

PINKLINED PLANNING AND THE NEED TO PLAN FOR WOMEN

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# PINKLINED PLANNING AND THE NEED TO PLAN FOR WOMEN

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Traditional forms of land use *pinkline* communities, constrain mobility, limit employment opportunities, reinforce outdated family structures as the norm, and provide inadequate support systems for women (Fainstein & Servon, 2005). Yet, little has been done in practice to address these concerns, and gender issues are still largely marginalized to the periphery of planning (Leavitt, 2003). However, aging-related work in planning has gained momentum in recent years (Warner et al., 2016), and there are similarities between the needs of an aging population and the needs of women around housing, transportation, and services.

This dissertation has three goals. Theoretically, this dissertation brings together multiple lines of literature to create a theory of pinklining, the division of space, and exclusion of women and women's needs from mainstream planning. Empirically, this project operationalizes feminist criticisms of traditional zoning regulations, transportation planning, and public participation processes by creating and analyzing the 2014 Women and Aging survey. Practically, this project identifies potential planning interventions that can address the needs of women.

This dissertation uses four regression models to test for gender responsive planning in a sample of U.S. communities. Two models evaluate the broad factors contributing to a community engaging in either gender responsive land use or gender

responsive transportation planning. Two additional models disaggregate aging from gender to determine which factors are the strongest drivers of gender responsive planning. Data for this dissertation is primarily from the 2014 Women and Aging survey, an online survey conducted in collaboration with the American Planning Association's Planning and Women Division.

Results from the regression models reveal that traditional land use regulations are relatively stuck in place and unable to address issues of gender adequately at the time of the survey. The models also demonstrate that there is potential for gender issues to move forward in discussion and resolution with transportation planning. Furthermore, leveraging aging work is an important tool to continue the conversation about gender issues in land use and transportation planning. With planners already advancing the aging population's needs, they should also advocate planning for women to create more equitable, inclusive, and livable communities for all.

## BIOGRAPHICAL SKETCH

Amanda (Andy) Micklow received their bachelor's degree in political science from Virginia Tech in 2006 and their master's degree in urban and regional planning from Virginia Tech's School of Public and International Affairs in 2008. Andy started their Ph.D. program at the Department of City and Regional Planning at Cornell University in 2012. In 2019, Andy joined the legislative staff of the Metropolitan King County Council in Seattle, Washington.

For my mother.

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## CHAPTER 1

### INTRODUCTION

#### *Gender and Planning*

American women have been navigating spaces that were created by and for men for hundreds of years. Traditional forms of land use regulation such as single-use zoning pinkline communities and disadvantage women by constraining their mobility, limiting employment opportunities, privileging outdated conceptualizations of family structures, and providing inadequate support systems. This is especially true for suburban women who navigate a landscape designed to facilitate only one role for women – housewife. Pinklining has been used previously in insurance and economics literature, but I use the term *pinklining* in this dissertation to refer to the division of the built environment into men's and women's spaces.

Women in the United States are more likely than men to head a single-parent household, face poverty, and experience sexual violence. Women's paid labor is valued at 80% of men's (AAUW, 2016), women are still responsible for the majority of household tasks (Bureau of Labor Statistics, 2018), and women only make up of 42% professional planners (APA, 2018). The realities of women's lives have significant implications for the planning field, but a 2014 survey of practicing planners revealed that we are not planning for women (Women & Aging Survey, 2014). Moreover, while planning practice has become more accepting of and even expected to plan for other groups, issues of gender remain outside the purview of mainstream planning theory and practice.

This dissertation has the following objectives:

- **Objective 1:** Explain how the waves of North American feminism manifest in planning scholarship.
- **Objective 2:** Describe the nature of and gaps in gender responsive planning in the United States.
- **Objective 3:** Identify potential planning interventions that begin to address the needs of women.

### ***Purpose of the Study***

This dissertation has three purposes. First, create a theory of pinklining--the division of a metropolitan landscape into women's and men's spaces using mechanisms such as zoning and comprehensive planning and through processes like suburbanization. Second, act as a point-in-time assessment of the level of gender responsive planning in a sample of communities using the 2014 Women and Aging Survey results. Third, demonstrate the need to plan for women.

The following chapters present the results of the first national survey of planners on women and aging. Motivated by a rich theoretical framework, the survey is one of few to operationalize feminist scholars' criticisms of zoning regulations, transportation planning, service provision, and public participation processes. The *Planning through a Gender Lens: Inclusive Planning for Aging and Livable Communities* project was a collaborative effort with the Women and Planning Division of the APA and Cornell University that bridged the divide between planning scholarship and practice. This dissertation uses a practice-focused survey to model predictors of gender responsive land use regulations and gender responsive

transportation planning to identify possible interventions that could lead to more women-friendly communities.

### ***Research Design***

#### *Quantitative Methods*

This dissertation applies a quantitative methodology to explore the interaction between local planning practices, planners, and gender in the United States.

Quantitative research tests theories by examining the relationship among variables (Creswell, 2009). In Chapters 4 and Chapters 5, I utilize four regression models to evaluate the level of gender responsive land use and gender responsive transportation planning in a sample of communities.

The land use models include:

- L1) a basic model to test drivers of gender responsive land use actions, and
- L2) a model that disaggregates aging from gender in the independent variable indices to test whether aging is a catalyst for gender responsive land use.

The transportation planning models include:

- T1) a basic model to test for predictors of gender responsive transportation planning, and
- T2) a model that disaggregates aging from gender in the independent variable indices to test whether aging is a driver of gender responsive transportation planning.

The unit of analysis is respondents' communities from the 2014 Women and Aging Survey. The survey asked respondents to provide their community's name and FIPS (Federal Information Processing System) code to pull community characteristic

information from the American Community Survey (ACS) 5-year sample data. The units of observation are the local land use regulations and transportation planning policies identified by survey respondents in these communities.

### *Dissertation Overview*

This dissertation project follows a manuscript format. The first chapter provides the introduction and overview of the dissertation. It concludes with a timeline and discussion of how feminism manifests in planning theory. Chapter 2 is the literature review. The literature review uses a theory of pinklining, or the gendered division of space through mechanisms such as traditional land use regulations and processes like suburbanization, as an analytical lens. It also reflects the theoretical framework that informed the 2014 Women and Aging Survey's development and analysis.

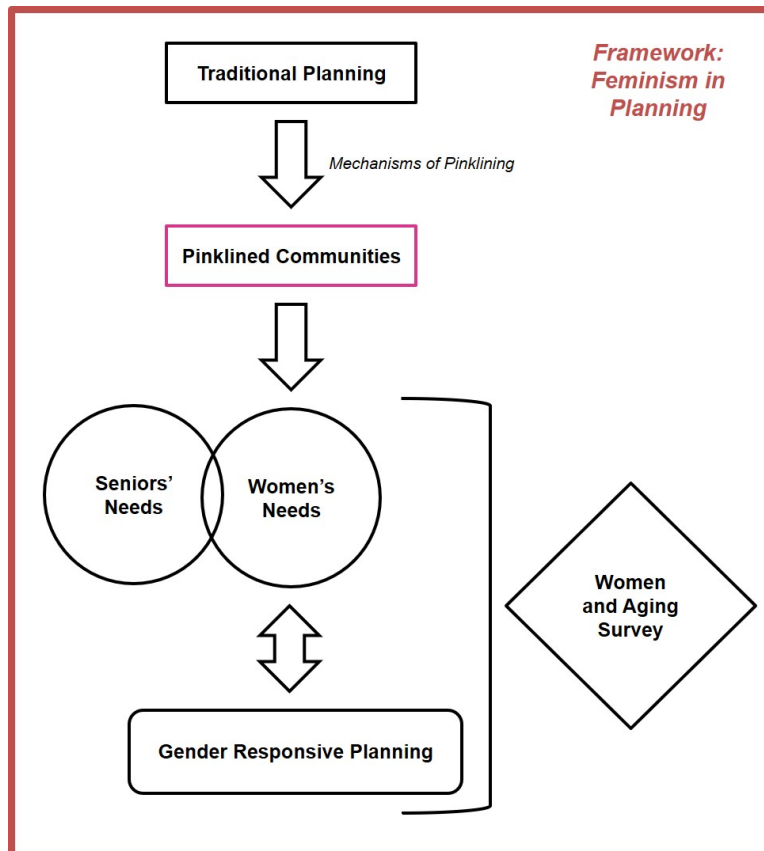
Chapter 3 is the survey methodology chapter. It discusses the survey's development and its respondents, structure, and connections to aging and the theoretical framework presented in the literature review.

Chapter 4 and Chapter 5 present the data and results of regression models. The four regression models used in this dissertation evaluate the level of gender responsive land use and gender responsive transportation planning in a sample of US communities with respondents to the survey. The models also look at motivators for engaging in gender responsive planning. The relationship between land use and transportation planning is crucial, as transportation planning is one tool that can help to address the gendered deficiencies in our current built environment. Other tools like joint-use agreements, developer impact fees, and neighborhood improvement districts

are discussed in Chapter 6 as part of "Not Your Mother's Suburb: Remaking Communities for a More Diverse Population" (Micklow & Warner, 2014). Chapter 7 provides final thoughts and suggestions for future research.

Figure 1.1 below illustrates the conceptual framework of this dissertation.

**Figure 1.1:** Conceptual Framework



### ***Timeline of Planning and Feminism***

This section begins by presenting a high-level timeline of urban planning in the United States to frame a discussion of the waves of North American feminism and how feminism manifests in planning. This discussion contextualizes the literature review in Chapter 2. It also locates this dissertation's feminist approach within the larger history of planning.



**Figure 1.2:** Timeline of Planning and Feminism

Time Period	Spatial Structure	Planning	Feminism	Intersection
19th Century	Walking-scale city Industrialization & urbanization	Subdividing + selling blocks Sanitary reforms City Beautiful movement	First-wave feminism	Women as reformers of the city
Prewar/Interwar	Continued urbanization Streetcar suburbanization	New York Zoning Ordinance (1916) Standard State Zoning Enabling Act <i>Euclid</i> Decision (1926)		
Postwar	Subsidized suburbanization	General Plans Euclidean zoning ordinances	Second-wave feminism	Women and ...
1970s/1980s	Suburban sprawl Urban decline	<i>Belle Terre</i> Decision (1974) <i>Mt. Laurel</i> Decisions (1975/1983)		
Contemporary	Redevelopment Gentrification Retrofit	Communicative Turn Comprehensive Plans Mixed use & Form-based codes	Third-wave feminism	Expanding gender
			Fourth-wave feminism	Gender mainstreaming

*Timeline of American Urban Planning*

**Origins of urban planning.** Antebellum, preindustrial cities were densely constructed. This was partly a carryover from the European street pattern, with such density forced by city walls. In the United States, high density was customary and fashionable, despite an overwhelming availability of land outside of the cities (Palen, 1995). The wealthiest residents lived near the center of the city. In preindustrial America, having a central location was a sign of social and economic achievement. Peripheral areas were primarily home to the poor and marginalized populations of society. The preindustrial, antebellum walking city had little spatial separation between economic and residential areas (Palen, 1995).

City development through the mid-nineteenth century was controlled by real estate developers, engineers, and some government officials. Planning meant plotting streets and subdividing blocks into lots for sale (Krueckeberg, 1983). In the late nineteenth century, sanitary reforms led to the City Beautiful movement that promoted municipal art, civic improvements, outdoor art, and classical design (Peterson, 1983).

From sanitary reforms and the City Beautiful movement emerged a planning that was dedicated to neighborhood and housing reform. These efforts typically included laws regulating minimum standards of space, light, air, and plumbing through controls on building design (Krueckeberg, 1983).

**Prewar/interwar planning.** The development of the electric streetcar substantially changed the metropolitan landscape. The electric streetcar transformed the way that many urban dwellers lived. It was no longer necessary for the middle-class to live within walking distance of their place of work. At the same time, industrialization made residing in the city center less attractive to those that could afford to commute. The adoption of the streetcar made it possible for middle-class businessmen and their families to live in suburban locations far away from the central business district (Hayden, 2003; Palen, 1995). This separation of activities that started with the industrialization and continued through suburbanization has had major implications for women's and men's responsibilities both inside and outside of the home.

By the early twentieth century, the tradition of master planning was well established, with notable urban designers laying out large-scale master plans for cities. With the increasing use of zoning beginning in the 1920s, city planning became more regulatory, bureaucratic, and analytical (Randolph, 2004). Central to the enabling and creation of these zoning ordinances is the Standard State Zoning Enabling Act (SZEA), a model law for states to enable zoning regulations. First issued in 1922, the SZEA laid the basic foundation for planning and zoning in the United States. “Few [other] model or uniform laws have enjoyed such widespread adoption of influence [as

the SZEAs]. Almost all states adopted enabling acts substantially patterned on the Standard Act” (Juergensmeyer & Roberts, 2003). Indeed, the 1926 second printing of the SZEAs noted that 19 states had used the standard act, and there were at least 425 zoned municipalities, comprising more than half the urban population in the country at the time (Department of Commerce, 1926).

The Standard State Zoning Enabling Act provided the legislative basis for the American planning paradigm. In 1926, zoning was judicially legitimated by the U.S. Supreme Court in *Village of Euclid v. Ambler Realty Corp.* (1926). The pervasive impacts of the *Euclid* decision on the built environment and women's and men's lives are discussed further in the next chapter's discussion on mechanisms of pinklining.

**Postwar planning.** Following World War II, the United States embarked on a period of rapid suburbanization powered by federally backed mortgages and highway development. Fishman (1987) wrote, “post 1945 America would appear to be the Age of the Great Suburbs” (pg. 182). Indeed, the population living outside central cities more than doubled from 35 million to almost 76 million from 1950 to 1970 (Teaford, 2008).

In the immediate postwar era, the Federal Housing Administration (FHA) issued low-interest, long-term mortgages for veterans, dramatically increasing the number of Americans able to buy a new house on the metropolitan fringe. Jackson (1985) estimates that between 1946 and 1956, approximately 97% of all single-family dwellings were completely detached, surrounded on every side by their own plots. With the federal government underwriting mortgages, it was cheaper to buy a home in the suburbs than to rent an apartment in the city (Hanlon, 2010). With homeownership

achievable for so many, the suburbs became associated with the American Dream and a place of opportunity.

Postwar suburbanization was also fueled by the increasing dominance of the automobile and the rapid expansion of the highway system in the 1950s and 1960s. The interstate highway program (Federal-Aid Highway Act of 1956) combined with federal and local subsidies to make commuting by personal vehicle both convenient and affordable (Duany et al., 2000). Consequently, commercial and residential developments were redesigned to meet the motorist's needs rather than the pedestrian's (Jackson, 1985). Suburbanization as a mechanism of pinklining is further discussed in Chapter 2.

The shift in business and real estate investment from the central city to the suburbs resulted in a deconcentration of households, employment, and commercial activity. This process of suburbanization undermined the central city tax base, resulting in economic, social, political, and physical problems from which many cities have yet to recover (Beauregard, 2001). Until the 1950s, city planning focused on a physical plan that reflects urban form. In the 1960s and 1970s, new urban problems arose, and planning shifted to address broader issues by adapting from a design and plan-making perspective to policy analysis and problem-solving (Randolph, 2004). These general plans gave more attention to policy elements and less attention to the physical manifestation of the community. The form of urban development was largely left in the hands of the private sector (Randolph, 2004).

**Contemporary planning.** The postwar general plan was neither as inspirational as prewar plans like the 1909 Plan of Chicago or as action-oriented as

today's plans. Beginning in the 1970s, the general plan was supplemented with land use design, land classification, and strategic plans. Contemporary comprehensive planning integrates aspects from these branches into a hybrid form of planning. Comprehensive planning not only maps and classifies land use in both specific and general ways, but it also includes policy and implementation measures (Kaiser & Godschalk, 1995).

City planning has evolved from its nineteenth-century origins, but one of the most interesting characteristics of the planning field is that it has experienced successive additions but virtually no deletions (Krueckeberg 1983). Nearly all of the ideals that existed in the prewar periods persist today, including views on gender and family. The literature review in Chapter 2 and *Not Your Mother's Suburb* in Chapter 6 provides additional discussion around traditional land use regulations as a palimpsest and impacts contemporary residents.

#### *Timeline of North American Feminism*

This dissertation applies a feminist lens to traditional planning in order to create a theory of pinklining. This subsection provides a brief history of feminism as context. The next subsection will intersect this timeline of feminism with the timeline of planning presented in the previous subsection.

Feminism is "the belief that girls and women are legally, politically, and socially disadvantaged on the grounds of their sex; the ethical stance that this oppression is morally wrong; and the pragmatic commitment to ending injustice to all female human beings" (Overall, 1998: 15).

**First-Wave Feminism.** First-wave feminism emerged in the United States in the mid-eighteenth century as the nation was urbanizing. Feminists of the period focused on the legally mandated inequalities between men and women, such as suffrage and property ownership. Some of these female reformers challenged the Victorian cult of domesticity by engaging in demonstrations and public speaking. The cult of domesticity is a set of white, middle-class ideals that emphasized women's emotional and moral sensibilities, the duty of care, and the private nature of caring compared to the physical work done by servants, the ability to exercise individual interests, and to engage in the public business of politics or business (Abel & Nelson, 1990). Other women leveraged the cult of domesticity to claim that their moral superiority to men would improve public behavior and the political process (Rampton, 2008). The first wave of North American feminism lasted approximately 70 years, with the end associated with white women earning the right to vote in 1920. Black women were not able to vote until the Voting Rights Act of 1965.

**Second-Wave Feminism.** Second-wave feminism did not emerge until the 1960s. The forty-year gap between the first and second waves of feminism was filled by the Great Depression and two World Wars. A delayed reaction to the renewed domesticity of the postwar era, second-wave feminism developed along with the American Civil Rights movement and the New Left's growth in politics. Second-wave feminism focused on issues of sexual, reproductive, and workplace rights. Second-wave feminism was also more radical and theoretical than the first wave, associating women's subjugation with broader critiques of patriarchy, capitalism, and heteronormativity (Rampton, 2008).

It was also during the second wave that scholars differentiated sex from gender. Sex is biological, and gender is a social construct that varies by culture and time (Money & Ehrhardt, 1972). Second-wave feminism, like its predecessor, was primarily a white, middle-class, and heterosexual movement.

**Third-Wave Feminism.** In the 1980s, feminism shifted from an equity approach to a difference framework (Kroløkke & Sorensen, 2006). Third-wave feminism began to challenge many of the previous constructs of feminism, such as universal womanhood, feminine identity, and the overemphasized experience of middle-class white women (Hull et al., 1982). Third-wave feminism recognized that women are of many races, ethnicities, religions, sexualities, and classes. bell hooks (1981) noted that both belonged to the category of woman, while the experiences of working-class black and white women were incomparable. Snyder (2008, pg. 175) identified the foregrounding of "personal narratives that illustrate an intersectional and multi-perspectival version of feminism" as a defining characteristic of third-wave feminism.

Third-wave feminism was also characterized by local, national, and transnational activism on issues like violence against women, sex trafficking, and the overall "pornification" of women by the media (Kroløkke & Sorensen, 2006). It was critical of the first and second waves of feminism for suggesting that universal answers or definitions of womanhood exist. Third-wave feminism, however, is criticized for its focus on individual emancipation, making wide-reaching change more difficult to achieve (Munro, 2013). Queer and transgender theorists also criticize third-

wave feminism's failure to recognize identities outside of just gays and lesbians (Halberstam, 1998).

**Fourth-Wave Feminism.** Third-wave feminism contained the seeds for an updated approach to feminist theory and politics (Snyder, 2008). Fourth-wave feminism is characterized by 'call-out' culture in which sexism or misogyny is challenged. Fourth-wave feminists demonstrate against sexism, domestic violence and sexual assault, equal pay, affordable childcare, and abortion rights. They participate and share their experiences through the Everyday Sexism project, Slutwalks, and similar events (Tarrant, 2016; Cochrane, 2013). Social media also plays a crucial role in this emerging wave of feminism. Persons of all genders are using media platforms to challenge misogynist behavior and language and increase young women's political participation (Schuster, 2013).

### *Locating Feminism in Planning*

This section parallels the timeline of North American feminism and discusses how the waves of feminism manifest in planning theory to provide context for the literature review in Chapter 2. The following subsections focus on women's roles as reformers of the city during first-wave feminism; highlights the significant planning contributions of feminist scholars during the second wave in the 1970s and 1980s; and discusses the intersection of feminism and planning theory during the 1990s and 2000s. The section concludes with a brief discussion of the expanding concept of gender in North American planning and international approaches.

**Women as Reformers of the Modern City.** The industrial cities of the late 1800s were crowded, unsanitary, and often corrupt spaces. First-wave feminist women



argued that the city was an extension of the home to legitimate their presence in the public sphere (Spain, 2014; Hayden, 1981). They capitalized on women's association with the home to address issues relating to housing, public health, and politics. First-wave feminists also challenged corruption in politics and advocated for improved urban services (Parker, 2012).

Additionally, these early reformers lobbied for public health issues, shedding light on unsanitary working and living conditions - especially for immigrants (Spain, 2014). These women envisioned not only a City Beautiful but also a City Social (Wirka, 1998). They addressed issues of housing, poverty, race, and segregation through projects like Jane Addam's (1860-1935) Hull House settlement and Catherine Bauer's (1905-1964) work on public housing (Spain, 2014; 2001; Birch, 1983). Hayden (1981) labeled this group 'material feminists' because they addressed women's material needs, reimagining cities built upon creativity, collectivity, and care.

In the 1930s, Edith Abbott, Sophonisba Breckinridge, and Helen Rankin Jeter developed complex sociospatial theories related to race, equality, and housing markets (Sibley, 1995; Sibley, 1990; Abbott, 1936). Their work demonstrated the significance of use and exchange values, how racism created housing submarkets, and included suggestions for state intervention in the housing market (Sibley, 1995). However, the Chicago School of Sociology did not welcome these action-oriented feminist scholars. Contemporaries and planning scholars, Park and Burgess, devalued these female scholars' work as biased and unsophisticated (Parker, 2012; Sibley, 1995; Sibley, 1990). Park and Burgess considered intellectual work that involved a practical engagement in social life inferior to the universalizing science of sociology. Instead,

the female scholars were segregated into the School of Social Service Administration (Parker, 2012; Spain, 2001; Sibley, 1995; Sibley, 1990).

Park was also an outspoken anti-feminist. Park once commented that women reformers had done more damage to Chicago than corrupt politicians or gangsters (Bulmer, 1981). Park's antifeminism is visible in the patriarchal social interpretation style that shaped the social sciences in the twentieth century. This includes dismissing the importance of gender relationships in constructing the American city (Parker, 2012; Sibley, 1995). Park's dismissal of women's scholarly contributions also speaks to the male-dominated [centric] early planning landscape (Sibley, 1995).

**"Women and ...."** Second-wave feminism emerged in the 1960s within an urban [suburban] environment that differentiated and reinforced traditional gender roles (Spain, 2014; Sandercock & Forsyth, 1992; MacKenzie, 1984; Markusen, 1980; Friedan, 1963). Second-wave scholars associated the subjugation of women with patriarchy, capitalism, and heteronormativity. The dominance of the single-family detached residence, its separation from the workplace, and its decentralized location result from both the patriarchal organization of household [social] production and the capitalist organization of wage labor (Markusen 1980, S23). Within this disempowering landscape, second-wave feminists fought for sexual, reproductive, and workplace rights. Feminist scholars worked on adding women, women's perspectives, and women's concerns to the social sciences (Snyder, 1995). In planning, we see the emergence of the "women and..." body of literature that addressed a range of urban feminist issues, including housing, transportation, and safety (Hayden, 1980; Matrix, 1984; Stimpson, 1981; Wekerle et al., 1980).

A significant contribution of these second-wave scholars was making women's experiences visible within the urban context. The *International Journal of Urban and Regional Research* (1978), *Signs* (1980), and *Antipode* (1984) all published special issues focused on women, gender, and the city. Articles in these special issues generally focused on more practical issues like transportation and housing, but some advanced theoretical discussions about the roots of women's oppression in cities (MacKenzie, 1984; Markusen, 1980; Hayden, 1980).

