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I, Sevsem Okay, hereby submit this original work as part of the requirements for the degree of Doctor of Philosophy in Sociology.

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PATTERNS AND TRENDS IN THE SPATIAL ASSIMILATION OF MIDDLE EASTERN AND NORTH AFRICAN IMMIGRANTS IN THE UNITED STATES, 2000-2016

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ABSTRACT

In this project I investigate the spatial assimilation of Middle Eastern and North African (MENA) immigrants in the United States. I examine whether the residential incorporation of MENA immigrants has decreased over time due to a changing social and political context following the 9/11 terrorist attacks. I analyze data from the 2000 U.S. decennial census and 2012-2016 American Community Survey, to which I append data from the Integrated Public Use Microdata Series, to test the effects of group-level characteristics and metropolitan area-level factors on spatial assimilation. I compare the experiences of the MENA population with those of South Asian and East Asian immigrants, who on average are both phenotypically different from non-Hispanic whites and score high on measures of socioeconomic status (SES), but may not have suffered the same degree of stigma and discrimination in the post-9/11 period. Thus, I provide an indirect test of the "context of reception" explanation for spatial assimilation in the United States by comparing the segregation and suburbanization patterns of the three groups. My findings suggest that the MENA population's residential segregation increased over time more than did the equivalent measures for South and East Asians, providing some support for the context of reception framework. The MENA population had the highest spatial concentration of the three groups, but the lowest level and lowest increase in their clustering patterns. Finally, on average the MENA group had the highest level of suburban residence in 2016, but the smallest increase in their suburbanization rate from 2000 to 2016, compared to South and East Asians. Multivariate analyses reveal that the relationships between segregation, acculturation, and SES characteristics vary by immigrant group and across measures, both aligning with and contradicting the predictions of spatial assimilation theory. These findings suggest that multiple frameworks should be used to account for immigrant residential patterns in the United States.

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Canım Anneme ve Babama…

To My Dear Mom and Dad…

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CHAPTER 1: INTRODUCTION

The opposition to segregation is an opposition to discrimination. The experience in the United States has been that usually when there is racial segregation, there is also racial discrimination.

– W.E.B. DuBois

Since the founding of sociology in the late 19th century, scholars have attempted to understand how immigrant populations become incorporated (or not) into host societies. Early versions of assimilation theory suggested that immigrants follow a "straight line" path toward increased incorporation, largely based on time spent in the host country and the accumulation of various forms of capital, such as income, education, and social contact with the native-born population (Park and Burgess 1921; Warner and Srole 1945; Gordon 1964). However, Massey and Mullan (1984) argue that a key intervening step between socioeconomic advancement and full incorporation is the spatial assimilation of groups, referring to "movement by immigrant minorities away from ethnic enclaves and into communities where the ethnic majority predominates" (Alba et al. 1999:447).

Consequently, a large body of research has examined the spatial assimilation of immigrant groups, generally finding that both acculturation (the adoption of the language and customs of the host society) and socioeconomic achievement are positively related to spatial incorporation with the native-born (Massey and Denton 1985; Frey and Farley 1996; South and Crowder 1998; Alba and Logan 1991; Logan et al. 1996; Freeman 2002; Timberlake and Iceland 2007; Pais et al. 2012; South et al. 2008). Later research argued that, equally important to the cultural and economic advancement of immigrants, was the "context of reception," including structural patterns of the host society such as economic (e.g., labor markets), political (e.g., government polices), and social (e.g., public attitudes) characteristics, as well as preexisting

ethnic communities or enclaves (Portes and Rumbaut 2014; Portes and Zhou 1993; Zhou 1997). Much of this research in the United States has focused on large, highly visible groups, such as Latin American (specifically Mexican) and East Asian (specifically Chinese and Korean) immigrants. However, a dearth of research has examined patterns and trends in the spatial assimilation of Middle Eastern and North African (MENA)[1] immigrants in the United States.

Although we have a sense of where the MENA population is concentrated across states, our knowledge of their spatial incorporation patterns is limited. A partial exception includes studies that measure spatial assimilation of certain groups of MENA immigrants (e.g., Iranians, Israelis, Armenians, and Arabs) in Los Angeles (Bozorgmehr et al. 1996), Arab residential segregation in New York, Los Angeles, Chicago, and Detroit (Holsinger 2009), and Muslim locational attainment in Philadelphia (Friedman et al. 2019). The findings of these studies, respectively, showed lower segregation between non-Hispanic white and Iranian, Israeli, Armenian, and Arab immigrants compared to any other minority group in Los Angeles; moderate segregation between Arab and non-Hispanic whites in New York, Los Angeles, Chicago, and Detroit; and that Black and non-Black Muslims are less likely to live in suburbs in Philadelphia. Though these studies contribute to our understanding of spatial assimilation of some MENA groups, their focus on certain groups in certain places limits our understanding of the spatial assimilation experiences of the MENA population as a whole and on a national level. In addition, although many studies examine MENA immigrants' experiences with a post-9/11 backlash (Cainkar 2009; Schachter 2014; Love 2017), no study investigates the potential effects of an increasingly hostile social and political climate on their residential patterns. To fill this gap

[1] In this study, the MENA category includes people of Egyptian, Iraqi, Jordanian, Lebanese, Moroccan, Palestinian, Syrian, Somali, Sudanese, Armenian, Israeli, Cypriot, Iranian, Afghan, and Turkish descent. I use the terms MENA immigrants/MENA population, South Asian immigrants/South Asian population/South Asians and East Asian immigrants/East Asian population/East Asians interchangeably to refer to people of either MENA or South and East Asian descent, whether or not they are actually first- or 1.5-generation immigrants, as information on immigrant generation by ancestry is not available from U.S. Census data.

in the literature, I analyze the spatial incorporation of MENA immigrants by assessing their segregation, spatial dispersion, and suburbanization in the United States from 2000 to 2016.

The primary goal of this study is to provide a broader understanding of the patterns and trends in the spatial assimilation of the MENA population in the United States. While it is well-known that MENA immigrants are economically (e.g., high income) and socially (e.g. high educational attainment, language proficiency) incorporated into the mainstream of American society (Marvasti and McKinney 2004; Awad 2010; Bakalian and Bozorgmehr 2011, 2013; Bozorgmehr, Der-Martirosian and Sabagh 1996; Tehran 2009), in this dissertation I explore whether and how such socioeconomic incorporation has translated into spatial incorporation. My focus on the MENA population is important for two key reasons. First, the MENA population has grown in the United States in recent decades. In fact, according to the U.S. Census Bureau from 2010 to 2014, the largest percentage increase in immigrants to the United States were from countries such as Saudi Arabia (an increase of 93 percent), Iraq (36 percent), and Egypt (25 percent) (Camarota and Zeigler 2016). The increasing number and visibility of MENA immigrants is reflected in the recent debate at the Census Bureau about whether to add a "Middle Eastern or North African" (MENA) category to the 2020 census ethnic and racial categories.[2] The MENA category did not move beyond recommendation, and its inclusion to the 2020 U.S. census was recently rejected. However, as Maghbouleh asserts (2017:185), "it has solicited public feedback on the formal inclusion of a new 'MENA' racial category for the 2020 US census." Because a large majority of MENA immigrants self-classify as "white" [3] in the U.S.

[2] The U.S. Census Bureau conducted a test of the MENA category in its 2015 National content Test. The results of the test show that when the MENA category was offered in addition to other racial categories (e.g., white, black, Asian etc.), a majority of immigrants with Middle Eastern and/or Arab ancestry identified themselves as such. However, when the MENA category was removed, a majority of those immigrants identified themselves as "white" or "some other race" (for more information see the 2015 National Content Test Race and Ethnicity Analysis Report).

[3] In this study, I chose to capitalize "Black" but not "white" as a racial group following and supporting the argument of Kimberlé Williams Crenshaw: "I capitalize 'Black' because Black people, like Asians, Latinos, and other 'minorities,' constitute a specific cultural group and, as such, require denotation as proper noun [….] some who

census, they have remained somewhat invisible to studies of immigrant spatial incorporation in the United States.

This leads to the second major contribution of my dissertation. This study will be the first to my knowledge to attempt to measure the impact of the context of reception on the spatial incorporation of MENA immigrants. Despite its theoretical prominence in the literature, few empirical studies[4] have actually tested the effect of the context of reception on the spatial incorporation of immigrants. Experiences of the MENA population clearly exemplify the significant impact of their political and social reception as they have faced hostility since the events of 9/11 (Cainker 2009; Kivisto and Faist 2010). Though the 9/11 terrorist attacks accelerated hostile attitudes towards MENA immigrants and precipitated hundreds of hate crimes,[5] negative perceptions of MENA immigrants, and particularly Muslims and Arabs, were already established "by preexisting social constructions that configured them as people who would readily conduct and approve of such attacks" in the United States (Cainker 2009:2, Love 2017). Such rhetoric is amplified in media, political practices, and policies (e.g. President Trump's "Muslim ban"), which in turn, shapes public opinion, in many cases generating actions such as hate crimes and verbal or physical harassment. Indeed, polls show that half of Americans support such prejudiced views by agreeing with the discriminatory policy that Arab Americans should carry a "special identity card" (Zarrugh 2016:2722). As Tehranian (2009:3) has noted:

> Unlike many other racial minorities in our country, Middle Eastern Americans have faced rising, rather than diminishing, degrees of discrimination over time—a fact highlighted by recent targeted immigration policies, racial profiling, a war on terrorism with a decided racialist bent, and growing rates of job discrimination and hate crimes […] Middle Eastern Americans are not even considered a minority in official government data, despite

grapple with this issue take the position that white must also be capitalized if Black is, however, this seems to presume a greater parallelism between these racial designations than their histories suggest. Of the myriad differences is the fact that while white can be further divided into a variety of ethnic and national identities, Black represents an effort to claim a cultural identity that has historically been denied" (Crenshaw 1991:1244).

[4] See, for example, Allan and Turner (1996) for the impact of ethnic networks on spatial incorporation.

[5] There were more than 645 incidents of hate crimes and bias recorded the week after 9/11 (Zarrugh 2016:2722).

> extensive participation in the economic life of our country, they remained socially and politically marginalized.

The pervasiveness of anti-Muslim sentiments makes it particularly important to identify the impact of an increasingly hostile context of reception on the MENA population's residential patterns in the United States (Selod 2015). Although data limitations do not permit a comprehensive analysis—such as assessing the effect of religion[6] or the direct effect of increases in hate crimes or harassment, my study design reveals the impact of the context of reception as follows: first, I compare the spatial assimilation of the MENA immigrant population with that of South Asian[7] and East Asian[8] immigrants, as those groups have similarly high levels of education and income, but have not engendered the same kind of hostility in the United States, particularly in the post-9/11 period. This comparison permits me to assess the effects of individual differences along with selective aspects of the context of reception on spatial incorporation in the United States. In addition, this comparison is important because compared to South Asians and particularly East Asians, MENA immigrants tend to exhibit more observable or identifiable religious indicators, which may lead to more hostile treatment among the native born compared to the treatment of non-Arab MENA immigrants.

Second, I provide a comparison of two time periods—pre 9/11 (year 2000) and post 9/11 (year 2016). As noted above, while there has been a considerable increase in research examining the backlash of the 9/11 terrorist attacks on this population, none of the research addresses their residential patterns (Naber 2008; Cainkar 2009; Schachter 2014; Love 2017). Thus, this

[6] Religion is not counted as a direct component of the mode of incorporation—like governmental reception, public reaction toward newcomers, and preexisting coethnic communities. However, Portes and Rumbaut argue that religion "can *interact* powerfully with them"; it may, for example, protect from discrimination or, alternatively, be cause for discrimination (2014:311). However, the U.S. census does not collect data on religion, so I cannot measure the impact of religion on spatial assimilation.

