Chapter Ten

Community Design

I. THE ROLE OF COMMUNITY DESIGN

Good Urban Design

Good urban Design can sustain natural resources, encourage pleasant human interaction, inspire beautiful buildings and landscapes, reduce premature development pressure on farmland, enhance the quality of life, encourage healthy neighborhoods, and provide for an efficient transportation system that includes an interconnected street network accessible to all users that are walking, bicycling, and using public transit.

Savannah, GA Forsythe Park

Cotton Exchange Savannah, circa 1780

Cobblestone Streets Savannah Circa 1735

We know that well designed cities and towns, rich agricultural regions, protected ecosystems, and quaint rural hamlets are sustainable over centuries in part because of proper urban design. Consider the example of Savannah Georgia, designed and platted in 1735 by General James Oglethorpe, and still one of America's most beautiful and vibrant small cities.

Good urban designs like the 1735 Savannah plat are based upon proven design principles.

Vetruvius, Roman architect to Emperor Augustus, codified many of these classical design principles in his "Ten Books of Architecture". These books were the basic guidelines for the Spanish Laws of the Indies under which Florida was settled.

Vetruvius said *"buildings must always be durable, useful and beautiful"*. Can we say that about the buildings we see in our daily lives?

Bad Urban Design

Bad urban design often results from the application of "design-blind" zoning regulations combined with short sighted incremental decisions that do not consider the ultimate build-out of a community. Such incremental decisions have led to unattractive, land-consumptive sprawl, where low density auto-oriented development patterns force most human needs to begin and end with an automobile trip. Sprawl destroys natural resources, encourages uninspired buildings, demands huge parking lots, denies healthy neighborhoods by not providing sidewalks and bike paths, discourages human interaction by trapping people in their cars, contributes to greenhouse gases, creates traffic congestion, and burdens government with excessive infrastructure.

Anywhere, USA: Sprawl & strip commercial zoning along major highways (SR 436 & SR 441, Orange and Lake County, FL)

Good urban design is what East Central Florida needs, but bad urban design is largely what we are getting. While Phoenix was once the poster child for sprawl, our 2005 seven-county average urban density was 2.15 persons per acre, lower than Phoenix. We have become the poster child for sprawl.

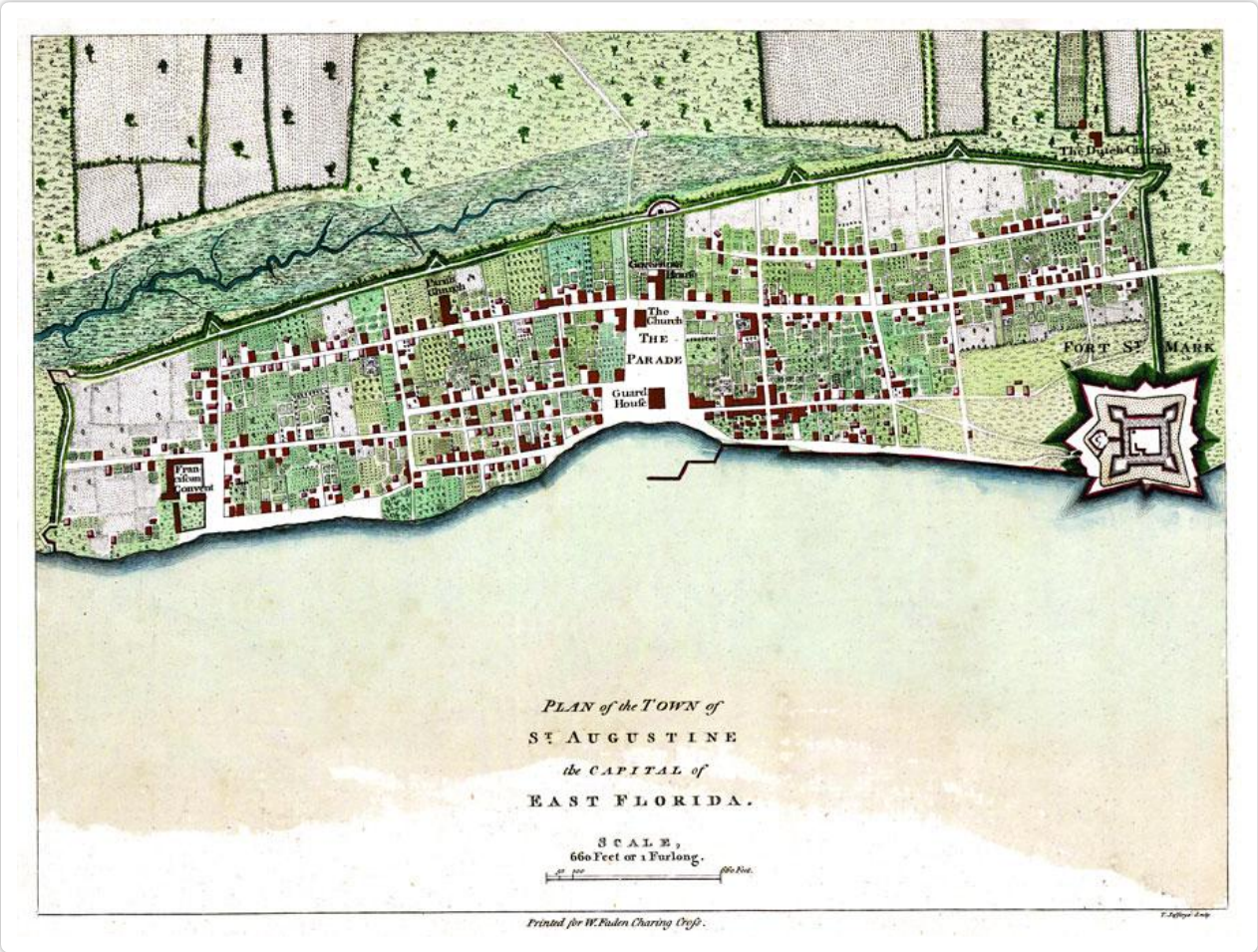
Computer modeling (Chapter 1) showed that if we keep growing at our current development patterns and densities, by 2050 Central Florida will have eliminated most of its farmland, wrecked its ecosystems, destroyed its migratory wildlife corridors and endangered species habitat, depleted its groundwater, polluted its air, and as auto traffic is increasingly stuck in gridlock, weakened our economy.