Dolores Hayden's (1980) "What Would a Non-Sexist City Be Like?" proposed solutions to contemporary women's problems. Hayden (1980) argued for a transformation of the built environment that overcomes "the traditional divisions between the household and the market economy, the private dwelling and the workplace" (S176). This approach is beyond the reach of municipal zoning ordinances or other tools that planners may employ. However, Hayden also offered practical suggestions such as converting a single-family suburban block to a block that includes multifamily housing, a common vegetable garden, daycare, and kitchen area.

**Expanding Gender.** In the 1990s, feminist scholars moved from the descriptive "women and..." literature of the 1980s to richer discussions of epistemology and ontology in planning. Discussions of epistemological and ethical approaches are integral to understanding power, process, participation, and professional conduct in a field such as planning (Friedmann, 1992). The connection between feminist planning theory and epistemology, ethics, and communication in planning is discussed further in the next chapter.

More recent literature in planning expands the concept of gender to include LGBTQ populations and the production of masculinities and femininities. Queer theory analyzes the "institutional practices and discourses producing sexual knowledges and the way they organize social life" (Seidman, 1996: 13). Scholars use queer theory to confront the normative assumptions about planning by identifying how sexuality has influenced planning's theoretical foundations. Queer theory challenges planners to consider the permeability of their plans and developments, and more generally, their ideal city (Hendler & Backs, 2011). For example, traditional housing developments with heteronormative assumptions embedded into their design should be challenged for disregarding the needs of persons with different identities. Transgender persons experience additional challenges. Doan's (2010) article on the tyranny of gendered spaces extends the feminist analysis to demonstrate how strict categorizations of gender fail to provide for intersex and transgender populations' needs.

**Gender Mainstreaming.** For the past 20 years until the 2016 presidential election, the literature on gender and planning in the United States has been relatively thin. Internationally, however, work around gender and development continued. Gender mainstreaming evolved from earlier approaches like Gender and Development (GAD) and Women in Development (WID). Gender mainstreaming represented a movement away from conceptualizing women as a separate target group to the concept of gender equity (Theobald et al., 2005).

Gender mainstreaming was established as an official strategy for promoting gender equality during the Fourth UN World Conference on Women in 1995. The UN Economic and Social Council (ECOSOC) defines gender mainstreaming as:

...the process of assessing the implications for women and men of any planned action, including legislation policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic, and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality (United Nations, 1997:2).

The gender mainstreaming approach theorizes the deconstruction of gender relations through policy interventions. Planning should consider gender in all stages of the plan-making process and all aspects of planning practice to achieve effective mainstreaming (Greed, 2005). The City of Vienna defines gender mainstreaming as a "process-oriented strategy to safeguard quality in planning... it informs the entire planning process from the analysis of planning tasks and the formulation of goals to the implementation and evaluation of measures taken" (Urban Development Vienna, 2013: 17).

Gender mainstreaming does not focus on women as a uniform group but instead focuses on the relationship between the genders and the varying situations of both women and men. The Royal Town Planning Institute (RTPI) defines gender mainstreaming as "embedding an acknowledgement of the different needs of women and men into the planning system, so that it becomes part of the central focus rather than an add-on extra... is a matter of looking at existing and proposed policy areas through a 'gender lens'" (Greed et al., 2003: 7).

Scholars like Larsson (2006) and McRobbie (2009) are critical of policy-based approaches like gender mainstreaming as transformative because they do not challenge existing gender relations (Jarvis et al., 2009; McRobbie, 2009). Advocates of agenda-setting approaches--policies that open up the possibility for new horizons and initiatives--challenge mainstreaming approaches in which gender is made part of existing policies without substantial efforts to change existing gender relations (Sánchez de Madariaga & Roberts, 2013).

A similar criticism of gender mainstreaming is that its technocratic nature excludes practitioners from engaging in more 'rowdy' forms of feminism (McRobbie, 2009). Interestingly, the technocratic nature of gender mainstreaming has created a new need for specialists in gender to audit policies and outcomes regarding their differential impact on gender. The specialists are 'femocrats' (McRobbie, 2009). Sainsbury and Berquist (2009) counter this second criticism of gender mainstreaming and offer support of such integrationist approaches by presenting evidence from a study of gender mainstreaming in the Swedish central government. In their study, they find no support for the claim that gender mainstreaming undermined the women's movement in Sweden and go so far as to suggest that it may be possible to have both a transformative (agenda setting) approach along with an integrationist approach (Sainsbury & Berquist, 2009).

Successful gender mainstreaming in planning would likely benefit women more than men because planning policy and practice have historically not recognized women's needs (Darke et al., 2000). Gender mainstreaming would also help recognize

the diversity of men's needs, including updated employment patterns through its disaggregated focus on gender (Greed, 2005).

### **Conclusion**

This introduction sets the foundation for the following chapters of this dissertation. It establishes the dissertation's structure and purpose and traces the development of feminist and gender-based planning scholarship in the United States (Figure 1.3).

**Figure 1.3:** Timeline of Planning and Feminism

<b>Time Period</b>	<b>Spatial Structure</b>	<b>Planning</b>	<b>Feminism</b>	<b>Intersection</b>
19th Century	Walking-scale city Industrialization & urbanization	Subdividing + selling blocks Sanitary reforms City Beautiful movement	First-wave feminism	Women as reformers of the city
Prewar/Interwar	Continued urbanization Streetcar suburbanization	New York Zoning Ordinance (1916) Standard State Zoning Enabling Act <i>Euclid</i> Decision (1926)		
Postwar	Subsidized suburbanization	General Plans Euclidean zoning ordinances	Second-wave feminism	Women and ...
1970s/1980s	Suburban sprawl Urban decline	<i>Belle Terre</i> Decision (1974) <i>Mt. Laurel</i> Decisions (1975/1983)		
Contemporary	Redevelopment Gentrification Retrofit	Communicative Turn Comprehensive Plans Mixed use & Form-based codes	Third-wave feminism	Expanding gender
			Fourth-wave feminism	Gender mainstreaming

The literature review presented in the next chapter, Chapter 2, expands on this framing of gender and planning to discuss mechanisms and processes of pinklining in planning.

## CHAPTER 2

### LITERATURE REVIEW

#### *Introduction*

The first chapter of this dissertation discussed how feminism manifests in planning literature. In this chapter, I build on that discussion with feminist theory to create a theory of pinklining in planning. I use pinklining to refer to the gendered division of space through mechanisms like land use regulations, comprehensive planning, and suburbanization.

The effects of such pinklining include women's isolation (especially in the postwar period), spatially limited job opportunities, complex daily travel patterns, and reinforcement of outdated family norms and gender roles. Planning interventions that address the effects of pinklining form the core of gender responsive planning.

#### *Separate Spheres*

The concept of separate spheres is central to a theory of pinklining. Separate sphere dichotomies like public/private, male/female, knowledge/experience, work/residence, and urban/suburban are foundational to planning. Within a pinklined environment, the division between public and private underlies all of the others. The public domain is associated with men, knowledge, work, and the urban. The private then becomes associated with women, experience, residence, and the suburb. This connection with the private sphere leads to women's exclusion from political and planning processes.

Kerber (1988) framed separate spheres as an ideology imposed on women and a set of boundaries expected to be observed by them. According to this construct, the



public sphere is the domain of men, and the private sphere is women's domain. While this form of gender relations existed in antebellum America (Tocqueville, 1835), the separate spheres construct achieved dominance in nineteenth-century America through the Industrial Revolution (Davidson & Hatcher, 2002). The Industrial Revolution transformed the American economy and, along with it, the urban landscape and gender dynamics.

According to Kraditor (1968), the separation of men's and women's occupations during the Industrial Revolution allowed separate spheres within the household. The Industrial Revolution "broadened the distinctions between men's and women's occupations and certainly provoked new thinking about the significance and permanence of their respective 'spheres'" (Kraditor, 1968: 14). This change in family dynamics also allowed, for the first time, an alternative to traditional urban life. It was only with the separation of spheres by gender that the separation of the workplace from the residence became possible (Miller, 1995).

The separation of the workplace from the residence is embedded into the landscape through suburbanization. The early suburbs were the bedrooms to the cities. Women continued to be associated with the virtues of domesticity, piety, purity, and submissiveness. The home was the proper sphere for women as cities continued to be spaces for men. For Welter (1966), separate spheres denigrated women and kept them subordinate. For Lerner (1969), "it is not an accident that the slogan 'woman's place is in the home' took on a certain aggressiveness and shrillness at the time when increasing numbers of poorer women left their homes to become factory workers" (pg. 12).

Saegert (1980) finds the separate spheres construct to be a "guiding fiction, yet one that finds its way into public policy and planning and into women's and men's sense of who they are" (pg. S111). The separate spheres construct functions as a mechanism of pinklining by creating gendered spaces both inside and outside the home. The separate spheres construct also provides the theoretical foundation for the androcentric bias underlying planning theory and land use regulation.

### ***Mechanisms of Pinklining***

The following subsections discuss mechanisms of pinklining. These mechanisms include planning theory (planning epistemologies, ethics, and language that exclude women's ways of knowing, thinking, and communicating), land use regulations, and suburbanization. By mechanism of pinklining, I mean that the concept or theory contributed to the gendered division of space, either directly or indirectly.

#### *Planning Theory*

The American land use and transportation planning paradigms were developed within a positivist epistemology that privileged scientific knowledge and assumed man as the universal subject (Lennie, 1999). This resulted in the development of androcentric zoning ordinances and comprehensive plans that are gender blind. While the communicative turn in planning marked a shift away from such a totalizing worldview (Innes, 1998; Healey, 1996), little has been done to address women's needs, and gender issues are still primarily marginalized to the periphery of planning (Johnston-Zimmerman, 2017; Leavitt, 2003)

Sandercock and Forsyth (1992) stress the critical power relationship between theory and practice. For these scholars, if inequality results from planning practice, it

is necessary to examine the theory and methods behind it. Friedmann (1992) also writes that "for emancipation to succeed, male habits of power must be broken... feminist epistemologies are an element in the continuing struggle for women's emancipation" (pg. 40).

**Epistemology.** Epistemology is a concept of what knowledge is, how it is attained, and who may claim it (Snyder, 1995: 91). Feminist epistemology's purpose is to challenge male dominance, to contribute to knowledge about women, and to construct a science in which gender and gender relations are viewed as wholly social and vital to inquiry (Tanesini, 1999). From an epistemological perspective, the feminist challenges to planning theory correspond to the hierarchical dualities of theory/practice, knowledge/experience, and public/private (Listerborn, 2007).

Feminist epistemology in planning emerged as a response to the discipline-specific "women and..." body of work in the 1980s discussed in the introduction. The "women and..." body of literature did not address why such research was needed or why gender was largely pursued as an afterthought rather than as an integral part of the field (Snyder, 1995: 93). Feminist epistemology generally falls into three categories: feminist empiricism, feminist standpoint theory, or feminist postmodernism. This categorization progresses from reformist critiques to radical approaches to knowledge.

For example, comprehensive planning is "rooted in a belief that social progress emerges through a combination of a unique vision, central control, and scientific knowledge" (Beauregard, 1991: 191). Feminist empiricists criticize this paradigm of scientific empiricism (Millman & Kanter, 1975). They identify the androcentric bias

as "bad science" that can be corrected through more careful adherence to existing empiricist methodology (Snyder, 1995: 94). Feminist empiricists believe that scientists can guard against androcentric bias by acknowledging the social context of research and the relationship between researcher and object. The feminist empiricist approach largely accepts the dominant epistemology and is critiqued by other feminist theorists as contradictory. It simultaneously seeks to challenge the foundation of the empiricism it upholds by recognizing the relationship between knower (researcher) and object (Harding, 1986).

Feminist standpoint theorists, like Hartsock (1983) and Rose (1983), reject empiricism completely. They believe that the scientific method is fundamentally flawed and unable to produce unbiased work because it failed to detect bias previously. Feminist standpoint theorists also argue that because knowledge is socially situated, women's marginalization results in a position from which they can add to more complete understandings of the world (Hartsock, 1983; Smith, 1979).

Feminist postmodernists criticize standpoint theory because there is no universal women's perspective (Milroy, 1991; Flax, 1987). Women may all share the experience of oppression in patriarchal societies, but that experience differs by race, class, and age. Postmodern feminists reject the Enlightenment notion of absolute truth. Knowledge is temporal, contextual, and dynamic. Gender and sexuality are also understood as multiple categories, shifting, and fluid by feminist postmodernists (Lorber, 2012).

The expansion or alteration of planning's epistemological foundation also requires a rethinking of methodological issues like how research should be conducted

in planning. Using feminist methods in planning means striving to be interdisciplinary, inclusive, and treating those being studied as partners in the research. Feminist research tends to be action oriented. It strives to provide a voice for concerns not previously heard and lead to women's empowerment (Reinharz, 1992).

A feminist epistemological approach challenges pinklined planning theory. It criticizes positivist definitions of knowledge and research methods as ignoring women's experiences. Feminist epistemology also criticizes the traditional comprehensive planning approach for refusing to consider knowledge creation's political context (Sandercock & Forsyth, 1992).

Feminist epistemologies contribute to planning theory's understanding of what constitutes valid knowing (Friedmann, 1992). Women's knowledge should no longer conflict with epistemological traditions of rationality and absolute knowledge in planning (Listerborn, 2007; Code, 1988). In this perspective, planners would accept that knowledge could be gained through talking and listening. Planners would understand the importance of oral traditions and experience. They would also accept that knowledge may also be tacit or intuitive (Sandercock & Forsyth, 1992).

Current planning theory is no longer exclusively the modernist project criticized for its totalizing worldview. Planning theory more frequently recognizes a variety of voices and a diversity of interests, but those voices and interests tend not to be women. Leavitt (2003) argued, "while the feminist agenda focuses on recognizing women's rights as universal human rights, mainstream urban planning adeptly avoids the issues" (pg. 209). Indeed, our 2014 survey found that only 2% of comprehensive plans give specific attention to the needs of women (Women and Aging, 2014).

**Feminist Ethics.** Planning ethics is the second area in which we can see pinklined planning theory. Planning, for this discussion on ethics, can be interpreted in three ways. First, planning is a profession. Second, it is a process of thinking and decision-making. Third, planning is an area of study associated with the other two interpretations' technical and philosophical aspects (Hendler, 2005). Planning ethics concerns how planners as individuals and the profession ought to behave morally (Hendler, 2005). Feminist ethics examines women's values, experiences, and decision-making processes (Ritzdorf, 1995). There is an essential distinction between feminine and feminist ethics. Feminine ethics refers to observations of how traditional approaches to ethics fail to include women's moral experiences and intuitions. Feminist ethics adds a political perspective and offers suggestions on how traditional ethics must evolve to address the patterns of dominance and oppression that affect women (Sherwin, 1993).

Strongly influenced by Carol Gilligan's (1982) work, feminist ethics is characterized by an expressed emphasis on responsibility, obligation, and care, as opposed to rights, rules, and justice emphasized in traditional ethics (Hendler, 1994: 116). Feminist ethics is rooted in the connection between the public and private domains and a broader recognition of what counts as moral knowledge. Inherent in it is a need to change the ways of thinking that subordinate women or negate feminist ideas (Hendler, 1994: 116). A feminist approach to planning practice includes anti-pinklining and gender responsive actions such as empowering individuals and groups, emphasizing diversity, focusing on the process, connecting theory and practice, and validating women's ways of knowing (Hendler, 2005).

Integrating the work of feminist ethicists into planning would encourage planners to engage in more caring relationships with clients and empathize with members of the communities in which they work. Planners would understand the public, not as a homogenous entity, but as multiple publics (Sandercock & Forsyth, 1992). There would also be a greater emphasis on qualitative methods in which planners work closely with their communities. Planning methods that integrate a feminist perspective include negotiation, mediation, and cooperative problem solving (Fainstein, 2005). For plan-making and implementation, feminist ethicists emphasize women's issues and wellbeing. In this framework, planners' efforts would be analyzed for their impacts on women and other oppressed groups.

**Language and Communication.** Feminist theories of language demonstrate how language forms a person's sense of reality, order, and place in a community. Language can be either empowering or constricting. Feminist theorists point to inequalities in the use of language. Men tend to interrupt women more often than women interrupt men. Men also listen less intently to members of the opposite sex (Lennie, 1999; Spender, 1985). This inequality is often present in citizens' participation in which planning discourse and ideologies limit women's participation and marginalize their contributions (Lennie, 1999). In the 2014 Women and Aging Survey, the majority of respondents reported that men engage more in community planning processes. Only 28% of respondents agreed that women are more engaged in the community planning process than men (Women and Aging, 2014). There appears to still be a need for planning to better address and incorporate the needs and concerns of women.

### *Land Use Regulations*

Another powerful mechanism of pinklining is land use regulations. Specifically, those American planning and land use regulations based on an androcentric and heteronormative framework. This form of land use regulation enforces a particular type of gender, sexual, and family identity that is more in line with the ideals of the 1950s rather than the 2020s. This is problematic for any person who lives outside the paradigmatic postwar nuclear family, for example, women who work, same-sex and queer families, and people of color. The American metropolitan landscape is not designed to support the lives of these groups.

This section of the literature review applies a gender lens to the history of land use regulation in the United States. It focuses on the role of heteronormativity and family in the development of zoning regulations. Heteronormativity is the "uncritical adoption of heterosexuality as an established norm or standard. Heterosexism is the system by which heterosexuality is assumed to be the only acceptable and viable life option and, hence, superior, more natural, and dominant (Perlesz et al., 2006: 183). Heteronormativity marginalizes any relational structure outside of this norm. Urban planning reinforces heteronormativity through single-family zoning codes and family definitions predicated upon outdated assumptions and stereotypes of family structure and gender roles. This type of land use regulation was established in 1926 with the *Village of Euclid v. Ambler Realty Co.* decision, reinforced through mid-century mass suburbanization, and continues to dictate household composition through family definitions in zoning ordinances.



**Pinklining using the Police Power.** This subsection demonstrates how the police power is used through traditional zoning ordinances to regulate family and community structure. These zoning ordinances are a mechanism of pinklining. They have created and reinforced an idea of family that has literally been built into the landscape. They have also functionally created men's and women's spaces through the separation of workplace and residence. People that do not acquiesce to this ideal are disadvantaged by this landscape.

The first zoning ordinances emerged in the early twentieth century due to the overcrowded and unsanitary conditions in major US cities. These zoning ordinances evolved from the earlier prohibition of nuisance laws and regulated the use, height, and density of structures in individual districts. New York City adopted the first comprehensive zoning ordinance in 1916, and in the following decade, hundreds of municipalities followed suit by enacting zoning codes regulating height, use, and density (Lubow, 2007). These municipalities enacted such zoning laws under their police power or a state's ability to regulate for the "safety, health, morals and general welfare of the public" (*Lochner v. New York* 1905).

Before the *Euclid v. Ambler Realty Co.* (1926) decision, land use was governed by the principles of nuisance or through hierarchical zoning ordinances. Hierarchical zoning ordinances did not segregate uses but rather prohibited specific uses in zones (Hirt 2013). For example, residential uses could be in commercial and industrial zones, but industrial uses could not be in commercial or residential zones.

With the *Euclid* (1926) decision, the Supreme Court maintained that it was a valid government interest to regulate the composition of a neighborhood by

controlling where specific land uses may occur. Euclidean zoning ordinances are based on the principles of separation and segregation. This form of regulation prohibits the mixing of use types in one zone and keeps incompatible zones at a distance from each other (Micklow & Warner, 2014). For example, many commercial uses are prohibited in and kept at a distance from single-family residential areas.

The *Euclid* (1926) case affirmed zoning as a valid use of the state's police power and expressed a preference for single-family homes. This preference for single-family detached houses extended from regulating building type in the first zoning ordinances to include regulating occupancy type following World War II. The [white, middle-class] nuclear family became the desired residents of the single-family home. The construction boom in the postwar period entrenched Euclidean zoning in the landscape, resulting in the sprawling, pinklined development that characterizes metropolitan America.

**Single-Family Rightness and Family Definitions.** The preference for single-family homes in traditional, Euclidean ordinances is often enforced through family definitions. Using family definitions as a form of land use regulation reinforces traditional gender roles and family structures that disadvantage women and those living outside of the traditional nuclear family lifestyle.

Frisch (2002) asserts that planning is a heterosexist project that "advances heterosexuality and suppresses homosexuality" (pg. 254) through ideals of order, public, family, reproduction, and nature that exclude persons based on their perceived sexual or gender identity. Early planners like Mumford and Geddes connected urban disorder and violence to homosexuality and perceived non-traditional lifestyles

(Frisch, 2002). They viewed planning as a means of bringing order into life, and they explicitly connected heterosexuality with this order (Frisch, 2002). Consequently, much of the early writing and jurisprudence in planning relies on the assumption that heterosexual marriage and the protection of traditional family structures will result in an orderly society.

The California Supreme Court's decision in *Miller v. Board of Public Works of the City of Los Angeles* (1925) justified residential zoning on the grounds that it protected the civic and social value of the American home. The Court found that "the character and quality of manhood and womanhood are in large measure the result of the home environment" (pg 493). The Court's decision affirmed that it is a legitimate state interest to promote and protect heterosexual families and persons.

The US Supreme Court referenced *Miller* (1925) in its *Euclid v. Ambler Realty Co.* decision (1926). The *Euclid* holding expressly privileged the single-family lifestyle noting, "very often the apartment house is a mere parasite, constructed in order to take advantage of the open spaces and attractive surroundings created by the residential character of the district" (pg. 394). The Court's decision lauded the single-family district as a place of privilege for raising children but did not define single-family occupancy.

Following the *Euclid* decision, municipalities across the country enacted some form of land use regulation that designated residential areas. These pre-war zoning ordinances typically specified that some areas be zoned for single-family, as opposed to multifamily apartment buildings, and defined family in terms of a single, nonprofit housekeeping unit (Oliveri, 2015).

Following World War II, the emphasis of single-family zoning ordinances shifted from the use of the land to the identity of the users (Ritzdorf, 1994). This shift coincided with the postwar baby boom, the nuclear family's rise, and the suburbs constructed as the ideal place for young, white families to reside. Zoning ordinances began to move away from the term "single housekeeping unit" to more restrictive ordinances that defined "family" in terms of the relationship between household members. Many ordinances explicitly required that household members be related by blood, marriage, or adoption. Some zoning ordinances went even further and defined the degree of relatedness allowed – a grandparent may be included, but adult siblings were excluded (Oliveri, 2015).

Ritzdorf (1994) wrote on the significance of this shift, "in its original sense, the phrase 'single-family' was a designation of a physical structure; however, it was a short leap to the municipal interpretation of it as a regulation on the type of dwelling occupancy – occupancy by the traditional nuclear family" (pg. 120).

The US Supreme Court's ruling in the *Village of Belle Terre v. Boraas* (1974) reinforced the preservation of traditional family values as a legitimate state objective. The Village of Belle Terre zoning ordinance was challenged by a group of college students who wanted to rent a house in the Village. The Village's single-family ordinance defined family so narrowly that it prohibited three or more unrelated persons from living together anywhere in the Village of Belle Terre. The US Supreme Court upheld the Village of Belle Terre's ordinance on the grounds that limiting households to a single nuclear family unit would reduce crowding, traffic, and noise. Justice Douglas, on behalf of the majority, wrote:

A quiet place where yards are wide, people few, and motor vehicles restricted are legitimate guidelines in a land use project addressed to family needs. This goal is a permissible one within *Berman v. Parker*, supra. The police power is not confined to elimination of filth, stench, and unhealthy places. It is ample to lay out zones where family values, youth values, and the blessings of quiet seclusion and clean air make the area a sanctuary for people (pg. 416).

This idyllic image presented by the Court in *Belle Terre* affirmed a particular type of lifestyle – nuclear families in low-density suburbs secluded from areas of filth and disorder. In his dissent, Justice Marshall wrote that:

Belle Terre imposes upon those who deviate from the community norm in their choice of living companions significantly greater restrictions than are applied to residential groups who are related by blood or marriage, and compose the established order within the community. The village has, in effect, acted to fence out those individuals whose choice of lifestyle differs from that of its current residents (pg. 416).

Restrictive family definitions in zoning ordinances act as a mechanism of pinklining. In choosing to exclude particular individuals, the Belle Terre ordinance also implied expectations of their residents, their gendered responsibilities, and their family structure.

