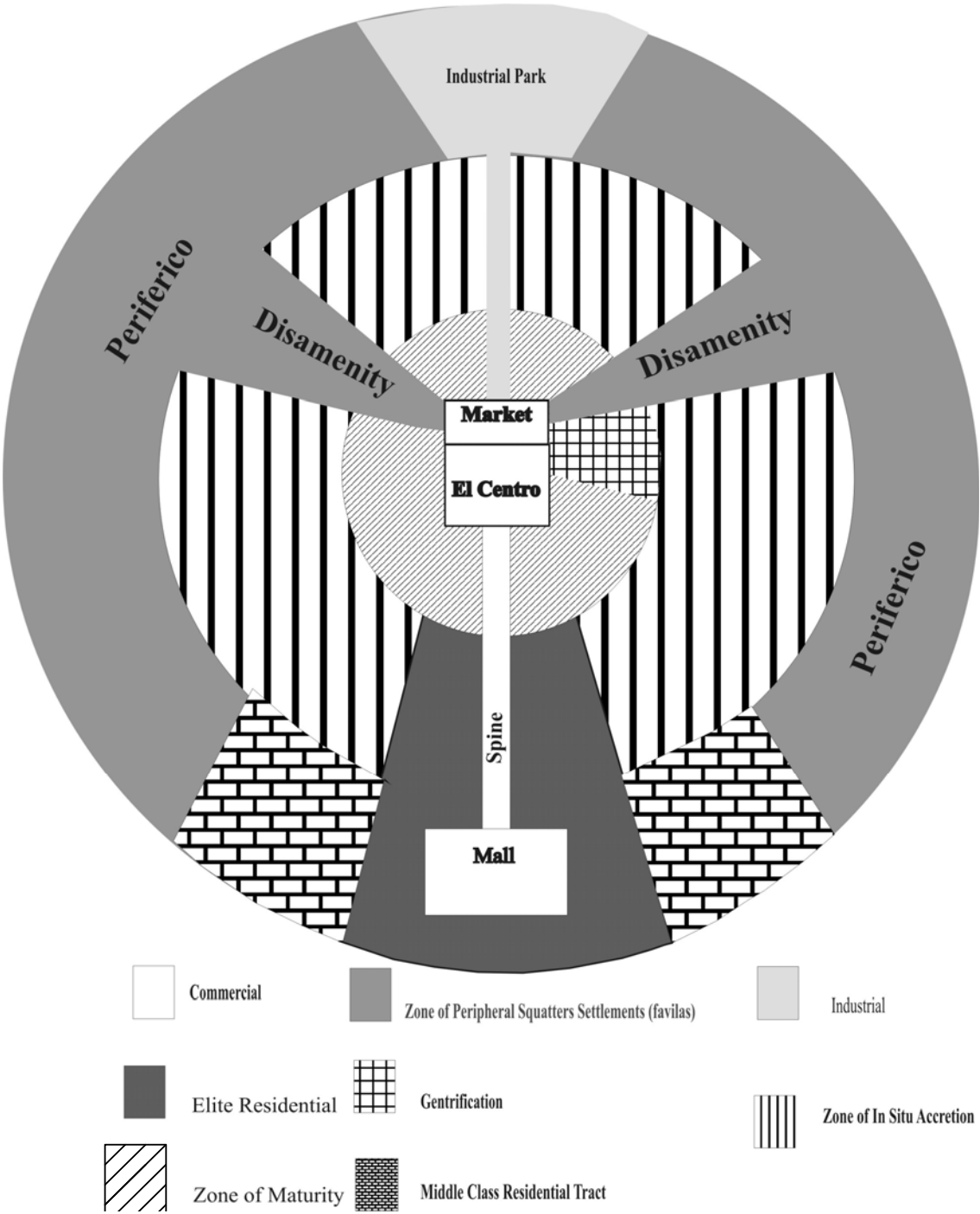
Introduction

Urban morphology examines the built-form and pattern of land use and the underlying dynamic factors that have created them. The study of urban morphology has largely concentrated on European and North American examples of urban structure and morphology (McAdams, 1995.) However, the literature on the urban morphology of Latin American cities is still maturing (Crowley, 1999.) The study of urban morphology of Mexican border cities is likewise in the same state of development. Similar to other models developed from other areas of the world (i.e., North America, Europe), the models developed for Latin America seem to follow some variation/combination of the concentric, sectoral, multi-nucleated and linear models. The key element in these models is the placement of generalized land use districts according to the author's view of the urban areas at a particular time. In all these models, the role and strength of the central business district is an important component. Thus, its characteristics could be seen as a key indicator of the developing form of the remainder of the urban area.