It does not have to be this way. We can reverse this trend before our systems break down. We can unlearn 60 years of bad habits and bad design.

The purpose of this chapter is to encourage sustainable urban design and Smart Growth within East Central Florida through a set of recommended guidelines and policies for future development.

How? There are many examples of sustainable, well designed classical cities. What can we learn from them?

St. Augustine, Florida was America's first city, built along the inter-coastal waterway surrounding a large public square. We can see the design aspects prescribed by its original 1565 plat of streets and squares, which has survived 444 years.



St. Augustine original plat circa 1565

These key design elements of St. Augustine are:

- The main Square as planned public open space (The Parade Ground)
- A grid street pattern that emanates in four directions from the main square, creating an interconnected network of streets
- Mixed-uses (commercial and residential) around the main square for merchants and government
- House lots 46 feet wide by 92 feet deep

Urban Lot Size

Community design and planning plays a vital role in creating the form and flow of the city. Smaller block sizes of one to three acres helps to accommodate multiple modes of transportation like bicycles and pedestrians as well as maximize opportunities for economic equity and investment. A standard urban lot size in 1573 by the Spanish Law of the Indies of 46 feet wide and 92 feet deep (4,232 sq. ft.) is still a desirable basic building block for platting. Homes and businesses should be allowed to purchase as many of these lots as they want or need for their individual architectural purposes. The allowance of smaller lot sizes and the ability to consolidate them can lead to more mixed income neighborhoods and allow residents to move to different house types and sizes as their lifestyles change over time.

Local comprehensive plans should control the overall density or number of dwelling units in a particular plat or block allowing for the subdivision and assembly of small and varied lot sizes.

Houses on small single lots in Mt. Dora

Lake Eola Heights

These design attributes were no accident. They were prescribed by the King of Spain for all settlements in the new world. Are they still applicable today?

The 1573 Laws of the Indies by King Philip of Spain included fourteen key design laws. If these design laws had been followed we would have prevented much of Florida's sprawl and congestion.

II. THE LAWS OF THE INDIES

Annexed land in floodplain, Palm Bay

Filled and mitigated wetlands, Avalon Park, Orange County, FL

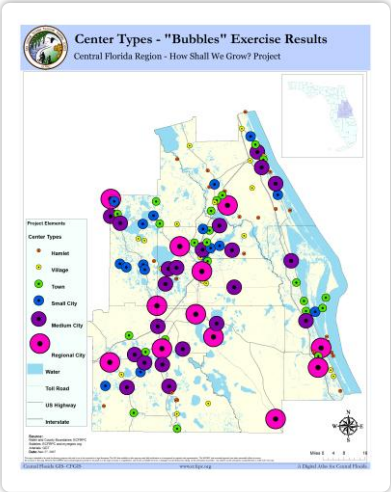
<u>The Laws Of The Indies §40</u>

"Do not select sites that are...in low lands".

Today we have drained hundreds of square miles of wetlands in central Florida because we can with modern earth moving machines. But it is seldom advisable, and should be carefully avoided or minimized. Had we generally followed this rule the Everglades would not have been drained, channeled, and polluted.

<u>The Laws Of The Indies §43</u>

"Having selected the area, province and site where the new settlement is to be built, and having established the existing opportunities for development, the governor in whose district the site is should decide whether the site should become a city, town or village".



East Central Florida Centers

How big should a city be? How big can it be? Not all places are created equal: it takes resources to create and maintain a "metropolitan city". There must be policies on where new centers should or should not occur over the next 50 years. We should build in the most appropriate locations that can be reasonably served with infrastructure, services, and transportation.

The Bubble Game 2050 (above left) was an indication of the anticipated size of future centers based on local leaders vision, but it does not represent the best distribution of population for the resources demanded.

Many landowners, cities, and counties have believed that development is appropriate anywhere. The result has been a repetition of strip commercial development along highway corridors, surrounded by far-flung low density, auto-dependent development that has promoted disconnected suburbs, long commutes, and traffic congestion. We have less time for human interaction as we spend more time isolated and aggravated in our cars.

The Laws Of The Indies §90

"…allocate sufficient public land and grounds for pasture…plus another portion for the natives of the area."

Gopher Tortoise

If we juxtapose the word "wildlife" for "natives", this is still a viable design guideline today.

Had Florida retained the wetlands, agricultural resources and native lands claimed by the King of Spain the state would still control the impacts to much of its migratory wildlife corridors and most critical ecosystems.

However, most of this land has passed to private property owners with a right to a viable economic use of their land. How can we preserve critical ecosystems and still give every landowner a viable economic use of their land?

Conservation-style development could preserve 50-70% of land in open space without public acquisition by allowing compact development outside the critical natural resource areas.

Conventional Development

Conservation Development

Source: *Randall Arendt, Conservation Design for Subdivisions, Page 60, 68*

The Laws Of The Indies §103, 104 & 105

"…the persons willing to populate the town shall receive the amount of peonias [urban lot 46 feet wide by 92 feet deep (4,232 sq. ft.)] and caballerias [urban lot 92 feet wide by 194 feet deep (17,848 sq. ft.)"] on which he is willing and able to build as long as no one is awarded more than five peonias nor three caballerias."

These lot sizes are significant because a settler only bought the number of lots he desired. A settler could have built a home on a single 46' x 92' lot. From a sustainability standpoint, this is a viable urban lot size today. If a resident wanted a larger lot, they could purchase additional lots without disrupting the organization and structure of the community (92' x 92', 138' x 92' and so forth).

Single lot, Savannah, GA

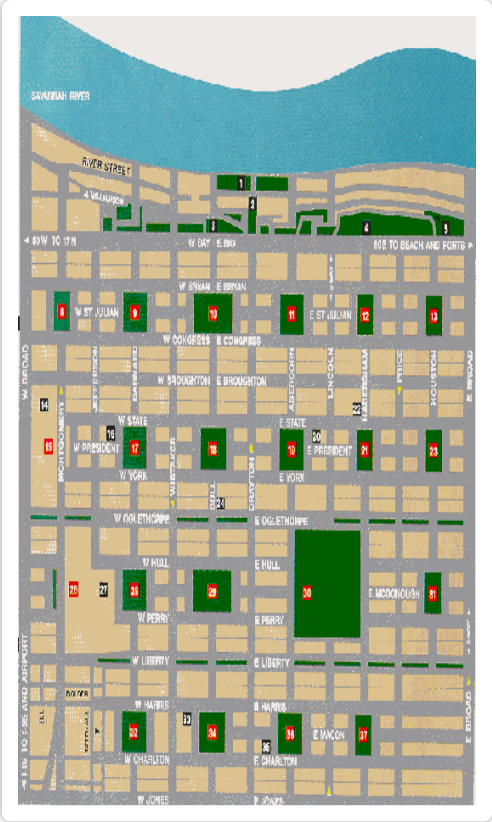
Double lot, Savannah, GA

But no one could purchase more than 53,544 square feet or 1.22 acres. In this manner, there would be a mixture of lot sizes, according to people's desire and ability to build. This is not allowed by current zoning, which forces all lot sizes to be the same within a district. Thus, in old cities built before zoning, there was architectural and social diversity.