In the forty-seven years since *Belle Terre* (1974), some localities have moved away from the restrictive single-family definitions of the postwar era by incorporating functional family reforms into their zoning ordinances. Tacoma, Washington defines a family as "one or more persons related either by blood, marriage, adoption, or guardianship, and including foster children and exchange students, or a group of not more than six unrelated persons, living together as a single nonprofit housekeeping unit" (City of Tacoma, 2019). With this definition, a group of six unrelated persons may live together, but only if they function similarly to a traditional family.

Binghamton, New York defines a "functional and factual family equivalent" as a "group of unrelated individuals living together and functioning together as a traditional family" (City of Binghamton, 2016). A group wishing to live together as a functional family must demonstrate to the city's Board of Zoning Appeals that they meet the city's criteria for a functional family. The Board then makes a determination of family status based on a set of guidelines that include the presence of children, an individual acting as head of household, and any other factors reasonably related (sexual intimacy?). However, a family of any size related by blood, marriage, or adoption is not required to present a petition to the Board of Zoning Appeals to live together.

Poughkeepsie, New York, also holds the traditional family to the highest standard in its zoning ordinance. The burden is placed on individuals to prove that their living arrangements are the "functional equivalent of a traditional family" by meeting five mandatory criteria (City of Poughkeepsie, 2016). The city's criteria that the "group is one which in theory, size, appearance, structure, and function resembles a traditional family unit" is likely in conflict with other with judicial protections on the rights of association and privacy.

Functional family definitions appear to allow for flexibility in living arrangements, but they judge the value of a relationship by how closely it resembles the traditional nuclear family. As such, functional family definitions are no more gender responsive than traditional family definitions in zoning ordinances.

**Land Use as Mechanism of Pinklining.** Single-family zoning ordinances provide a lens on the power of land use regulation in the United States. The

government cannot, for example, regulate the type of car a person drives, what to eat for dinner, or how to decorate the interior of a home, but it can govern what is considered a family and who can live in a home (Boudreaux 2011). Restrictive single-family ordinances and the judicial decisions upholding them are laden with value judgments masked as facts about what families should look like and why people should live together. Traditional zoning ordinances are a vestige of the 1950s and 1960s when the nuclear family represented most American households. Household structure has steadily moved away from the nuclear family that formed the basis for traditional single-family ordinances. However, the 2014 Women and Aging Survey found that 63% of respondent communities still use a family definition that regulates the number of unrelated people that may live together.

#### *Suburbanization and Pinklining Gender Roles*

Suburbanization is an important pinklining process. As discussed in the previous sections, the single-family lifestyle's rightness is implied by the American zoning and land use paradigm. Ritzdorf (1994) wrote:

An implicit meaning of the word *family* (working father, stay-at-home mother, and children) embedded in "married suburban bliss" has shaped much of the municipal land-use planning agenda. Built into the exclusive single-family residential zoning district is the assumption that a parent, almost always the mother, will be at home all day to take care of her children (pg. 259).

The American Dream manifests in the suburban landscape and culture as the "imagined land of opportunity" (Hanlon, 2010: 1). For residents of the noxious industrial city, the suburb was an escape, open only to society's most affluent. Following World War II, millions were presented with the opportunity for homeownership and the possibility of middle-class life (Jackson, 1985). Single-family

homes, especially, became integral to the middle-class identity and physical expression of the American Dream (Clapson, 2003). Ritzdorf (1994) wrote:

If a single-family detached home on its own piece of land, located in a quiet and tree-lined neighborhood far from the bustle of the city, is the metaphor for the American dream, zoning is the tool with which this spatial metaphor is bonded to the landscape (pg. 257).

For American women, the postwar suburban boom also meant a baby boom.

Women and the suburbs are both associated with domesticity, closeness to nature, and safety. These characteristics are reinforced through symbolic structuring (Saegert, 1980: S97). Symbolic structuring is another term for Ortner's "sadly efficient feedback system" (Ortner, 1974: 87) in which certain aspects of a suburban woman's situation contribute to her being viewed as closer to nature. This view was institutionalized through single-family zoning and suburban land use patterns that reproduce her situation.

Especially in the suburb, the home is so connected to the definition of men's and women's roles that it exists as a cultural symbol primarily through these roles (Saegert, 1980: S98). Saegert (1980) noted that women are committed to and take responsibility for the home and, at the same time, denigrated for being "nothing but a housewife" (S99).

For Markusen (1980), the modern US city spatial structure is defined by the significant spatial segregation of residence from the capitalist workplace, low-density settlement, and the predominant single-family form of residential housing (S27). The dominance of this type of residence and its separation from the workplace results from the patriarchal organization of social production and the capitalist organization of



wage labor (Markusen, 1980: S23). Rosaldo (1974) described American society as "organized in a way that creates and exploits a radical distance between private and public, domestic and social, female and male" (pg. 42).

The gendered assumptions that underpin traditional land use regulations have significant implications for women, especially as household and employment patterns continue to change. As long as the nuclear family remains an implicit assumption in the American zoning and planning paradigm, household production will continue to be women's responsibility, and the pinklined landscape will impact her travel patterns, job opportunities, and care duties. Additional discussion on the intersection of traditional land use regulations, suburbanization, and gender roles is provided in Chapter 6: *Not Your Mother's Suburb*.

### ***Effects of Pinklining***

The effects of pinklining include women's isolation and confinement, limited employment opportunities, and more complex travel patterns compared to men. The 1950s- and 1960s-bedroom suburbs led to women's isolation in the postwar period (Miller, 1995). These pinklined communities separated business from residential. With many households only having one vehicle, this led to women's isolation as their breadwinning husbands took the family car for work in the central city. Postwar isolation turned into confinement as women started to enter the workforce in the 1970s.

Women who take on the role of wage earner in addition to their traditional household responsibilities typically have fewer employment opportunities when compared to men (Kwan, 1999). This is because the time spent on household

maintenance is less time that women can spend commuting to work. This double burden generally limits women's employment opportunities to a smaller geographic area. The triple burden hypothesis expands on this to incorporate a woman's community's spatial structure as an additional constraint to her mobility and employment options (Micklow & Warner, 2014). The land use pattern of a community impacts a woman's opportunities and the size area to which she has access. Moreover, the division of services/workplace from residence also results in more complex travel patterns for women.

### *Transportation Patterns*

This section uses transportation patterns as a lens to understand the impact of pinklining on women. Gender is a critical point of difference in trip length, mode, purpose, and safety while traveling. Hjorthol (2008) notes that differences in travel patterns between women and men "can be seen as a barometer of the state of equality between men and women in society" (pg. 206). Additionally, the assumptions regarding gender relations within a household, the division of labor, and the control of resources in the decision-making process that underlies zoning are also present in transportation planning (Levy, 2013).

**Spatial Entrapment.** Spatial entrapment theory asserts that women's work trips are shorter than men's, their labor markets are smaller, and their employment opportunities are accordingly more limited (England, 1993). This is due to women's traditional gender roles inhibiting their labor market status by constraining their space-time budget (Kwan, 1999). Women have less time to travel to and from work than men, thereby reducing the quantity and quality of jobs to which they have access. This

is especially true for married women (Rapino & Cooke, 2011; Kwan, 1999). The rationale is that men, especially married men, can have longer commutes because of their traditional role as a family provider, which affords them fewer domestic responsibilities, higher labor market status, and more transportation options (Rapino & Cooke, 2011).

A standard method of testing the spatial entrapment hypothesis is to study commute times or distances disaggregated by gender. McLafferty and Preston (1997) analyzed commuting behavior in the New York Metropolitan Statistical Area for 1990. They found that white, married women with children had significantly shorter commutes regardless of location within the MSA (city or suburb). Women with higher educational attainment levels or income, or reliance on public transportation, had longer commute times. Significantly, married men had the longest commuting times, holding race and ethnicity constant. McLafferty and Preston (1997) concluded, "this result is linked to the unequal division of labor in the home, a division in which women's unpaid domestic work supports men's paid work and commuting" (p. 208).

Kwan (1999) focused on women's nonemployment activities as part of their standard travel patterns. This work is significant because Kwan emphasized the importance of nonemployment activities in conceptualizing the home-to-work commute. She used data on all trips made during two days for a sample of households in Columbus, Ohio, to create space-time aquariums in GIS. In this visualization method, travel data are input with the vertical axis representing the time of day and the horizontal plane's boundary representing the extent of the study area (Kwan, 1999). From there, Kwan performed a canonical correlation analysis with two sets of

variables to identify individuals with higher levels of daytime fixity. Daytime fixity arises when an activity has a rigid locational or temporal requirement that permits little flexibility regarding when or where it can be performed.

Kwan (1999) found that women experience more fixed activities than men, regardless of employment status, and that higher levels of income are associated with less constraint. She also explored the impact of the fixity constraint on commuting distance and employment status.

**Commuting.** Crane (2007) used American Housing Survey data to examine commuting behavior by gender, race, age, and family structure. Crane applied a multivariate analysis on commute trip distance to determine the impact of individuals' and households' demographic and economic characteristics on commute patterns. He found commute distance to be a function of income, age, gender, race/ethnicity, and educational attainment. The analysis also included variables on housing tenure and cost, carpool participation, and the number of vehicles owned by the household. Gender continued to affect commute distance across income, age, marital status, housing tenure, and location within a metropolitan area (Crane, 2007).

Rapino and Cooke (2011) built on traditional analyses of gender and commuting studies by utilizing a regional fixed effects model to remove the impact of local geographic structure on estimates. They used Bureau of Economic Analysis component economic areas (BEAs) to account for different spatial structures between regions and a 5% Public Use Microdata Sample (PUMS) as their dataset. Rapino and Cooke found that for married women, holding occupation, age, education, and mode of transportation constant, the presence of children under five decreased commuting

times by 3%, and having children over five decreased commuting time by 11.5 percent (Rapino & Cooke, 2011).

Naess (2008) also integrated urban spatial structure into his daily travel analysis by gender in Copenhagen. The analysis used a multivariate regression of travel distance on four structural variables and 19 socioeconomic and attitudinal variables. The structural variables were residence location to the primary urban center, proximity to the second urban center, closest rail station, and jobs to residence ratio. Naess (2008) found that working women are more likely to travel to work on a bike or foot than men, especially as the city center's distance decreases. Proximity to the primary and secondary urban centers and closest rail station influence women's travel distance, while only distance to the center influences men.

These studies on commuting and those focusing on housing or economic development provide a wealth of information about women's condition in a metropolitan area(s) but provide little explanation as to why the conditions exist or how to remedy them.

### ***Conclusion***

In this literature review, I build on the timeline of feminism in planning presented in the first chapter to construct a theory of pinklining. Pinklining in planning relates to the division of space into women's and men's areas through mechanisms like zoning, comprehensive planning, and suburbanization. In my discussion of the mechanisms of pinklining, I pay significant attention to the public domain's role and separate spheres ideology. Separate spheres provide context for the gendered

dichotomies that we see in planning epistemology and methodology, ethics, and language and communication.

I also use a gender lens to review previous studies of transportation patterns to demonstrate the effects of pinklining on women's daily lives. The connection between land use and transportation planning is essential. Transportation policy and planning are predicated upon many assumptions that bias its outcomes (Lopata, 1980). The first set of assumptions relates to the gender relations within a household, the division of labor, and the control of resources in the decision-making process. On top of these gender-based assumptions are additional transportation biases, such as focusing on the (male) journey to work and the private car (Levy, 2013). Transportation planning, like land use, is not ideologically neutral. However, transportation planning can be gender-responsive because it is not as reliant on development or redevelopment to effectuate change as land use. As such, transportation planning has the potential to be a powerful tool in the planners' toolbox to combat gender inequities in planning, as shown in Chapter 5.

## CHAPTER 3

### SURVEY METHODOLOGY

#### *Introduction*

The first two chapters of this dissertation discuss the relationship between feminism and planning and present a theory of pinklining based on how the gendered built environment differentially impacts women. They also demonstrate how women's needs go relatively unacknowledged in planning, while discussions of inclusive practices for other groups move forward. For example, aging has moved from the fringes of mainstream planning to the center of many planning discussions.

This connection between aging and gender is important for several reasons. First, aging-related work in planning has gained momentum in recent years (Warner et al., 2016; APA, 2014), and there are similarities between the needs of women and the needs of an aging population around transportation, housing, and support services within a community. Second, the recent push in age-friendly planning could also result in communities that are responsive to gender issues. Additionally, the 2014 Women and Aging survey structure was based on previous surveys that examined aging (Planning Across Generations, 2013) and family-friendly planning (Warner & Rukus, 2013), as well as previous studies of aging (WHO, 2007).

The American Planning Association (APA) published the Aging in Community Policy Guide noting that, "the APA recognizes that the aging of the population creates a unique opportunity and responsibility to apply sound planning approaches and policy to improve communities to serve the spectrum of needs and abilities of older adults" (APA, 2014: 1). The planning approach includes actively

engaging the aging population in planning processes; the integration of housing, land use, and transportation; strengthening community support and assets for older adults; and the recognition that the needs of an aging population differ by gender.

In 2013, the APA Divisions Council announced a grant competition to address aging issues. Encouraged by the connection between gender and aging, the Cornell Women's Planning Forum worked with the APA's Planning and Women division to explore how gender affects planning for communities and identify opportunities for further planning interventions. The resulting project--*Planning through a Gender Lens: Inclusive Planning for Aging and Livable Communities*--brought together students from Cornell's Department of City and Regional Planning with the Planning and Women Division leaders over three years to study gender issues, design focus groups, and develop a national survey. The collaborative project was supported by the grant from the APA Divisions Council to research the unique connection between gender, aging, and livable communities. The grant led to a semester-long workshop course on Gender and Aging in Spring 2014 and two national surveys: 2014 Women and Aging and Planning Workplace Dynamics in 2015.

### ***Focus Group and Survey Development***

Led by Ph.D. Candidate Andy Micklow and Professor Mildred Warner, Cornell students and Planning and Women Division leaders designed focus groups to inform survey development at the 2014 APA National Conference in Atlanta. Together the group reviewed the gendered history of planning, new directions in planning for aging and used this exploration to inform the focus groups. Three questions guided the focus group discussion at the conference: What is a gender lens



in planning? How do we apply a gender lens in practice? What are the challenges of applying a gender lens, and how do we celebrate success?

Over forty focus group participants discussed the role of the built environment and planning in fostering women's safety; how the built environment can cultivate community and connectivity; the need for representation of women in planning; ways communities can reflect the diversity of their citizens; and the role that planners should play in issues of domestic, private life. Additionally, the focus groups discussed workplace dynamics and how gender integrates into professional planning practice.

The majority of participants were women; however, five men attended the focus group session. Comment cards were also available for conference participants to provide feedback on the three main questions. Key themes that emerged in the focus groups were integrated into survey design, such as attention to safety, and the disconnect between social needs and planning, i.e., a lack of childcare and communal spaces.

Following the focus group discussions, the project team decided to separate planning for women and women's experiences within the professional planning field into two surveys: one on planning practice relating to women and aging and the other on workplace dynamics in the planning profession. The 2014 Women and Aging Survey is the primary data source for this dissertation's quantitative analysis and is discussed in the next paragraph. The second survey, Planning Workplace Dynamics, was launched in Spring 2015 and asked about workplace characteristics, work-life balance, salary and benefits, and workplace equity. There were 327 survey

respondents, 160 completed all survey questions for the workforce survey. For additional discussion on the Planning Workforce Dynamics survey, see Turesky & Warner, 2018 and Turesky & Warner, 2020.

For the 2014 Women and Aging survey, Micklow and the project team integrated the focus group feedback and refined survey questions during the summer of 2014. The resulting web-based survey was advertised nationally through multiple divisions of the APA (Small Town and Rural, Housing and Community Development, and Private Practice) and the APA's national monthly e-newsletter, *Interact*. The Planning for Women and Aging survey was open to practicing planners to respond over three months from October to December 2014.

Micklow and Warner presented the survey results at the Women and Planning Division's Aging & Gender in Livable Communities session at the 2015 APA National Conference. This session, which drew a standing-room-only crowd, generated further discussion about how to put a gender lens on planning. The session focused on the gender biases in planning practice and the potential of using a multi-generational approach to planning to address better the needs of both women and an aging population. A summary of survey results was published and shared with the Women and Planning Division (Micklow et al., 2015).

The following sections present an overview of the survey respondents, the structure, and connections to this project's theoretical framework. Chapter 5 details the quantitative regression analysis.

### *Respondent Characteristics*

A total of 624 respondents from 325 different localities, including 66 from regional, state, or federal planning agencies, completed at least one section of the survey. Respondents were primarily practicing planners in the public sector (81%), but also included private (13%), and nonprofit (6%) planners (n=333). Fifty-five percent of respondents providing demographic information were between the ages of 30 and 50; 66% of respondents identified as women. Survey respondents worked in a range of community sizes: 12% worked in communities with under 10,000 residents, 32% in communities with 25,000 to 100,000 residents, 19% in communities with populations between 100,000 and 500,000, and 10% in communities with a population over 1 million.

**Figure 3.1.** Response Count by FIPS County

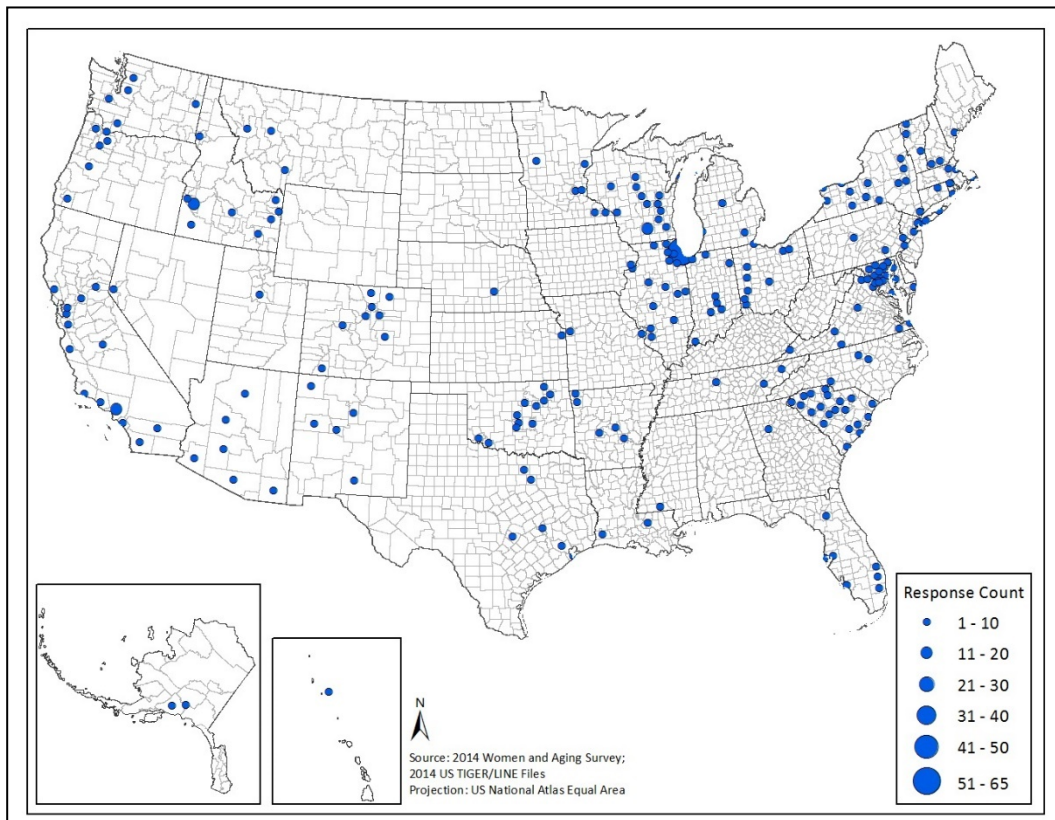


Figure 3.1 shows respondent location. Survey respondents were generally representative of planners in the United States with respect to the type of employer and age (APA, 2019). The survey overly represented female respondents. Females accounted for 66% of respondents compared to 43% of practicing planners (APA, 2019). This is not unexpected given the topic of the survey.

### ***Survey Structure***

The survey asked questions about land use and zoning, transportation planning, comprehensive planning, public participation, community attitudes, planner attitudes and actions, and respondent characteristics. Questions were grouped under three themes: practices, attitudes, and barriers. Questions about practices included if and how planners plan for women, while questions about attitudes gauged both planners' and communities' opinions about the importance of considering women and aging when planning. Questions about barriers explored the mechanisms that hinder planners from considering women and aging in their practices. In this chapter, survey statistics are presented as percentages of the total responses to each question. The full text of the survey is available in Appendix 1 of this dissertation.

### ***Comprehensive Planning***

Comprehensive planning is a pervasive and powerful tool for guiding land use regulation in a community. Comprehensive plans articulate the local values, future goals, and complex issues facing a community. Many states and individual localities require external consistency between the comprehensive plan and zoning. The consistency embeds local values into land use regulations and the landscape (Ohm, 2014).

In the first section of the survey, we asked respondents about the inclusion or recognition of women's needs and an aging population's needs in comprehensive plans. Survey respondents indicated that 94% of their communities have a comprehensive plan, yet only 2% of those comprehensive plans pay specific attention to the needs of women, compared to 55% for aging.

One possible explanation for the absence of language relating to women's needs in comprehensive plans is that historically men have dominated both the real estate sector (Fainstein, 2001) and the planning field. The landscape was designed and constructed according to traditional views of appropriate gender and family relations (Fainstein & Servon, 2005; Hayden, 2002; Saegert, 1980). This results in the absence of attention to gender and family concerns documented in other national surveys of family-friendly planning (Israel & Warner, 2008) and planning across generations (Choi & Warner, 2015).

### *Participation*

Methods of outreach and levels of participation also impact the land use actions in a community. In recent decades, the dominant planning discourse changed from a top-down approach to a collaborative and communicative model. Instead of planning in a technocratic and positivist manner, planners are now expected to pay attention to and incorporate citizens' voices into planning processes (Listerborn, 2007). Community meetings are standard practice for comprehensive planning, and public hearings are typically held for zoning ordinance amendments and land use petitions.

Participation in the planning process is essential to helping planners address the array of issues facing women (Warner & Rukus, 2013). A lack of women's

participation limits their influence on planning outcomes and contributes to the ignorance around planning for women's needs within housing, employment, safety, transit, and childcare (Fainstein & Servon, 2005).

The survey asked about the level of attendance and engagement of women in community planning processes. We found that despite being equally represented in terms of numbers at community meetings, the majority of survey respondents indicated that women are less likely to be engaged than men. We also asked questions about meeting times, as these are often held at times of the day or at locations that make women's attendance and engagement difficult.

### *Zoning*

The next section of the survey asked respondents about zoning regulations in their community. Of the respondents, 92% indicated that their communities utilize traditional zoning ordinances (or a hybrid form) to regulate land use in their community. Traditional zoning ordinances are those that separate and segregate incompatible land uses from one another and give preference to single-family detached residences as the highest and best use (Micklow & Warner, 2014). However, these types of ordinances impact women and the aging population by limiting housing and employment options, reinforcing outdated family structures, failing to provide adequate support systems, constraining mobility, and affecting safety both inside and outside of the home.

### *Housing*

This section of the survey focused on the connection between zoning and housing in respondent communities. Affordable, safe, and inclusive housing is an

issue for women as they account for the majority (56%) of individuals living in poverty, with female householder families twice as likely to be impoverished as their male counterparts. Older women are also more likely to live in poverty due to more limited access to pensions and other retirement income sources, lower lifetime earnings, and a greater need for long-term care services at older ages (IWPR, 2015).

Denying or limiting the conversion of accessory apartments and single-family houses inhibits women from supplementing their incomes as suppliers of this type of housing, limits low-income women from residing in this type of affordable housing as tenants, and precludes alternative family and care arrangements (Markovich & Hendler, 2006; Hayden, 2002). Accessory apartments are also an important way to meet the needs for supportive housing for elders (Warner & Baran-Rees, 2012; Liebig et al., 2006). Thirty percent of survey respondents indicated that their communities permit accessory dwellings in single-family areas by right, 34% indicated the need for a special use permit, and 37% responded that such a use is prohibited. An additional burden, a special use permit is both costly and time-consuming with no guarantee of an outcome in the petitioner's favor.