In inspecting the structure of the Mexican city, one sees a distinct variation from the European and North American urban structural models. It is very clear that Mexican cities fall under the urban morphological models for Latin America. This is due to numerous factors such as culture, income levels, automobile ownership, and availability of long-term loans for commercial and residential units and other factors unique to Latin America. The main urban morphological model used to describe the Latin American cities was developed by Griffin and Ford (1980) and later revised by Larry Ford (1996) to include other elements such as the emerging industrial park that were not included in the earlier model (see Figure 1.) However, these models are not without their critics. William Crowley (1999) criticized the original Griffin-Ford model and the revised model (Ford, 1996) as being too generalized and not accounting for the abundance of mixed land use found in all Latin American cities. Within the context of urban morphological models, those of Latin American could also be considered as a sub-set of the urban morphology of developing countries (Potter, 1995.)

The border cities, although influenced by the proximity of the United States-- particularly in the Rio Bravo/Rio Grande Valley area, follow the basic Latin American urban structure. The view of the everyday U.S. citizen is that Mexican border cities are a distortion of the North American city (Arreola, 1996.) This assumption is completely false. The influences of the urban policy of México, the Mexican economic system and the fact that many of these cities were founded as colonial settlements before the present border between the United States and Mexico have placed an indelible and irreversible Mexican imprint on the urban structure of these cities. From the author's observation of cities throughout México, the basic urban structure of the Mexican border cities resemble those in the interior of northern México. Along the Texas border, major border cities mirror the urban structure of Monterrey and Saltillo in many aspects due to the influence of increasing industrialization, particularly due to the development of increasing number of *maquiladoras* and the prosperity of these areas compared to other areas of México, and the proximity of the United States.

Figure 1:
Revised Latin American Urban Model (Ford, 1996)
Based on Griffin-Ford Model (1980)



Redrawn by Author

In other ways, the urban structure of both border and interior Northern Mexican cities are similar to many other Mexican cities located at a significant distance from the border.