The Laws Of The Indies §110

"In arriving at the place where the new settlement is to be founded…a plan for the site is to be made, dividing it into squares, streets, and building lots…beginning with the main square from which streets are to run to the gates and principal roads and leaving sufficient open space so that even if the town grows, it can always spread in the same manner."

This law requires a grid of interconnected streets and public squares that are repeated as the city grows. King George of England used the Spanish Laws of the Indies as the basis of his Georgian Town planning guidelines, which were used to lay out such cities as Savannah Georgia, and the hundreds of New England village centers and greens.



<u>The Laws Of The Indies §112 & 113</u>

"The main plaza is to be the starting point for the town…. The plaza should be square or rectangular, in which case it should have at least one and a half its width for length… A good proportion is 600 feet long by 400 feet wide."

<u>The Laws Of The Indies §114& 117</u>

"From the plaza shall begin four principal streets: One shall be from the middle of each side, and two streets from each corner of the plaza. The streets shall run from the main plaza in such manner that even if the town increases considerably in size, it shall not result in some inconvenience that will make ugly what needed to be rebuilt, or endanger its defense or comfort."

Placa Reial, Barcelona, Spain

Parade Square, St. Augustine, FL

Start with the squares. This is the rule that zoning forgot. Every community desires and must have organized public open space, and under the Laws of the Indies the main plaza was the beginning of the design. Its size, whether square or rectangular, should be proportional to the number of town inhabitants.

The prescribed grid of interconnected streets can be repeated without disturbing the original street pattern. This assures connectivity, improves overall traffic flow and reduces the impact on any one intersection. This makes for a more desirable community at build out.

Had the Laws of the Indies numbers 114 and 117, requiring a grid of interconnected streets, been followed in Central Florida since 1565, we would have less traffic congestion in 2009.

Roads emanating from the corners of a square, Savannah, GA

How? There are many disconnected local road networks along I-4 with thousands of homes located on cul-de-sacs. It is so difficult to travel north to south through these disconnected neighborhoods that many drivers will drive on I-4 just to travel a short distance. This has made I-4 the "defacto" local collector, overloading it, and reducing its ability to function as an Interstate

highway. This is obvious every day between Maitland Boulevard and Lake Mary, and the result is that the Florida Department of Transportation (FDOT) will have to widen I-4 at great cost to the public, and it will fill up almost as soon as it reopens unless we change our development patterns and interconnect all our new streets.

In public areas around the squares, near the center of the city, the laws indicate that the land should not be used for private dwellings but rather civic and public spaces. Therefore, mixed uses are not only allowed but required. This would have reduced our traffic problems because small shops and stores would be located in each neighborhood, thus making walking to get daily provisions an option, reducing auto trips.

Public Square in Savannah, Georgia

The Laws Of The Indies §118

"Here and there in the town, smaller plazas of good proportion shall be laid out…"

Smaller square in historic St. Augustine, FL

The Laws Of The Indies §129

"Within the town, a commons shall be delimited, large enough that although the population may experience a rapid expansion, there will always be sufficient space where the people may go to for recreation…"

The message is clear: provide for large common recreation open space in the center of all cities. This becomes the center of activity, and is the most valuable property, around which all properties rise in value.

Forsthye Park, Savannah, GA, approximately 8 acres

The Laws Of The Indies §134

"They shall try as far as possible to have the buildings all of one type for the sake of the beauty of the town."

The message for each community is that we should care about how buildings and streetscapes look. They are important to a community's self-worth and sense of belonging.

Architectural variety with classic elements from Savannah, Georgia

The moral is that these 14 selected Laws of the Indies still represent viable modern community design criteria. Can we apply them today to get better results from our new communities?

Let's use a case study to compare conventional versus classical design and see what the qualitative differences are.

The image below displays a central Florida Development of Regional Impact (DRI) designed in the "conventional" pattern approved for:

- 2,850 dwellings
- 27 acres of Office/Retail
- 437 acres green space (mostly golf course) and some wetlands
- A "new town" of 7,000 residents
- Approximately 30,000 automobile trips each day

Conventional Design- Development of Regional Impact, Orange County, Florida.

Eagle Creek DRI

What design attributes do we note, and what are their impacts?

- Designed for autos, not for walking, so most human needs begin and end with an automobile trip, which increases traffic, reduces human interaction, contributes to obesity, and generates greenhouse gases

- Disconnected street network and no connections to adjacent neighborhoods, which forces all trips out onto the arterial roads and overloads intersections

- Only four external road connections for 30,000 vehicle trips per day means these intersections will have long delays and congestion
- Homes are isolated from schools, shops, and offices
- The "Village Center" is a perimeter strip mall, not walk-able for most of the community
- Golf course and large residential house lots need extra water for irrigation
- No central square or public open space for public gatherings
- Limited pedestrian trails and bicycling connectivity
- No solar street orientation (a north/south/east/west grid is better for rooftop solar collectors)
- Since all lots are the same size on one street, there is less variety of housing sizes and prices

Smart Growth Alternative Design, same tract of land

The image below shows the same land designed for following the fourteen design principles from the Spanish Laws of the Indies. We can impute certain comparisons to the approved DRI pictured above.

Regarding the "classical" or "Smart Growth" alternative design:

- Would its external traffic impacts be less? Yes.
- Would there be more public green space? Yes.
- Would there be a "downtown" with 2-3 story buildings with shops and apartments above? Yes.
- Would it be more compact? Yes, there is more density, and more homes are possible even though there is more public green space.
- Would it provide more variety of housing and price within a neighborhood? Yes.
- Would it be more walkable? Yes.
- Would it be more livable? ***You decide.***

Smart Growth Classic Design (Based on Spanish Laws of the Indies)

Design by Carolyn Knabel, ECFRPC

What design attributes do we note, and what are their impacts?