#### *Family Structure [Composition]*

We were interested in how many respondent communities still use traditional family definitions to regulate density and household composition. The ability of communities to regulate family structure is a significant concern for women, as zoning policies favoring the traditional, nuclear family continue to remain in place regardless of the extent to which the family structure has changed (Ritzdorf, 1994). In 1960, 88% of children under 18 lived with two parents and only 9% lived with one parent. By

2015, 69% lived with two parents and 27% of children under 18 lived with one parent (US Census Bureau, 2020). Despite this change in family structure, nearly 65% of survey respondents indicated that their communities use a family definition that regulates the number of unrelated people that may live together. This means that non-traditional family types or caregiving structures may be illegal under many zoning ordinances. It also means that those women who combine domestic and wage earner responsibilities must navigate a landscape designed to confine women to the home (Micklow & Warner, 2014; England, 1993).

#### *Child-, Eldercare, and Home-Based Work*

We asked respondents about the ability to locate child and eldercare services in residential zones. Affordable, quality, and conveniently located childcare is a severe need for many families. Forty-six percent of respondents indicated that their communities allow childcare services by right, and 52% by special use permit in residential zones. However, traditional zoning ordinances may condition this service. For example, Ritzdorf (1994) found zoning ordinances often restrict care services only to the principal structure, prohibit play equipment from front or side yards, or restrict employees to those living in the residence. Zoning ordinances that limit employees to only those living in the residence are particularly problematic for those wishing to manage or utilize a larger childcare facility in a residential zone, as state laws generally mandate that a second caregiver be present if five or more children are present (Ritzdorf, 1994). Recent reports from the APA find progress in planners addressing childcare issues (Warner, 2007).



Eldercare services, such as family day care homes, are regulated more stringently than childcare services, with only 37% of survey respondents indicating that this type of use is permitted by right in residential zones, compared to forty-six percent for childcare. This difference in regulations will become more significant as the US population continues to age.

We also asked respondents about how their communities regulated home-based businesses beyond child or eldercare services. Permitting certain types of home-based businesses would benefit women by allowing closer integration of work and family responsibilities and eliminating some need for childcare outside the home. Home-based work also creates an opportunity for those disproportionately impacted by traditional zoning practices, like divorced women, the elderly, single mothers, and the carless, to engage in paid labor. Our survey finds that over 50% of respondent communities permit some home-based businesses by right in residential zones.

### *Safety*

Safety issues are one place where planners are more aware of the needs of women than of the aging population. This came out of the focus group discussions at the 2014 APA national conference and the open-ended comments section in which we asked respondents to share a program or planning element in their community that addresses the needs of women or the aging population. Multiple respondents shared programs that support domestic violence shelters and complete street initiatives that promote safe and walkable communities. Eighty-four percent of respondents indicated that their community's design standards ensure that public spaces are designed to allow all genders to feel safe and welcome.

### *Planner and Community Attitudes*

We asked planners about their attitudes toward age-friendly and gender-responsive planning. Only 58% of responding planners specifically consider how their work decisions may affect genders differently, compared to 91% for the aging population. What might explain this difference? The communities and cultures in which planners work may create significant barriers to gender responsive planning (Burgess, 2008). We asked planners about their communities' culture and attitudes of gender-conscious planning and found that communities, planning boards, and developers are generally unaware of women's needs. Without the planning or zoning board's support or approval, planners cannot pursue gender responsive initiatives such as zoning or comprehensive plan amendments.

By contrast, age-conscious planning is much more common; 80% of respondents report that planning/zoning boards are aware of this group's needs, and 66% report developers are responsive to the needs of an aging population. While 75% of respondents agreed that communities that give attention to gender issues are better able to meet an aging population's needs, in subsequent statistical analyses, we find communities that give more attention to aging are more likely to give attention to women's issues as well. This suggests that attention to gender may benefit from attention to aging, and leveraging women's needs in communities would create more livable communities for all.

### ***Feminist Methods***

The *Planning through a Gender Lens: Inclusive Planning for Aging and Livable Communities* survey project received the American Planning Association's

Division Council Contribution to the Planning Profession Award in 2016. The award recognizes outstanding skill-based or knowledge-based professional content, and measurable visibility to the profession. The survey project is also significant for its use of feminist research methods in its development. Feminist research methods treat those being studied as partners in the research, are interdisciplinary, and attempt to be inclusive. Feminist methods are action-oriented, lead to women's empowerment, and provide a voice to concerns that have not previously been heard (Reinharz, 1992).

Focus groups are considered complementary to feminist research methods (Munday, 2007; Wilkinson, 1999). Focus groups began in business and psychology as an efficient, inexpensive, and effective way to gather information about a particular issue or question (Greenbaum, 1993). Focus groups are now commonly employed by other social science fields, including planning, to create an interactive process that enables a researcher to gain rich, contextual information, ask questions, and test tentative hypotheses (Hendler, 2005). Focus groups can also help to bridge the gap between theory and practice.

Additionally, feminists argue for connected knowing, emphasizing the relationship rather than the separation between the researcher and object of research (Sandercock & Forsyth, 1992). In designing the survey, we incorporated a plurality of knowledge as researchers and as objects to create the survey questions. Our own experiences with and knowledge of the built environment informed the development of the survey. This goes back to the fundamental insights of feminism, that the personal is political and that theory is constructed out of the personal experience (Christopherson, 1989).

The survey process is also open to feminist critique on several fronts. First, the survey, by necessity, is essentialist. The framing and questions were not nuanced enough to fully capture the diversity of women's experiences. Additionally, the choice of using women over gender was explicit and discussed at length during survey creation. A queer student in the workshop criticized the survey for reinforcing heteronormativity and falling into the tyranny of gender binary (Doan, 2010).

The survey itself also had a relatively low risk of alienating or confusing respondents - a common feminist critique of planning (Lennie 1999; Sandercock & Forsyth 1990; McDowell 1992). We avoided inequalities in language and communication because survey designers and respondents were familiar with planning concepts and jargon.

### ***Conclusion***

The 2014 Women and Aging Survey acts as a point-in-time assessment of the level of gender responsive planning among a sample of planners' communities. The results reveal the nature and gaps of gender responsive planning within the United States and are used in the following chapters to operationalize pinklining within a local land use framework.

The survey focused primarily on mechanisms of pinklining described in Chapter 2, such as comprehensive planning, family definitions, separation of uses, methods of participation, and planner attitudes. This is important because while urban planners themselves rarely have any decision-making authority (Fischler, 2012), they often function as advisors who make recommendations to elected officials, residents, and other parties. Staff members answer questions from citizens, participate in

mandatory development meetings, and are responsible for writing and amending the comprehensive plan and land use regulations in a community. Planners' attitudes towards gender and aging can influence how a community engages in gender responsive land use actions and transportation planning.

The next chapter, Chapter 4, further discusses the quantitative analysis used in this dissertation.

## CHAPTER 4

### DATA AND MODELS

#### *Introduction*

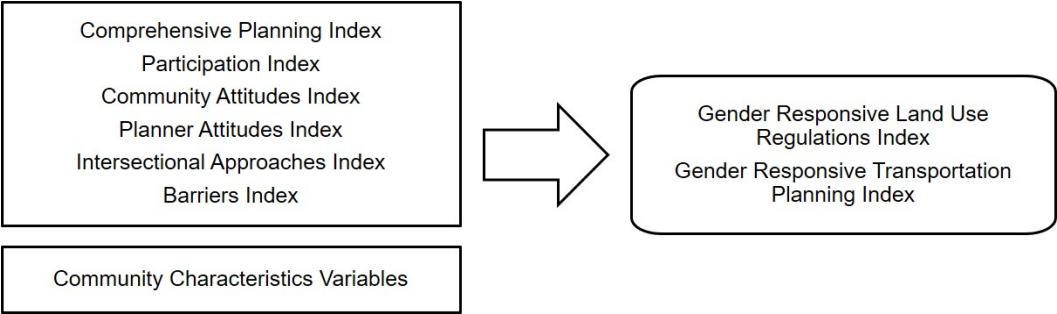
This dissertation uses a quantitative analysis of the 2014 Women and Aging Survey data to understand the relationship between gender responsive land use regulations and gender responsive transportation with other planning actions, planner attitudes, and community characteristics. Gender responsive land use or transportation planning refers to planning actions that address the needs of women.

Two pairs of regression models are used to evaluate the level of gender responsive planning in a sample of US communities. The regression models also look at motivators for engaging in gender responsive planning. The data and models are presented in this chapter. The results are presented in Chapter 5.

#### *Models*

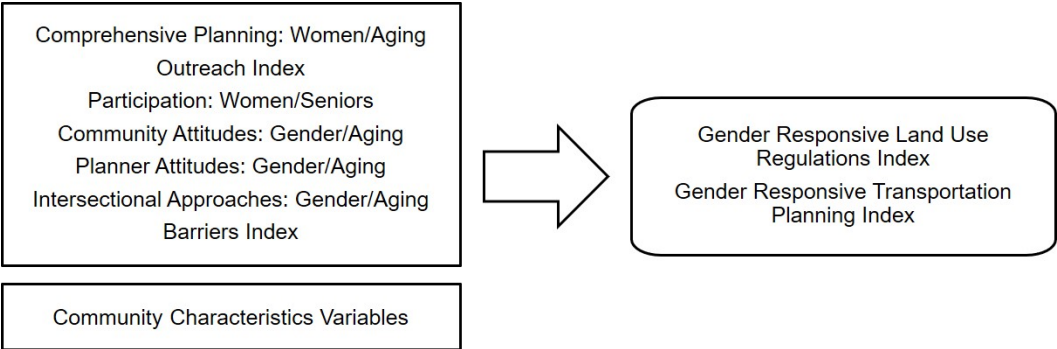
This dissertation uses two pairs of models (4 models total) to assess the level of and motivators for engaging in gender responsive planning. The first pair of models concern land use in a community. The second pair of models relate to transportation planning. In Land Use Model I and Transportation Model I, I look for the factors driving a community to engage in gender responsive land use or transportation planning (Figure 4.1).

**Figure 4.1: Model I**



In Land Use Model II and Transportation Model II, I disaggregate the explanatory factors to determine if aging or gender is a catalyst for communities to engage in gender responsive planning (Figure 4.2). This disaggregation is important because the recent push within planning to address seniors' needs could result in a community engaging in land use actions, like accessory apartments and shared housing, that present as gender responsive. Understanding the drivers of gender responsive planning will help planners understand how to help their communities plan for the needs of women.

**Figure 4.2: Model II**



The explanatory variables are identical in the two land use and the two transportation models except that average commute time is added as a community characteristic variable in the two transportation models. The results from the

regression models are presented in the next chapter, Chapter 5. The following sections of this chapter discuss the models' sample and variables.

### *Sample Size*

A total of 624 responding planners completed at least one section of the Planning for Women and Aging survey. After removing international respondents and those that did not provide a community-level FIPS code, 539 survey respondents remained. These respondents were removed from the sample because they did not provide enough information to gather community characteristic data, or their geographic scale (regional, state or national planners) was not compatible with the model focus at the community level. For example, a respondent that listed their geographic identifier only as STATE was dropped from the survey because the model is at the community level. Respondents that indicated that their geographic scope was state or federal but provided a local community identifier (e.g. they answered questions with reference to a specific community) remained in the sample.

Of the remaining 539 respondents, 298 (55%) reached the end of the survey. This total includes respondents who completed the entire survey and respondents who viewed the entire survey. The sample size was further reduced to include respondents who answered all of the questions used in the land use and transportation regression models. In the land use models, there are a total of 230 complete surveys. In the transportation models, there are a total of 265 complete surveys. There is an overlap of 227 respondents between the land use and transportation samples. The land use sample and transportation sample are similar to the full sample with respect to metropolitan status.



### ***Index Construction***

The 2014 Women and Aging Survey included 43 questions about planning actions in a community and respondents' attitudes about planning for aging and gender. The survey questions can be grouped into six categories: comprehensive planning, public participation, land use and zoning, transportation, elder services, and planner attitudes. Responses to the opinion or attitude-related questions were on a 5-degree Likert scale (0 = Don't Know, 1= Strongly Disagree, 2 = Disagree, 3= Agree, 4 = Strongly Agree). Responses to other questions were either yes, no; by-right, by special use permit, not permitted; or always, often, sometimes, rarely, never.

I developed composite indices to represent two dependent variables and six independent variables. My dependent variables of interest are the current level of gender responsive land use regulations or gender responsive transportation planning in a community. The independent variable indices include comprehensive planning, participation, community attitudes, planner attitudes, intersectionality, and barriers. The composite indices are constructed so that higher values represent more of an action or attitude.

### ***Dependent Variables***

#### *Gender Responsive Land Use Regulations Index*

Gender responsive planning includes efforts to improve women's safety, mobility, labor force opportunities, housing options, care burdens, and equitable engagement in planning processes (Silbaugh, 2007; Markovich & Hendler, 2006; Ritzdorf, 1994; Sandercock & Forsyth, 1992). A gender lens in planning "not only takes into account socially constructed differences among women and men but also

recognizes that gender is a multi-dimensional and intersectional concept" (Chant, 2013: 2).

The Gender Responsive Land Use Regulations (GRLUR) Index is composed of seven aspects of land use regulations that could be considered gender responsive. These include zoning ordinances that provide opportunities for affordable and non-traditional housing, alternative forms of density regulation, accessible childcare, and opportunities to engage in paid labor within the home. The seven component variables related to Gender Responsive Land Use Regulations are added together with 0 = not permitted, 1 = by special use permit, and 2 = by-right. The higher the index for a community, the more gender responsive it is. The maximum value for the GRLUR Index is 12, with a mean of 6.78 and a standard deviation of 2.25 (Cronbach's alpha = 0.54; see Table 4.1).

**Table 4.1:** Descriptive Statistics, Gender Responsive Land Use Regulations Index (n=230)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Gender Responsive Land Use Regulations Index</b>	<b>6.78</b>	<b>2.25</b>	<b>2</b>	<b>12</b>
Land use regulations in your community permit...				
Accessory apartments in single-family zones ( <i>not permitted, special use, by-right</i> )	0.90	0.83	0	2
Retrofitting for more than one family ( <i>not permitted, special use, by-right</i> )	0.63	0.75	0	2
Childcare services in residential zones ( <i>not permitted, special use, by-right</i> )	1.45	0.55	0	2
Eldercare services in residential zones ( <i>not permitted, special use, by-right</i> )	1.28	0.62	0	2
Other home-based businesses in residential zones ( <i>not permitted, special use, by-right</i> )	1.53	0.54	0	2
Community allows more than one unrelated family to reside in single family home ( <i>no, yes</i> )	0.53	0.50	0	1
Community uses a family definition that regulates number of unrelated people that may live together ( <i>no, yes</i> )	0.37	0.48	0	1

### *Gender Responsive Transportation Planning Index*

Gender responsive transportation planning means paying attention to both mobility and accessibility. Traditional transportation planning focuses heavily on mobility or the movement of persons and goods from origin to destination. Mobility planning does not address issues of access to goods, services, activities, and destinations. On top of this are additional transportation biases such as focusing on the (male) journey to work and the private car (Levy, 2013) that result in biased outcomes for certain users, i.e. women.

However, an accessibility framework emphasizes the "ability to reach desired goods, services, activities and destinations" (Litman, 2003: 28). Accessibility planning takes an integrated view of transportation and land use systems and recognizes both motorized and non-motorized modes as an essential means of travel (Litman, 2003). Examples of accessibility planning include addressing trip-chaining or designing roadways for biking and walking. Planning within a mobility and accessibility framework is one example of how transportation can address the built environment's gendered deficiencies.

The dependent variable in the transportation models, the Gender Responsive Transportation Planning (GRTP) Index, includes both mobility and accessibility measures. The four indicator variables in the GRTP Index are on a five-degree Likert scale with 0 indicating that a community never engages in a practice and 4 indicating that a community always engages in the specified transportation planning effort. The maximum possible value for Gender Responsive Transportation Planning Index is 16.

The mean for the transportation sample is 8.58, with a standard deviation of 3.20 (Cronbach's alpha = 0.77; see Table 4.2).

**Table 4.2:** Descriptive Statistics, Gender Responsive Transportation Planning Index (n=265)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Gender Responsive Transportation Planning Index</b>	<b>8.58</b>	<b>3.20</b>	<b>0</b>	<b>16</b>
Transportation planning address trip chaining ( <i>never, rarely, sometimes, often, always</i> )	1.67	1.05	0	4
Transportation planning address mobility management ( <i>never, rarely, sometimes, often, always</i> )	2.06	1.08	0	4
Roads are being built or redesigned with dedicated space for biking or walking ( <i>never, rarely, sometimes, often, always</i> )	2.41	1.01	0	4
Design standards ensure that public spaces allow all ages and genders to feel safe and welcome ( <i>never, rarely, sometimes, often, always</i> )	2.45	1.02	0	4

The descriptive statistics for the GRTP Index variables reveal that some communities are actually engaging in mobility and accessibility planning (Table 4.2). Of the four variables that compose the GRTP Index, communities are most likely to have design standards that ensure public spaces allow all ages and genders to feel safe and welcome. The majority of respondents also indicated that their community's transportation planning efforts always, often, or sometimes include building or rebuilding roads with dedicated (or delineated) space for biking or walking. This is in contrast to the land use dependent variable and provides support for transportation planning as a tool to help planners address the needs of women. Additional analysis to determine the drivers of GRTP could help communities also engage in gender responsive land use.

***Independent Variables***

Land Use Model I and Transportation Model I use the following indices as the independent variables. Land Use Model II and Transportation Model II disaggregate the indices to determine if gender- or aging-related factors are the primary drivers of

gender responsive land use regulations and gender responsive transportation planning in a community. The descriptive statistics for the independent variable indices are presented separately because the land use and transportation models have different sample sizes: land use (n=230), transportation (n=265).

*Comprehensive Planning Index*

The Comprehensive Planning Index includes three questions related to comprehensive planning in a respondent's community. The first asked if the respondent's community had a comprehensive plan. If the respondent answered no, the next questions were also recoded to no. The majority of communities had a comprehensive plan. The survey also asked if the comprehensive plan gave specific attention to the needs of women or addressed the needs of an aging population. Approximately 50% of communities had comprehensive plans that address the needs of an aging population. Planning for women's needs is nearly non-existent, with less than 1.5% of respondents indicating yes in either sample.

**Table 4.3:** Comprehensive Planning Index, Land Use Sample (n=230)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Comprehensive Planning Index (alpha=0.19)</b>	<b>1.51</b>	<b>0.57</b>	<b>0</b>	<b>3</b>
Community has comprehensive plan ( <i>0=no, 1=yes</i> )	0.97	0.16	0	1
Comprehensive plan gives specific attention to the needs of women ( <i>0=no, 1=yes</i> )	0.01	0.11	0	1
Comprehensive plan addresses needs of aging population ( <i>0=no, 1=yes</i> )	0.53	0.50	0	1

**Table 4.4:** Comprehensive Planning Index, Transportation Sample (n=265)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Comprehensive Planning Index (alpha=0.20)</b>	<b>1.48</b>	<b>0.58</b>	<b>0</b>	<b>3</b>
Community has comprehensive plan ( <i>0=no, 1=yes</i> )	0.97	0.18	0	1
Plan gives specific attention to the needs of women ( <i>0=no, 1=yes</i> )	0.01	0.11	0	1
Plan addresses needs of aging population ( <i>0=no, 1=yes</i> )	0.50	0.50	0	1

*Participation Index*

The Participation Index includes six Likert scale questions related to women's and seniors' engagement in planning processes with 0 = statement is never true in their community...4 = statement is always true. The maximum possible value for this index is 24. However, the highest value in both samples is 22. Respondents were most likely to agree that attendees of public meetings were representative of all genders and all ages. Seniors tend to be more engaged in the planning process than other age groups. Women are less likely to be engaged in the planning processes than men. In terms of outreach efforts, tailoring information to the needs of different ages is more common than holding public meetings at varying times of the day. I predict that more participation in the planning process leads to more gender responsive land use regulations and transportation planning.

**Table 4.5:** Participation Index, Land Use Sample (n=230)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Participation Index (alpha=0.53)</b>	<b>13.36</b>	<b>3.28</b>	<b>0</b>	<b>22</b>
Public meetings offered at multiple times of day to allow constituents with different schedules to attend ( <i>0=never, 1=rarely, 2=sometimes, 3= often, 4=always</i> )	1.53	1.08	0	4
Information tailored to different ages ( <i>0=never, 1=rarely, 2=sometimes, 3= often, 4=always</i> )	1.70	1.16	0	4
Attendees at public meetings representative of both genders* ( <i>0=never, 1=rarely, 2=sometimes, 3= often, 4=always</i> )	3.21	0.77	0	4
Attendees at public meetings representative of all ages ( <i>0=never, 1=rarely, 2=sometimes, 3= often, 4=always</i> )	2.49	1.00	0	4
Women more engaged in planning process than men ( <i>0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree</i> )	1.85	0.92	0	4
Seniors more engaged than other age groups ( <i>0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree</i> )	2.58	1.03	0	4

**Table 4.6: Participation Index, Transportation Sample (n=265)**

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Participation Index (alpha=0.51)</b>	<b>13.24</b>	<b>3.21</b>	<b>0</b>	<b>22</b>
Public meetings offered at multiple times of day (0=never, 1=rarely, 2=sometimes, 3=often, 4=always)	1.56	1.10	0	4
Information tailored to different ages (0=never, 1=rarely, 2=sometimes, 3=often, 4=always)	1.66	1.13	0	4
Attendees at public meetings representative of both genders (0=never, 1=rarely, 2=sometimes, 3=often, 4=always)	3.20	0.76	0	4
Attendees at public meetings representative of all ages (0=never, 1=rarely, 2=sometimes, 3=often, 4=always)	2.45	0.99	0	4
Women more engaged in planning process than men (don't know, strongly disagree, disagree, agree, strongly agree)	1.83	0.91	0	4
Seniors more engaged than other age groups (don't know, strongly disagree, disagree, agree, strongly agree)	2.54	1.02	0	4

### *Community Attitudes Index*

The Community Attitudes Index includes five questions that measure community attitudes about gender and aging issues in planning measured on a scale of 0 (don't know) to 4 (strongly agree). The survey asked if there was a culture of gender-conscious planning in the respondent's community. The majority of respondents in both samples disagreed or strongly disagreed with this statement. Most respondents also reported that developers and planning boards are not aware of the special needs of women. However, communities were likely to have planning/zoning boards that are aware of the needs of an aging population. Similarly, respondents also indicated that developers are more responsive to the needs of an aging population than to the special needs of women. I expect that communities with planning boards and developers aware of the special needs of women and seniors will have higher levels of gender responsive land use and transportation planning in a community.

**Table 4.7:** Community Attitudes Index, Land Use Sample (n=230)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Community Attitudes Index (alpha=0.75)</b>	<b>8.91</b>	<b>3.22</b>	<b>0</b>	<b>17</b>
Culture of gender conscious planning in community (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	1.41	0.92	0	4
Planning board aware of different planning needs of women (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	1.30	0.86	0	4
Planning board aware of needs of aging population (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	2.62	0.92	0	4
Developers responsive to special needs of women (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	1.29	0.81	0	4
Developers aware of needs of aging population (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	2.29	1.03	0	4

**Table 4.8:** Community Attitudes Index, Transportation Sample (n=265)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Community Attitudes Index (alpha=0.76)</b>	<b>8.65</b>	<b>3.23</b>	<b>0</b>	<b>17</b>
Culture of gender conscious planning in community (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	1.35	0.91	0	4
Planning board aware of different planning needs of women (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	1.26	0.87	0	4
Planning board aware of needs of aging population (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	2.55	0.92	0	4
Developers responsive to special needs of women (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	1.25	0.80	0	4
Developers aware of needs of aging population (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	2.23	1.01	0	4

### *Planner Attitudes Index*

The Planner Attitudes Index is comprised of two variables that measured the degree to which respondents consider how their work decisions may affect those of different genders or ages measured on a scale from 0 (never) to 3 (often). Respondents indicated that they are more likely to consider how their work affects different ages



rather than genders. I expect that Planner Attitudes will positively correlate with both gender responsive land use regulations and gender responsive transportation planning.