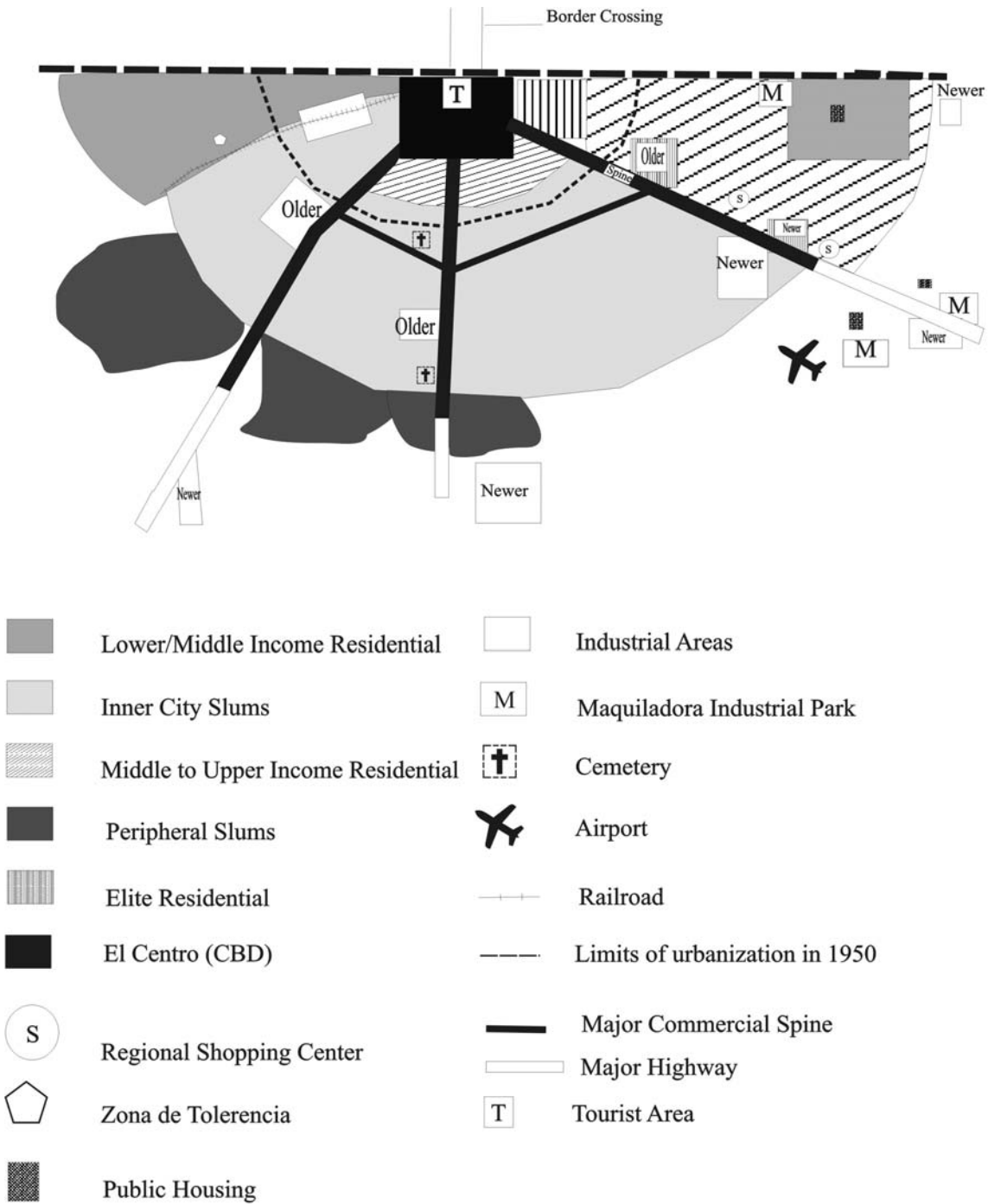
Regardless of the similarities of border cities to other Latin American cities and those of Northern México, there are some significant differences, which separate Mexican border cities as a distinct variation of the Latin American urban models (Arreola and Curtis, 1995.) The proximity of the U.S. border to these cities have encouraged the development of *maquiladoras* at a level higher than other areas of México thus encouraging greater demand for workers and increased internal migration to these areas. The increased population has created a rapid growth in residential areas, particularly in the development of significantly large areas of squatter areas on the outskirts of these cities. This development has been greatly enhanced by governmental policies, transportation and other infrastructure improvements to take advantage of area's position vis-à-vis the United States over a period of many years. (Batallion, 1993.) The Mexican government has further reinforced the locational advantages by the official designation of *la región fronteriza norte* (the northern border region) and the area adjacent to the border, particularly the urbanized area as *la franja fronteriza norte* (the northern border strip.) (See Aduana de México, 2002 and Comisión para Asuntos de la Frontera Norte, 2002.) Esparza, Chávez and Waldorf (2001), Fuentes (2000) and Yoder (2002) have recently documented the increasing influence of *maquiladoras* on the urban structure of border cities.

The historical setting along the Rio Bravo/Rio Grande and the long period of interaction between Mexican and U.S. cities along the border has created a distinct urban structural variations peculiar to this area, but different on each side of the border. Since the area was occupied by Spain and México and the peoples of both sides have traversed freely across the border after the establishment of the Rio Bravo/Rio Grande as the border between the U.S. and México, there is a large degree of similarities in urban structure on both sides (Arreola, 2002.) One can see this in building types, house set-backs, types of commercial land uses, and public spaces such as plazas (which are also present in South Texas.) Recently, the tourist and other related trade oriented toward U.S. citizens (particularly from residents from near-by sister cities) have created service shopping (e.g., drug stores, dentists etc.) and consumer shopping (curios, clothes, liquor, cigarettes etc.) and entertainment areas which are directly related to the proximity of the United States and the associated “bargains” afforded in Mexico. Mexican citizens also travel frequently across the border for the greater variety and prices in stores in sister cities in the U.S. For example, it is estimated that in some Texas border cities the amount of retail trade related to Mexican citizens or export retail trade is between six (Del Rio) to twenty percent (McAllen) of their total retail trade (Phillips, 2001.) Freedom of movement on both sides has been somewhat restricted since September 11, 2001 and temporarily put a slight damper on the movement of both Americans and Mexicans across the border.