[7] In this study, the category of South Asian include Indians and Sri Lankans. Although Bangladeshis and Pakistanis are part of the South Asian population, I intentionally exclude them from the South Asian category as they come from majority-Muslim countries (91 percent and 96 percent respectively) (Pew Research Center 2019), and I wish not to conflate geographic origin and religion for the purposes of this study.

[8] In this study, the category of South Asian include East Asian category using Chinese, Korean, Taiwanese, and Japanese ancestries.

comparison estimates the effect of the social consequences of 9/11 and the subsequent backlash on the spatial incorporation of all groups under consideration. For this reason, I pursue a "difference in differences" approach by estimating change over time in the levels and determinants of spatial assimilation for MENA immigrants compared to South and East Asian immigrants and then estimating the differences in those changes.

In sum, this dissertation is guided by the following questions:

1. What are the current spatial assimilation levels of MENA immigrants compared to the South and East Asian populations?
2. How much variation is there across these groups in the predictors of spatial assimilation?
3. How much change has each group experienced from the pre- to the post-9/11 period, both in levels of spatial assimilation and in its predictors?

I address these research questions by analyzing data from the 2000 U.S. decennial census and 2012-2016 American Community Survey, to which I append data from the Integrated Public Use Microdata Series, to examine levels of spatial assimilation (or lack thereof) of the MENA, South Asian, and East Asian population. My findings are presented in three empirical chapters: in Chapter 2 I assess the degree of evenness and isolation of the three groups, while Chapter 3 assesses their spatial concentration and clustering. Finally, in Chapter 4 I analyze the suburbanization patterns of each group. Although some of these measures overlap empirically, they reveal different facets of spatial assimilation and generate different outcomes on individuals' lives (Massey and Denton 1988:283). In addition, all chapters analyze the change in segregation of these groups from 2000 (pre-9/11) to 2016 (post-9/11). In all three substantive chapters, I employ ordinary least squares (OLS) techniques to predict levels of and change from

2000 (pre-9/11) to 2016 (post-9/11) in segregation, clustering, concentration, and suburbanization of groups and (2) investigate the relationship between predictors of spatial assimilation and these measures compared to South and East populations. I so doing, I demonstrate the extent to which the context of reception, along with group level characteristics, influence the MENA population's spatial assimilation with non-Hispanic whites.

Altogether, the results of the three chapters demonstrate that the MENA population's residential segregation increased over time, confirming the general predictions of the context of reception framework. Nonetheless, the massive disparities in the relationship between spatial assimilation variables (e.g. education, income) and segregation of groups within and across each measure of segregation provide support for the tenets of spatial assimilation theory and the context of reception. Thus, I conclude that the segregation of social groups cannot be explained by a single theory and the differences in group segregation cannot be reduced to differences in socioeconomic characteristics. Hence, these findings suggest that multiple frameworks should be used to account for immigrant residential patterns in the United States.

CHAPTER 2: THE RESIDENTIAL SEGREGATION OF MIDDLE EASTERN AND NORTH AFRICAN IMMIGRANTS IN THE UNITED STATES, 2000-2016

Immigrants have changed every aspect of life in the United States, most visibly the ethnic diversity of metropolitan areas (Frey and Farley 1996). Between 1990 and 2017, the total number of foreign-born residents rose from 19 million to 44 million. This increase encompasses immigrants from countries throughout the world, particularly those in East Asia and Latin America (Pew Research Center 2019). The dramatic and recent increase in immigrant populations has led social scientists to investigate the incorporation of these new immigrants into U.S. society, including their "spatial assimilation," which is thought to link cultural and socioeconomic achievement to later stages of the assimilation process (Massey and Mullan 1984).

Alba et al. (1999:447) define spatial assimilation as "movement by immigrant minorities away from ethnic enclaves and into communities where the ethnic majority predominates." Much of the research on spatial assimilation in the United States has focused on large, highly visible groups, such as Latin American (specifically Mexican) and East Asian (specifically Chinese) immigrants (Massey and Denton 1992; Iceland, Weinberg and Hughes 2014; Kim and White 2010; Frey and Farley 1996) However, little research has examined patterns and trends in the spatial assimilation of immigrants[9] from the Middle East and North Africa (MENA).[10]

[9] The U.S. Census summary tape file data do not contain information on ancestry and generation simultaneously. Therefore, the term "immigrants" in this paper is used to refer to all individuals with MENA, South Asian, and East Asian ancestry. Based on my calculations from IPUMS data, in 2016 between 56% and 72% of MENA, South Asian, and East Asian individuals were foreign-born; hence, the majority of members of these populations are either first, "1.5," or second generation.

[10] The umbrella term "MENA" is used to encompass a diverse set of national-origin groups who are both similar and different with regard to language, religion, culture, race and ethnicity, and precise geographic region (Haddad 2009; Marvasti and McKinney 2004; Awad 2010; Bozorgmehr et al. 1996). As I discuss at length below, in this study the

Although Asian and Latin American countries remain the largest source of immigration to the United States, according to the U.S. Census Bureau from 2010 to 2014, the largest percentage increase was from MENA countries such as Saudi Arabia (an increase of 93 percent), Iraq (36 percent), and Egypt (25 percent) (Camarota and Zeigler 2016).

In addition to their growing numbers, there are reasons to believe that the MENA population might be a particularly interesting case study for testing theory about the causes of spatial assimilation. Individual- or household-level models suggest that the spatial incorporation of immigrant groups occurs as a result of acculturation—the adoption of the language and customs of the host society—and achievement on such indicators as educational attainment and income. Contextual-level models argue that the "context of reception" in the host society, including political and social responses to newcomers by the native-born and the availability of ethnic enclaves, is just as important for incorporation dynamics as is the cultural and economic advancement of immigrants (Alba and Nee 2005; Portes and Rumbaut 2014). Indeed, Alba and Nee (2005:47) emphasize the importance of the context of reception for immigrant incorporation by arguing that "assimilation into the mainstream society is affected not just by the social, financial, and human capital of immigrant families, but also by the ways individuals use these resources within, and apart from, the existing structure of ethnic networks and institutions."

I argue that the MENA population is interesting because although it tends to score high on measures of acculturation and socioeconomic status, the context of reception may have changed radically in the years following the September 11, 2001 terrorist attacks and other high-profile terrorist attacks around the world (e.g., in Madrid and London in 2005, Paris in 2015, and Barcelona in 2017). Research has shown that anti-Muslim backlash and cultural othering became systematic through intensified surveillance that culminated in subtle forms of discrimination

MENA group comprises individuals with Egyptian, Iranian, Iraqi, Jordanian, Lebanese, Moroccan, Palestinian, Saudi Arabian, Syrian, Turkish, or "other Arab" ancestry.

against the Muslim population (Maira 2004; Selod 2015; Jamal and Naber 2008; Khoshneviss 2019), including in such areas as labor market, housing market, and social interaction (Lee and Kye 2016).

In this paper, I examine the residential segregation of Middle Eastern and North African populations and explore to what extent the changing context of reception from the pre- to post-9/11 period may have influenced their spatial incorporation in the United States. I ask three basic empirical questions: first, what is the current level of segregation of MENA immigrants from non-Hispanic whites[11] compared to South and East Asians? Second, how much variation is there across these three groups in the predictors of segregation? Lastly, how much change has each group experienced from the pre- to the post-9/11 period, both in levels of segregation and in their predictors?

To answer these questions, I use data from the 2000 Census and the 2012-2016 American Community Survey (ACS) to calculate dissimilarity and isolation indexes at the metropolitan area level. To develop measures of several predictors of segregation, I merge data from the 2000 and 2016 Integrated Public Use Microdata Series (IPUMS), with which I calculate metropolitan area-level predictors of spatial assimilation for each group. I use linear regression techniques to assess the levels and determinants of segregation from non-Hispanic whites for the MENA group and each of the two Asian subgroups in 2000 and 2016. I then calculate difference in difference estimates of how much the changes in levels and predictors of segregation over time vary between the three groups. As discussed more fully below, I expect that, compared to South and East Asians, the MENA population became more segregated (or at least less desegregated) in the

[11] I recognize that in the literature scholars have increasingly used the phrase "non-Latinx white" instead of non-Hispanic white. In my research, I choose to use the latter term to maintain consistency with the terminology used by the U.S. Census Bureau, the source of data for this paper. Moreover, a recent poll showed that about two-thirds of Hispanic respondents preferred either "Hispanic" (44%) or "Latino/a" (24%), while just 2% preferred "Latinx" (ThinkNow 2020). Similarly, according to Pew Research Center (2020), most Latino adults (76 %) have not heard the term "Latinx", among those who heard "Latinx" term only 3% of them preferred to use it.

post-9/11 compared to the pre-9/11 period. I also expect that the positive effects of acculturation and socioeconomic achievement have become less salient for the MENA population compared to the comparison groups.

This paper contributes to the literature on segregation and immigration in two key respects. First, I analyze the segregation patterns of the MENA population, which has received little treatment in past research (exceptions include Holsinger 2007, Bozorgmehr, Der-Martirosian and Sabagh 1996). To some extent these studies contribute our understanding of segregation of MENA immigrants in the U.S.; however, these studies either only focusing on Arab MENA population or MENA population who reside in New York, Los Angeles, Chicago, and Detroit which limited to capture residential segregation of MENA population at the national level. Second, I provide one of the first tests, albeit indirect, of the cumulative effects of the context of reception[12] of these immigrant groups by comparing changes over time in the segregation of MENA, South Asian, and East Asian immigrants.

Theoretical Background

Research on immigrant assimilation in the United States dates back to Park and Burgess's (1921) claim that "assimilation is a process of interpenetration": in other words, ethnically and racially diverse immigrant groups incorporate themselves into the mainstream[13] over time by sharing their experiences (1921:736). Given the fact that "social relations are so frequently and so inevitably correlated with spatial relations" (Park 1926:1), spatial assimilation is considered a crucial step in the full incorporation of immigrant groups into mainstream society. Spatial assimilation thus refers to the "process whereby a group attains residential propinquity with

[12] I discuss the limitation of this indirect test in the Conclusion sections to each substantive chapter, as well as in Chapter 5.

[13] The term "mainstream" has been used in the literature to refer to the middle-class white population in the United States (Alba and Nee 2005; Portes and Rumbaut 2014), and I adopt this practice in my research.

members of a host society" (Massey and Mullan 1984:837). Sociologists have analyzed residential patterns by relying on two primary theoretical approaches: the spatial assimilation and place stratification models (Iceland and Nelson 2008; Lichter, Parisi, and Taquino 2015; Massey and Denton 1985). These models should be seen as neither contradictory nor mutually exclusive; rather, they complement one another in accounting for residential segregation or incorporation.

Spatial Assimilation Theory

Spatial assimilation theory contends that groups' residential patterns are shaped by their degree of acculturation and socioeconomic advancement (Iceland and Scopilliti 2008). The residential isolation of immigrants is thus thought to be a temporary phenomenon, as residential segregation from the mainstream population will gradually decline as groups attain increased cultural familiarity and socioeconomic status. This is, of course, closely related to the length of their stay in a host country—the longer immigrants stay, the more fluent they become in navigating life in their new land. Spatial assimilation theory predicts that once immigrants become proficient in the language and customs of their host country and achieve higher socioeconomic status (e.g., increased income and educational attainment), they will convert these achievements into residential propinquity with the native-born and move away from immigrant enclaves.