**Table 4.9:** Planner Attitudes Index, Land Use Sample (n=230)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Planner Attitudes Index (alpha=0.62)</b>	<b>4.07</b>	<b>1.36</b>	<b>0</b>	<b>6</b>
Consider how my work decisions affect genders differently (0=never, 1=rarely, 2=sometimes, 3=often)	1.66	0.87	0	3
Consider how my work decisions affect varying ages (0=never, 1=rarely, 2=sometimes, 3=often)	2.40	0.72	0	3

**Table 4.10:** Planner Attitudes Index, Transportation Sample (n=265)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Planner Attitudes Index (alpha=0.65)</b>	<b>4.04</b>	<b>1.39</b>	<b>0</b>	<b>6</b>
Consider how my work decisions affect genders differently (0=never, 1=rarely, 2=sometimes, 3=often)	1.65	0.88	0	3
Consider how my work decisions affect varying ages (0=never, 1=rarely, 2=sometimes, 3=often)	2.39	0.73	0	3

#### *Intersectional Approaches Index*

The Intersectional Approaches Index is made up of two questions that asked respondents about their attitudes towards integrated planning approaches. Respondents were asked to indicate to what extent they agreed or disagreed with the questions with 0 indicating strong disagreement to 3 indicating strong agreement. The majority of respondents in the land use sample (58%) strongly agreed that integrated approaches better meet the needs of an aging population. Respondents felt less strongly, but still positively, that communities that give attention to gender issues are better able to meet the needs of the aging population. As with the Planner Attitudes Index, I expect that more positive attitudes regarding Intersectional Approaches will lead to more gender responsive land use regulations and transportation planning in a community.

**Table 4.11:** Intersectional Approaches Index, Land Use Sample (n=230)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Intersectional Approaches Index (alpha=0.43)</b>	<b>4.52</b>	<b>1.04</b>	<b>2</b>	<b>6</b>
Integrated approaches better meet the needs of aging community (0=strongly disagree, 1=disagree, 2=agree, 3=strongly agree)	2.56	0.53	1	3
Communities that give attention to gender issues are better able to meet the needs of aging population (0=strongly disagree, 1=disagree, 2=agree, 3=strongly agree)	1.96	0.76	0	3

**Table 4.12:** Intersectional Approaches Index, Transportation Sample (n=265)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Intersectional Approaches Index (alpha=0.42)</b>	<b>4.52</b>	<b>1.05</b>	<b>2</b>	<b>6</b>
Integrated approaches better meet the needs of aging community (0=strongly disagree, 1=disagree, 2=agree, 3=strongly agree)	2.56	0.53	1	3
Communities that give attention to gender issues are better able to meet the needs of aging population (0=strongly disagree, 1=disagree, 2=agree, 3=strongly agree)	1.96	0.76	0	3

### *Barriers to Gender Responsive Planning Index*

The Barriers to Gender Responsive Planning (Barriers) Index measures two potential barriers to gender responsive planning in a community on a scale from 0 (don't know) to 3 (strongly disagree). First, funding limited to certain age groups or specializations makes inclusive planning efforts more difficult. The majority of respondents in both samples reported relative difficulty in coordinating cross-agency activity or planning due to siloed funding. The second barrier is related to participation. Over 80% of respondents agreed that it is challenging for planners to achieve meaningful participation from a broad spectrum of residents. Higher scores on Barriers Index indicate more perceived barriers to coordinated and inclusive planning efforts. As such, I expect that communities with higher Barrier Index scores will engage in less gender responsive land use and transportation planning efforts.

**Table 4.13:** Barriers Index, Land Use Sample (n=230)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Barriers Index (alpha=0.28)</b>	<b>5.16</b>	<b>1.43</b>	<b>0</b>	<b>8</b>
Challenging to engage meaningful participation from broad spectrum of residents ( <i>0=don't know, 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree</i> )	2.89	1.02	0	4
Siloed funding makes cross-agency activity or cross-generational planning difficult ( <i>0=don't know, 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree</i> )	2.27	0.84	0	4

**Table 4.14:** Barriers Index, Transportation Sample (n=265)

	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Barriers Index (alpha=0.29)</b>	<b>5.20</b>	<b>1.38</b>	<b>0</b>	<b>8</b>
Challenging to engage meaningful participation from broad spectrum of residents ( <i>0=don't know, 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree</i> )	2.94	0.98	0	4
Siloed funding makes cross-agency activity or cross-generational planning difficult ( <i>0=don't know, 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree</i> )	2.26	0.81	0	4

### *Community Characteristics Variables*

The community characteristics variables provide information about the demographic and geographic characteristics of the respondents' communities. Communities differ in terms of size, location, economic base, demographics, and growth potential. Each of these factors impacts planning and land use regulation in that community (Daniels et al., 2007). The models incorporate seven community control variables: land use regulation type, metro status, median year built, population, population density, percent aging, and per capita income. The type of land use regulation in the community came directly from the survey. Over 80% of respondents indicated that their community uses a traditional zoning ordinance to regulate land use.

A community's location within the metropolitan area (core, suburb, or rural) is included in the models because of the relationship between suburbanization and

pinklining. Dummy variables were used to determine the effect of metro status on gender responsive land use. The land use model uses suburban location as the reference category. The transportation model uses metro core as the reference category. In the land use sample, 47% of communities are principal cities or counties [core], 40% are suburban, and 13% are rural communities.

The remaining community characteristic variables are from the 2010-2014 5-year American Community Survey estimates based on the community's FIPS code. The median year built for communities in the land use sample was 1975 and 1974 for the transportation sample. The natural log of the population is used in the model because population size varies across the samples. The population density for communities in the samples also varies greatly. Communities like New York City have a population density of 27,606 persons per square mile, while communities like Fremont, Idaho, have only seven persons per square mile. The models also use percent aging – those over 65 years of age – as a community control variable. The average percent aging for those in the land use sample is 14%; the national average in 2014 was 14.5% (US Census Bureau 2016). The community with the highest percentage of those over 65 is Leelanau, Michigan (39%). The median per capita income (2014 dollars) for communities in this sample is \$28,320. The natural log of per capita income is used in the models. The transportation model adds average commute time in minutes for each of the communities in the models. The average commute time for the transportation sample is 23.39 minutes (SD 6.10).

**Table 4.15:** Descriptive Statistics, Land Use Sample Independent Variable Indices (n=230)

<b>Variable</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
<b>Comprehensive Planning Index (alpha=0.19)</b>	<b>1.51</b>	<b>0.57</b>	<b>0</b>	<b>3</b>
Community has comprehensive plan ( <i>0=no, 1=yes</i> )	0.97	0.16	0	1
Comprehensive plan gives specific attention to the needs of women ( <i>0=no, 1=yes</i> )	0.01	0.11	0	1
Comprehensive plan addresses needs of aging population ( <i>0=no, 1=yes</i> )	0.53	0.50	0	1
<b>Participation Index (alpha=0.53)</b>	<b>13.36</b>	<b>3.28</b>	<b>0</b>	<b>22</b>
Public meetings offered at multiple times of day to allow constituents with different schedules to attend ( <i>0=never, 1=rarely, 2=sometimes, 3= often, 4=always</i> )	1.53	1.08	0	4
Information tailored to different ages ( <i>0=never, 1=rarely, 2=sometimes, 3= often, 4=always</i> )	1.70	1.16	0	4
Attendees at public meetings representative of both genders* ( <i>0=never, 1=rarely, 2=sometimes, 3= often, 4=always</i> )	3.21	0.77	0	4
Attendees at public meetings representative of all ages ( <i>0=never, 1=rarely, 2=sometimes, 3= often, 4=always</i> )	2.49	1.00	0	4
Women more engaged in planning process than men ( <i>0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree</i> )	1.85	0.92	0	4
Seniors more engaged than other age groups ( <i>0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree</i> )	2.58	1.03	0	4
<b>Community Attitudes Index (alpha=0.75)</b>	<b>8.91</b>	<b>3.22</b>	<b>0</b>	<b>17</b>
Culture of gender conscious planning in community ( <i>0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree</i> )	1.41	0.92	0	4
Planning board aware of different planning needs of women ( <i>0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree</i> )	1.30	0.86	0	4
Planning board aware of needs of aging population ( <i>0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree</i> )	2.62	0.92	0	4
Developers responsive to special needs of women ( <i>0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree</i> )	1.29	0.81	0	4
Developers aware of needs of aging population ( <i>0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree</i> )	2.29	1.03	0	4
<b>Planner Attitudes Index (alpha=0.62)</b>	<b>4.07</b>	<b>1.36</b>	<b>0</b>	<b>6</b>
Consider how my work decisions affect genders differently ( <i>0=never, 1=rarely, 2=sometimes, 3=often</i> )	1.66	0.87	0	3
Consider how my work decisions affect varying ages ( <i>0=never, 1=rarely, 2=sometimes, 3=often</i> )	2.40	0.72	0	3
<b>Intersectional Approaches Index (alpha=0.43)</b>	<b>4.52</b>	<b>1.04</b>	<b>2</b>	<b>6</b>

Integrated approaches better meet the needs of aging community (0=strongly disagree, 1=disagree, 2=agree, 3=strongly agree)	2.56	0.53	1	3
Communities that give attention to gender issues are better able to meet the needs of aging population (0=strongly disagree, 1=disagree, 2=agree, 3=strongly agree)	1.96	0.76	0	3
<b>Barriers Index (alpha=0.28)</b>	<b>5.16</b>	<b>1.43</b>	<b>0</b>	<b>8</b>
Challenging to engage meaningful participation from broad spectrum of residents (0=don't know, 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree)	2.89	1.02	0	4
Siloed funding makes cross-agency activity or cross-generational planning difficult (0=don't know, 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree)	2.27	0.84	0	4

**Table 4.16:** Descriptive Statistics, Transportation Sample Independent Variable Indices (n=265)

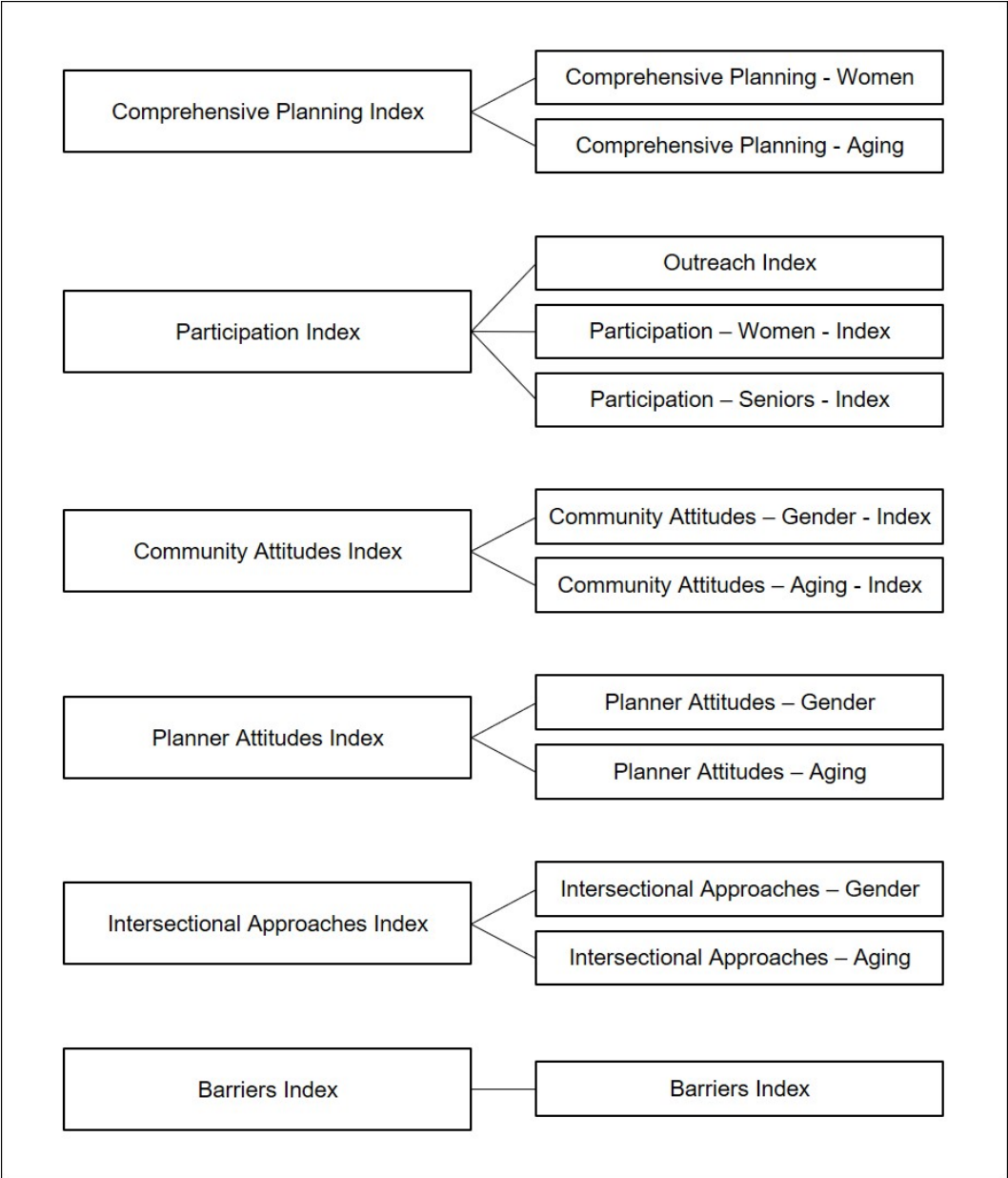
Variable	Mean	SD	Min	Max
<b>Comprehensive Planning Index (alpha=0.20)</b>	<b>1.48</b>	<b>0.58</b>	<b>0</b>	<b>3</b>
Community has comprehensive plan (0=no, 1=yes)	0.97	0.18	0	1
Plan gives specific attention to the needs of women (0=no, 1=yes)	0.01	0.11	0	1
Plan addresses needs of aging population (0=no, 1=yes)	0.50	0.50	0	1
<b>Participation Index (alpha=0.51)</b>	<b>13.24</b>	<b>3.21</b>	<b>0</b>	<b>22</b>
Public meetings offered at multiple times of day (0=never, 1=rarely, 2=sometimes, 3=often, 4=always)	1.56	1.10	0	4
Information tailored to different ages (0=never, 1=rarely, 2=sometimes, 3=often, 4=always)	1.66	1.13	0	4
Attendees at public meetings representative of both genders (0=never, 1=rarely, 2=sometimes, 3=often, 4=always)	3.20	0.76	0	4
Attendees at public meetings representative of all ages (0=never, 1=rarely, 2=sometimes, 3=often, 4=always)	2.45	0.99	0	4
Women more engaged in planning process than men (don't know, strongly disagree, disagree, agree, strongly agree)	1.83	0.91	0	4
Seniors more engaged than other age groups (don't know, strongly disagree, disagree, agree, strongly agree)	2.54	1.02	0	4
<b>Community Attitudes Index (alpha=0.76)</b>	<b>8.65</b>	<b>3.23</b>	<b>0</b>	<b>17</b>
Culture of gender conscious planning in community (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	1.35	0.91	0	4

Planning board aware of different planning needs of women (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	1.26	0.87	0	4
Planning board aware of needs of aging population (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	2.55	0.92	0	4
Developers responsive to special needs of women (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	1.25	0.80	0	4
Developers aware of needs of aging population (0=don't know, 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree)	2.23	1.01	0	4
<b>Planner Attitudes Index (alpha=0.65)</b>	<b>4.04</b>	<b>1.39</b>	<b>0</b>	<b>6</b>
Consider how my work decisions affect genders differently (0=never, 1=rarely, 2=sometimes, 3=often)	1.65	0.88	0	3
Consider how my work decisions affect varying ages (0=never, 1=rarely, 2=sometimes, 3=often)	2.39	0.73	0	3
<b>Intersectional Attitudes Index (alpha=0.42)</b>	<b>4.52</b>	<b>1.05</b>	<b>2</b>	<b>6</b>
Integrated approaches better meet the needs of aging community (0=strongly disagree, 1=disagree, 2=agree, 3=strongly agree)	2.56	0.53	1	3
Communities that give attention to gender issues are better able to meet the needs of aging population (0=strongly disagree, 1=disagree, 2=agree, 3=strongly agree)	1.96	0.76	0	3
<b>Barriers Index (alpha=0.29)</b>	<b>5.20</b>	<b>1.38</b>	<b>0</b>	<b>8</b>
Challenging to engage meaningful participation from broad spectrum of residents (0=don't know, 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree)	2.94	0.98	0	4
Siloed funding makes cross-agency activity or cross-generational planning difficult (0=don't know, 1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree)	2.26	0.81	0	4

### ***Disaggregated Indices***

I also disaggregate the independent variable indices used in the first pair of models into their gender and aging components for Land Use Model II and Transportation Model II (Figure 4.3).

**Figure 4.3:** Disaggregated Indices



The Comprehensive Planning Index is disaggregated into two variables: comprehensive plans that give specific attention to the needs of women and comprehensive plans that address the needs of an aging population. Nearly 50% of respondents indicated that their plans pay attention to the needs of an aging population compared to 1% of plans that pay attention to women's needs. Therefore, I expect that



it is actually comprehensive planning that addresses the needs of the aging population that will be the more significant driver.

The Participation Index is disaggregated into three smaller indices: Outreach, Participation of Women, and Participation of Seniors. The Outreach Index combines the two variables about tailoring information to different ages and holding public meetings at varying times of the day. The Women's Participation Index includes women's attendance and engagement in public meetings and community planning processes. Correspondingly, the Seniors' Participation Index includes seniors' attendance and engagement.

The Community Attitudes Index is split into two component indices: Community Attitudes about Women's Planning Needs and Community Attitudes about Seniors' Planning Needs. Women's Planning Needs includes three variables that measured the degree of gender awareness by the community, planning/zoning board, and developers. Seniors' Planning Needs only included the two variables asking about the planning/zoning board and developers. Respondents indicated more favorable community attitudes towards planning for an aging population than planning for women. In the disaggregated models, I expect that there will be a stronger relationship between gender responsive land use regulations and transportation planning and community attitudes towards aging, indicating that gender responsive planning efforts are primarily driven by aging.

Planner Attitudes is disaggregated into its two component variables: Planner Attitudes about Gender and Planner Attitudes about Aging. As discussed previously, respondents are more likely to consider how their daily work decisions may affect

persons of varying ages versus how they may affect different genders. I expect that both variables to be positively related to gender responsive land use regulations and transportation planning.

The Intersectional Approaches Index is disaggregated into gender and aging variables and recoded into 0/1. Respondents are much more likely to agree that integrated approaches better meet the needs of an aging population (98%) as compared to paying attention to gender issues (74%).

### ***Conclusion***

Using data from the 2014 Women and Aging Survey, two pairs of regression models (4 models total) explore what planning actions or community characteristics lead to more gender responsive land use or transportation planning. The equations for the regression models are given below. Land Use Model I and Transportation Model I use six composite indices as the independent variables. Land Use Model II and Transportation Model II disaggregate the independent variable indices to determine if gender- or aging-related factors are drivers of gender responsive planning. The results from the models are presented in the next chapter.

#### *Land Use Model I*

$$Y_{GRLUR} = \beta_0 + \beta_1 X_{CompPlan} + \beta_2 X_{Participation} + \beta_3 X_{CommAttitudes} + \beta_4 X_{PlannerAttitudes} + \beta_5 X_{Intersectional} + \beta_6 X_{Barriers} + \beta_7 X_{Zoning} + \beta_8 X_{YearBuilt} + \beta_9 X_{Metro} + \beta_{10} X_{PopLog} + \beta_{11} X_{PopDen} + \beta_{12} X_{PercentAging} + \beta_{13} X_{PerCapita} + \varepsilon_1$$

#### *Land Use Model II*

$$Y_{GRLUR} = \alpha_0 + \alpha_1 X_{CompPlanWo} + \alpha_2 X_{CompPlanAging} + \alpha_3 X_{Outreach} + \alpha_4 X_{ParticipationWo} + \alpha_5 X_{ParticipationSen} + \alpha_6 X_{CommAttWo} + \alpha_7 X_{CommAttAging} + \alpha_8 X_{PlannerAttWo} + \alpha_9 X_{PlannerAttAging} +$$

$$\alpha_{10}X_{\text{IntApproachGen}} + \alpha_{11}X_{\text{IntApproachAging}} + \alpha_{12}X_{\text{Barriers}} + \alpha_{13}X_{\text{Zoning}} + \alpha_{14}X_{\text{YearBuilt}} + \alpha_{15}X_{\text{Metro}} \\ + \alpha_{16}X_{\text{PopLog}} + \alpha_{17}X_{\text{PopDen}} + \alpha_{18}X_{\text{PercentAging}} + \alpha_{19}X_{\text{PerCapita}} + \varepsilon_1$$

*Transportation Model I*

$$Y_{\text{GRTP}} = \beta_0 + \beta_1X_{\text{CompPlan}} + \beta_2X_{\text{Participation}} + \beta_3X_{\text{CommAttitudes}} + \beta_4X_{\text{PlannerAttitudes}} + \beta_5X_{\text{Intersectional}} \\ + \beta_6X_{\text{Barriers}} + \beta_7X_{\text{Zoning}} + \beta_8X_{\text{YearBuilt}} + \beta_9X_{\text{Metro}} + \beta_{10}X_{\text{PopLog}} + \beta_{11}X_{\text{PopDen}} + \beta_{12}X_{\text{PercentAging}} \\ + \beta_{13}X_{\text{PerCapita}} + \varepsilon_1$$

*Transportation Model II*

$$Y_{\text{GRTP}} = \alpha_0 + \alpha_1X_{\text{CompPlanWo}} + \alpha_2X_{\text{CompPlanAging}} + \alpha_3X_{\text{Outreach}} + \alpha_4X_{\text{ParticipationWo}} \\ + \alpha_5X_{\text{ParticipationSen}} + \alpha_6X_{\text{CommAttWo}} + \alpha_7X_{\text{CommAttAging}} + \alpha_8X_{\text{PlannerAttWo}} + \alpha_9X_{\text{PlannerAttAging}} + \alpha_{10}X_{\text{IntApproachGen}} \\ + \alpha_{11}X_{\text{IntApproachAging}} + \alpha_{12}X_{\text{Barriers}} + \alpha_{13}X_{\text{Zoning}} + \alpha_{14}X_{\text{YearBuilt}} + \alpha_{15}X_{\text{Metro}} \\ + \alpha_{16}X_{\text{PopLog}} + \alpha_{17}X_{\text{PopDen}} + \alpha_{18}X_{\text{PercentAging}} + \alpha_{19}X_{\text{PerCapita}} + \varepsilon$$

## CHAPTER 5

### RESULTS AND DISCUSSION

#### ***Introduction***

While very few communities address women's needs explicitly in their planning documents and policies, some communities are actually implicitly planning in a gender responsive manner. This chapter presents the results from a series of four regression models that examine drivers of gender responsive land use regulations and gender responsive transportation planning in a sample of US communities.

The first set of models use the Gender Responsive Land Use Regulations Index as the dependent variable. The second set of models use the Gender Responsive Transportation Planning Index as the dependent variable. The variables and models are detailed in the previous chapter. The results are presented below.

#### ***Land Use Models***

##### *Land Use Model I*

Land Use Model I looks at potential predictors of gender responsive land use regulations in a community. The only significant predictor of gender responsive land use is the Comprehensive Planning Index (Figure 5.1). The Comprehensive Planning Index, which includes whether the community had a comprehensive plan and whether it pays attention to women's needs and the needs of an aging population, was positively related with the Gender Responsive Land Use Regulation Index.

**Figure 5.1: Land Use Model I Summary**

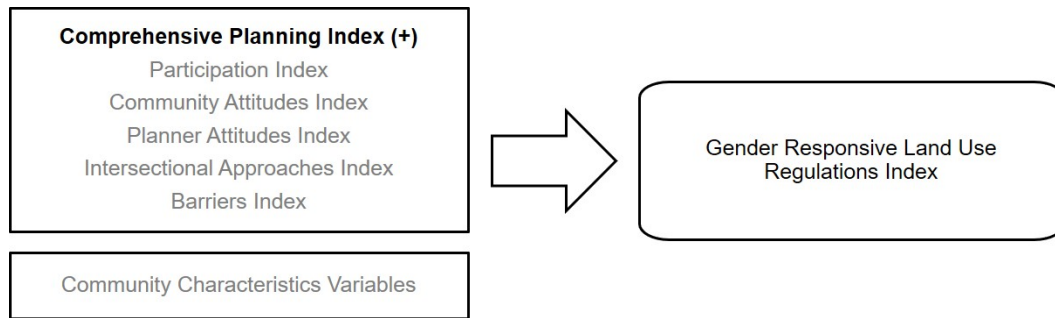


Table 5.1 shows the detailed results for Land Use Model I. The results show that for every unit increase in the Comprehensive Planning Index, we see a 0.605 unit increase in the GRLUR Index. Comprehensive planning efforts should lead to more inclusive land use regulations. Descriptive statistics for the composite variables suggest that including the needs of an aging population may be responsible for the relationship between comprehensive planning and gender responsive land use regulations. This hypothesis is tested in Land Use Model II.