Arreola and Curtis (1995) studied the urban structure of border cities extensively. Their urban model is by far the most developed of several urban morphological models. Their model is a variation of the Griffin-Ford model (1980) with variations allowing for

districts indicating industrial areas on the outskirts, a tourist/entertainment area and automobile-oriented shopping areas. The most obvious difference is the demarcation of the Mexican/U.S. border, which is the reason for the difference between border cities and interior Mexican cities.

**Figure 2:
Arreola and Curtis Border City Model
(Areola and Curtis, 1996)**



Redrawn by Author

The vitality of any urbanized area can be gauged by inspecting the central business district. The downtown area of any city around the world is a “barometer” of the dynamics of other parts of the city and perhaps the relationship of the city with surrounding cities, regions or near-by countries. The focus of all Mexican cities is the downtown area or *El Centro*. The importance of *El Centro* is apparent in all Mexican cities and has not been completely marginalized as the case of the Anglo North American city. *El Centro* is still a vital component of the structure of the Mexican urban area. However, with the advent of outlying areas with suburban shopping malls and commercial strips in most major Mexican cities, such as Monterrey, which mirror North American suburban development, one can see that the role of *El Centro* has been altered and is showing signs of being marginalized similar to what happened in North American cities in the 1950’s. The case of *El Centro* in the border towns, particularly where there is a sister cities or urban agglomeration (i.e., the Rio Grande Valley) across from a Mexican border city is further changing its character. This is not to say that Mexican cities and those along the border are following the exact same path as American cities did in the 1950’s due to numerous factors peculiar to México, Latin American countries and developing countries. Cities along the border are presently Mexican in character and will remain so for the near future. However, some distinct differences make the structure of *El Centro* in border cities different from other Mexican cities.

Reynosa, a major city long *La Frontera* in México, was chosen as a case study because it was felt that it was representative of major cities along the border such as Matamoras, Nuevo Laredo, and Juarez exhibit many of the same tendencies. (Arreola and Curtis, 1995) Reynosa was also chosen because the author saw that *El Centro* in Reynosa could be considered a “barometer” or indicator of other developmental pressures. Arreola and Curtis (1995) inspected the structure of *El Centro* in Reynosa in detail including an extensive land use survey. While it is clear that most of their findings are still correct and the model they developed is accurate from my inspection, I would like to add some additional detail to clarify their findings further and to lead possibly to a revision of their model of border cities.

What is *El Centro*?

El Centro is generally synonymous with the land use category of the Central Business District. In Latin American cities, including México, *El Centro* has followed a particular pattern. The origins of the structure can be traced back to the The Law of the Indies (Vance, 205-10) where the Spanish proscribed for each town a certain structure particularly focusing on the plaza, with the church and the *Ayuntamiento* (City Hall) as key elements of the plaza. The street pattern prescribed was a grid. This same plan is repeated in every colonial city in México. Many urban morphologists have examined the plaza or town square as having its roots in Roman/Greek origins. Edmund Bacon (1967), Munford (1961) and Vance (1976) are probably the best source for documenting the basic overall structure of cities around the world. However, they have ignored or given little focus on the urban morphology of Latin America. Vance (205-10) is the only one of the three that looks at the linkages between the Roman and the colonial Spanish Latin American urban form.