Recent research, however, has documented that living in an enclave is not necessarily a sign of segregation caused by low levels of personal or familial capital, but rather an expression of immigrant preferences (Li 1998; Logan, Zhang and Alba 2002). That is, although early immigrants often settled in less desirable and poorer neighborhoods, recent immigrants with high levels of capital may be increasingly settling in "ethnic communities," defined by Logan and colleagues (2002:300) as "ethnic neighborhoods that are selected as living environments by those who have wider options

based on their market resources." The fundamental argument of this model relies on that fact that immigrants continue to form ethnic communities even when living in affluent white neighborhoods is feasible for them. This, then, requires a reevaluation of the assumptions of traditional spatial assimilation theory—that the segregation of immigrants into ethnic enclaves is driven by limited socioeconomic status and acculturation attributes (Wen, Lauderdale and Kandula 2009). Supporting this argument, recent literature reports that the rise in the socioeconomic standing of Asians and Hispanics does not necessarily translate into proximity to whiter neighborhoods with better amenities, nor does it mean living with co-ethnics in neighborhoods with fewer or less desirable amenities (Lee and Kye 2016; Li 1998; Logan et al. 2002; Logan and Zhang 2013; Wen et al. 2009). In other words, some minorities are residing in affluent neighborhoods, but that does not mean they are more proximate to the white population (Wen et al. 2009).

Meanwhile, there is a large body of scholarship on the residential segregation of immigrants that supports the general view of the spatial assimilation model—that advancement in socioeconomic status (SES) for immigrants results in spatial assimilation (Massey and Denton 1985; Frey and Farley 1996; South and Crowder 1998; Alba and Logan 1991; Logan et al. 1996; Freeman 2002; Timberlake and Iceland 2007; Pais et al. 2012; South et al. 2008). As immigrants gradually accumulate cultural, human, and economic capital, they achieve upward residential mobility by investing in higher-quality housing and neighborhoods with more resources—neighborhoods where middle class, non-Hispanic whites often reside (Myles and Hou 2004). Similar transitions have been observed for Europeans (Fong and Wilkes 2003), Asians (Denton and Massey 1988; Emerson, Chai, and Yancey 2001; Frey and Farley 1996; Timberlake and Iceland 2007), Arabs (Holsinger 2009), and Latin Americans (Denton and Massey 1989; Massey

and Mullan 1984; South, Crowder, and Chavez 2005; Timberlake and Iceland 2007; Wahl, Breckenridge, and Gunkel 2007).

Nevertheless, such patterns are not generalizable to every minority group in the United States. Spatial incorporation cannot be solely reduced to the cultural and socioeconomic attributes described above; other factors can also moderate these processes. The existence of colorism and discrimination, for instance, shows that racialized phenotypical attributes have been used as an apparatus by dominant groups to prevent the residential mobility of Black and dark-skinned immigrants from Caribbean countries (e.g. West Indians and Dominicans and Puerto Ricans; Pais, Jeremy, South and Crowder 2012; Rosenbaum and Friedman 2007; Wahl et al. 2007; Charles 2003; Crowder 1999; Massey and Denton 1988; Massey and Mullan 1984). The deterrent effect of race or ethnicity in the spatial assimilation process thus gives rise to the place stratification model.

Place Stratification and the Context of Reception

The place stratification model, sometimes labeled the ethnic disadvantage or ethnic retention model (Alba and Logan 1991; Alba and Logan 1993; Charles 2003; Massey and Denton 1992), suggests that "lingering prejudice and discrimination by the dominant group (non-Hispanic whites in the U.S. context) prevents neighborhood-level integration" (Iceland 2009:27). Particularly applicable to the Black population's experiences of residential discrimination, this model argues that race continues to shape individuals' and groups' residential incorporation into mainstream American society (Massey and Denton 1993; Friedman and Rosenbaum 2007). I argue that the place stratification model as it is commonly conceived shares key elements with what Alba and Nee (1997, 2003) and Portes and Rumbaut (2014) have called the "context of reception." In contrast to the spatial assimilation model, which focuses on the effects of

individual or household forms of capital on locational attainment outcomes, both the place stratification and the context of reception models focus on contextual or structural factors, which operate outside of individuals or households. However, the context of reception differs from the place stratification model by taking into consideration the presence of ethnic communities or enclaves in the incorporation process.

Hence, the context of reception[14] is a broader concept that incorporates the arguments of the place stratification model, in that it accounts for a larger set of social structures that explain the different assimilation experiences among immigrant groups, particularly those who face ethnic, racial, or religious disadvantages (Alba and Nee 2003; Portes and Rumbaut 2014; Portes and Zhou 1993; Zhou 1997). The context of reception includes structural patterns of the host society such as economic (e.g., labor markets), political (e.g., government polices), and social (e.g., public attitudes) systems, as well as the presence of ethnic communities or enclaves (Portes and Rumbaut 2014). Although immigrants blend into the same overall society upon their arrival, their experiences still differ and are largely dependent on their membership in particular ethnic or racial groups. For instance, the identities of immigrants who are from MENA countries may shift after arriving in the United States because of the current sociopolitical climate that stigmatizes them by stereotyping them as a source of violence and terror (Jamal 2008; Cainkar 2008; Love 2017). Hence, those immigrants' everyday experiences and micro- or macro-level interactions in American society are likely shaped by their stigmatized and racialized status, regardless of their socioeconomic status.

On the basis of this discussion, I argue that spatial assimilation processes and the context of reception may operate independently or may intersect to determine an immigrant group's

[14] Because the context of reception encompasses the proponents of place stratification model and provides a more comprehensive understanding of other factors (e.g. ethnic enclave) that may generate differences in assimilation experiences of immigrants, in this research my focus will remain on the context of reception to measure differences (if any) in the spatial incorporation of groups.

spatial incorporation into a host society (Portes and Rumbaut 2014). Therefore, in order to understand the determinants of spatial incorporation fully, it is important to explore the interplay between individual- or household-level characteristics and the structural context of reception.

Middle Eastern and North African Immigrants in the United States

Demographic profile. As noted above, MENA populations are some of the fastest-growing immigrant groups in the United States. Between 2009 and 2017, their numbers rose from 2.5 million to over 3.5 million people (author's calculation from American Community Survey data). As with other racial and ethnic categories, MENA is a socially-constructed term that "was invented from political consideration, not any natural geography" (Tehranian 2009:65). Subsequently, there is an inherent sense of ambiguity in the scope and definitional usage of the term, which is apparent among scholars and research institutes (e.g., Pew Research Center, United Nations, U.S. Census Bureau, and the World Bank). Despite variation in definition, MENA immigrants are most commonly conceptualized as including the following groups: Egyptians, Iraqis, Jordanians, Saudi Arabians, Lebanese, Moroccans, Palestinians, Syrians, Somalis, Sudanese, Armenians, Israelis, Cypriots, Iranians, Afghans, and Turks.

This study similarly refers to these ethnic groups when operationalizing the term MENA, with several differences: it excludes Somalis, Sudanese, Armenians, Israelis and Cypriots. These exclusions rely on three factors: self-identification, common categorization by previous scholars, and coming from Muslim-majority and Arab-majority countries (or both). If an ethnic group did not meet at least two of these criteria, it was excluded from the MENA category for the purpose of this study. It was important to consider self-categorization, as it conveys personal experiences in the wider society. For instance, although previous scholars and many research institutions include Armenians, Israelis and Cypriots under the MENA moniker, the overwhelming majority

of these people identify themselves as white, rather than MENA[15] (U.S. Census Bureau 2015). On the other hand, among MENA groups who come from Muslim countries, only Somalis, Sudanese, Afghans and Turks do not identify with the MENA category. The majority of the former two groups self-identified as Black, while the latter groups identified with some other race, or as white (U.S. Census Bureau 2015). Afghan and Turkish populations are included in this study because they meet two of the inclusion criteria described, having been categorized as MENA populations by previous scholars (Bozorgmehr et al. 1996; Bakalian and Bozorgmehr 2011; Marvasti and McKinney 2004) and coming from Muslim countries (Pew Research Center 2015).

Immigration patterns. MENA immigration to the United States occurred in two primary waves. The first began with the entrance of Syrians and Lebanese in the late 1800s, who sought better living conditions, and Armenians who fled from oppression under the Ottoman Empire (Awad 2010, Tehranian 2009, Marvasti and McKinney 2004). During this period, approximately 100,000 Syrian and Lebanese immigrants came to United States (Marvasti and McKinney 2004). However, this may be an underestimate because U.S. immigration records (until 1899), and U.S. census records (until 1920), recorded Middle Eastern immigrants as "Armenian," "Turk," or "Turk in Asia" because they were subjects of the Ottoman Empire at that time (Bakalian and Bozorgmehr 2013:1136).

The first wave of MENA migration slowed down because of World War I and the Great Depression, and then resumed after World War II in a second wave. MENA immigrants arrived in massive numbers in the 1960s and 1970s, due to immigration reforms in 1965 that eroded the

[15] In the existing race question in U.S. Census Bureau surveys, there is not MENA category that allows individuals to be identified simultaneously as white and MENA. However, MENA populations can self-identify as "white" on the race question and write in their ethnicity on the ancestry question. For the purpose of this study, I develop inclusion and exclusion criteria of groups by utilizing findings from the 2015 National Content Test conducted by the U.S. Census in order to plan the content of the 2020 Census race/ethnicity questions on whether or not to include a "MENA" category in the existing race question.

restrictions on immigration erected in the 1920s (Haddad 2009). The political instabilities in MENA countries, the process of establishing the state of Israel in 1948, the Arab-Israeli war from 1967 to 1973, the Lebanese civil war in 1975, and the Iranian Islamic revolution of 1978 to 1979 all contributed to MENA migration to the United States (Bozorgmehr et al. 1996; Awad 2010; Tehranian 2009; Marvasti and McKinney 2004). Nationally, religiously, and ethnically diverse MENA immigrant groups live all around the United States, with the majority settling in California, New York, Michigan, New Jersey, Florida, and Massachusetts (American Community Survey 2016; Bozorgmehr et al. 1996).

Socioeconomic status. The research on MENA immigrants indicates that they have achieved high levels of socioeconomic success and language proficiency compared to other immigrant groups (Bozorgmehr et al. 1996, Tehran 2009, McKinney 2004, Awad 2010). Several studies have found that MENA immigrants have the highest educational attainment among all minority groups, outpacing even non-immigrant citizens of the United States (Haddad 2009, Bakalian and Bozorgmehr 2013, Camarota 2002). Nearly half of MENA men (42.5%) had professional or managerial occupations in 1990 in Los Angeles, comparable to Asians (41.9%) and American white men (45.4 %), a rate four times higher than Hispanics men (9.0 %). Although MENA women were not employed at the same rate as men in these professional arenas, they displayed employment patterns comparable to white American women (Bozorgmehr et al. 1996:353).

Racialization, stigma, and discrimination. Because MENA immigrants are racially self-classified as "white" in the U.S. census, and because they achieve high educational and income attainment once in the United States, they would be expected to experience relatively straightforward social, economic, and spatial assimilation experiences, according to the tenets of spatial assimilation theory (Maghbouleh 2017). However, due to their racialized status that was

exacerbated after the September 11th terrorist attacks, MENA populations became highly stigmatized, and were often linked with violence, terrorism and savagery in the media and in public and political discourses. They therefore experienced racialization, referring to "the process of assigning derogatory meaning to particular bodies distinguished by ethnicity, nationality, biology, or geography, as well as legitimizing discourses" (Alsultany 2008:208). In this case, the racial status of MENA/Arab/Muslim has been conflated with the category of terrorist. The lived experience of MENA immigrants is thus contradictory—despite having high SES, they also face anti-Muslim backlash. This duality represents a unique opportunity to test the degree to which the context of reception has deterministic power in shaping spatial assimilation.