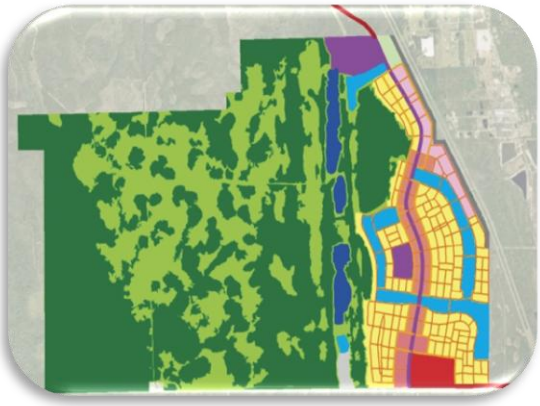
- Designed primarily for people and walking, not cars, which promotes public health, social interaction, and overall quality of life for its residents

- By connecting a neighborhood with its surroundings, including schools, parks, offices, and shopping districts, the convenience, safety, and relationships within the community are strengthened
- Creates social networks and promotes integration of people into their built environment
- With a centrally located mixed use downtown, many human needs can be accomplished by walking or bicycling without contributing to traffic on the peripheral roads. This minimizes traffic and greenhouse gases
- The interconnected street network has 21 road connections, so internal and external intersections flow traffic better. The grid pattern allows the neighborhood to grow predictably outward from its commercial center
- The main public square is large enough for public gatherings on a proper green common
- The main square is surrounded by schools, small stores, public agencies and churches
- Smaller neighborhood squares are parks within a five minute walk from each residence
- Many road and trail connections to adjacent neighborhoods and property
- Proper NSEW solar orientation of streets makes rooftop solar collectors more efficient
- Trails have less environmental impact than the golf course and benefit all residents
- Smaller house lots consume far less irrigation water than large lots
- Since basic lot size is 46' x 92', buyers can buy what they need and build on a single lots or any multiple number of lots, resulting in an interesting variety of housing sizes, and prices

Conclusion: Good community design is aided by classic, proven design principles.

A good quantitative example of sound design principles can be seen in the Restoration Development of Regional Impact. This DRI, located in Volusia County, progressed through several design iterations as noted in the illustrations below. Of interest are the projected financial and environmental benefits, some of which are noted in the graph below.

August 2006 Master Plan (Source: Canin Associates)



August 2009 Master Plan (Source: Canin Associates)

Restoration DRI				
	2006 Plan	**2009 Plan**	**Change**	**Projected Savings**
Land Preserved	55% (2,867 Acres)	73% (3,872 Acres)	35% Increase	1,005 Acres
Average Internal Trip	1.75 Miles	.38 Miles	78 % Shorter	1.37 Miles
Total Daily VMT	594,000 Miles	349,000 Miles	41% Fewer	245,000 Miles
On-Site Trip Capture	20%	50%	1.5 Times More	30%
Miles of Roadway	72 Miles	38 Miles	47% Fewer	34 Miles
Roadway Cost	$336 Million	$209 Million	38% Lower	**$127 Million**
Roadway Impervious Surface	17 Million Square Feet	10 Million Square Feet	42% Fewer	7 Million Square Feet
Roadway Landscaping Needs	6 Million Square Feet	3 Million Square Feet	50% Fewer	3 Million Square Feet

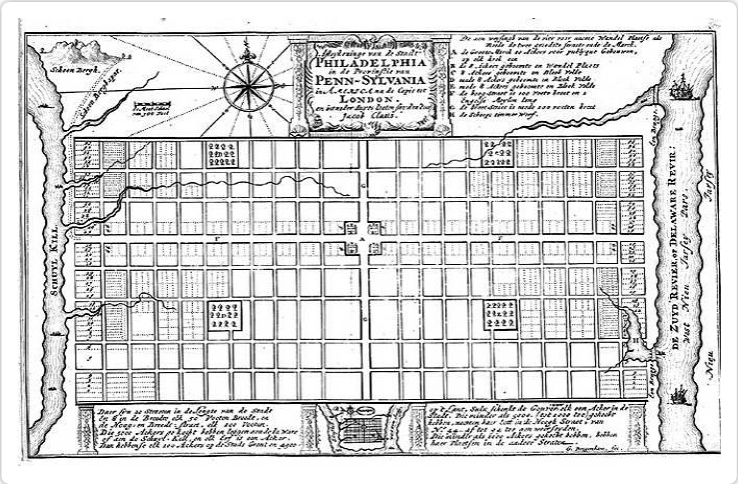
As East Central Florida continues to grow, the use of good design principles, in addition to or in place of local zoning can give us better results than we have been getting by zoning alone.

Let's look at some other examples of successful, sustained urban design.

III. HISTORIC AMERICAN CITY DESIGNS

Philadelphia

Philadelphia was founded in 1682 by William Penn. The basic design was the gridiron street pattern with a central square. The main streets are 100 feet wide with secondary streets at 50 feet wide. There are eight secondary streets running from river to river and twenty secondary streets paralleling High Street.



Historic Plat of Philadelphia

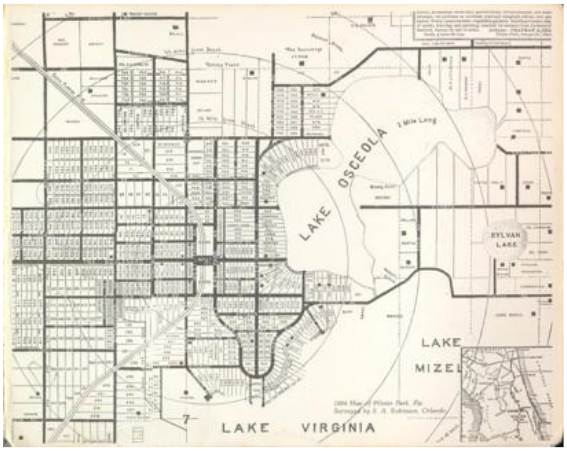
Philadelphia's Central Plaza

The center of the city contains a square of 10 acres containing public buildings on each corner and in each quarter of the city is another public square. Such a design allows traffic to be directed down intended streets while smaller streets can maintain local traffic. It also encourages pedestrian travel due to a smaller block and increased intersection and public squares within walkable distance of every lot. The historic portion of Philadelphia has endured and is still a vital city center today, commanding the highest premiums for housing.