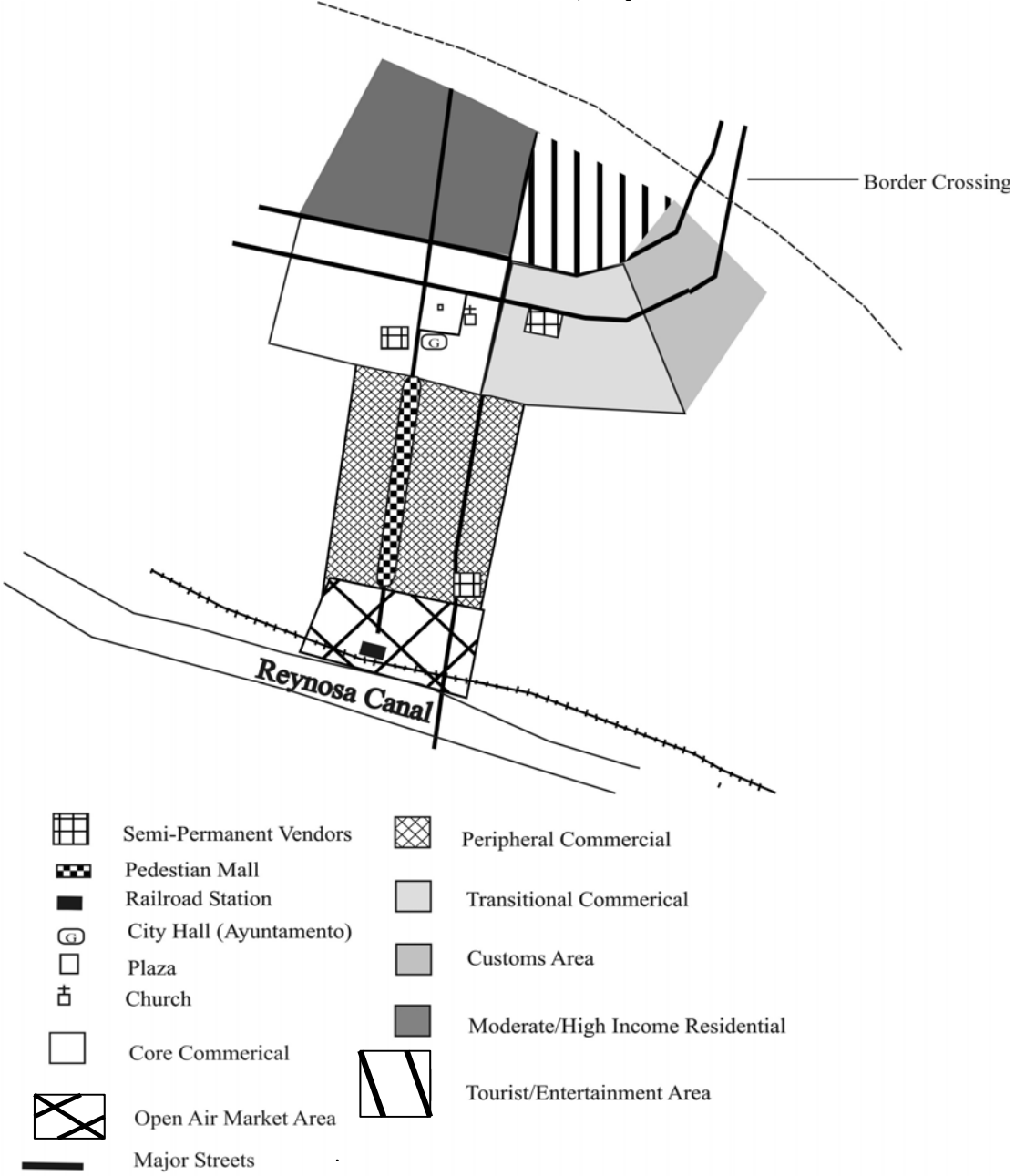
The components of *El Centro* as identified by Ford and Griffin (1980) consists of a commercial spine, the plaza, and middle to high income neighborhoods close to the Plaza. This model could be described as a hybrid concentric/sectoral model. The model was revised to include some of the elements that were excluded or not fully mature, such as the industrial park, and some other revisions. The *El Centro* of the Arreola and Curtis model (1995) includes all the above components, but adds the tourist area, and the barrier of the border. While they describe some of the basic components, the model may have to be revised or refined in light of some of the findings in Reynosa.

Components of Urban Structure of *El Centro* in Reynosa

On several occasions during the spring 2002, I went to Reynosa to inspect the built structure of *El Centro*. I took numerous photographs and observed the present function of the different areas of *El Centro*. In addition, I used a Geographic Information System and a digital aerial photograph to delineate the general boundaries of these areas and reference my digital photographs with the general land use areas.