The r-squared for Land Use Model I is 0.08 (adjusted r-squared = 0.02). This suggests that the model does not fit the data well. However, the results still provide valuable information about predictors of gender responsive land use regulations.

**Table 5.1: Land Use Model I Detailed Results**

	<b>Unstd. Beta</b>	<b>Std. Beta</b>	<b>Std. Err.</b>	<b>p-Value</b>
Comprehensive Planning Index	0.605*	0.154*	0.295	0.042
Participation Index	0.016	0.024	0.049	0.739
Community Attitudes Index	0.054	0.077	0.052	0.304
Planner Attitudes Index	-0.177	-0.107	0.119	0.138
Intersectional Approaches Index	-0.146	-0.030	0.350	0.678
Barriers Index	-0.071	-0.045	0.107	0.508
Non-Traditional Zoning Regulations	-0.076	-0.013	0.407	0.852
Median Year Built	0.017	0.105	0.013	0.21
Metro Status	-0.546	-0.119	0.337	0.107
Population (log)	0.015	0.012	0.112	0.894

Population Density	0.000	-0.018	0.000	0.844
Percent Aging	0.594	0.014	3.083	0.848
Per Capita Income (log)	-0.734	-0.103	0.511	0.152
Constant	-19.45	26.53	26.531	0.464

**Source:** Author's Analysis of 2014 APA Women and Aging Survey, n =230

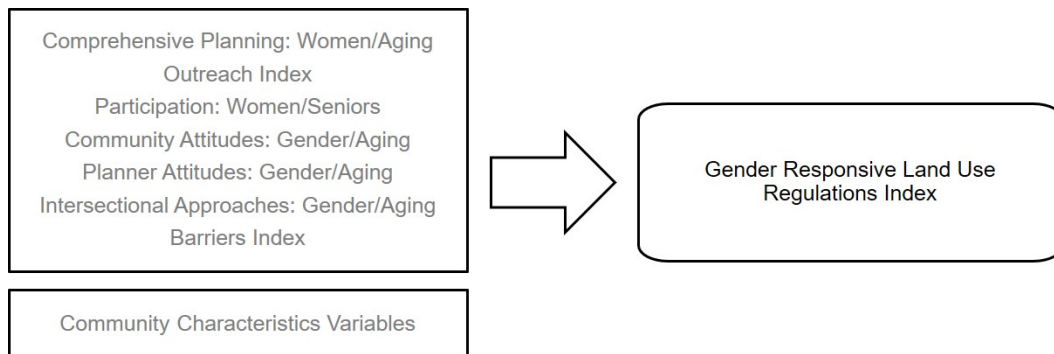
Adjusted R-squared = 0.021

\*  $p < 0.05$ , <sup>t</sup>  $p < 0.1$

### Land Use Model II

Land Use (LU) Model II disaggregates the predictor indices to determine whether gender or aging is the more powerful predictor of gender responsive land use regulations. Disaggregating the indices led to weaker relationships between the predictor variables and the dependent variable of the Gender Responsive Land Use Regulations Index. There were no significant predictors in this model. Figure 5.2 summarizes these results.

**Figure 5.2:** Land Use Model II Summary



The detailed results in Table 5.2 show, however, that aging is the primary predictor of gender responsive land use in a community. While the comprehensive planning variables are no longer significant in LU Model II, comprehensive planning for the aging population has the highest beta weight and is almost significant at 0.071. The model results demonstrate that it is actually paying attention to the needs of an aging population that influences these land use actions.

This makes sense given the overlap between the needs of women and the aging population. It could also be partially due to the inclusion of land use actions targeted towards seniors in the dependent variable index. I grouped elder care with gender-related actions because women live longer than men, tend to be the primary caregivers of aging family members (Pope et al., 2012), and are differentially impacted by the inclusion or exclusion of elder care facilities in residential areas.

Disaggregating the Intersectional Attitudes Index shows that planners believe that integrated approaches – or cross-silo approaches – better meet the needs of an aging population. However, there is a negative relationship between integrated approaches relating to gender and the dependent variable in LU Model II. This variable measured whether planners believe that communities that give attention to gender issues are better able to meet the needs of an aging population. The negative relationship with the GRLUR Index may indicate that planners are unaware of the needs of women and how those needs overlap with those of other groups.

Whether planners consider how their work decisions affect genders differently is almost significant at 0.062 but negatively related to the dependent variable. This is almost counterintuitive, as we should expect a positive relationship between planner actions and gender responsive land use. This could be due to two possible factors 1) respondents who often consider gender do not work in communities that score higher on the index, or 2) planners rarely consider gender. It is also likely why the Planner Attitudes Index in Land Use Model I returned negative.

The r-squared for LU Model II is 0.003. This suggests that the model does not fit the data well. However, the coefficients' directionality still provides valuable insight about predictors of gender responsive land use regulations.

**Table 5.2:** Land Use Model II Detailed Results

	<b>Unstd. Beta</b>	<b>Std. Beta</b>	<b>Std. Err.</b>	<b>p-Value</b>
Comprehensive Planning Women	0.91	0.05	1.41	0.52
Comprehensive Planning Aging	0.63 <sup>t</sup>	0.14	0.35	0.071
Outreach	0.00	0.00	0.09	0.982
Participation Women	0.02	0.01	0.15	0.913
Participation Seniors	0.03	0.02	0.13	0.817
Community Attitudes Gender	0.06	0.06	0.08	0.47
Community Attitudes Aging	0.03	0.02	0.11	0.79
Planner Actions Gender	-0.39 <sup>t</sup>	-0.15	0.21	0.062
Planner Actions Aging	0.08	0.03	0.25	0.736
Intersectional Approaches Aging	0.49	0.03	1.21	0.684
Intersectional Approaches Gender	-0.13	-0.03	0.37	0.727
Barriers Index	-0.09	-0.06	0.11	0.424
Non-Traditional Zoning Regulations	-0.06	-0.01	0.41	0.878
Median Year Built	0.02	0.10	0.01	0.26
Metro Status	-0.56	-0.12	0.35	0.111
Population (log)	0.02	0.01	0.12	0.873
Population Density	0.00	-0.02	0.00	0.818
Percent Aging	0.41	0.01	3.16	0.897
Per Capita Income (log)	-0.66	-0.09	0.53	0.214
Constant	-17.49	.	26.90	0.516

**Source:** Author's analysis of 2014 Women and Aging Survey

Adjusted R-squared = 0.003

\*  $p < 0.05$ , <sup>t</sup>  $p < 0.1$

### ***Transportation Planning Models***

The survey shows that more communities engage in gender responsive transportation planning than in gender responsive land use. This could be for several reasons. First, policies considered to be gender responsive transportation planning can

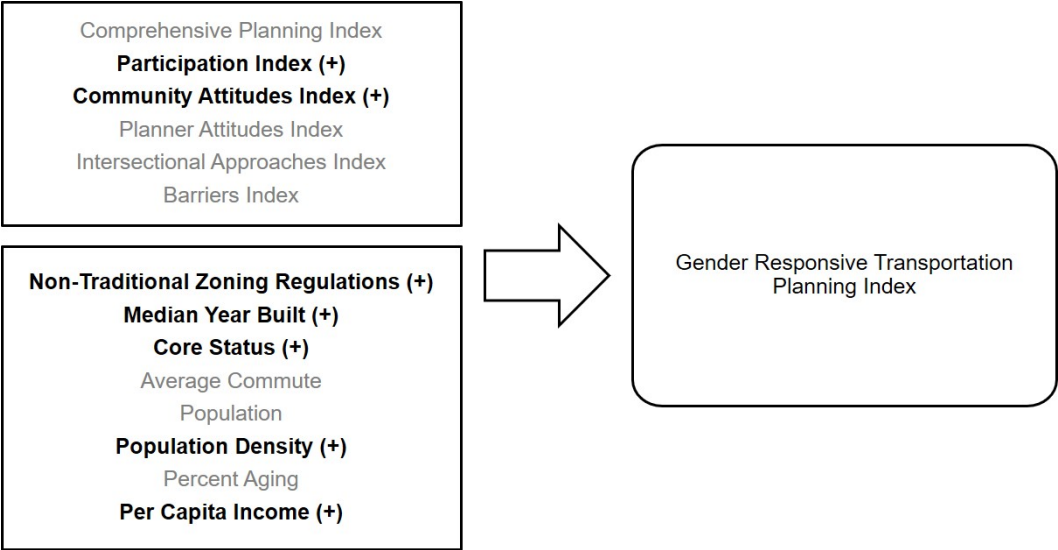


also reduce greenhouse gas emissions, lower congestion, and other similar end goals. It could also be that transportation planning is quicker to respond to changing needs than land use regulations. Land use regulations are typically codified, and transportation work is more policy-based. Land use regulations are literally built into the landscape. This makes it more difficult to effectuate change within traditional land use planning. However, the relative mutability of transportation planning offers the potential to address pinklined landscapes and the needs of women. The next two sections examine the primary drivers of gender responsive transportation planning in a community.

#### *Transportation Model I*

The transportation planning models use the Gender Responsive Transportation Planning (GRTP) Index as the dependent variable. The results from Transportation Planning Model I show that the Participation, Community Attitudes, Non-Traditional Zoning Regulations, Median Year Built, Metro Core Status, Population Density, and Per Capital Income are also positively correlated with Gender Responsive Transportation Planning (Figure 5.3).

**Figure 5.3: Transportation Model I Summary**



The detailed results from Transportation Model I (Table 5.3) show that the strongest predictor of gender responsive transportation planning is the Community Attitudes Index. This suggests that both planning and zoning boards and developers are key actors in creating a transportation network that addresses women's needs. The participation of women and seniors in the planning process is also a significant predictor of gender responsive transportation planning.

The five remaining significant predictors are five community characteristic variables. Non-traditional zoning regulations, such as form-based codes, are positively related to gender responsive transportation planning. These results support the theory that pinklining traditional zoning regulations lead to less women-friendly landscapes. Median year built is also positively correlated with gender responsive transportation planning, meaning that newer or redeveloped communities are more likely to engage in gender responsive transportation planning.

A community's location in the core of a metropolitan area is also associated with higher levels of gender responsive transportation planning. This suggests that a suburban location is not conducive to a community engaging in gender responsive transportation planning. This is important because we know that women are particularly disadvantaged by suburban form. Looking forward, GRTP has the potential to address some of these deficiencies.

The results show that density is also positively associated with this type of planning. More dense communities are likely to engage in multimodal transportation planning. And finally, per capita income is also positively related to gender responsive transportation planning. Wealthier communities are more likely to engage in such practices.

The adjusted R-squared for Transportation Model I is 0.33, indicating a relatively strong model.

**Table 5.3:** Transportation Model I Detailed Results

	<b>Unstd. Beta</b>	<b>Std. Beta</b>	<b>Std. Err.</b>	<b>p-Value</b>
Comprehensive Planning Index	0.034	0.006	0.308	0.9120
Participation Index	0.244*	0.245*	0.056	0.0000
Community Attitudes Index	0.345*	0.348*	0.057	0.0000
Planner Attitudes Index	0.155	0.068	0.124	0.2120
Intersectional Approaches Index	0.135	0.019	0.380	0.7220
Barriers Index	-0.138	-0.059	0.122	0.2580
Non-Traditional Zoning Regulations	1.227*	0.143*	0.448	0.0070
Median Year Built	0.043*	0.196*	0.014	0.0030
Metro Core	1.312*	0.205*	0.457	0.0040
Average Commute (minutes)	-0.042	-0.081	0.037	0.2510
Population (log)	-0.260 <sup>t</sup>	-0.138 <sup>t</sup>	0.143	0.0700
Population Density	0.00023*	0.257*	0.000	0.0010
Percent Aging	-4.665	-0.077	3.454	0.1780
Per Capita Income (log)	1.533*	0.150*	0.588	0.0100

Constant	-95.681	.	28.228	0.0010
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**Source:** Author's analysis of 2014 Women and Aging Survey

**Notes:** Adjusted R-squared = 0.33

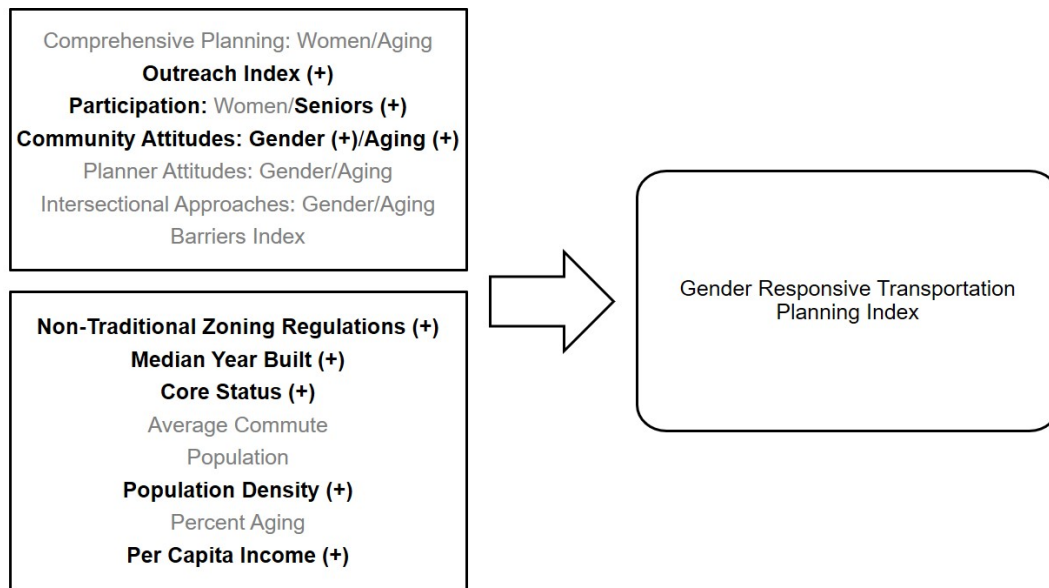
\*  $p < 0.05$ , †  $p < 0.1$

### Transportation Model II

Transportation Model II disaggregates four of the six independent variable indices: Comprehensive Planning, Community Attitudes, Planner Actions, and Integrated Approaches. The indices are disaggregated to determine whether aging or gender is a primary motivator of a community engaging in gender responsive transportation planning.

The results from Transportation Model II show that outreach, seniors' participation, and community attitudes toward gender and community towards aging are significant predictors of a community engaging in gender responsive transportation planning (Figure 5.4).

**Figure 5.4:** Transportation Model II Summary



Community attitudes towards aging have the greatest effect on gender responsive transportation planning (Table 5.4). Community attitudes around gender are also positively correlated with GRTP. Community attitudes about gender planning include three variables that measure gender awareness in the community and by planning/zoning board and developers. While it is not as powerful of a predictor as aging, community attitudes around gender planning are significant in this model. By contrast, they are not significant in Land Use Model II. This suggests transportation planning may serve as an intervention to create better communities for women by overcoming the spatial constraints of the built environment. It also suggests that planning boards and developers are important actors in moving gender responsive transportation planning forward.

The participation of seniors is also a significant predictor of gender responsive transportation planning. Women's participation is positively correlated but has relatively little effect on GRTP compared to other variables in this model. This could be because women's participation is still not enough to impact current transportation policies or not enough relative to aging. This suggests that an effective strategy to increase the level of gender responsive transportation planning is to ensure the participation of seniors, in addition to women.

We also see that the Outreach Index is a significant driver of GRTP in a community. It has the least effect of the significant predictor variables, but this still suggests two things. First, tailoring information to different ages is useful in that senior participation is also a predictor of gender responsive transportation. Second,

communities that hold public meetings at varying times of the day tend to have more inclusive transportation planning.

The five community characteristic variables significant in Transportation Model II are the same as in Transportation Model I. They are Non-Traditional Zoning Regulations, Median Year Built, Core Status, Population Density, and Per Capita Income. The adjusted R-squared for Transportation Model II is also 0.33, indicating another relatively strong model.

**Table 5.4:** Transportation Model II Detailed Results

	<b>Unstd. Beta</b>	<b>Std. Beta</b>	<b>Std. Err.</b>	<b>p-Value</b>
Comprehensive Planning Women	1.392	0.046	1.615	0.39
Comprehensive Planning Aging	0.061	0.010	0.371	0.869
Outreach	0.238*	0.140*	0.099	0.016
Participation Women	0.061	0.023	0.163	0.708
Participation Seniors	0.369*	0.156*	0.137	0.008
Community Attitudes Gender	0.267*	0.178*	0.090	0.003
Community Attitudes Aging	0.457*	0.237*	0.118	0.000
Planner Actions Gender	0.314	0.087	0.227	0.169
Planner Actions Aging	-0.055	-0.012	0.274	0.842
Intersectional Approaches Aging	0.852	0.036	1.255	0.498
Intersectional Approaches Gender	-0.060	-0.008	0.404	0.882
Barriers Index	-0.130	-0.056	0.123	0.294
Non-Traditional Zoning Regulations	1.381*	0.161*	0.458	0.003
Median Year Built	0.045*	0.205*	0.015	0.002
Metro Core	1.335*	0.209*	0.462	0.004
Average Commute (minutes)	-0.032	-0.061	0.038	0.396
Population (log)	-0.243 <sup>t</sup>	-0.130 <sup>t</sup>	0.146	0.097
Population Density	0.00023*	0.250*	0.000	0.001
Percent Aging	-4.984	-0.082	3.505	0.156
Per Capita Income (log)	1.506*	0.148*	0.608	0.014
Constant	-99.930	.	28.589	0.39

**Data Source:** Author's analysis of 2014 Women and Aging Survey.

**Notes:** Adjusted R-squared = 0.33

\*  $p < 0.05$ , <sup>t</sup>  $p < 0.1$

## ***Conclusion***

This chapter presents the results of a quantitative analysis of the 2014 Women and Aging Survey to identify potential planning interventions that can begin to address the needs of women within a pinklined landscape. The four regression models' results reveal that land use actions are relatively locked in place regarding gender and aging compared to transportation planning. The relative immutability of land use compared to transportation is demonstrated through very few significant predictor variables in the two land use models and the models' low explanatory power.

On the other hand, transportation planning is more responsive to the needs of both women and seniors than land use. We see this in the descriptive statistics for the Gender Responsive Transportation Planning Index and the transportation models' predictive strength. The results from the transportation models in this chapter demonstrate that there is some potential for gender to move forward in discussion and resolution with transportation planning. By incorporating accessibility and mobility goals, gender responsive transportation planning can help address the disparities within the built environment by increasing access to employment, childcare, and other necessary services.

Transportation may also show more responsiveness due to the nature of transportation planning funding and oversight. Metropolitan Planning Organizations (MPOs) are regional agencies responsible for planning and distributing funding for regionally significant and federally supported transportation improvements (Sciara, 2017). MPOs direct hundreds of billions in annual transportation investments in line with regional transportation plans. Regional transportation plans reflect the needs and

vision for investments in a region over a twenty-year period and are updated regularly within that planning horizon (Sciara, 2017).

For example, in the Puget Sound region of Washington, the Puget Sound Regional Council (PSRC) is designated under federal law as the Metropolitan Planning Organization, and under state law as the Regional Transportation Planning Organization (RTPO) for King, Kitsap, Pierce, and Snohomish counties. RTPOs were authorized as part of Washington's 1990 Growth Management Act (GMA) to ensure local and regional coordination of transportation plans (PSRC, 2021). As the MPO for the region, PSRC is responsible for distributing the approximately \$270 million in transportation funding annually from the Federal Highway Administration and Federal Transit Administration (PSRC, 2021). Funding is distributed in the region using the Transportation Improvement Program (TIP). The TIP spans a four-year period and a new TIP is created for the region every two years. The TIP process helps to ensure that transportation projects are meeting regional transportation, growth and economic development goals and policies (PSRC, 2021).

It could be that this required frequent review of transportation plans and projects could be contributing to the gender responsiveness that we see in the transportation models. With each biennial review, there is an opportunity to update transportation policies to reflect the region's changing needs. Comprehensive plans and their implementing development regulations are not updated as frequently as transportation plans. In Washington State, for example, each planning locality must periodically review its comprehensive plan and development regulations every eight years. At the regional level, plans like VISION 2050, which is the Puget Sound



region's plan for growth, are updated even less frequently. This difference in update timelines can be practically attributed to the nature of funding transportation projects and of comprehensive plans as longer-range planning documents. However, the accountability achieved through periodic review may be contributing to the responsiveness of transportation planning to users' changing needs.

There is also a disconnect in the scale of transportation planning and land use regulations that may also be contributing to the fixity of land use around gender. Transportation planning is often done at the regional level through MPOs and other regional stakeholders, while zoning and other implementing regulations are at the local level. Sciara (2017) makes this connection, "increasingly MPOs promote less car-dependent and more walkable and bikeable communities, but MPOs cannot control land use decisions needed to create those communities" (pg. 262). Allred and Chakraborty (2015) find that regional principles are easier to implement at the local level if the principles reflect the parochial interests of the local jurisdiction. The results from the regression models support this connection between regional and local planning efforts. In the transportation models, we see that the relationship between community attitudes toward gender and gender responsive transportation planning is both positive and significant. The relationship between community attitudes and gender responsive land use is not significant.

We can see from the models that community attitudes and participation are important factors in moving communities toward gender responsive planning. Higher levels of gender responsive transportation planning are positively correlated with the participation of women and the aging population in the planning process and favorable

community attitudes around gender and aging issues. However, when the transportation model is disaggregated, aging is the primary driver of gender responsive transportation planning. This follows with Warner et al. (2016), who find that increased elder participation leads to increased levels of service provision.

Transportation planning may also show more responsiveness to issues of gender compared to land use regulations because land use regulations are codified. Land use regulations have the force of law; comprehensive plans and transportation plans do not. It is inherently more difficult to change a law than to change a policy. As Chapter 2 demonstrated, the comprehensive planning model of today is very different from the general (rational) plan of the past. Land use, on the other hand, has been slower to evolve. The next chapter, *Not Your Mother's Suburb*, continues the discussion of the implications of traditional zoning for women. It also offers suggestions for additional planning interventions that address the needs of women and other groups.

## CHAPTER 6

### NOT YOUR MOTHER'S SUBURB: REMAKING COMMUNITIES FOR A MORE DIVERSE POPULATION

#### ***Preface***

This paper was initially published in *The Urban Lawyer* (2014, Vol. 46, Issue 4.). It is included in this dissertation with permission from the co-author.<sup>1</sup>

While the descriptive statistics from the 2014 Women and Aging Survey reveal that fewer communities engage in gender responsive land use actions than transportation planning, a correlation in the land use regression models would help to determine what drivers could move communities forward around gendered issues in land use. However, the results showed minimal movement around land use. The land use models' results affirm the durability of the built environment and the pinklined planning framework that created it.

The following paper, *Not Your Mother's Suburb*, provides additional discussion around traditional land use regulations as a palimpsest that disadvantages women and those who do not conform to the suburban ideal. It also offers some suggestions on how to address some of the challenges facing contemporary suburban residents.

#### ***Abstract***

The United States is a suburban nation with a majority of Americans living and working in this landscape. But the suburb is more than a physical location; it is also a social production. Built upon a middle class, white, nuclear family ideal, the suburb is

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<sup>1</sup> Micklow, A. C., & Warner, M. E. (2014). Not your mother's suburb: Remaking communities for a more diverse population. *The Urban Lawyer*, 46(4), 729-751.

now diversifying demographically and economically, yet zoning ordinances and the built environment continue to reflect this outdated ideal. Today's suburb is not your mother's suburb. We argue that these demographic changes create both a point of rupture that challenges traditional land use regulations and actual uses of space, and an opening for communities to embrace and plan for new residents. In order to respond to the needs of a diversifying suburban population, communities need to challenge the underlying assumptions of traditional zoning ordinances--the separation of uses and preference for single-family housing. We present an agenda for the future that includes planning responses that rethink the zoning hierarchy, promote new forms of densification, move beyond restrictive family definitions, and experiment with new forms of service delivery.