Central Florida Cities with Classic (Traditional) Design

Winter Park is one of Florida's historic and traditional cities. It was designed in a gridiron pattern around its chain of lakes with a central square. Winter Park offers transit, business, residences, and leisure activities all within walking distance to one another.

Tree lined streets offer shade from the intense Florida sun, attracting bicyclists and walkers. Park Avenue offers mixed use buildings, urban density, and public open space. Central Park, its central square, is located on Park Avenue.



Map of Winter Park

Park Ave. Winter Park, FL

Central Park, Winter Park, FL

Park Ave. Winter Park, FL

Thornton Park, Orlando

Thornton Park is an Orlando neighborhood that is undergoing significant revitalization over the last decade with its close proximity to Downtown Orlando. Development of the area originally occured between 1886 and 1924 when traditional neighborhoods were established. The area has bceome a diverse area that includes a mix of uses and opportunities all level of income. Its close proximity to public space amenities such as Lake Eola, Lake Lawson, and Langford Park create a desirable and livable area.

Central Boulevard in Downtown Orlando, FL

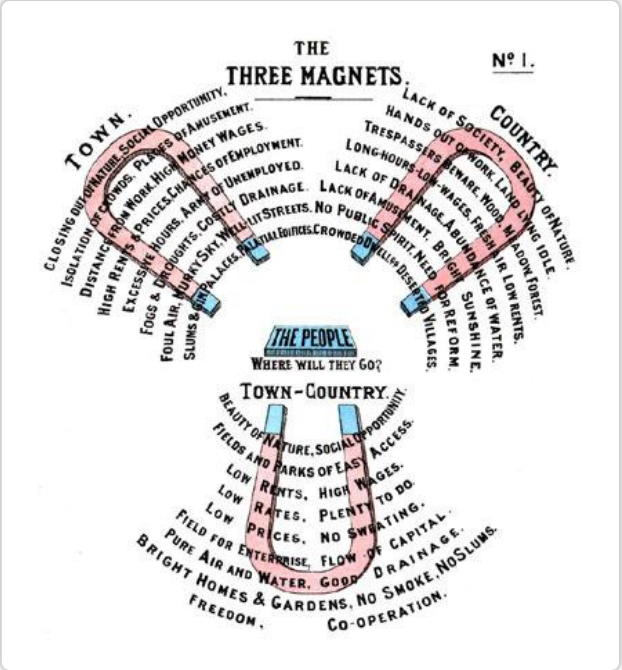
Albert Park of College Park, FL

IV. GARDEN CITIES

By the time of the Industrial Revolution, many major American cities were becoming overcrowded and unsanitary due to lack of public parks, sanitary sewers, clean potable water supplies, and inadequate light and air in stuffy interior tenement buildings. These problems were exacerbated by the huge influx of immigrants in the mid to late 1800's.

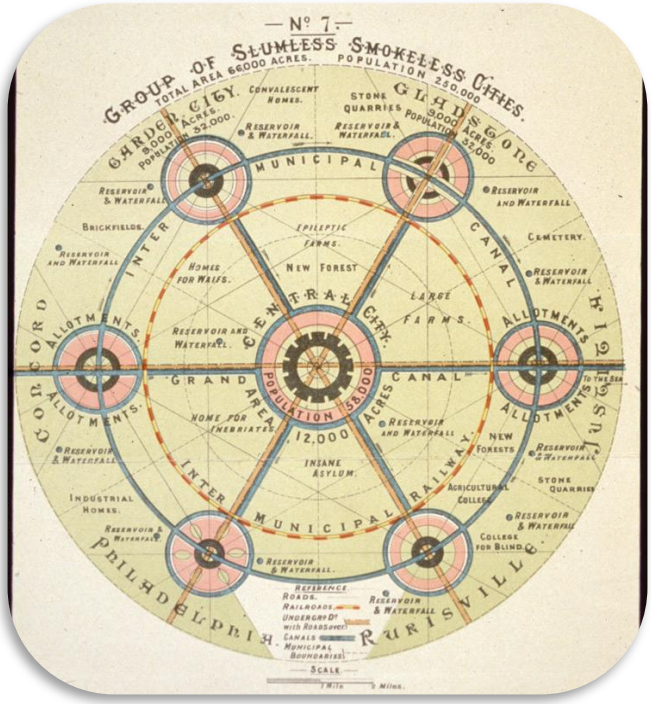
Several public policy movements responded to these conditions. The City Parks Movement began with the development of New York's Central Park in 1854, providing large green open spaces for the masses to get air and light and exercise.

"The Three Magnets" describing Garden Cities as Town and Country



The City Beautiful Movement involved massive public expenditures on new and modern buildings with lavish landscape plans, such as Chicago's "White City".

The Garden Cities Movement evolved from an 1898 book by Englishman Ebenezer Howard entitled "Tomorrow: A Peaceful Path to Reform". Howard called for relief from sooty and overcrowded British cities by the creation of what he called "Garden Cities", of modest size, geometric in design with a concentric center and surrounded by green space".



Garden cities were planned, self contained communities located just outside a main city and surrounded by greenbelts. According to Howard, they should contain a balanced blend of residences, industry, and agriculture in order to be sustainable communities where people could live, work, and play.

When a neighborhood reached its maximum capacity, a new garden city would ostensibly be developed nearby. Each garden city would be connected with its neighbors and central city via road and rail lines for public transportation.

The first Garden City was Letchworth, England, but the idea was quickly influential in the United States. Examples can still be found today within the cities of: Boston, Pittsburgh, and New York City, just to name a few. These neighborhoods share characteristics like transit and mixed use that contribute to their continued success today.

Letchworth, England- Garden city surrounded by greenbelt

Jackson Heights, a neighborhood in the northwest Queens Borough of New York City was influenced by the Garden Cities movement. It was developed in 1916 after the arrival of the number 7 train that runs between Manhattan and Flushing, providing rapid transit into the city.

Jackson Heights has many private parks, referred to as gardens, within short walking distance of most residences and it is a short distance from the inner city to the rail station. It has high density apartment buildings as well as clusters of private homes – offering a mixed income neighborhood and promoting social interaction. Among its residential lots it has commercial sectors that offer mixed use buildings, allowing patrons to live close to where they shop or work. Schools and churches can also be found in the neighborhood within walking distance to the residences.