El Centro in Reynosa consists of the following areas: 1) customs; 2) tourist/entertainment; 3) moderate to high-income adjacent residential (former elite housing area); 4) transitional commercial (mixed tourist and local commercial land use); 5) commercial core; 6) peripheral commercial and; 7) the market/railroad station area (See Figure 3.)

**Figure 3:
Generalized Land Use of *El Centro*, Reynosa**



Not to Scale

The **customs area** consists of the border crossing facilities and the related road network. Surrounding some of these areas is some commercial related to the port function such as insurance companies, importation of goods facilitation. The customs facilities for the importing of vehicle, granting of visas, and commercial transactions related to trucking is located away from the main entry point into *El Centro*. Truck transfer areas and warehouses are located on the perimeter, but near to the border. The land use devoted to the transportation is an important part of the land use of border cities. It should be noted that a large degree of truck traffic has shifted away from the McAllen/Reynosa crossing to the Pharr crossing because: it offers better access to the toll road (*autopista*) to Monterrey; customs facilities are located at the border as opposed to the former crossing where they are located some distance from the border and avoids the congestion found in the central area of Reynosa.

Adjacent to the customs area is the **tourist/entertainment area** with various curio shops, liquor stores, nightclubs and restaurants that cater to tourist trade and particularly that from adjacent Texas border towns, particularly McAllen. There is also a mix of services catering to U.S. citizens such as doctors, dentists, and pharmacies due to the lower price of their services or goods compared to their cost in the United States. On the edge of this area are several “malls” or department stores catering to the tourist trade. This is a relatively new phenomenon and is a major competitor with other tourist/curio shops. While the tourist/entertainment area is evident, it is not a dominant part of the urban structure of Reynosa. (While all border cities in this area have a certain tourist component in their urban structure; Nuevo Progreso is the only one in the area that is almost exclusively devoted to the tourist industry.) Arreola and Curtis (1993) provide detailed analysis of the tourist/entertainment sector of border cities.

Next to the tourist area is the area of **middle to high-income housing**. This area consists of older formerly elite housing, new high-income housing, and well-maintained middle-income housing. Many of the houses have a style that reflects the influence from the United States, but mixed among other houses that are truly Mexican in character. While this once was one of the most exclusive neighborhoods in Reynosa, most of the newer and high-income housing is occurring off the major arterials. Overall, the impression is one of a declining residential neighborhood. Surrounding this area is the typical mix of land use found throughout Mexico, consisting of low to middle income housing, neighborhood commercial (i.e., *abarrotes/mini-supers* or neighborhood grocery stores, local restaurants etc.) and perhaps small industrial sites.

From the customs area to the plaza is an area of **transitional commercial land uses**. This area being marginal to the main commercial core and to the tourist/entertainment area has land uses that are characteristic of both. In addition, because this is a lower rent area, it contains businesses that could not operate in either areas and make a profit. There are some tourist-oriented- businesses such as dentists, doctors and money exchange offices, but there is also commercial land uses oriented toward the local economy. Interspersed in this area is residential development either above the commercial establishments or as separate units. Just before the plaza is an area of stalls for semi-permanent vendors, which cater to tourist and non-tourist trade.

The **core commercial** area is one of moderate-income commercial and permanent stores mostly catering to the local economy. Absent are some of the high-end franchised stores such as The Gap, found in the *El Centro* of other northern Mexican cities (i.e., Monterrey.) The center of the commercial cores is the plaza. The plaza is typical of many plazas in México with a kiosk and temporary commercial activities such as taco stands and shoeshine stands. However, different from other plazas in México is the presence of temporary facilities for tourists on one side of the plaza. For example, there is a large white plastic horse where tourists can pose adorned with a sombrero. Surrounding the plaza is an area of moderate-income commercial establishments, a newer and older church dating to colonial times, a hotel, several banks and the *ayuntamiento* (city hall), which is of fairly recent origin. There is very little evidence surrounding the plaza of the colonial period of Reynosa. Leading away from the plaza and going toward the railroad station and the market is the **pedestrian mall**. This area contains some of the higher-end commercial establishments catering almost exclusively to the local population. At this point, there are almost no establishments that can be identified as exclusively catering to tourists. Off the pedestrian mall is a covered pedestrian street, which contains semi-permanent to permanent stalls, catering to tourists and the local population. A comparable set-up is found in the *El Centro* of Monterrey. Monterrey's main shopping street in *El Centro* is pedestrian oriented, but differs in that it has higher-end stores and an American style mall connected to the main pedestrian area. The larger and more affluent population of Monterrey can account for the higher-end stores to a great degree. Overall, the pedestrian mall is dated with stores appearing not to have been modernized for many years.