Despite MENA populations having the necessary prerequisites for residential incorporation, I propose that they will not able to achieve residential proximity with non-Hispanic whites due to their stigmatized racial and religious identities. In fact, research has documented discrimination and bias toward Muslim and Arab populations in finding roommates and renting houses in several metropolitan areas in the United States such as Los Angeles, New York, Detroit, and Houston along with several places outside of the United States such as Toronto and Sweden (e.g. Gaddis and Ghoshal 2015; Carpusor and Loges 2006; Ahmed, Andersson and Hammarstedt 2010, Hogan and Berry 2011).

In order to understand how the MENA population's racialized status impacts their residential segregation, I used South and East Asian immigrants as comparison groups[16]. These groups are particularly useful because they share some important similarities with the MENA population. All three groups are likely seen as phenotypically different and distinguishable from non-Hispanic whites, at least on average. Second, on average, all three groups have high rates of

[16] Note that Africans immigrants also demonstrate relatively similar socioeconomic characteristic as MENA population (Pew Research Center 2015). However, I did not include Africans as a comparison group because Black immigrants become highly racialized upon arrivals in a racialized system of American society due to their color of skin (Waters 2001, Crowder 1999). With long history of exclusion and oppression of Black, thus African immigrants experience of discrimination has different dimension that would not suit in this comparison.

socioeconomic attainment, an attribute that fosters spatial assimilation (Bozorgmehr et. al 1996; Cheng and Yang 1996; Schachter 2014).

In addition, South Asian and MENA populations are comparable because they have both been exposed to similar attitudes from mainstream Americans due to their phenotypical similarities and religious affiliations after 9/11 (Maira 2004). By comparing these groups, I am able to reveal to what extent residential patterns of both groups align, or are differentiated, holding all other attributes constant. As I discuss below, the contrast between the spatial assimilation of MENA and South Asian populations is ultimately an empirical question. On the one hand, it is conceivable that South Asians have not experienced the same kinds of anti-immigrant backlash as have MENA groups. If this is true, then we ought to observe improvements in South Asian relative to MENA segregation from the pre- to post-9/11 periods. On the other hand, if South Asians[17] are confused with MENA populations, or discriminated against simply for being non-white or foreign, then it is possible that their outcomes will look similar to those of their MENA counterparts.

Similar to the South Asian and MENA comparison, an East Asian comparison helps provide a case to test the power of ethnic, racial, and religious status on residential mobility. The MENA and East Asian comparison, however, facilitates a case to estimate the effect of phenotypic differences on residential differences, as these immigrant groups are distinct phenotypically while being similar on socioeconomic attributes. In addition, religion plays a significant role in this comparison, as the majority of MENA groups in this study emigrated from predominantly Muslim countries. Also, unlike East Asian populations, MENA immigrants are

[17] Research has shown that the South Asian population has been exposed to discriminatory attitudes in the post 9/11 period, due to their phenotypical similarities and religious markers with MENA immigrants (Maira 2004). South Asian Sikhs, in particular, can be mistaken as being Muslim or a MENA immigrant (Love 2017) due to American stereotypes of what wearing a turban signifies. Hence, the South Asian population may be exposed to a hostile environment because of their status as "foreigners" in the United States (Schuessler 2015).

more likely to wear indicators of their religious identity such as a scarf, *abaye* or *bear* (Naber 2008). Besides religion, Naber argues (2008:278) terrorism is associated with other signifiers "such as particular names (e.g. Mohammed), dark skin" […] and particular nations of origin (e.g. Iraq or Pakistan) as signifiers of an imagined 'Arab/Middle Eastern/Muslim' enemy." Hence, despite MENA immigrants' demonstrating high English proficiency and high levels of socioeconomic attainment, a hostile "context of reception" can force their segregation and limit their spatial integration, contrary to what their group-level characteristics would predict.

Limitations of past research. Several studies have examined MENA immigrants' economic and sociocultural adaptation in the United States. For example, some scholars have addressed their distribution across states—in other words, where they are concentrated—but few analyses exist regarding their residential patterns in metropolitan areas. Exceptions include Bozorgmehr et al. (1996), who focus on Middle Eastern immigrants (Iranians, Israelis, Armenians, and Arabs) in Los Angeles, and Holsinger (2009), who focuses on Arabs' residential patterns. While the former study showed lower segregation between non-Hispanic white and Iranian, Israeli, Armenian, and Arab immigrants compared to any other minority group in Los Angeles, the latter found moderate segregation between Arab and non-Hispanic whites in New York, Los Angeles, Chicago, and Detroit.

Although these studies begin to give scholarly attention to the spatial assimilation of MENA immigrants in the United States, they are limited in several respects. Neither examines the experiences of MENA immigrants in the United States at a national level. They are either limited to Arab MENA populations or the MENA groups located in New York, Los Angeles, Chicago, and Detroit. The experiences of MENA populations at the national level remain unexamined by studying only certain metropolitan areas. Moreover, each study takes a point-in-time snapshot of the spatial assimilation of MENA groups, and thus cannot comment on changes

over time, particularly during the critical pre- and post-9/11 periods. Finally, neither study compares the experiences of MENA immigrants to comparable others, to assess the extent to which MENA segregation is unique among Asian populations, or whether it is similar to the experiences of other similar groups.

Research Design and Hypotheses

Research Design

My goal in this study is to assess changes over time in the segregation of the MENA, South Asian, and East Asian populations, thereby providing an indirect test of the context of reception on the spatial assimilation of these groups. To do this, I use a two-fold approach. First, I attempt to account for the effect of racial/ethnic/religious status[18] on residential segregation by using two comparison groups: South and East Asians. As noted above, these groups (1) score high on measures of education and income, and (2) are phenotypically different from non-Hispanic whites, but (3) may not have experienced the same kind of post-9/11 stigma and hostile treatment as MENA immigrants in the U.S. Second, in order to reveal political and social context of reception, I operationalize two crucial time periods for comparison: pre 9/11 (2000) and post-9/11 (2016).

Although 2016 may be too distant from September 11, 2001 to the immediate backlash of that particular event, I use this time point for several reasons. First, the backlash of 9/11 may necessitate a longer time frame to observe its consequences on residential patterns, as these patterns are unlikely to have changed dramatically immediately following 9/11. Further, this time

[18]Religious status is not measured directly because the U.S. census does not collect data on religious affiliation. However, I used Pew Research Center Data to provide a proxy for religious affiliation of the MENA population in my research. Based on data from "Religious Composition by Country," it is safe to assume that a majority of MENA immigrants in the United States are Muslim (Pew Research Center 2015). Moreover, by eliminating Bangladeshis and Pakistanis (whose Muslim population as a percentage of the whole country is 91.7% and 96.5%, respectively) from the South Asian group, I keep South Asians (Indians and Sri Lankans' percentage of Muslim population is 18.4%; 12.3% respectively) distinct from the MENA population by excluding Muslims.

period (2000-2016) encompasses the effects of many other terrorist incidents in the U.S and around world, including the Madrid train bombings in 2005, the London bombing in 2005, the Boston Marathon bombing in 2013, and the San Bernardino mass shooting in 2015 committed by an Islamist extremist that lead to public scrutiny of MENA groups (Widner and Chicoine 2011). Third, choosing this time allows me to bypass the specific consequences of the housing crash that led to a dramatic decline in average housing prices between 2007 and 2010 (Kwak and Wallace 2018). Lastly, using data from 2016 provides the most recent measures about residential patterns of MENA, South and East Asian immigrant populations in the United States.

Hypotheses

With the foregoing literature and research design in mind, I test the following hypotheses:

Hypothesis 1: Controlling for acculturation and SES, South and East Asians are currently less segregated than MENA immigrants.

Hypothesis 2: The negative cross-sectional relationship between acculturation or SES and segregation is stronger (i.e., more negative) for South and East Asians than for MENA populations.

The rationale for these hypotheses focuses on the impact of the post-9/11 backlash. Although the racialized status of MENA populations predated 9/11 and led to discrimination and other forms of poor treatment, the 9/11 terrorist attacks arguably reinforced their stigmatized status and forced them to "the foreground of the U.S. public sphere" (Bail 2012:855). Considering the stigmatized status of MENA populations, I hypothesize that segregation will be higher (Hypothesis 1) and the payoff for income as well as high educational attainment and language proficiency will be lower for MENA than South and East Asians (Hypothesis 2).

In terms of change over time, I hypothesize that:

Hypothesis 3: Differences in average levels of segregation between MENA and South and East Asian populations will be significantly different (either more segregated or less desegregated) in the post-9/11 period compared to the pre-9/11 period.

Hypothesis 4: Changes in the relationship between acculturation and SES and segregation will be significantly different in the post-9/11 period compared to the pre-9/11 period for the MENA compared to the South and East Asian populations.

These last two "difference in differences" hypotheses require some explanation. Previous studies have shown that MENA immigrants in the United States face individual and institutional discrimination (Naber 2008; Tehranian 2009; Khoshneviss 2019). However, the pervasiveness and severity of that discrimination intensified after 9/11 and following other global terrorist attacks. Having been perceived as potential terrorists, immigrants from MENA countries are exposed to extremely hostile environments including harassment and hate crimes (Naber 2008, Zarrugh 2016). The backlash of terrorism provides a central reason to believe that residential patterns of MENA immigrants may differ significantly from South Asians and East Asians in the pre- and post-9/11 periods.

Hypothesis 3 predicts either that the growth in segregation will be greater for MENA versus the South and East Asian populations, or the decline will be lower. Hypothesis 4 predicts that growth in negative relationships between acculturation and SES will be lower for the MENA versus the South and East Asian populations, or the growth in positive relationships will be stronger. Overall, the argument derived from the context of reception model is that MENA immigrants were more negatively affected by racialization and stigma from the pre-9/11 to the post-9/11 period. In the following section I describe the data and methodological procedures I use to test these hypotheses.

Data, Measures, and Methods

Data

I use two data sources for this research. The pre-9/11 data were drawn from the 2000 U.S. Census Summary Tape Files (STF) and the post-9/11 data come from the 2012-2016 American Community Surveys (ACS). I use the ACS[19] five-year estimates because this is the only version that releases data at the tract level, which is necessary to calculate the dependent variables. In this data set, all census tracts from 2000 match 2016 boundaries, which ensures the validity of comparisons applied between the time periods. Several of the independent variables come from the 2000 STF and 2012-2016 ACS, including population size, percent of each group, and geographic region. I also use Integrated Public Use Microdata Sample (IPUMS) data to calculate average characteristics at the metropolitan area level for each immigrant group, including English language proficiency, educational attainment, and income.