Garden within Jackson Heights

V. THE BEGINNING OF AUTO-ORIENTED CITY DESIGN

In the 1920's the affordability of automobiles and gasoline and the expansion of America's paved road network began America's move to the suburbs. Frank Lloyd Wright explained this move as a 'good riddance' from the dirty industrial cities[1].

Land development became big business, and developers, engineers and lawyers wanted a predictable subdivision process. In 1926 zoning was upheld as a valid police power by the United States Supreme Court in the landmark case Euclid vs. Ambler Realty.

With the advent of zoning, planning took a back seat. The US Department of Commerce published its standard enabling zoning text in the late 1920s and their standard planning text several years later. This backwards way of thinking would foreshadow the next 80 years of development in the USA. Zoning came first and planning was an afterthought.

Radburn, NJ

Radburn is one of the first suburbs of America, designed by Clarence Stein and Henry Wright in 1928 as "a town for the motor age". Its intention was to create a neighborhood with automobile access without requiring the use of automobiles for everyday activities. Connected pedestrian paths throughout the entire neighborhood never interfere with automobile streets.

Site plan of Radburn, NJ

Every home is accessible via a park and path in the front and an alley and garage in the rear. The neighborhood contains an elementary school as well as a small commercial center known as Radburn Plaza. Everything in this community is accessible to residents by foot, relieving the necessity of the automobile and encouraging social interaction. A study done by John Lansing showed that 47% of Radburn residents shopped on foot, as opposed to an average of 8% for unplanned communities[2].

Footpath under road in Radburn

Unfortunately, Radburn also introduced some design drawbacks, including the super-block and cul-de-sac street. Radburn was designed with the intention to be automobile-free, but as time progressed the automobile proved to be more popular than expected, and reliance on the automobile to leave the neighborhood resulted in more traffic at intersections due to a lack of street connectivity. While this design is famous for its ingenious use of a walkable pedestrian community and is used as a model community world-wide, it also showed why cul-de-sacs and super-blocks contribute to traffic congestion and should be avoided.

VI. CONVENTIONAL DEVELOPMENT – POST WWII

After World War II, the Federal Housing Administration enabled millions of people to purchase their first home by insuring long term, low interest mortgages. However, FHA gave preference to new exclusively single family development that followed the pattern of individual homes on large lots with large setbacks. With this sudden financial boost for new development, the baby boomer generation witnessed the beginning of America's move to the suburbs designed after the FHA cookie-cutter formula.

Levittown, NY

Aerial View of Levittown c.1950

Levittown Street c.1950

Levittown was the first mass-produced suburb and is commonly referred to as the prototype for American post-war suburbs. It was constructed by Levitt and Sons around 1950 in Long Island, by production building methods used to construct WWII military bases.

As a suburb of New York City, demand was high and by 1951 Levittown included 17,447 homes. It offered larger houses for a more affordable price, away from the hustle and bustle of the city. There was no passenger train or transit system linking Levittown to New York, making residents 100% reliant on their automobiles for transportation into and out of their community. A few parks and open spaces were incorporated into the neighborhood, but there was not one within walking distance of every house. Since the lot sizes were large, children had the opportunity to play in their own yards.

Peter Bacon Hills describes Levittown as "a symbol of the strengths and weaknesses of the postwar American model of community that found its strongest representation and its most passionate defenders in the suburbs".

While critics decried its raw look, its lack of organic natural features, its near-identical houses, its class homogeneity, and its early racial covenants, residents have with equal fervor declared that many of these were features of the postwar moment:

- Housing rapidly built to satisfy a large demand

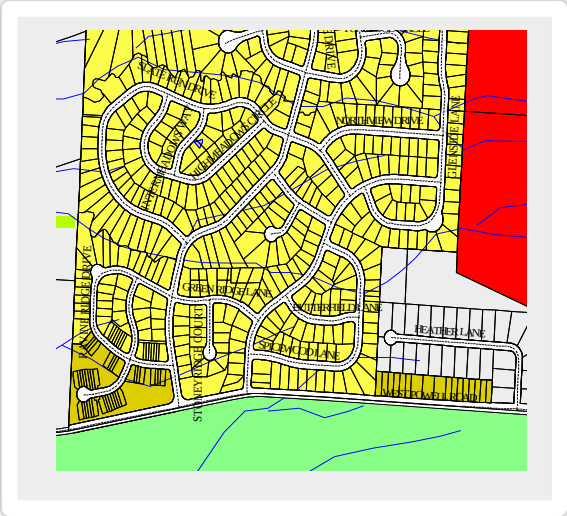
- Housing cheap enough for newly returning GIs, and the middle class
- Houses that were small enough to be convenient and easily maintained, large and expandable enough to accommodate growth in family and in wealth
- Houses that drew the family into a common room around the TV
- A community that embodied the child-centered and optimistic values of the postwar booms

Levittown's formula was copied thousands of times around the USA in the housing boom that followed WWII.

VII. THE LOSS OF A CONNECTED STREET NETWORK 1950-2000

Over the next 50 years, as American suburbs became more auto oriented, their designers cared less about tree lined streets, beauty, walkability and form, and cared more about vehicle speed, and off street parking.
The public square, the essential building block of the Spanish Laws of the Indies and all great cities, was forgotten by "conventional" development.

Today, developers use computer aided design (CAD) to quickly layout a piece of land to determine the maximum "yield". This became the design goal: follow the rules of local zoning and get the maximum "yield" (lots) from a particular piece of property. Natural features are often bulldozed, and natural resources are often destroyed.



Green Meadows Subdivision, Delaware County, Ohio, 1985

Why are there no street connections to adjacent lands? Where is the internal community open space? The green area to the south is a fenced metropolitan park that cannot be accessed from this road. Residents of this subdivision must drive one mile to enter either the park (green) or shopping (red) from a six lane US highway with a 50 mph speed limit. There are 900 homes with only two entrances to this 2 lane road. This road fails at peak hours, but cannot be widened because of the park land to the south. This is bad design.

Since public open spaces were no longer required by local zoning they were eliminated for more "yield". Sidewalks were eliminated, often at the request of city and county engineers so they would not have to maintain them. Engineers of the auto age wanted wide streets with large curves, making subdivision speeds high, and thus making walking in the streets dangerous, reinforcing the need to drive everywhere.