At the lower end of the pedestrian mall is the **market area**. This consists of an open-air market with vendors for fresh fruits, vegetables and other produce with restaurants. This is probably the liveliest area of *El Centro* next to the plaza and pedestrian mall. It is also typical of most Mexican cities, even larger ones, such as Monterrey. Next to the market, is a series of semi-permanent stalls which cater mostly to the local population which consist of a variety of uses (clothes, perfume, restaurants, small household appliances, music CD's etc.) The boundary of the *El Centro* is clearly demarcated by the railroad and station, parking lot and a drainage canal.

Although it is apparent that there is a definite influence in the urban morphology relating to the border nature of Reynosa, it is also clear that the built environment is typical of any Mexican city. The open-air market and the plaza are clear indicators of the overwhelming influence of Mexican culture and are "stamped" across the urban landscape of all Mexican cities. Residential structures while obviously taking some influence from the United States are truly Mexican in character. In the high/moderate income neighborhood adjacent to the tourist area, the houses have a garden area entry and a visible carport enclosed by a fence. In low to moderate residential areas in Reynosa, the housing is abutting the sidewalk. The commercial developments are usually situated below residential apartments and again are adjacent to the sidewalk. As in all Mexican cities, Reynosa's land use is mixed and a delineation of specific areas is fuzzy. Building and minimal zoning regulations in Reynosa, limited commercial and residential loans, low to moderate incomes and traditional Mexican building styles and culture throughout

México dictate a land use and urban structure that is unique to México although being a variation of the urban structure found throughout Latin America.

Does the *El Centro* of Reynosa follow the Revised Griffin-Ford model for Latin American Cities and Arreola and Curtis border cities model?

In many aspects, the *El Centro* of Reynosa follows the revised Griffin-Ford Latin American model (1996), controlling for the influence of the border economy with a clearly delineated central business district, a plaza, adjacent high/moderate income housing and a market area. However, Ford (1996) classifies the adjacent high/moderate income residential area as gentrified. In Reynosa, this area is not gentrified, but transitional and somewhat declining as the elite areas are developing in other areas of Reynosa. This model being a static model and somewhat limited does not reflect the mixed-use land use, the transitional and fuzzy nature between the different areas of *El Centro*, controlling for the border related land uses. It also does not reflect the differing variation of land use characteristics of *El Centro* as represented in Reynosa (e.g., core, transitional and peripheral, permanent, semi-permanent, mixed residential/commercial etc.) The Griffin-Ford Model also does not address the deterioration and diminishing of El Centro as the primary shopping area. The clear cause of this is the development of suburban shopping centers that are more modern and more accessible to an increasingly more affluent population who have automobiles and desire higher quality goods in a “upscale” setting.

The Arreola and Curtis border cities model (Arreola and Curtis, 1995), being a variation of the Griffin-Ford model, fits Reynosa better than the Griffin-Ford model (Griffin and Ford, 1980.) There is little doubt that Arreola and Curtis used Reynosa to shape the aspects of their model. In their book, Border Cities (Arreola and Curtis, 1995) performed an extensive survey of the land use of *El Centro* of Reynosa. However, their survey was done almost ten years ago and Reynosa is changing with the influence of NAFTA and the growing affluence of Mexicans. The influence of the border is a definite factor in the past and developing urban morphology of Reynosa and *El Centro*. While the general tendencies of *El Centro* described by Arreola and Curtis still apply, some clarifications can be made. The high/moderate income areas is characterized by homes that were once high income but are now moderate. It is obvious that those with higher incomes are opting toward other areas of Reynosa and in some cases building and living across the border. (This needs to be further studied, but there is some indication that this is happening.) In addition, the status and position of its commercial aspect is weakening due to more modern and attractive shopping center in Reynosa and across the border. Arreola and Curtis, which mentioning the influence of the United States upon Reynosa did not at that time see its influence on the urban structure. The tourist/entertainment area is vibrant. However, it is obvious that the tourist trade in Reynosa, while important, is not as active as those in other border cities. (For example, a nearby border city, Nuevo Progreso which has purposely oriented itself toward the tourist market has far more dentists, doctors, drug stores, and curio locations than Reynosa.) Arreola and Curtis do not comparatively look at the different border cities in Texas and distinguish between