Analytic sample. The units of analysis are Metropolitan Statistical Areas (MSAs), which are relatively large units within the broader category of Core-Based Statistical Areas (CBSAs). I

[19] Napierala and Denton (2017) caution that using ACS data at the census tract level is problematic because of the large margins of error in tract population counts, especially for relatively small groups such as the MENA population. This leads to less efficient and potentially upwardly biased estimates of dissimilarity scores. This is concerning, and the findings I present in this paper may be subject to these problems to some degree; therefore, all results should be interpreted with caution. In addition, however, there are at least seven reasons why the results presented here may not be highly affected by these issues. First, half of my data come from Census 2000, which is not subject to the large margins of error in the ACS. Second, to the extent that the problem has to do with inefficient (as opposed to biased) estimates of the dependent variables, this would result in larger standard error estimates, not bias in the coefficient estimates. Third, even if the overall levels of segregation were upwardly biased, it is not obvious that this would bias the coefficient estimates, that is, the relationships between the independent variables and the dependent variables. Fourth, in this paper I am interested in the comparison of segregation scores across groups as well as the relationship between spatial assimilation variables and dependent variables. Hence, if there were upward bias in all estimates of segregation scores, the differences between those scores across groups would not be biased (if the upward bias was the same for all groups). Fifth, the authors pointed out that the problem is worse in micropolitan areas and when block groups are used in the analysis. Since my analysis relies on tract-level data on metropolitan areas, the problems should be somewhat mitigated. Sixth, the authors note that weighting estimates by group population sizes reduces the problems identified in their paper. Although I do not weight my estimates, I do control for the minority population size, which would have the same mathematical benefit as weighting. Finally, the authors show that the problems of bias and inefficiency are exacerbated by the inclusion of tracts with 0 population counts. Since I do not include tracts with 0 population, this would not be a concern in my analysis.

limited the sample to MSAs with at least 500[20] members of each group taken separately. For the MENA analysis, this led to sample sizes of 193 MSAs in 2000 and 294 in 2016. For the South Asian population there were 191 MSAs in 2000 and 267 in 2016, and for the East Asian population there were 273 CBSAs in 2000 and 338 in 2016. I also created a sample of MSAs where these criteria were met for each group simultaneously in both 2000 and 2016; this yielded a sample of 121 MSAs.[21]

MENA immigrants do not constitute a separate racial or ethnic group due to their designation as "white" by the U.S. Census. However, the availability of an ancestry question largely overcomes this issue. Thus, the U.S. Census and ACS are the most accurate data sources available to study MENA immigrants in the United States (Holsinger 2009). Using the ancestry question, I created the category of MENA from Egyptian, Iraqi, Jordanian, Lebanese, Moroccan, Palestinian, Syrian, Turkish, Iranian, Afghan, "Arab" and "Other Arab" answer categories. I followed suit by creating a South Asian category from respondents reporting an Asian Indian or Sri Lankan ancestry. Although Bangladeshis and Pakistanis are part of the South Asian population, I intentionally exclude them from the South Asian category as they come from majority-Muslim countries (91 percent and 96 percent respectively) (Pew Research Center 2019), and I want to keep South Asians distinct from MENA population by excluding Muslims. I created the East Asian category using Chinese, Korean, Taiwanese, and Japanese ancestries.

[20] I also ran my analyses with 1,000 as the population cutoff and the results are not substantially different; however, this higher threshold resulted in the loss of many cases (i.e., metropolitan areas) for each group; hence, I focus on results using the 500-person threshold.

[21] Note that in this research the unit of analysis in metropolitan area is the CBSA, the characteristics of which were measured with decennial Census, ACS, or IPUMs data. Although these data sources are themselves samples, the units of analysis are better thought of as a purposive sample of CBSAs with at least 500 of members of MENA, South Asian, or and East Asian residents. This sample selection criterion alters the interpretation of the standard error estimates (and *t*-ratios and *p*-values) produced below because those estimates were generated under the assumption that data came from a simple random sample. Hence, the standard error estimates should be treated cautiously and as "estimates of parameter dispersion contaminated by measurement error" rather than sampling variability (Grodsky and Pager 2001:552). Accordingly, I focus my discussion of the regression results on coefficient estimate sizes and differences rather than statistical significance in the conventional sense because "when there is no random sampling […] p-values are essentially uninterpretable" (Hirschauer et al. 2020:87).

Finally, I created the white comparison group by subtracting the MENA tract count from the non-Hispanic white count.[22]

Measures

Dependent variables. To measure the residential segregation of the MENA, South Asian, and East Asian populations from the non-Hispanic white population, I use two commonly used segregation measures[23]: the dissimilarity index and the isolation index. The former is a measure of evenness of population distribution, and ranges from 0 (complete integration) to 100 (complete segregation). Conceptually, it describes the percentage of any members of groups that would have to change their residence to achieve an even racial and ethnic distribution in a broader metropolitan area (Massey and Denton 1993; Iceland 2009). The isolation index is a measure of residential exposure, which refers to the level of potential interaction or contact between minority groups and all others. In Massey and Denton's words, the isolation index will "attempt to measure the experience of segregation as felt by the average minority or majority member" (Massey and Denton, 1988:287). It also ranges from 0 (lowest level of isolation) to 100 (highest level of isolation).

The dissimilarity index is computed as:

$$D_{gw} = (.5 \sum_{i=1}^{n} |g_i /G - \ w_i/W|) \times 100, \quad (1)$$

where, for the n tracts in an MSA, g_i and w_i are the populations in tract i of group g (MENA, South Asians, or East Asians) and whites, respectively, and *G* and *W* represent the total populations of group *g* and whites, respectively, in the MSA as a whole.

[22] There may be some overlap between the non-Hispanic white and MENA populations because they are derived from different questions on the U.S. Census and ACS. However, according to 2015 National Content Test conducted by the U.S. Census in order to plan the content of the 2020 Census race/ethnicity questions, the MENA population overwhelmingly identified themselves in the "white" category, with the sole exception of Afghanis. Thus, it is likely that subtracting the MENA count from the white count will yield reliable estimates of both groups at the tract level.

[23] The high correlation between entropy index (H) and dissimilarity index (D) shown that the same segregation results are obtained, accordingly the same conclusion are dawn no matter which measure is used (Massey and Denton 1988). Thus, I choose use dissimilarity index as commonly used measure in the literature.

The isolation index is computed as:

$$P_{gg}^{*} = (\sum_{i=1}^{n}[(g_i/G)(g_i/t_i)]) \times 100, \quad (2)$$

where g_i and G are as defined in equation (1) and t_i is the total population of tract i.

Focal independent variables. Based on the tenets of spatial assimilation theory and previous research, the focal independent variables capture the impact of acculturation and SES on residential segregation. As noted above, I used PUMS data for each time point (2000 and 2016) to calculate averages for heads of household for each group in each MSA. In order to estimate the effects of acculturation on residential segregation, I calculated English language proficiency by taking the percentage of household heads in each group and each MSA who spoke English very well or only. To capture the effects of socioeconomic status on residential segregation, I measured average household income (in thousands of 2016 dollars) and the average education level (in years) for each group's household heads. Although acculturation and socioeconomic attainment can both be outcomes of spatial incorporation, my goal in this research is to measure whether such individual attributes influence spatial incorporation, and, if so, how strong this relationship is and how it may differ across groups.

Control variables. In addition to the focal independent variables, I calculated group averages within each MSA for nativity (in percent native-born), length of residence in the United States (in years), age (in years), marital status (in percent married), and presence of children (in percent of household heads with children present in the household (Iceland et al. 2010). Metropolitan area characteristics also influence residential segregation (Logan, Stults, and Farley 2004; Wilkes and Iceland 2004). To account for this, I include the log of the population size of the MSA in question, the percentage of the total population the minority group composes, and region (Northeast, Midwest, South or West).

Methods

Analytic approach. To measure the degree to which residential segregation is explained by acculturation and SES, I conduct multivariate analyses. Formally—and generally—the multivariate OLS models can be written as shown in Equation 3:

$$Y_{j_{g,t}} = \beta_{0_{g,t}} + \sum_{r=1}^{R} \beta_{r_{g,t}} X_{rj_{g,t}} + \sum_{s=R+1}^{R+S} \gamma_{s_t} Z_{sj_t} + \varepsilon_{j_t}, \quad (3)$$

where $Y_{j_{g,t}}$ is the score on the dependent variable for group *g* in metropolitan area *j* at time *t* (i.e., 2000 or 2016). When the covariates X_r and Z_s are centered around their respective grand means, the following estimates are derived: $\beta_{0_{g,t}}$ is the covariate-adjusted average score on the dependent variable for members of group *g* at time *t*; $\beta_{r_{g,t}}$ are partial effects of acculturation and SES on the dependent variable for members of group *g* at time *t*; γ_{s_t} are partial effects of metropolitan area-level characteristics on the dependent variable for members of group *g* at time *t*; and ε_{j_t} is an error term, representing unexplained variation in the dependent variable for group *g* at time *t*.[24]

I first present my analysis with descriptive tables and figures that show dissimilarity and isolation indexes for MENA, South Asian and East Asian immigrants in 2010 and 2016. Then, I focus on the 2016 period to estimate the relationship between socioeconomic and acculturation attributes and residential patterns, followed by a fuller model that includes control variables. For this analysis I use the largest analytic samples possible, by selecting MSAs with at least 500 members of each group taken separately.

Finally, to estimate change over time for these groups, I run similar models for 2000 and calculate differences in differences between groups, based on a consistent sample of 121 MSAs with at least 500 of each group in each time period. To do this, I first calculate the change from 2000 to 2016 in levels of segregation and its predictors for the MENA, South Asian, and East

[24] These models are unweighted, although I control for the size of each minority group and the log of population size. As such, the unit of analysis is the MSA; therefore, the coefficients should be interpreted as estimates of the relationship between average group characteristics and the level of segregation in MSAs.

Asian populations separately. I then take the difference between the MENA difference and the differences of the other groups to assess the extent to which changes over time have been similar or different for the three groups. As noted above, I expect that not only will segregation have increased more (or declined less) for the MENA population versus the comparison groups, and that the relationships between acculturation and SES will have lessened over time for MENA immigrants compared to their counterparts.

Findings

Descriptive Statistics

Table 2.1 depicts the basic socioeconomic and demographic characteristics of MENA, South Asian and East Asian immigrants, as well as metropolitan area characteristics in 2000 and 2016. The three populations are relatively similar in terms of their high levels of English proficiency and educational attainment, on average, in both 2000 and 2016. MENA and East Asian populations, on average, had similar household incomes, particularly in 2016. South Asians in both years surpassed the MENA and East Asian populations. While average household income increased for East and South Asians groups over time, it decreased for the MENA population.

Differences were more pronounced in nativity among groups. On average, about 40 percent of the MENA population were native-born and had lived in the United States for an average of 23 years in 2016.[25] In comparison, 28.4 percent of East Asians were native-born, and averaged 25 years of residence in the United States. For South Asians, the native-born percentage is 10 percent, with time lived in the United States averaging 21 years. Note that the percent of nativity reflects the average of CBSAs for each immigrant group residing in

[25] This figure may seem relatively high although it reflects the MSA average, which isn't necessarily the same as the population average. I disaggregated the MENA category by ancestry to investigate this high native-born percentage and found that one of the largest MENA ancestries in the IPUMS data was Lebanese, who have a very high native-born percentage compared to other groups, leading to a high nativity average for the MENA population overall.

metropolitan areas because the unit of analysis is the CBSA. The three groups, on average, have very similar age compositions that have increased over time. The married proportion of MENA and East Asian populations are also similar and increase over time, whereas the married proportion of South Asians remains high and constant.

2000 and 2016 Average Segregation Scores

Figure 1 displays the dissimilarity index of residential segregation for MENA, South Asian, and East Asian populations from non-Hispanic white populations in 2000 and 2016. In addition, I show segregation levels of Blacks and Hispanics with whites in order to allow for a comparison of the three groups under consideration with groups whose segregation patterns are well known. As expected, the East Asian populations had the lowest dissimilarity index (40.5 in 2000 and 52.3 in 2016) compared to the MENA (49.4 and 55.5) and South Asian populations (48.4 and 65.5). Although the highest dissimilarity index belongs to the Black population with a figure of 54.8 in 2000, only the Black population experienced a decline in residential segregation by 2016. The dissimilarity index for Hispanic, MENA, South and East Asian increased from 2000 to 2016; however, the largest increase observed was for the South Asian population, from 48.4 to 65.5. This latter figure exceeds the commonly used threshold of 60 for a high level of residential segregation (Massey and Denton 1993). By 2016, the East Asian and Black population experienced the same level of residential segregation, while the MENA and South Asian figures exceed those for the Black population.