### ***Introduction***

The American suburb is at a crossroads, a pivotal moment when demographic and economic changes exist in tension with the ideal and design of the suburban landscape. The suburban ideal is a postwar cultural construction of the American Dream--a single family detached house, surrounded by a yard, and inhabited by the nuclear family. However, as the suburb becomes more ethnically and economically diverse, scholars and communities are faced with an important decision: will they embrace and support this shift or undermine it with a rigid adherence to historical conceptions of family type and zoning rules?

To fully discuss the implications of a more diverse suburb, both the tool that created the landscape and the social processes that restructure that landscape must be explored. The tool is Euclidean zoning and the social processes that frame it are a

separation of public and private spheres and the dominance of the white nuclear family as the archetype for which the suburbs were built.

This paper begins by discussing the mutual constitutivity of society, space, and law through the value-laden assumptions embedded in the suburban landscape and ethos. Support is provided from case law through a discussion of the spatial barriers facing suburban women. The second part of this paper focuses on the increasing diversity of the suburb by family type, ethnicity, and income using decennial census data from 1950 to 2010. The paper explores the tensions created when occupants and uses exist in conflict with the built environment and municipal regulations. These demographic changes create new opportunities for urban planning to rethink the zoning hierarchy, increase density, and embrace new approaches to service delivery. The paper combines legal, historical, and demographic analysis to suggest that an evolution in planning practice is needed for suburbs to meet the needs of a twenty-first century population.

***Theoretical Framework: Mutual Constitutivity of Society, Space, and Law***

Society and space are mutually constitutive. Space not only contains social processes, but actively constructs them (Braverman et al., 2014). The spatiality of a community determines its material character. In the American suburb, the cultural norm of the nuclear family resulted in the low density, single-use developments of the postwar period. This form of development has become so engrained in American society, that even as residents change, the mechanisms that regulate this form of development are slow to evolve.

The most pervasive of these mechanisms is Euclidean zoning; a land use tool that separates 'incompatible' land uses and gives preference to single-family detached residential uses. This uniquely American form of zoning epitomizes suburban development since World War II. In the postwar period, the United States embraced rapid suburbanization leading to the eventual dominance of the suburban ethos in American life. The suburban ethos, or ideal, refers to the postwar cultural construction of the American Dream--a single-family detached home in a residential neighborhood, inhabited by the white nuclear family, and maintained by the idealized suburban housewife (Micklow, 2008). This ideal is embedded in the suburban landscape through Euclidean zoning ordinances that privilege single-family residential as the highest and best use. Even today, 70% of suburban housing is single family (US Census Bureau, 2012) evidence of this heteronormative feedback loop.

Complementary to the reinforcing processes of society and spatiality is the mutually constitutive nature of the legal and the spatial, of which zoning ordinances are a prime example (Sharpe & Wallock, 1994). Early American ordinances were guided by the belief that land uses form a hierarchy or pyramid, privileging the detached single-family home at the top (Hirt, 2013). Uses were banned from levels above them; consequently residential zones contained little except housing. However, with the increased separation of public and private spheres in the postwar period, zoning ordinances became less hierarchical and more segregationist, prohibiting the mixing of uses. This led to the sprawling landscape of suburban America (Hirt, 2007).

The resulting housing patterns are not only spatially exceptional, but also legally exceptional in that American zoning ordinances support the "special status of

America's landmark housing form--the detached single-family home" (Hirt, 2013). More recently we are seeing a reprioritization of the zoning hierarchy to privilege commercial uses (See *Kelo v. New London, 2005*). This creates the opportunity for mixed use (discussed later in the paper), but also the risk of pushing residential uses out of spaces deemed more profitable for commercial development.

Often overlooked is the power of zoning ordinances to spatially direct lives, the location of support systems, and the composition of households (Ritzdorf, 1994). The Supreme Court first legitimated a belief in the 'rightness' of the single-family lifestyle and purely residential zones in 1926 with the *Village of Euclid v. Ambler Realty Co.* case. The Court's decision, delivered by Justice Sutherland, approved excluding multifamily housing from single-family residential districts because "very often the apartment house is a mere parasite, constructed in order to take advantage of the open spaces and attractive surroundings created by the residential character of the district" (*Euclid*, 1926). As a result of this case, valuing single-family dwellings as the 'highest and best use' became the common method of regulating land use. In its original conception, the phrase 'single-family' was meant to be a designation of a physical structure, but quickly led to the regulation of dwelling occupancy--occupancy by the traditional nuclear family (Salsich, 2007).

Traditional zoning ordinances have been used to enforce a specific social agenda. For example, zoning was used in the South to segregate the races within communities and between them as part of a broader set of Jim Crow laws (Berry, 2001). Districts were zoned white single family or colored single family. These lines not only determined where people could live, but also affected the type and style of

single-family homes. Because colored zoned neighborhoods were limited from growing geographically, the density in these neighborhoods was higher, and this racial zoning relegated African Americans to a second-class American Dream of smaller homes, smaller lots and more crowded neighborhoods (Silver, 1997). Today, jurisdictional boundaries often exclude lower-income minority neighborhoods from access to equal public infrastructure in urban, suburban and rural communities (Marsh et al., 2010).

American land use classifications, definitions, and standards continue to reflect social and cultural categories but also control what are believed to be the correct relationships among them. The 'rightness' of the single-family in American society was reinforced in 1974 the case of *Village of Belle Terre v. Boraas*, which challenged the definition of family in the Belle Terre zoning code. The majority opinion, written by Justice Douglas, recognized the preservation of traditional family values as a legitimate state objective. The Supreme Court's opinions in the *Euclid* and *Belle Terre* cases represent the Justices' conception of an ideal community. This idealized notion of the single-family community was challenged by the *Mount Laurel I/II* decisions that argued that all communities have an obligation to provide a fair share of affordable housing. By recognizing the externalities of exclusive single-family zoning, *Mount Laurel* offers a revised conception of the suburban ideal, one that permits some minimal level of affordable multi-family housing (Hughes & Vandoren, 1990). For nearly a century, the American zoning paradigm has crafted the suburban landscape by determining where on a lot a house may be placed, privileging who may live in that house, and how they may interact in that space.



Women, for example, are constrained by the inadequacies of the physical design of suburban residential neighborhoods, which were built and planned to facilitate the private role of women within the nuclear family. Markusen (1980) notes "[t]he most striking aspects of modern U.S. city spatial structure are the significant spatial segregation of residence from the capitalist workplace," a separation that roughly corresponds to the division of responsibility between men and women for household production and wage labor, respectively (S27). This segregated land use pattern discourages extended family or community sharing of housework and replaces public play spaces such as parks with private yards.

The postwar emphasis on suburban development and the nuclear family increased domestic labor for women. Mothers who navigate the suburban landscape illustrate the intersectionality of society, space, and law. These women face not just a double burden--responsibility for home and child care in addition to paid jobs they perform (Hochschild, 1989) but a triple burden due to the segregation of uses, auto-dependence, and prevalence of single-family homes in the Euclidean suburb. This is a direct result of the antiquated and value-laden assumptions underlying the Euclidean zoning and planning paradigm, and engrained in the suburban landscape and American consciousness in the postwar period.

The increased separation of spheres and emphasis on gender roles following World War II was a result of the United States' effort to reintegrate returning soldiers into civilian life (Kerber, 1988). Relegated to the domestic sphere in the postwar by culture, economy, and the emerging suburban environment, a middle class white woman's place was in the home; and her primary job was to provide a safe haven for

the breadwinning husband after he returns from working in the masculine (public) city, and to raise children in order to sustain the workforce (England, 1993). A feminist backlash against this position beginning in the 1960s, and the stagnation of the family wage in the 1970s, forced most women with children to engage in the formal labor force, with resulting changes in family and household structure (England, 1993). Despite changes in the household structure and the role of women, the postwar suburban development style is perpetuated in most new development today.

The physical design of a community represents a moment in time that is continually reevaluated by subsequent inhabitants. At present, the American suburb is experiencing a demographic transformation with increases in singles, elders, and multi-generational and ethnic households. These demographic changes illustrate the tensions that arise when a space is inhabited by a new set of residents for which it was not originally planned.

### ***Changing Demographics and Economics, Conflicting Ideals***

#### *Changing Demographics*

The American suburb is undergoing a significant demographic and economic transformation. The nuclear family, the ideal for which the suburb is built, is in decline and multi-generational families are making a resurgence. The number of non-white and senior residents is also increasing, creating an imperative for communities to rethink the way they plan, and provide for their residents.

In 1950, over 50% of households conformed to the nuclear version of the family--married two-parent household with their own children--compared to only 20% of households in 2012. Of these remaining nuclear families, both the husband and wife

are employed in 70% of households (US Census Bureau, 2012). Single parents and parents who combine the domestic and wage earner roles are confronted by additional constraints resulting from the spatial structure of the suburbs. For example, zoning ordinances may exclude or highly condition the location of childcare in residential districts because it is not a residential use of property. This is ironic as there is no other use as integral to single-family district as the raising of children. Ritzdorf (1994) states, "since the original decision establishing the constitutionality of single-family zoning ... in 1926, the importance of this housing district for children is brought up in virtually all defenses of zoning" (pg 269). But the actual impact of this zoning paradigm on children is questionable: limited walkability leads to obesity, limited public space creates a sense of isolation that reduces opportunities for play and exploration, and concerns over security relegate children to the private sphere (Rudner, 2012).

The construction of the workplace separated from the residence, male space from that of the female, and city from suburb constrains suburban men as well. The fragmented landscape has young families reconsidering whether the suburb is, any longer, the ideal place to raise a family with the forced separation of work and family spheres and the increased commuting costs and stress for all family members (Frey & Berube, 2002). Communities are beginning to respond to these tensions and attempts are being made to break down these barriers and plan for more family-friendly communities (Warner & Rukus, 2013).

The separation of uses characteristic of traditional zoning ordinances has significant implications for working suburban parents in terms of commuting time and

distance (Markovich & Hendler, 2006). Women have shorter commute times and distances on average than men, but growth rates vary considerably between sexes. Over the past two decades, married women with children saw their work trips lengthen by 34%, while married men with children experienced half that growth, and married women have, on average, shorter trips than single women (Crane, 2007). One explanation is that marriage leaves the average woman with additional family responsibilities, encouraging greater proximity between work and home, while doing just the opposite for men (Silbaugh, 2007). The disparity in commute time and distance between men and women, and between married and unmarried women, is a reflection of the triple burden that is created when landscapes remain stagnant against societal changes.

As postwar suburbanization supported the rapid growth of the nuclear family, it also saw a decline in extended family households during the same period. In 1940, approximately a quarter of the population lived in a multi-generational household, and by 1980, just 12%. Over the past decade the percentage of multi-generational households increased to 16.1% of households in 2010 (Morin, 2010). This is a significant trend reversal, and signals a change in how the suburban landscape is being used.

Non-white families are most likely to live in multi-generational households, with Asians (26%), blacks (24%) and Hispanics (23%) accounting for the majority of these households in 2009 (Pew Research Center, 2011). With the increase of these groups in the suburbs, the role of the multi-generational household is becoming more important. As poverty rates are highest for Black and Hispanic families (Vespa et al.,

2013) residing in a multigenerational household could improve the financial situation for some families by reducing housing and childcare costs.

The American suburb is also becoming more racially diverse. In 1990, just 17% of suburban residents were non-white (US Census Bureau, 1992). By 2010, non-whites represented 35% of suburban residents, similar to their share of the US population and higher than at any other time in history (Frey, 2011). In many of these metropolitan areas, immigrants are bypassing the central city and moving straight into suburban areas, bucking historical trends that have been in place for over a century (Katz et al., 2010).

The Hispanic population is primarily responsible for this demographic shift, accounting for 49% of suburban population growth-compared to 9% of growth due to whites between 2000 and 2010. In the decade prior (1990-2000), Hispanics accounted for 38% of suburban growth, compared to 26% for whites. Today 45% of metropolitan Hispanics live in suburbs (Frey, 2011). However, segregation remains high in areas with a fast-growing Hispanic population (Lichter et al., 2010).

Increasing diversity is not just linked to the Hispanic population; for the first time, 40% of Blacks in metropolitan areas now reside in the suburbs (Frey, 2011). Historically Blacks have had a lower rate of suburbanization due to racial zoning, housing discrimination, and significant income disparities (Palen, 1995). The increase could be explained by a dual process of deconcentration of low-income households to the suburbs (Samara et al., 2013) and movement of wealthier Black households to suburbs seeking better educational or employment opportunities.

The increase in racial diversity implies a transformation of the suburbs' cultural identity. A 2009 study of suburban immigration in Prince William County, Virginia--a suburb of Washington DC--revealed significant increases in Hispanic homeownership, but also a change in the 'feel' of older neighborhoods traditionally inhabited by non-Hispanic residents. These differences included changes in the outward appearances of houses and property--parking on lawns, overcrowding as evidenced by multiple vehicles and unrelated persons sharing homes, home-based businesses and an increase in outdoor activities and noise levels. (46) Many of these uses were violations of local ordinances--regulations that were created to foster the postwar suburban ideal of a nuclear family with one vehicle.

The suburb is also aging with the 65+ age group accounting for 13% of suburban residents in 2010 (Singer et al., 2009) with dramatic increases projected over the next 30 years as a result of the aging baby boomer generation. As Table 6.1 shows, 59% of metropolitan seniors now live in the suburbs.

This phenomenon is not restricted to the Sun Belt, as the recent trend of aging in place combined with declines in youth in suburban areas have led to greater concentrations of seniors in suburban areas outside of traditional 'retirement magnets' (Kochera et al., 2005). Those aging in place are forced to reevaluate the space in which they have spent their lives. Maintaining homes and yards requires more effort, driving everywhere becomes expensive and eventually impossible, and the absence of sidewalks and infrastructure in most suburban areas limits older adults' civic engagement.

As the proportion of elders rises in the suburbs, pressure will mount to increase walkability, service, and housing options that enable elders to stay and age in their home communities. However, many zoning and building regulations actively function as barriers against adapting spaces to meet the needs of an aging population resulting in "Peter Pan neighborhoods built to serve residents who will never age" (Antoninetti, 2008). Prohibitive regulations include the exclusion or heavy regulation of accessory dwelling units, cohousing arrangements, and elder care facilities (Hoffman & Landon, 2012).

**Table 6.1:** Population, by Suburb and City: 1950-2012

Total US Population	1960	1970	1980	1990	2000	2012
	179,323,175	203,211,926	226,545,805	248,709,873	281,421,906	309,138,711
<b>Metropolitan Population</b>	119,594,754	139,418,811	169,430,623	192,725,741	225,981,679	258,777,679
<i>Central City</i>	50.1%	45.8%	40.0%	40.4%	37.8%	43.4%
<i>Suburb</i>	49.9%	54.2%	60.0%	59.6%	62.2%	56.6%
<b>Black Metro Population</b>	12,194,000	16,749,356	21,477,741	25,122,054	29,893,271	33,571,696
<i>Central City</i>	79.6%	78.4%	71.2%	68.3%	61.6%	59.8%
<i>Suburb</i>	20.4%	21.6%	28.8%	31.7%	38.4%	40.2%
<b>Hispanic Metro Population</b>	Not Available		12,794,946	20,204,818	32,173,942	46,778,854
<i>Central City</i>			57.4%	57.0%	51.2%	54.7%
<i>Suburb</i>			42.6%	43.0%	48.8%	45.3%
<b>Age 65 and over Metro Population</b>	9,813,103	12,896,938	18,124,676	27,945,232	26,958,060	32,500,612
<i>Central City</i>	Not Avail.	53.2%	44.2%	42.6%	36.6%	40.6%
<i>Suburb</i>		46.8%	55.8%	57.6%	63.4%	59.4%

Notes: Based on all metropolitan areas in census year. Number has increased since 1960. 1960–2000 data from decennial census publications (source: <http://www.census.gov/prod/www/decennial.html>); US CENSUS BUREAU, SOCIAL AND ECONOMIC DATA FOR PERSONS IN SMSAs BY RESIDENCE INSIDE OR OUTSIDE CENTRAL CITY (1961); see also US CENSUS BUREAU, 1970 CENSUS OF POPULATION CHARACTERISTICS OF THE POPULATION (1972); see also US CENSUS BUREAU, 1980 CENSUS OF POPULATION CHARACTERISTICS OF THE POPULATION (1982); see also US CENSUS BUREAU, 1990 CENSUS OF POPULATION GENERAL POPULATION CHARACTERISTICS METROPOLITAN AREAS (1992); see also US CENSUS BUREAU, PROFILES OF GENERAL DEMOGRAPHIC CHARACTERISTICS (2002). 2012 data from American Community Survey, 5-year estimates 2008 to 2012: US CENSUS BUREAU, AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES DATA PROFILES, 2008–2012 FOR METROPOLITAN STATISTICAL AREAS AND PRINCIPAL CITIES, available at <https://www.census.gov/geo/maps-data/data/iger-data.html> (2012). 2000 and 2012 Black population for One Race, Non-Hispanic. 2000 and 2012 Hispanic for All Races.

### *Changing Economics*

Suburbs are not only facing changing demographics, but they are also dealing with changing economics. In 2008, for the first time, suburban poverty rates were higher than those of cities, making suburbs home to the largest and the fastest-growing poor population in the country (Kneebone & Garr, 2010). The migration of poverty

(Howell & Timberlake, 2014) is the result of employment decentralization, gentrification of central city neighborhoods, declining regional economic conditions, and decreased housing prices in the inner ring (Cooke, 2010). Employment decentralization is one of the largest contributors to the suburbanization of poverty as the US economic base shifted from central city-based manufacturing into a mix of high and low skill service jobs in the suburbs. However, the movement of commercial and retail establishments to the suburbs created a labor shortage in which low-wage service jobs struggle to find workers (Cooke, 2010). This spatial mismatch led to a federal response with the Job Access Reverse Commute (JARC) program that seeks to meet the transportation needs of low-income persons to suburban jobs. However, JARC is a 'bandaid' solution, and a more permanent solution needs to be enacted at the local level, such as constructing affordable multi-family housing in the suburbs for these workers (Ihlanfeldt, 2004). This development type would enhance workers' productivity and reduce environmental costs of commuting, but is often prohibited by zoning ordinances that privilege single family housing.

The fate of the suburb is tied to the fate of the city, and declining regional economic health has increased poverty rates in the suburbs. Many poor suburbs have a large portion of their population engaged in manufacturing or low skill services, and are characterized by low property values, low rates of owner-occupied housing, and an above-average rate of vacant houses (Mikelbank, 2004). Lee-Chevula (2012) finds a clustering of low-income populations in inner ring suburbs located closest to principal cities.



The combination of economic and demographic change forces many suburban communities to confront the 'problems of little cities' such as a limited tax base and lack of affordable housing. These communities also lack the social service agencies necessary to meet the needs of a low-income population (Cooke, 2010). Suburbs have traditionally been considered the privileged location in the metropolitan landscape, with low service and infrastructure costs, high property values, and low poverty (Warner, 2009). However, much of the postwar, inner-ring suburban tract housing is low quality and the infrastructure built in this period needs to be replaced (Cooke, 2010). These suburbs face significant fiscal barriers due to the shortage of commercial or industrial land, a limited tax base and high social needs (Orfield, 2002; Xu & Warner, 2016).

The United States is a suburban nation, but the residents of the suburb are changing. The suburb is now as diverse as the overall US population. But these residents are often confronted with a built environment governed by regulations that create unnecessary tensions between home and work and challenge shifting cultural norms. These tensions, however, offer a potential for change. The first zoning ordinances were a reaction to the tensions created by rapidly industrializing cities at the turn of the last century. Planners and residents, therefore, have the opportunity to take advantage of the tensions today to reshape planning practice to better meet the needs of the modern suburban community.

#### *Potential for Remaking the Suburb*

American land use classifications, definitions, and standards need to be remade to reflect changing cultural and economic standards. In order to remake these

communities, practitioners and scholars need to challenge the underlying assumptions of the planning paradigm to meet the needs of these new residents who conceive and produce space in different ways.

The physical design of a community represents a moment in time that is continually reevaluated by subsequent inhabitants. Lefebvre defines these 'moments' as points of rupture in the rhythms of work and leisure that enable residents to subtly remake the spaces in which they live and work (Lefebvre, 1991). Urban scholars are giving increasing attention to these moments and the ways in which residents alter both the physical space and their interpretation of it through use, without formally challenging ideals and power structures. This potential to remake space has especially captured urban scholars' attention as regards public space in cities (Langegger, 2013; Purcell, 2008; Franck & Stevens, 2007). We argue this process is occurring in suburbs as current residents use the built environment, both private homes and public spaces, in new ways such as converting dead malls into productive community spaces (Parlette & Cowen, 2011).

Applying Lefebvre's (1991) triad of spaces --perceived, conceived, and lived-- offers the potential for remaking the suburb. Perceived space is the space of every life; it is created through popular belief and action and experienced by all. Conceived space is the theoretical space in which urban planning sits. Lived space involves the imagination and has the power to reconfigure the relationship between popular perceived space and official or municipal conceived space. As the suburbs become more diverse and used in ways other than originally conceived, scholars and planners are faced with two questions. What do these demographic changes imply about a

transformation of the suburb's cultural identity? And, will communities embrace and support this shift or undermine it with a rigid adherence to historical conceptions and uses of zoning structures?

Three major factors create an opening for a planning response: the marketing imperatives created by changing demographics, the fiscal stress facing many suburban communities, and the actions of current residents that challenge traditional land use regulation. Suburban communities are especially responsive to developers, and the pressures of demographic change create new opportunities for the growth coalition of government and real estate developers (Logan & Molotch, 1987) to be responsive to changing resident needs. As population shifts, there will be demographic and marketing imperatives for reshaping suburbia; a market demand for smaller houses, multi-generational houses, and location efficient mortgages (Nelson, 2009; Vesselinov et al., 2007). Harnessing the growth coalition of business, developer, and local government interests to retrofit suburban space could be an efficient and cost-effective method to meet market demands of the aging and non-white population (Smith et al., 2008). Indeed, communities that engage elders in planning have been able to generate a market response to providing more services for elders (Warner et al., 2016), thereby relieving some of the burden on government services.

In addition, residents themselves have the power to reshape the suburb. This is occurring both inside and outside the home as residents use land, housing, and services in new ways and challenge traditional regulations governing land use. For example, new technology and ease of communication allows many suburban residents to merge home and work (Munro, 2008). However, working from home violates one of the

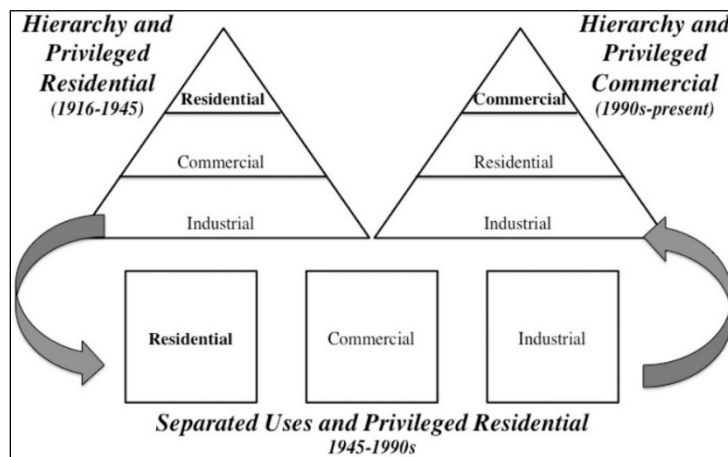
most protected norms of zoning, the separation of workplace from residence; as a result, many zoning ordinances restrict or prohibit home-based business (Garnett, 2001). Rather than challenging these new uses as a violation of zoning codes, communities can incorporate these innovative responses into revised zoning and incentive schemes to better meet the needs of current residents and encourage participation in the process of reshaping suburbia. Residents may become "insurgent suburbanites," helping to increase density, promote mixed use, and address inadequate public space and service provision through their actions. The question is, will planning and zoning schemes respond and allow a permanent, formal reshaping to take place?