Cul de sacs were the answer to high internal subdivision speeds. Children could play relatively safely in the street since there was no through traffic. People complained about connecting one subdivision to next for fear of "cut through" high speed traffic. But soon these same people would also complain about their inability to get where they needed to drive, since there was by now such neighborhood isolation and a fragmented road network. This lack of road connectivity causes multiple problems within a community.

Aerial of an isolated Central Florida suburb. There are 366 homes in this subdivision with only one way in or out. What happens at rush hour when everyone is leaving for work and school?

Since "conventional" residential subdivisions exclude commercial uses most human needs of their residents must start and end with an automobile trip, which means:

- Less exercise for residents
- Less human interaction
- More greenhouse gases
- More traffic
- More dependence on cheap gasoline
- More time spent in the car
- Greater amount of household budget is spent on cars and fuel

All of these problems are due to poor community design. Over the past 60 years many cities have expanded outward with no overall design, and no balance between land use and transportation.

VIII. THE REBIRTH OF DESIGN: THE SMART GROWTH MOVEMENT

Similar to the Garden City movement of the early 1900's, today's Smart Growth Movement strives to reestablish development and growth principles that create sustainable, walkable communities and avoid auto-oriented urban sprawl, increased traffic congestion, disconnected streets, and neighborhood isolation.

The Smart Growth movement began in Miami in the early 1980s with the First Congress of New Urbanism in response to the proliferation of sprawl. Since that time the American Planning Association, the Congress for New Urbanism and many other transportation, engineering, environmental, and architectural organizations have endorsed Smart Growth principles.

Smart Growth looks a lot like classic design, promoting growth in city centers with great amenities like parks, shops and jobs all within a short walk or commute. Smart Growth supports designs that are compact, transit-oriented, and pedestrian and bicycle friendly.

Residences of Baldwin Park, Orlando, a "New Urbanist", Smart Growth redevelopment neighborhood.

Several communities as well as large cities have incorporated smart growth principles into their plans and are already reaping the benefits. Some proven benefits of Smart Growth include a healthier environment, increased safety, improved public health, reduced traffic, and a bettered sense of community.

Compact Neighborhoods

Downtown sidewalk in Delray Beach FL

Recent research has shown that approximately 30% of those interested in the housing market are interested in compact and walkable mixed-use urban neighborhoods. Higher density mixed use developments allow residents to live, work, and play in the same district, reducing commute times or the need to drive, providing people more productive or recreational time.

Pedestrian and Bicyclist friendly

Within a smaller community, residents are more likely to walk or bike to their destination rather than drive a short distance in the automobile. In order to encourage this, certain design standards need to be implemented to make bicyclists and walkers comfortable in the Florida weather. Wide sidewalks lined with shade trees are of utmost importance. Numerous crosswalks and paths to interconnect the streets and increase accessibility are also crucial. Finally, placing public parks and civic destinations within close proximity of one another (five minute walking radii between each) will increase the desire to walk to destinations in place of driving. Having the opportunity and convenience of walking to local parks and businesses will increase the physical activity of residents.

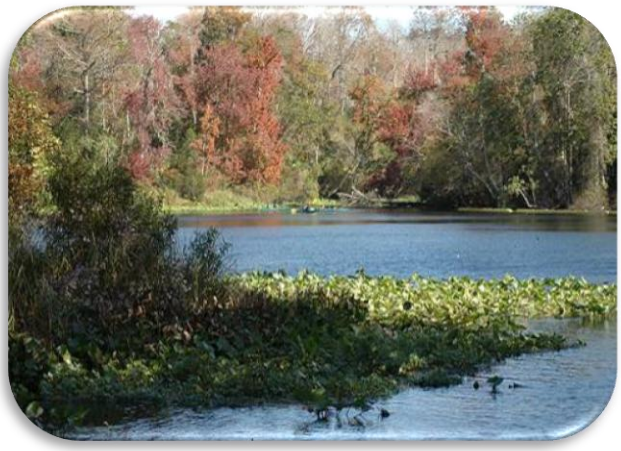
Rail Transit

By 2050 central Florida may be as populous as the San Francisco region is now. The San Francisco area today has 7 million plus residents and an extensive rail transit system.

Rail transit systems have recently proven effective in changing development patterns and reducing auto reliance (see Chapter 5). According to the Federal Transit Administration, "at least one-quarter of all American households is likely to seek housing near transit over the next 20-years". Many cities such as Arlington Virginia, Portland Oregon, San Francisco, California and Charlotte, North Carolina are now changing to become more compact and are focusing urban concentrations along their rail corridors. In all four cities, billions of dollars of private real estate reinvestment occurred within walking distance of the rail system within the first five years of rail transit start-up.

Charlotte Light Rail Blue Line

San Francisco F Line Street Cars



Wekiva River

Preserving Natural Resources

By promoting more dense urban development, Smart Growth reduces the need for sprawling outward growth into ranchlands and critical ecosystems.

Public Open Space

Smart Growth promotes public open space at the core of every neighborhood.

Lake Eola, Orlando, FL

Cranes Roost Park, Altamonte Springs, FL

Wooten Park, Tavares, FL

IX. CONVENTIONAL DEVELOPMENT vs. SMART GROWTH

We have a choice as we plan for 2060.

We can keep our sprawling Conventional development patterns, carving up our countryside a piece at time with no thought for the ultimate build out of the region.

Or, we can use Smart Growth principles to return to more classical designs that preserve natural resources and features, provide for a mixture of uses, and create walk-able, people oriented, beautiful, healthy, sustainable, and liveable communities.

Photos: *Courtesy of the City of Kissimmee*

CHAPTER 10: COMMUNITY DESIGN	
Goal	Improve and enhance the region's development character by assuring a high standard of design in all development.
Policy 10.1	Development should avoid negative impacts to Natural Resources of Regional Significance as identified by the ECFRPC Natural Resources of Regional Significance data layers and policies (see Chapter 3).
Policy 10.2	When new development is proposed, preserve natural features such as topography, wetlands, floodplains, native plant communities, and wildlife habitat to the maximum extent possible.
Policy 10.3	Development should enhance natural features, vistas, and view sheds.
Policy 10.4	Every community should have a main public open space for congregating.