Table 2.1. Means and Standard Deviations of Independent Variables Used in the Analysis, by Immigrant Group and Year

	MENA				South Asian				East Asian			
	2000		2016		2000		2016		2000		2016	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Spatial assimilation variables												
% speaking English well or only	83.7	9.36	79.2	12.23	83.6	12.6	84.48	10.17	61.5	11.70	64.8	11.28
Average education (in years)	8.2	0.76	8.6	0.81	9.272	1.023	9.693	0.741	8.3	0.87	8.6	0.74
Average household income (in $000s)	93.3	15.83	84.9	30.58	115.6	40.4	123.7	34.1	82.7	18.83	84.6	26.17
Average years in U.S. (in years)	18.2	4.55	23.0	7.18	15.0	3.329	20.91	4.76	17.7	5.06	25.3	6.35
% native-born	44.8	17.95	40.3	16.72	7.471	6.787	9.886	7.442	25.8	13.66	28.35	13.42
Other demographics												
Average age (in years)	45.2	4.35	47.9	5.51	40.57	4.093	44.43	4.892	42.8	5.16	46.5	5.85
% married	61.7	10.65	59.2	11.72	73.1	13.77	72.68	11.58	60.7	12.16	57.4	16.67
% with children present	46.4	11.30	43.0	13.63	52.65	13.15	48.00	14.33	43.2	12.16	38.6	11.92
Metropolitan area characteristics												
Log of CBSA population	13.2	1.03	12.9	1.14	13.2	1.03	13.0	1.10	12.8	1.14	12.7	1.14
% minority group in CBSA	0.46	0.27	0.70	0.42	0.534	0.591	0.873	0.964	0.90	1.137	1.176	1.457
Midwest	0.197	–	0.191	–	0.201	–	0.203	–	0.191	–	0.188	–
South	0.382	–	0.402	–	0.370	–	0.401	–	0.366	–	0.399	–
West	0.217	–	0.225	–	0.227	–	0.219	–	0.263	–	0.252	–
No. of CBSAs												

Notes : Data for metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data.

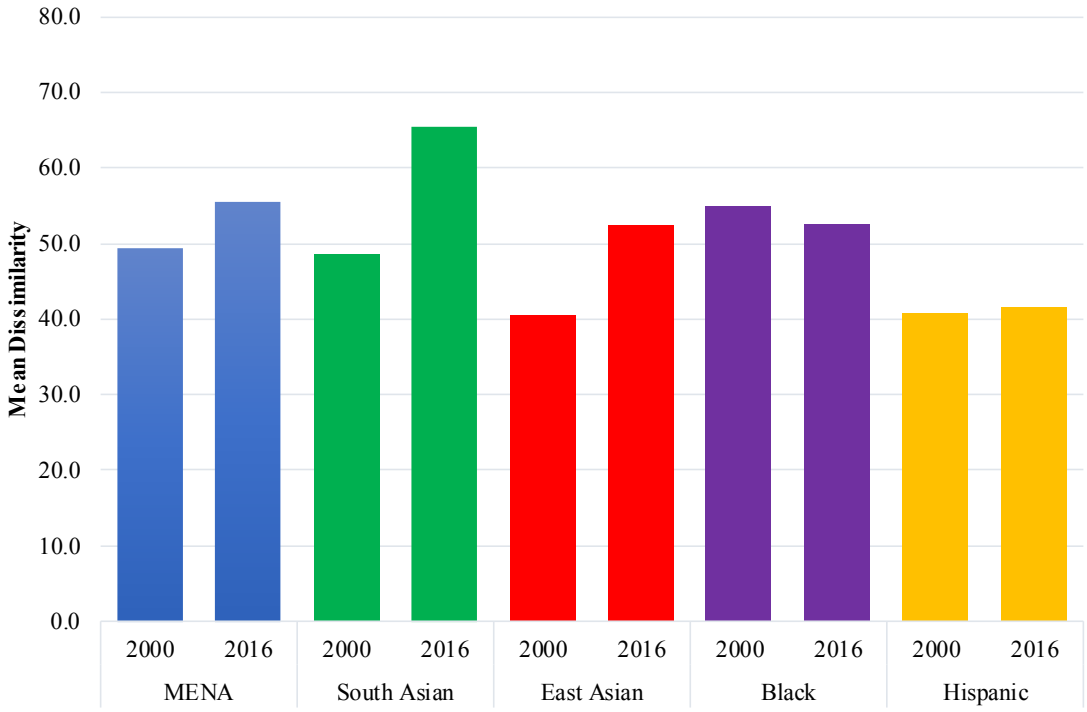

Figure 2.1. Dissimilarity Index (from non-Hispanic Whites) for the MENA, South Asian and East Asian Populations, 2000 and 2016

Note: T-test results show that all groups, except, MENA vs South Asian in 2000, are significantly different than each other.

Note: This results indicate dissimilairty index in 164 metropolitan areas in 2000 and 220 metropolitan areas in 2016 that are in common across groups.

Figure 2 shows the isolation index for the MENA, South Asian, East Asian, Black and Hispanic population in 2000 and 2016. Although I observed an increase in the isolation of each group, except Black, from 2000 to 2016, this index increased for South Asians by far more (from 1.65 to 4.15) compared to the MENA (from 1.50 to 2.69) and East Asian (from 3.36 to 4.37) populations. In other words, in 2000, on average the South Asian population lived in a tract in which 1.6 percent of people were South Asian. In 2016, this increased to about 4.1 percent. Note that there is a positive correlation between population size and isolation index—that is, the isolation index is influenced largely by the size of a group (Rugh and Massey 2014). Therefore, it is not surprising to see increases in the isolation index levels for each immigrant group, as their population sizes increased over the time period due to continued immigration or higher-than-average fertility.

Synchronic Regression Findings

Table 2.2A demonstrates results from OLS regressions for the MENA, South Asian and East Asian populations in 2016. The dependent variable is the dissimilarity index of the non-Hispanic white population and the focal independent variables are spatial assimilation indicators, including English language proficiency, education, income, average number of years in the U.S. for the immigrant population, and percent native-born. In the first model, I compare the relationship between indicators of spatial assimilation and the dissimilarity index for each immigrant group. I also present a second set of models that includes other demographics and metropolitan characteristics to show the extent to which these factors attenuate the effects of the spatial assimilation variables.

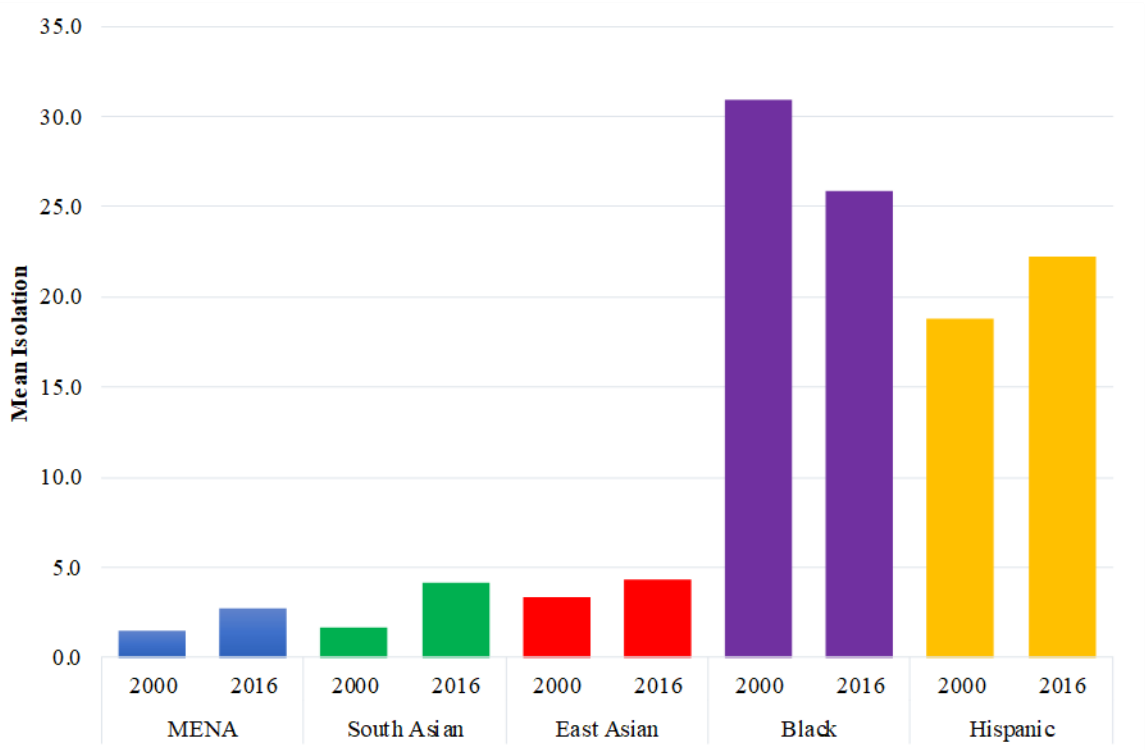

Figure 2.2. Isolation Index for the MENA, South Asian and East Asian Populations, 2000 and 2016

Note: T-test results show that all groups, except, MENA vs South Asian in 2000 and South Asian vs East Asian in 2016, are significantly different than each other.

Note: This results indicate isolation index in 164 metropolitan areas in 2000 and 220 metropolitan areas in 2016 that are in common across groups.

Focusing on English language proficiency as a predictor of spatial assimilation, Table 2A indicates that a one-unit increase in the CBSA-average percentage of MENA residents who speak English very well or only decreases the dissimilarity index by 0.11 points. While this negative correlation is observed for South Asian populations, it is not observed for East Asians, in contrast to the prediction of spatial assimilation theory. That is, when MENA and South Asian groups speak English well or only, their residential segregation decreases, unlike for the East Asian population. Turning to educational attainment, on average, for each one-year average increase in educational attainment for MENA and East Asian populations, residential segregation

decreases by 0.87 and 0.83 points, respectively. For South Asian immigrants, however, educational attainment does not play a role in reducing residential segregation. Similarly, length of residence in the United States appears to decrease residential segregation for MENA and East Asians, but not for South Asians. Finally, as average household incomes increase by $1,000, the dissimilarity index decreases by 0.04 for MENA immigrants, 0.01 for South Asian and 0.02 for East Asian populations. While being native-born lowers the segregation score for East Asians, this is not the case for the MENA and South Asian population.

After adding in other demographic factors and metropolitan area characteristics into the second set of models for each immigrant group, I did not observe much change in the relationship between spatial assimilation variables and dissimilarity indexes. On average, household income appears to have similar effects for MENA and East Asians, although the magnitude of these coefficients is different for these two populations. Increases in average household income were related to declines in segregation for the MENA and East Asian populations, but not for South Asians. While educational attainment, length of residence, and nativity also decreased the dissimilarity index for MENA and East Asian communities, this is still not the case for South Asian populations in Model 2. In addition, when English proficiency increases, the dissimilarity index declines for South Asian populations by 0.09 and MENA populations by −0.05; again, however, this is not the case for East Asian populations.