***Planning Responses***

To respond to new suburban realities, the underlying assumptions of traditional zoning ordinances--the separation of uses and preference for single-family housing--need to be challenged. In this next section, we highlight four planning responses that work towards this transformation: rethinking the zoning hierarchy, new forms of densification, moving beyond family definitions, and new forms of service delivery.

*Rethinking the Zoning Hierarchy*

**Figure 6.1:** Evolution of Land Use Planning Hierarchy



A critical component of remaking the suburb is changing rules and structures, especially zoning regulations. Reprioritizing the zoning hierarchy (Figure 6.1) might allow for a range of housing options, increased tax base, and reduce the environmental and social impacts of single-use zoning. This is already occurring in many localities, where Euclidean zoning ordinances are being supplanted by form-based codes that allow for a greater mixing of commercial, residential, and industrial uses (Barry, 2008). Some communities have started to reprioritize commercial over residential uses since the *Kelo vs. New London* case in 2005, which held that economic development on private property was a legitimate public use because of the increase in tax value. Fiscally constrained localities are privileging commercial development as the highest use in order to boost tax revenue (e.g., sales and hotel occupancy taxes). This reprioritization of use may provide for the introduction of mixed use in suburban neighborhoods, helping suburbs become more full service communities, if planned appropriately. Indeed the 2008 American Planning Association (APA) survey found that 90% of planners reported that their communities allow mixed use (Israel & Warner, 2008). However, such reprioritization also risks demolition of lower-valued residential housing in favor of commercial development (Somin, 2007), a proper balance needs to be found.

The incorporation of new urbanist principles or mixed use into both new and existing neighborhoods rethinks the zoning hierarchy (Figure 6.1). However, new urbanism has limited reach for many suburbs (Moore, 2010), the density of demand in many suburban areas may not justify such development patterns and research suggests these new urbanist developments are generally unaffordable for most families. Just as

suburban areas waxed with the rise of the automobile, they risk waning with the shift toward lower commuting times and efforts to redevelop the city for families and promote more transit-oriented development within the inner ring (Nelson, 2012).

With new urbanism's limited applicability in suburban areas, communities must look to other solutions that build from the increasing diversity of the suburb and respond to the needs of all suburban residents. These solutions include the densification of single-family neighborhoods and the elimination of family discriminatory definitions from traditional zoning ordinances.

#### *Forms of Densification*

One method to increase density and housing options in an existing community is to permit accessory dwelling units in single-family neighborhoods. These spaces provide legal residence for extended family members, child or elder caregivers, or may increase the affordability of housing. However, the 2008 APA survey found that only 25% of responding planners reported their communities allowed accessory flats by right, and 36% by special use permit (Israel & Warner, 2008). Restrictive zoning regulations are the most influential barrier to creating accessible and affordable housing for the aging population (Liebig et al., 2006; Brinig & Garnett, 2013).

Resistance to the inclusion of alternative forms of housing may stem from neighbor concerns regarding overcrowding, degradation of neighborhood quality, and declining property values. These concerns may be attributed to accessory dwelling units being framed only as an affordable housing issue, not as a family caregiving issue (Liebig et al., 2006). They also may be unwarranted as demonstrated by Seattle's successful accessory flat legislation (Ghazaleh et al., 2011). In a more radical vision,

Hayden imagines the conversion of a single-family suburban block to one that includes multifamily housing, a common vegetable garden, childcare, and community kitchen area. (84) Co-housing arrangements, such as this, are limited by land cost and prohibitive zoning regulations (85) but may be an effective response to the desire for more inter-generational living. However, the 2008 APA survey found only 19% of planners reported their communities promoted cooperative housing or common living spaces (e.g., shared yards) (Israel & Warner, 2008).

The retrofitting of existing single-family homes offers perhaps the greatest potential for remaking the suburb. Both large and small residences can be converted to senior or multi-family housing in response to the needs of the aging and diversifying suburban population. A traditional three-bedroom home can be transformed into a three-unit structure by reconfiguring the interior space to allow for smaller apartments and additional kitchens. This is part of the "green homes" design being promoted for seniors today (Weisberg, 2005). However, traditional ordinances that prevent conversion of single-family homes need to be amended.

The opportunity for reconfiguring single-family housing may be driven by empty nest and downsizing households, which are expected to account for about 75% of the demand for new housing between 2010 and 2030, contrasted with only a 25% demand from the starter home and peak space demand households (Nelson, 2012). The Great Recession left many newly-platted housing developments unbuilt (Wissoker, 2013) and this creates an opening to reimagine the form these new development might take.

Amending the traditional Euclidean-based zoning ordinances to permit a variety of housing types in a single zone, and the conversion of single-family houses into multi-family, commercial, or mixed-use structures are ways in which planners can respond to changing suburban demographics.

#### *Elimination of Discriminatory Family Definitions*

Discriminatory family definitions, such as those that unduly limit the number of unrelated individuals living together, need to be eliminated from zoning ordinances and replaced with reasonable standards for neighborhood densities that apply to both related and unrelated individuals. The most effective approach to provide for the needs of 'non-traditional' households is to eliminate the right of communities to define family at the state level as the New Jersey Supreme Court did in its *State vs. Baker* (1979) decision.<sup>2</sup> At the local level, municipalities have two choices--to define family functionally or not to define family and employ regulations to prohibit overcrowding.

Defining a functional family can be troublesome for policymakers because the definition needs to be enforceable. In many cases, a functional family is synonymous with a single housekeeping unit identified by communal cooking, pooled finances, or shared domestic responsibilities (Lubow, 2007). The functional family definition offers some promise because it removes the marriage or blood-related requirement from the regulation, but still conforms to a traditional view of what makes a family. Another option for policymakers is to adopt lifestyle-neutral ordinances or form-based

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<sup>2</sup> *State v. Baker*, 81 N.J. 99, 405 A.2d 368 (1979). Supreme Court of New Jersey rejected *Belle Terre* and invalidated a zoning ordinance that prohibited more than four unrelated persons from living together. The Court's decision was grounded in substantive due process developed by other cases of exclusionary zoning (Urban Law Annual, 1982).



codes. These types of ordinances retain the height and yard restrictions of traditional single-family ordinances without regulating the household composition with restrictive definitions (Ritzdorf, 1985). This incremental change would provide for a range of household types to occupy a single-family neighborhood with minimal impact on the surrounding residences.

#### *New Approaches to Service Delivery*

Suburban communities, by providing a variety of housing options, will begin to meet the needs of aging and low-income residents. However, suburbs lag in providing the transportation and community services needed by such groups (Warner & Morken, 2013). Many suburbs, especially those in the inner ring, also lack adequate public space and parks. Communities can tackle these barriers by embracing multi-generational planning methods to address the provision of community services and space, promote joint use agreements with schools, and foster greater resident engagement (Warner & Morken, 2013).

**Joint Use Agreements with Schools.** A joint-use agreement outlines specific terms and conditions for shared use of a facility between a school and a municipal or community organization (Lafleur et al., 2013). As the population ages and diversifies, the potential to use school facilities for a broader range of services increases. Typical uses include: elder care, childcare, community recreation, community kitchens and social engagement space. Joint-use agreements can extend beyond a brick-and-mortar facility to include a transit system (the school bus) that connects housing to the school. Especially for suburban neighborhoods that lack much public space, the school can

become a community-wide center. Challenges in funding, liability and security can be overcome with careful planning (Filardo et al., 2010).

**Developer Impact Fees.** One method of increasing service provision in suburbs is through impact fees in new developments. In California, planners have imposed impact fees to ensure childcare is built in new neighborhoods, and have used transportation planning dollars to build childcare centers in bus transfer stations (Anderson, 2006). Australia has a long history of using impact fees to fund a wide array of neighborhood services--from bikeways to parks to libraries and childcare (Gurran et al., 2009). A recent study in the United States found communities using impact fees for child and family services benefitted from lower crime rates (Warner & Rukus, 2013). However, impact fees only work in places experiencing development pressure.

**Neighborhood Improvement Districts (NIDs).** For older, built-out suburbs facing financial stress, one option might be the creation of neighborhood improvement districts, similar to Business Improvement Districts, but for improving residential services (Nelson, 2006). NIDs could be utilized in existing suburban neighborhoods as a means to help residents redesign neighborhoods for their needs, enhance services, and increase the amount and diversity of public space. Such an approach would increase investment by residents, help stabilize declining neighborhoods, and reduce costs to government (Griffith, 2007). New York Academy of Medicine advocates the neighborhood improvement district concept as a public participation tool to ensure that the needs and voices of seniors are heard in neighborhood planning (NYAM, 2012). However, these NIDs need to be designed so they accommodate rather than suppress

new cultural uses of space by a more diverse resident population, a problem often cited in neighborhood business improvement districts (Schaller & Modan, 2005). While such neighborhood-based approaches have been criticized for fragmenting the city with different service levels for different neighborhoods (Warner, 2011) these approaches, like impact fees and joint-use agreements, may offer promise for redeveloping fiscally stressed and inner ring suburbs.

### ***Conclusion***

The American suburb and the planning model that created it are at a critical juncture, a moment when demographic and economic changes create both a need and an opening for reshaping the suburb. With an increasing number of non-whites, lone seniors, families in poverty, and multi-generational households, a new population inhabits the suburb. However, the materiality of the suburban built environment--low density, auto-dependent, separated uses--is in conflict with the increasing ethnic and economic diversity of the suburb. And the production of space by new suburban residents is obstructed by a stagnant built environment and land use regulations that both reflect and reinforce past perceptions of the suburban community.

Today's suburb is not your mother's suburb. As the new suburban population negotiates the tension created by using space in 'unplanned' ways, they generate new market demands and openings for innovative planning to reshape the suburb. By utilizing this tension as an imperative to reshape the suburb, communities have an opportunity to better meet the needs of a diversifying suburban population.

## CHAPTER 7

### CONCLUSION

#### *Introduction*

This dissertation has three main goals. Theoretically, this dissertation brings together multiple lines of literature to create a theory of pinklining, the division of space, and exclusion of women and women's needs from mainstream planning. This exclusion is not unintentional. Urban planning does have a sexism problem (Johnston-Zimmerman, 2017). Early planning scholars purposefully excluded women and their work from the field (Parker, 2012; Sibley, 1995). Women are no longer excluded from planning, but they are still underrepresented, and there are still gender biases within the planning profession (Turesky & Warner, 2020; Johnson & Crum-Cano, 2011).

Empirically, this project operationalizes feminist criticisms of traditional zoning regulations, transportation planning, service provision, and public participation processes by creating and analyzing the 2014 Women and Aging survey. The results from this survey show that we are not giving attention to planning for women. While academic scholarship has been aware of the differing needs of women, planning practice has been slow to respond.

Gender impacts a person's opportunities and experiences, and planning plays a role in promoting greater equity for women and men. Conventional forms of land use regulation pinkline communities and continue to constrain women's mobility, limit their employment opportunities, reinforce outdated family structures as the norm, and provide inadequate support systems. Traditional zoning ordinances that highly condition childcare services in residential zones place an added burden on families

who need affordable childcare. Mobility-focused transportation policies impact the accessibility of goods and services. Additionally, the limitation or prohibition of home-based work in many zoning ordinances denies women opportunities to engage in paid labor.

Practically, this project serves as a call to action. This dissertation is titled *Pinklined Planning and the Need to Plan for Women*. Ada Colau, the first female Mayor of Barcelona, said, "this is about achieving what we have never had the opportunity to impact before: the design and management of our cities, by and for our fellow women" (quoted in Johnston-Zimmerman, 2017).

### ***Responses to Pinklining***

This dissertation constructed a theory of pinklining to help explain the impacts of planning practices on women and identify potential interventions that might help address those impacts. Pinklining in planning is based on a system of beliefs about the role of women and men in society. The built environment reflects a stereotypically male bias, designed to facilitate the role of men as wage earners and women as homemakers (Saegert, 1985; 1980). Traditional zoning ordinances exhibit control over the lives of women, men, and their families by regulating the location of jobs and services, as well as household composition (Ritzdorf, 1994).

Gender responsive land use regulations and gender responsive transportation planning respond to the needs of women created by pinklining. The effects of such pinklining include spatially limited job opportunities, complex daily travel patterns, and reinforcement of outdated family norms and gender roles. Planning interventions that address the effects of pinklining form the core of gender responsive planning.

This includes efforts to improve women's safety, mobility, labor force opportunities, housing options, care burdens, and equitable engagement in planning processes (Silbaugh, 2007; Markovich & Hendler, 2006; Sandercock & Forsyth, 1992).

In this dissertation, gender responsive land use includes zoning ordinances that provide opportunities for affordable and non-traditional housing, alternative forms of density regulation, accessible childcare, and opportunities to engage in paid labor within the home. Gender responsive transportation planning includes measures of both mobility and accessibility, including trip-chaining, mobility management, roads designed for biking and walking, and design standards to ensure public spaces allow all ages and genders to feel welcome.

On gender responsive planning, Ritzdorf (1994) writes,

Both men and women's lives would be enhanced by residential neighborhoods that allow them the freedom to work at home, to have their children (or parents) watched at small neighborhood-based daycare centers, to share living spaces with the companions of their choice, and to use the spaces within their homes as they choose, within the parameters that assure the safety and health of the entire community (pg. 276).

In practice, this would mean eliminating discriminatory family definitions and replacing them with other reasonable standards for neighborhood densities that would apply equally to related and unrelated individuals. This would also necessitate restructuring the meaning of the single-family in zoning ordinances. It could mean abolishing the single-family zone altogether. These ideas are beginning to gain traction in land use planning. For example, Seattle recently enacted legislation limiting exclusive single-family zoning in 27 neighborhood urban villages, effectively 6% of the city's land area (Cohen, 2019). Minneapolis enacted a zoning reform law that eliminated exclusive single-family zoning in every neighborhood. The Minneapolis

reform aims to improve densification and affordability in the city and is tied to the city's most recent comprehensive plan update (McCormick, 2020). In Land Use Model I, the Comprehensive Planning Index is the only variable significantly related to the Gender Responsive Land Use Regulations Index.

The results from the four regression models also show that transportation planning efforts like trip-chaining could address some of the gendered deficiencies in the built environment. Transportation planning may be more responsive to women's needs because of the overlap with other user groups. The disaggregated model results show that aging, not gender, is the primary driver in these planning efforts. The responsiveness of transportation planning may also be attributed to the level of funding and oversight not as present in land use regulations. For example, in the Puget Sound region, millions of public dollars are invested into the transportation system, but not into land use and housing which is typically privately controlled. This division between public and private is discussed in Chapter 2 in the section on Separate Spheres.

The results from the survey analyses also demonstrate that leveraging interest in aging is an important tool to continue the conversation about gender issues in land use and transportation planning. The regression analysis presented in this dissertation shows that we can look to recent shifts in planning practice for aging populations for guidance. This theme appears across the research, focus groups, and survey: planning for women and aging populations is planning for everyone.

Women are a bellwether for safety, as well as other planning priorities. Asking, "would a woman feel comfortable walking here at dusk?" and getting an affirmative

response likely means that most people will feel comfortable using the space.

Similarly, with transportation planning, women are choice riders. More people will ride if more women ride transit. Seniors and those with disabilities often depend more on public transit than the general population. Therefore, planning with women in mind can help meet the needs of multiple groups.

### ***Project Limitations***

This dissertation seeks to call attention to the need to plan for women. One major barrier to this is a lack of knowledge by planners on issues of gender. One respondent shared in the open-ended comment section of the survey, "as a woman, I'm not sure what type of 'planning program' should be done specifically for women as a separate group." Other survey respondents found it challenging to understand what gender responsive planning would mean in practice, "I am curious what it is that you think are the 'special needs of women.' [...] OK, women need more toilets in the bathrooms than men, but otherwise I don't see a difference." A few respondents revealed hostility towards considering women's needs in planning, "I'm a little tired of this stratification of people and attempts to define people's needs as 'special' or different based on race and gender and sexual orientation and every possible social and cultural difference." The open-ended comment section did not reveal the same regarding the aging population. Respondents provided many examples of housing, transportation, and community-wide programs to support aging residents.

Within the field of planning, important gender issues are often subsumed by those of age, race, or income – primarily due to gender's intersectionality with these variables. For example, the deconcentration of poverty impacts both men and women,



but it is largely women who are affected by the lack of accessible childcare, transportation options, and affordable housing. Another reason gender falls outside of mainstream planning is the deep structural inequities that exist in the way we structure and think about our built environment and the field of planning itself. This exclusionary process of pinklining results in a landscape that disadvantages women and a planning model that does not often consider their needs when developing and redeveloping these spaces.

Other limitations include the use of "woman" and the robustness of the survey for quantitative analysis. This dissertation uses "woman" and "gender" interchangeably. This necessarily excludes people who do not identify with the term "woman" but are impacted by the gendered bias in our planning framework. It assumes a universal and cisgender woman as the subject. Women as a universal category simultaneously exist and do not exist. Women as a category exist at the intersection of multiple identities, but women's needs vary by sexuality, age, race, income level. What it means to plan for the needs of women in one community may be different in another community. I attempt to account for this by linking the dependent variables (gender responsive land use regulations and gender responsive transportation planning) to tenable planning concepts like home occupations and accessory apartments.

It should also be noted that out of the 624 respondents, only 340 completed the full survey. Survey respondents tended to drop off at the questions that required more detailed responses about land use regulations in their communities. This drop-off

reduced the sample size available for modeling. Future surveys could take a narrower scope to maximize survey response rate.

### ***Final Thoughts***

Results from the regression models reveal that traditional land use regulations are relatively stuck in place and unable to address issues of gender adequately at the time of the survey. The transportation models show that transportation planning can affect change more efficiently and quickly than land use regulations. Programs like Complete Streets and Safe Routes to Schools address women's needs indirectly by creating more accessible streetscapes and alleviate some responsibility regarding children's transport to school. Examples like these demonstrate transportation planning's ability to provide opportunities to enter gender into policy conversations and to remedy some of the shortcomings of the current, pinklined built environment.

The session attendance and feedback at the 2015 APA National Conference where I first presented results of the 2014 survey demonstrate that many planners actually view gender as important despite it not appearing "on the ground" in their communities. During the standing-room-only 'Aging & Gender in Livable Communities' session at the 2015 APA National Conference, an audience member reflected, "I want to thank you for bringing this issue up. While I do plan for the public good generally, I don't give much thought especially to women and the aged. I think they would be good to consider first, because if a project or plan is good for them, it is likely going to be better for everybody." With planners already advancing the aging population's needs, they should also advocate planning for women to create more equitable, inclusive, and livable communities for all.

## APPENDIX 1.

### Planning for Women and Aging Online Survey

The Planning and Women Division of the APA is conducting this survey to gather information on the attitudes and practices of planners with respect to women and aging. All genders are encouraged to participate.

For questions that ask about "your community," refer to the community in which you work. If you practice in multiple locations, please respond by thinking of a specific community and indicate that community on the survey. Answer each question in terms of you or your organization's typical level of involvement.

This survey is divided into 3 sections: planning practices, attitudes, and respondent characteristics. We estimate that the survey will take no longer than 15 minutes to complete. Please contact Amanda Micklow at [acm325@cornell.edu](mailto:acm325@cornell.edu) with questions.

#### Confidentiality

Your responses will be confidential but we do ask you to identify the community where you practice so we can add Census information about your community when we analyze the survey responses statistically. Participation in this survey is voluntary. You may skip any questions you do not wish to answer. If you do not wish to complete this survey just close your browser.

At the end of the survey, you will have the option to provide your name and email if you wish to be contacted for more information about an innovative program in your community. If you choose to provide contact information, your community information may be included in a description of the case you provide.

I have read and understand the above consent form, I certify that I am 18 years old or older and, by clicking the submit button to enter the survey, I indicate my willingness voluntarily take part in the study.

#### **Community**

##### Community Information

Community in which you practice  
County  
State  
FIPS Code (if known)

#### **Part 1: Planning Practices**

##### Comprehensive Planning

Does your community have a comprehensive plan? (Y/N)  
Does your community's comprehensive plan give specific attention to the needs of women? (Y/N)  
Does your community's comprehensive plan specifically address the needs of your community's aging population? (Y/N)  
Does your community have area or topic specific planning documents that give attention to: Planning needs of women (Y/N)

Your community's aging population (Y/N)

Public Participation

Please indicate how often the following statements are true of your community.

*Always, Often, Sometimes, Rarely, Never*

Public meetings are offered at multiple times of day to allow constituents with different schedules to attend.

Information is tailored to meet the needs of different ages.

Attendees at public meetings are representative of both genders.

Attendees at public meetings are representative of all ages.

Please indicate to what extent you agree or disagree with the following statements.

*Strongly Agree/ Agree/ Don't Know/ Disagree/ Strongly Disagree*

Women are more engaged in community planning processes than men.

Seniors are more engaged in community planning processes than other age groups.

It is challenging for planners to engage meaningful participation from a broad spectrum of residents.

Land Use and Zoning

Land use in your community is regulated by (*select one*):

- Traditional zoning ordinance
- Form-based code or similar
- Hybrid: \_\_\_\_ (*specify*) \_\_\_\_\_
- No formal zoning exists

Do the land use regulations in your community permit?

	<i>By Right</i>	<i>By Special Permit</i>	<i>Not Permitted</i>
Child care services in residential zones			
Elder care services in residential zones			
Other home-based businesses in residential zones			
Accessory apartments ("Granny Flats") in single-family or low density residential districts			
Group homes in single-family or low density residential districts			
Retrofitting single-family houses for more than one family			

Does your community use a definition of family that regulates the number of unrelated people that may live together? (Y/N)

What is the maximum permitted number of unrelated people that may live together?

< 4; 4; 5; > 6

Does your community allow shared housing arrangements such as "golden girls housing?" (Y/N)

Does your community allow more than one unrelated family to reside in a single-family home? (Y/N)

What percent of your community do you estimate to be zoned single-family or low density residential?

0 (none); Less than 25%; Less than 50%; Less than 75%; Greater than 75%

### Transportation

Please indicate how often the following statements are true of your community.

*Always, Often, Sometimes, Rarely, Never*

Transportation planning in your community addresses trip-chaining (shopping, child care, home, work).

Transportation planning in your community addresses mobility management.

Roads in your community are being built or redesigned with dedicated (or delineated) space for biking or walking.

Design standards in your community ensure that public spaces allow all ages and genders to feel safe and welcome (eg. maintained sidewalks, adequate lighting, street furniture).

### Services

Does your community? (*Y/N/DK*)

Provide paratransit for disabled and elderly residents

Support care work (elder care, child care) with economic development incentives

Provide job training opportunities for older adults

Provide training on elder fraud to the police

Provide services to enable people to age in place (home delivered meals, snow removal)

## **Part 2: Attitudes**

### Community Attitudes

Please indicate to what extent you agree or disagree with the following statements.

*Strongly Agree, Agree, Don't Know, Disagree, Strongly Disagree*

There is a culture of gender conscious planning in your community.

Planning/zoning board is aware of the different planning needs of women

Planning/zoning board is aware of the planning needs of an aging population.

Developers are responsive the special needs of women.

Developers are responsive to the special needs of the aging population.

Funding limited to specific age groups or specializations makes coordinated cross-agency activity or cross-generational planning difficult.

### Your Attitudes

Please indicate to what extent you agree or disagree with the following statements.

*Strongly Agree, Agree, Disagree, Strongly Disagree*

Integrated approaches (eg. coordinating housing, transportation, and land use) better meet the needs of an aging population.

Communities that give attention to gender issues are better able to meet the needs of the aging population.

### Your Actions

Please indicate how often the following statements are true of your actions.

*Often, Sometimes, Rarely, Never*

I consider how my work decisions may affect genders differently.

I consider how my work decisions may affect those of varying ages.

**Part 3: Respondent Characteristics**

Respondent Characteristics

Sex (*Male/Female*)

Age (*Under 30; 30 – 50; 51 – 65; Over 65*)

Geographic scope of planning practice (*Local/ Regional /State/ Federal*)

Type of planning practice (*Public/ Private/ Nonprofit*)

How many years have you been in your current position? (*Less than 1, 1-5, 6-10, Greater than 10*)

How many years have you been in the profession? (*Less than 1, 1-5, 6-10, Greater than 10*)

**Part 4 (optional): Community Program**

Community Program (optional)

Please share with us a program or planning element in your community that addresses needs of women and/or the aging population.

Also optional, your name and email address if we may contact you regarding the program or planning element you describe above.

Name

Email address

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