their interdependence, their relationship to each other, their competitive nature and their obvious connection with sister cities in Texas. These characteristics in the Rio Grande/Rio Bravo Valley make the characteristics that influence the urban structure different from those that influence others such as Ciudad Juarez, Tijuana and Nogales. In addition, there is a variation in the quality of the differing commercial areas in Reynosa, which was not truly emphasized in their work. While there are some upscale commercial facilities in *El Centro*, these are exceptions and not the rule for its commercial establishments. The highest end commercial facilities in *El Centro* are located on the Pedestrian mall. However, there is an obvious temporal and marginal characteristic concerning commercial establishments near the market and the railroad station.

Conclusion

There are obviously criticisms that can be made against the development of urban morphological models such as presented by Crowley (1999.) While it would appear that the urban models developed by Arreola and Curtis (1995) to describe the border cities are an accurate portrayal of the Mexican urban structure, the dynamics and the influences of the border cities in the United States upon those across the border were not addressed. The evidences are clear in the types of land uses, but not in the built form and definitely not in the segregation of land uses as in North America where you have distinct areas of residential, commercial, and industrial development. In the border cities, the land use is very mixed with a cacophony of residential, commercial, and industrial development. This makes generalizing the land use of Latin American cities and border cities difficult and fuzzy at best in urban models. The author used remote sensing and GIS in this paper in an exploratory nature to inspect the urban structure of Reynosa. The use of these two developing spatial tools brought up more questions than it did answers of the situation and seemed to prove that much more study is needed of the cities *La Frontera*.

What is apparent is that the goods and services being offered by shopping centers on the United States side of the border are influencing the vitality of *El Centro* in Reynosa and probably other Mexican border cities with American cities near-by. It should be also mentioned that the development of suburban shopping centers seems to be weakening the role of *El Centro* even further while not to the level that the Central Business District has been marginalized and transformed in the last fifty years in North America. What is also evident in *El Centro* in Reynosa is the absence of new office buildings. These offices are being located in other areas along the major arterials in Reynosa or perhaps in the United States. The development of new commercial establishment and to some extent the development of new residential units or the strength of the gentrification of older residential areas surrounding *El Centro* is also indicative of the development of more desirable areas in Reynosa. Some of the wealthier residents may be building houses on the United States side while still having businesses in Reynosa and still being considered residents of Reynosa. The extent of this theory still has to be explored.

Overall, it is apparent that the border cities and particularly those along the Texas/Mexican border need a comprehensive study. The interrelatedness and difference between cities in *La Frontera* continue to develop due to the nature of the levels of development and the two differing cultures; and it seems unlikely that the cities on either

side of the border will start to look the same. However, the blurring of the border by the increasing interaction of México and the United States due to NAFTA cannot be underestimated in its effect on the urban character on both sides of the border. I think that it would be a fair assessment that the position of *El Centro* in Mexican border towns will be lessening at an even more rapid rate than in interior cities due to the American influence. The author feels that the overall urban structure of the border Mexican city is changing so rapidly that a significant revision of the urban model developed by Arreola and Curtis is imminent.

The emerging tools of Geographic Information Systems (GIS), Remote Sensing, fractal analysis, chaos theory and empirical models are likewise changing the scope and the nature of viewing urbanization. In Batty and Longley's Fractal Cities (1994), it is demonstrated the promise that these developing techniques may hold. By using remote sensing to track and document different kinds of land uses in combination with GIS for accounting for the multi-layered land uses, there is a possibility of viewing the nuances of urban morphology. However, these combined methodologies are still in their infancy and have not been fully utilized by urban morphologists. Urban morphology may be on the verge of a new era with the assistance of these new tools in spatial analysis.

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