Table 2.2A. Coefficient and Standard Error Estimates from Linear Regressions of the Dissimilarity Index (vs. Non-Hispanic White) on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, by Immigrant Group: 2016

	MENA				South Asian				East Asian			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	-0.105	0.068	-0.047	0.054	-0.057	0.068	-0.088	0.062	0.034	0.065	0.016	0.064
Average education (in years)	-0.866	0.859	-2.732	0.697 ***	0.889	1.011	-0.106	1.025	-0.832	1.002	-0.360	0.939
Average household income (in $000s)	-0.035	0.021	-0.008	0.017	-0.008	0.018	0.019	0.018	-0.020	0.024	-0.005	0.026
Average years in U.S. (in years)	-0.062	0.088	-0.076	0.086	0.235	0.133	0.092	0.207	-0.367	0.115 **	-0.319	0.152 *
% native-born	0.045	0.044	-0.044	0.037	0.095	0.079	0.098	0.077	-0.202	0.051 ***	-0.053	0.053
Other demographics												
Average age (in years)	–	–	-0.163	0.114	–	–	-0.076	0.218	–	–	0.084	0.171
% married	–	–	0.000	0.047	–	–	0.068	0.066	–	–	-0.069	0.054
% with children present	–	–	0.073	0.040	–	–	-0.006	0.049	–	–	-0.133	0.051 **
Metropolitan area characteristics												
Log of CBSA population	–	–	-0.011	0.460	–	–	-0.631	0.547	–	–	-0.203	0.476
% minority group in CBSA	–	–	-9.484	1.182 ***	–	–	-3.772	0.581 ***	–	–	-0.768	0.366 *
Midwest	–	–	4.938	1.406 ***	–	–	1.909	1.664	–	–	0.958	1.552
South	–	–	6.775	1.273 ***	–	–	1.689	1.493	–	–	1.762	1.376
West	–	–	1.037	1.404	–	–	0.295	1.686	–	–	-7.596	1.795 ***
Intercept	55.62	0.548 ***	55.62	0.417 ***	66.24	0.562 ***	66.24	0.49 ***	52.82	0.512 ***	52.82	0.448 ***
R^2	0.0827		0.4896		0.0276		0.2808		0.2045		0.4144	
Model df	198		190		181		173		212		204	

Notes : Data for the index of dissimilarity and metropolitan area-level characteristics come from 2012-2016 ACS. All other independent variables come from 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Demographic attributes of immigrant groups mediate segregation scores to some degree. Unlike East Asian populations, on average, for every increase in age for MENA and South Asian populations, the dissimilarity index drops by 0.163 and 0.076, respectively. Marital status is also an important factor in decreasing residential segregation of East Asian population, but not for the MENA and South Asian group. However, the presence of children contributes to the diminishing of the dissimilarity index both for South Asian and East Asian populations.

The final rows in Table 2.2A demonstrate the figures on the metropolitan area characteristics, including log population size, the percentage of the total population each minority group represents, and the region (with the Northeast as the omitted category). For all three groups, MSA size is associated with decreasing segregation, with coefficients of −0.01 for MENA, −0.63 for South Asians, and −0.20 for East Asians. Existing literature indicates that increasing population size in a given metropolitan area tends to increase residential segregation because ethnic minorities tend to cluster in enclaves or may face more discrimination and tighter housing market (Timberlake and Iceland 2007). However, this is not the case for the MENA and Asian subpopulations; rather, there is a negative relationship between higher concentrations of these groups and their segregation.

In addition, compared to the omitted Northeast category, MENA-white segregation in the Midwest and South are significantly higher, by averages of 4.93 and 6.77 dissimilarity points, respectively. Although there was not a statistically significant difference in South Asian-white and East Asian-white segregation in the Midwest and South compared to the Northeast, segregation scores are higher in those regions for both groups. Similarly, compared to the Northeast, the dissimilarity index scores of MENA and South Asians were higher in the West. The East Asian segregation score was significantly lower in the West (7.59) versus the Northeast. Taken together, metropolitan area characteristics affect the isolation of MENA, South

and East Asian populations in similar ways; however, their isolation levels differ across the four regions of United States. Lastly, the R-squares for the fullest models indicate that Model 2 explains about 49%, 28%, 41% of the variation in segregation of MENA, South and East Asian, respectively.

Overall, the effect of socioeconomic and acculturation patterns on residential segregation differs for each immigrant group. Interestingly these differences affect both the magnitude of coefficients and their direction. In other words, unlike what spatial assimilation theory asserts, improvements in socioeconomic standing and degree of acculturation do not easily translate into accelerated spatial incorporation for South Asians. Due to the racialization of MENA populations, and the American tendency to mistake some South Asians as MENA people, I expected to observe a high level of segregation for South Asians, but not one that exceeded the residential segregation of MENA immigrants when controlling for group-level characteristics. I also expected to observe a strong negative relationship between acculturation, SES, and segregation for South Asians. However, my findings show that the opposite occurred in both cases, which runs contrary to Hypotheses 1 and 2. Also, controlling for acculturation and SES, East Asians are less segregated than MENA population which supports Hypothesis 1. Nevertheless, the negative relationship between acculturation and segregation was weaker for East Asians in 2016.

Table 2.2B. Coefficient and Standard Error Estimates from Linear Regressions of the Isolation Index (vs. Non-Hispanic White) on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, by Immigrant Group: 2016

	MENA				South Asian				East Asian			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	-0.008	0.018	-0.005	0.012	-0.030	0.029	-0.016	0.015	-0.071	0.029 *	-0.002	0.014
Average education (in years)	-0.754	0.227 **	-0.389	0.155 *	-0.489	0.434	0.199	0.241	0.894	0.446 *	0.011	0.204
Average household income (in $000s)	0.004	0.006	-0.004	0.004	0.025	0.008 **	-0.001	0.004	0.022	0.011 *	-0.005	0.006
Average years in U.S. (in years)	-0.017	0.023	0.007	0.019	-0.188	0.057 **	-0.052	0.049	-0.097	0.051	-0.042	0.033
% native-born	-0.028	0.012 *	0.006	0.008	-0.046	0.034	-0.008	0.018	-0.011	0.023	-0.003	0.011
Other demographics												
Average age (in years)	–	–	-0.013	0.025	–	–	0.017	0.051	–	–	-0.027	0.037
% married	–	–	0.008	0.01	–	–	0.018	0.015	–	–	-0.016	0.012
% with children present	–	–	0.008	0.009	–	–	0.008	0.011	–	–	-0.033	0.011 **
Metropolitan area characteristics												
Log of CBSA population	–	–	0.053	0.102	–	–	0.585	0.129 ***	–	–	0.623	0.103 ***
% minority group in CBSA	–	–	3.971	0.263 ***	–	–	2.828	0.137 ***	–	–	2.071	0.079 ***
Midwest	–	–	1.028	0.312 **	–	–	-0.060	0.392	–	–	-0.345	0.336
South	–	–	0.998	0.283 ***	–	–	-0.023	0.352	–	–	-0.752	0.298 *
West	–	–	0.290	0.312	–	–	-0.320	0.397	–	–	-1.101	0.389 **
Intercept	2.646	0.145 ***	2.646	0.093 ***	4.322	0.239 ***	4.322	0.115 ***	3.76	0.228 ***	3.760	0.097 ***
R^2	0.1295		0.6585		0.1244		0.8048		0.1752		0.8561	
Model df	198		190		181		173		212		204	

Notes : Data for the isolation index and metropolitan area-level characteristics come from 2012-2016 ACS. All other independent variables come from 2016 IPUMS data. *** $p < .001$; ** $p < .01$; * $p < .05$, two-tailed tests.

Table 2.2B shows the OLS results for isolation for the three groups. According to Model 1, for MENA, South Asian and East Asian immigrants, spatial assimilation is negatively associated with English language proficiency, length of residency and nativity. That is, the coefficients of all these variables indicate lower isolation indexes when MENA, South and East Asian populations have high levels of English language proficiency, longer durations of residency and are native. Including the other demographics and metropolitan area characteristics weakened the relationship between isolation and spatial assimilation variables and influenced some of the group-level variables. The isolation index is negatively associated with being older for MENA and East Asian populations, but positively associated for South Asian populations. However, marital status is negatively associated with isolation scores for all three groups. While having children significantly lowers the isolation score level of East Asians, it increases the isolation score for both MENA and South Asian populations.

Correspond with theoretical discussion, being native-born, speaking English, and staying longer decreases isolation of MENA, South and East Asian population in the United States in both model (except that being native change effect in its direction for MENA). In contrast, the average household income has no effect on decreasing the isolation of groups and does not promote spatial contact for those groups, though its effect shifts in full model. In general, demographic characteristics do not promote spatial assimilation for MENA and South Asians yet promote spatial contact for East Asians and other social groups. Unlike South Asian, the older MENA and East population become the more contact they have with population different than their own groups.

Metropolitan area characteristics also exert significant influence on the isolation indexes. Although not statistically significant for MENA populations, for each point increase in the log of metropolitan population, the isolation index rose for all three immigrant populations—by 0.05

for MENA immigrants, 0.59 for South Asians and 0.62 for East Asians. However, the percentage of the group's minority influenced the isolation score significantly in the same direction. Increasing the population size of each immigrant group by one percent increased the isolation index by 3.97 for MENA immigrants, 2.83 for South Asians and 2.07 for East Asians. In addition, the isolation index of each group in a given region is not consistent in terms of direction or statistical significance. The isolation score of MENA immigrants in the Midwest, South and West versus Northeast is also significantly higher. Unlike for the West, the isolation index of the Midwest and South are higher for South Asians compared to the Northeast. For East Asians, however, the isolation score lessened in the Midwest, the South and the West, versus the Northeast. Taken together, metropolitan area characteristics affect the isolation of MENA, South and East Asian populations in similar ways; however, their isolation levels differ across the four regions of United States.

Diachronic Regression Findings

Table 2.3A and Table 2.3B[26] present the OLS regression results of residential segregation from non-Hispanic whites for MENA, South Asian and East Asian populations across two time periods: 2000 and 2016. As stated previously, estimating the change in the segregation scores of MENA populations, compared with the two other groups, helps demonstrate the influence of contextual factors when controlling for spatial assimilation and metropolitan area-level predictors, as well as group-level characteristics. The figures before the terrorist attacks of September 11th are from the year 2000, and 2016 represents the post-9/11 period. The third column shows the differences in segregation score by subtracting the coefficient value of 2016 from the coefficient of value of 2000. Since I aim to estimate the differences in segregation

[26] Tables 3A and Table 3B represent the fullest samples of these populations, and therefore better reflect the overall experiences of the immigrant groups under consideration. I also ran a set of analyses with one consistent set of places across time for all three groups (tables are included in the appendix). Although there are slight numerical differences, the results are consistent with those in Tables 3A and 3B.

scores for each group, controlling for individual and metropolitan area-level characteristics, my interpretation will focus on the third column.

Starting with Table 2.3A, the segregation score of MENA populations in 2000 is 48.9, which rises to 54.6 in 2016, as expected. Likewise, South Asian segregation scores rise from 48.5 to 65.6 and East Asian scores rise from 38.6 to 52.3. Considering the long history of housing discrimination and the pervasiveness of racism and xenophobia in the U.S., the increase in the dissimilarity index over time for these minority groups is not surprising (Wilkes and Iceland 2004; Ross and Turner 2005). Comparing these three groups, however, and taking into consideration the racialization of MENA populations as a result of 9/11 (and the many other social and political consequences stemming from these terrorist attacks), I expected to see the largest increase for MENA immigrants, followed by South Asians, as they have sometimes been mistaken as MENA immigrants. Instead, with a figure of 17.1 for South Asians, and 13.7 for East Asians, both groups' indices surpassed the MENA population segregation score difference (of 5.68). This means that among the three groups, controlling for group- and metropolitan area-level characteristics, MENA segregation actually increased the least between 2000 to 2016. However, since MENA segregation different (increase) from pre-9/11, my results slightly fail to support Hypothesis 3. This is because, despite the differences in average levels of segregation between MENA and East and South Asian populations being significantly different in the post-9/11 period compared to the pre-9/11 period, the differences were not higher for MENA, as was expected.