Design guidelines could include:

a. The main plaza should be the starting point for the town. The plaza should be square or rectangular, in which case it should have at least one and a half its width for length.

b. Surround the main square with mixed (institutional, commercial, and office) uses with residential uses on upper floors of multi-story buildings appropriate in height and scale to the size and density of the city and square.

c. Institutional uses such as schools, post offices, government buildings, churches, shops, and stores are ideal uses for a downtown around the main square.

d. Place no parking lots in front of buildings that front on the square. Place parking behind the commercial structures on the square.

e. Allow on street parking around the square. Angle parking is desirable as it acts as a traffic calming feature.

f. Restaurants may use the square to their advantage for outdoor seating or vendors may set up carts to create a small market.

g. Fountains, landmarks, or monuments should reside in open spaces along with shade trees, pavilions, seating, and other amenities.

h. Types of public space include open space, green space, and civic building. Each of these, regardless of a city's location or density, allows residents of that community to interact and meet new people, a necessity of social development.

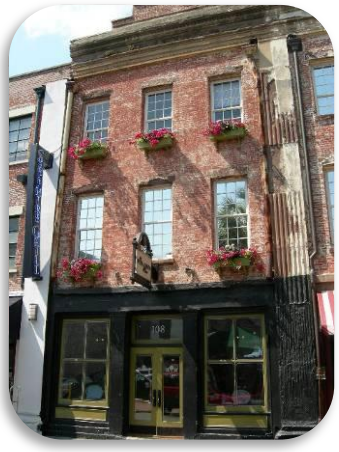
i. Design public spaces within walking distance of one another, particularly parks and plazas. This encourages residents to walk around town rather than simply walking 'around the block' to get daily exercise.

j. Distribute smaller public open spaces (squares) throughout the community.

k. Consider the use of alleys to rear-load narrow lots.

Policy 10.5	Build new centers and rebuild existing urban centers in the most appropriate locations that can reasonably provide urban services and multi-modal transportation.

Policy 10.6	Encourage an interconnected network of streets. 10.6.1 Encourage the prohibition of new dead end streets (cul-de-sacs) unless absolutely necessary because of topographic features or natural resources of regional significance. 10.6.2 Use public squares with streets emanating in all directions from the four corners as a desirable way to achieve common public space and an interconnected street network.
Policy 10.7	Design for transit. 10.7.1 Consider establishing minimum densities for planned "Transit Corridors" to incentivize Transit Oriented Development. 10.7.2 Transit corridors should provide for a mixture of commercial, office, institutional, and residential uses in multi-story buildings to create a walkable pedestrian friendly environment.
Policy 10.8	Buildings should be designed to be durable, useful, energy efficient, and beautiful. 10.8.1 Every community should have architecture and streetscape standards. 10.8.2 Public buildings should set the community tone for beauty and architecture. 10.8.3 There should be a variety of architectural styles, with compatible elements.



Architectural examples from Savannah GA

Architectural examples from Winter Park, FL

Policy 10.9	Promote and implement Safe Routes to School Programs and guidelines in comprehensive plans and transportation and school planning. 10.9.1 Schools should be sited as community anchors, located within walking distance of their students and co-located with other public facilities where possible. 10.9.2 Avoid prescribing minimum acreage requirements for new school sites. 10.9.3 Renovation of existing structures for schools should take precedence over new construction where feasible.
Policy 10.10	Downtowns and village centers should include certain common elements of great sustainable communities (see Chapter 10).

Elements of great sustainable communities include:

a. An intimate, pedestrian scale, as informed by the community architect.

b. Angle parking on street.

c. Wide sidewalks with street trees/planters.

d. Decorative/historic street lighting.

e. High quality, permanent, natural materials.

f. Classic architectural elements.

Haille Village, Gainesville, FL

g. Public and cultural building as anchors.

h. Mixed uses (residential, commercial, and office).

i. Compact blocks with no rapid through traffic.

j. Make through streets treed boulevards.

k. Fine grained hanging or wall signage at walking scale, not driving scale.

l. Large, inviting first floor windows.

m. Narrow streets, 60' right-of-way is adequate unless it is a main boulevard, in which case right-of-way could be much wider, as wide as 190 feet for a multi-lane European style four-lane boulevard with one way street pairs outside and transit lanes.

n. Bicycle accommodations.

Thomasville, GA

Orlando, FL

Tallahassee, FL

o. Grid pattern streets with short blocks.

p. Wall graphics in classic style.

q. Small shops, narrow structures, greater depth.

r. Parking to rear of structures.

s. Landscaped end islands for on street parking.

Policy 10.11	Parks and open space should be liberally distributed throughout the community and connected by a system of walking and bicycling accommodations.
Policy 10.12	Communities should strive to retain their history through reinvestment and restoration of historic structures and to reuse them through time as the centerpiece of their community.

Policy 10.13	New development should include smaller block sizes to accommodate pedestrians and to maximize opportunities for economic investment.
Policy 10.14	Vacant or underutilized retail sites should be seen as opportunity sites for assembly and redevelopment as mixed use (retail, office, and residential) centers, especially along corridors currently served by transit or planned to be served by transit.
Policy 10.15	Encourage schools to integrate into the surrounding neighborhoods by removing physical barriers (i.e. walls), engaging in and hosting shared community activities, and collocating with parks and other public facilities.

CHAPTER 10: COMMUNITY DESIGN INDICATOR
Expand on the number of great places by 2060. The following communities are examples of well designed, mixed-use, historic communities that we should emulate: Sanford Historic Downtown, Thornton Park, Lake Eola Heights, College Park, Winter Park Original Plat, Mt. Dora Original Plat, DeLand, Baldwin Park, Celebration, Old Cocoa, Historic Downtown Kissimmee, Eustis Historic Downtown, Winter Garden Historic Downtown, Uptown Altamonte.

Forsythe Park, Savannah, GA

Old Daytona Beach, FL

South Beach, FL

St. Augustine, FL

Delray Beach, FL

Tallahassee, FL

Monticello, FL

Madison, FL

Monticello, FL

New Smyrna Beach, FL

Shasta Ruins, Redding CA

Historic district, Mt. Dora, FL

Note: For additional suggested design principles, see Appendix A of this Policy Plan.

SOURCES

---

[1] Wright, Frank Lloyd. The Disappearing City. W.F.Payson, 1932.

[2] John B. Lansing, Robert W. Marans and Robert B. Zehner, *Planned Residential Environments* (Ann Arbor: University of Michigan, 1970), p. 213