Table 2.3A. Coefficient and Standard Error Estimates from Linear Regressions of the Dissimilarity Index (vs. Non-Hispanic White) on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, 2000-2016

	MENA						South Asian						East Asian					
	2000		2016		Difference		2000		2016		Difference		2000		2016		Difference	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables																		
% speaking English well or only	-0.114	0.066	0.019	0.072	0.133	0.098	-0.141	0.066 *	-0.156	0.073 *	-0.016	0.098	-0.164	0.060 **	-0.152	0.085	0.012	0.104
Average education (in years)	-1.860	0.743 *	-2.606	0.875 **	-0.746	1.148	0.673	0.967	-0.899	1.128	-1.572	1.486	0.336	0.840	-0.774	1.237	-1.111	1.495
Average household income (in $000s)	-0.020	0.022	-0.040	0.022	-0.020	0.031	-0.015	0.017	0.013	0.027	0.028	0.032	-0.023	0.025	0.007	0.030	0.030	0.039
Average years in U.S. (in years)	-0.227	0.122	-0.138	0.135	0.089	0.182	0.086	0.280	0.164	0.248	0.078	0.374	-0.406	0.193 *	-0.155	0.188	0.251	0.270
% native-born	-0.046	0.042	-0.128	0.047 **	-0.082	0.063	-0.089	0.098	0.093	0.099	0.182	0.140	-0.075	0.057	0.077	0.069	0.152	0.090
Other demographics																		
Average age (in years)	-0.263	0.136	-0.152	0.153	0.111	0.205	-0.237	0.256	-0.387	0.264	-0.150	0.368	-0.209	0.179	-0.295	0.204	-0.086	0.271
% married	0.087	0.051	-0.008	0.057	-0.096	0.076	0.001	0.061	0.079	0.082	0.079	0.102	0.180	0.065 **	0.119	0.069	-0.060	0.095
% with children present	-0.057	0.049	0.062	0.053	0.119	0.072	-0.110	0.070	-0.064	0.057	0.046	0.091	-0.188	0.061 **	-0.150	0.073 *	0.038	0.095
Metropolitan area characteristics																		
Log of CBSA population	0.665	0.486	0.405	0.496	-0.260	0.694	0.579	0.594	-0.147	0.602	-0.727	0.846	1.337	0.519 *	0.090	0.513	-1.247	0.730
% minority group in CBSA	-11.730	1.778 ***	-8.520	1.152 ***	3.210	2.119	0.956	0.999	-3.152	0.567 ***	-4.109	1.149 ***	1.422	0.482 **	-0.671	0.390	-2.093	0.620 ***
Midwest	6.193	1.453 ***	3.933	1.451 **	-2.260	2.053	3.704	1.791 *	1.968	1.659	-1.737	2.441	0.783	1.650 q	1.505	1.619	0.722	2.311
South	3.817	1.290 **	5.544	1.327 ***	1.727	1.850	0.536	1.631	1.906	1.487	1.370	2.208	-0.002	1.411	2.026	1.421	2.027	2.003
West	-0.533	1.519	0.878	1.462	1.411	2.108	-5.867	1.969 **	-1.092	1.647	4.775	2.567	-5.123	1.844 **	-7.534	1.918 ***	-2.412	2.661
Intercept	48.865	0.425 ***	54.547	0.468 ***	5.682	0.632 ***	48.539	0.552 ***	65.645	0.537 ***	17.107	0.770 ***	38.640	0.484 ***	52.313	0.499 ***	13.673	0.695 ***
R^2	0.48		0.53				0.29		0.32				0.58		0.47			
Model df	135		135		135		132		132		132		163		163		163	

Notes : Data for the index of dissimilarity and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Looking at the differences in the relationship between acculturation, SES, and segregation in the post-9/11 period compared to the pre-9/11 period, the figures tell a different story for each immigrant group. For all three groups, the relationship between educational attainment and segregation became stronger. That is, increases in educational attainment decreased the dissimilarity indices in larger magnitudes for MENA, South and East Asian populations in 2016 than in 2010. In the post-9/11 period, nativity's effect became stronger in decreasing residential segregation for MENA immigrants, but not for the other two groups. Similarly, English language proficiency lessened the segregation scores for South and East Asians, but not for MENA immigrants. Also, unlike what spatial assimilation theory predicts, increased median household income in the U.S. did not lessen the segregation score of the South and East Asian populations over time. The length of residence decreased the segregation score for all groups over time, excluding South Asians. In general, the presumed causal relationship between acculturation and SES and spatial assimilation is not observed, it varies considerably across groups and overtime. The acculturation and SES do not boast the spatial proximity of non-Hispanic white over time unlike the assumption that the longer immigrant stay the more they become incorporated.

Unlike what Hypothesis 4 suggests, when looking at English language proficiency as an indicator of acculturation, the relationship between English language proficiency and segregation stays the same. However, it is important to note that the magnitude of the coefficient is dissimilar in the pre- and post-9/11 periods, which suggests that there is a stronger relationship between acculturation and segregation for South Asians than MENA populations in the post-9/11 period. Likewise, the coefficient for English language proficiency at difference displays a stronger relationship between acculturation and segregation for East Asians than MENA populations, as Hypothesis 4 predicts. In addition, the SES predictor (educational attainment) became stronger

for South Asians and East Asians compared to MENA immigrants in the post-9/11 period, as Hypothesis 4 suggested. Nonetheless, the difference in the relationship between household incomes and segregation remains almost same for MENA in the post-9/11 period compared to the pre-9/11 period, but not for South and East Asian populations.

Table 2.3B displays the results of OLS regressions used to predict isolation in 2000 and 2016, as well as the differences in isolation between 2000 and 2016. The degree of isolation experienced by each group significantly increased from 2000 to 2016. Although the isolation index is mathematically related to the size of an immigrant group, the important thing here is to focus on the other factors that influence the isolation index of each group. Disregarding statistical significance due to the randomized sample selection, English language proficiency and educational attainment were associated with increases of 0.007 and 0.004 points in isolation, respectively, for MENA populations, yielding a 1.065 point change in isolation over time. Likewise, English language proficiency, household income and nativity were associated with an increase of 0.013, 0.004 and 0.001 points in isolation, respectively, for East Asians, yielding a 1.380 point change in isolation over time. Educational attainment and nativity had a stronger effect in increasing isolation for South Asians, as well, with an increase of 0.188 and 0.022 points in isolation, yielding a 2.48 point change in isolation from 2000 to 2016. Overall, these findings contradict the tenets of the spatial assimilation model, indicating that increases in household income, educational attainment, and English language proficiency do not translate into increasing proximity with non-Hispanic whites for the MENA and South and East Asian populations.

Table 2.3B. Coefficient and Standard Error Estimates from Linear Regressions of the Isolation Index on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, 2000-2016

	MENA						South Asian						East Asian					
	2000		2016		Difference		2000		2016		Difference		2000		2016		Difference	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables																		
% speaking English well or only	-0.015	0.016	-0.008	0.020	0.007	0.026	-0.011	0.006	-0.025	0.020	-0.015	0.021	-0.015	0.012	-0.002	0.014	0.013	0.018
Average education (in years)	-0.449	0.180 *	-0.445	0.245	0.004	0.304	0.027	0.093	0.088	0.306	0.061	0.320	0.046	0.166	0.011	0.204	-0.034	0.263
Average household income (in $000s)	-0.003	0.005	-0.006	0.006	-0.002	0.008	-0.001	0.002	-0.004	0.007	-0.004	0.007	-0.009	0.005	-0.005	0.006	0.004	0.007
Average years in U.S. (in years)	0.014	0.029	0.014	0.038	0.000	0.048	-0.002	0.027	-0.060	0.067	-0.057	0.073	-0.030	0.038	-0.042	0.033	-0.013	0.050
% native-born	0.003	0.010	0.001	0.013	-0.002	0.016	0.000	0.009	0.012	0.027	0.012	0.029	-0.004	0.011	-0.003	0.011	0.001	0.016
Other demographics																		
Average age (in years)	-0.039	0.033	-0.017	0.043	0.022	0.054	-0.021	0.025	-0.051	0.072	-0.029	0.076	-0.008	0.035	-0.027	0.037	-0.019	0.051
% married	0.018	0.012	0.015	0.016	-0.004	0.020	0.001	0.006	0.038	0.022	0.036	0.023	0.011	0.013	-0.001	0.016	-0.011	0.021
% with children present	-0.011	0.012	0.004	0.015	0.015	0.019	0.001	0.007	0.015	0.015	0.015	0.017	-0.015	0.012	-0.033	0.011 **	-0.018	0.016
Metropolitan area characteristics																		
Log of CBSA population	0.127	0.118	0.094	0.139	-0.033	0.182	0.197	0.057 ***	0.688	0.163 ***	0.491	0.173 **	0.481	0.103 ***	0.623	0.103 ***	0.142	0.146
% minority group in CBSA	4.512	0.430 ***	4.147	0.322 ***	-0.365	0.537	2.757	0.096 ***	2.792	0.154 ***	0.034	0.182	2.326	0.095 ***	2.071	0.079 ***	-0.255	0.124 *
Midwest	0.635	0.351	1.062	0.406 **	0.427	0.537	0.083	0.173	-0.241	0.450	-0.324	0.482	-0.219	0.327	-0.345	0.336	-0.126	0.469
South	0.438	0.312	1.036	0.371 **	0.598	0.485	-0.105	0.157	0.016	0.403	0.121	0.433	-0.733	0.279 **	-0.752	0.298 *	-0.019	0.409
West	-0.171	0.367	0.224	0.409	0.395	0.549	-0.362	0.190	-0.610	0.447	-0.248	0.485	-0.981	0.365 **	-1.101	0.389 **	-0.120	0.533
Intercept	1.451	0.103 ***	2.516	0.131 ***	1.065	0.166 ***	1.744	0.053 ***	4.194	0.146 ***	2.450	0.155 ***	2.380	0.096 ***	3.760	0.097 ***	1.380	0.136 ***
R^2	0.57		0.66				0.89		0.82				0.86		0.85			
Model df	135		135		135		132		132		132		163		163		163	

Notes : Data for the isolation index and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Other demographic factors also influenced the isolation index. For MENA immigrants, getting older, being married, and having children increased the isolation index over time. However, all these factors promoted a decline in isolation indices for South Asians and East Asians over time—except that having children increased the isolation index of South Asians as well demonstrate disparities across groups in effect of demographic attributes on their residential patterns.

Difference in Differences Findings

Table 2.4A and 2.4B depicts the 2000 to 2016 difference, and difference in differences analysis of change over time in segregation and its determinants for the MENA, South Asian and East Asian populations. For the 2000 to 2016 difference, all three immigrant groups' dissimilarity scores showed a significant rise over time, however with an intercept of 17.11 the South Asian population saw the highest increase in their dissimilarity index, followed by East Asians (13.67) and the MENA population (5.68). We observe similar patterns in the isolation indices that are displayed in Table 2.4B. The isolation index rose significantly for MENA (1.06), South (2.45) and East Asians (1.38) from 2000 to 2016, but the highest increase belongs to the South Asian population again.

On the right side of panels of Table 2.4A and Table 2.4B, a positive coefficient means that the impact of the variable on segregation is increasing more rapidly for the first group in comparison to the second group. Negative coefficients indicate the opposite, that variables became markedly more related to desegregation for the first group relative to the second. For example, in Table 2.4A, with respect to English proficiency and educational attainment, the relationship grew stronger over time for the MENA population and weaker for South Asians. The difference in difference coefficient reflects that these two groups experienced different changes in the salience of this relationship during this period. Specifically, this means that

English proficiency and educational attainment are increasingly related to desegregation for South Asians while the same variables are increasingly related to segregation for the MENA population. This measure is similar for the MENA and East Asian differences, but it shows stronger dissimilarities for the South Asian population. That is, the effect of English language competence and educational attainment on MENA population's spatial proximity with non-Hispanic white shrinkages over time (after 9/11 terrorist attacks) compared to other two groups as presumed.

However, household income and nativity are increasingly related to desegregation for the MENA population while increasingly related to segregation for the South Asian population. For the MENA-East Asian comparison, only education and nativity are increasingly related to desegregation for the MENA population while the rest of the assimilation variables are increasingly related to desegregation for the East Asian population. In the South and East Asian comparison, all the assimilation variables (except nativity) are increasingly related to desegregation for the East Asian population but are related to segregation for South Asians during this time period.

In terms of the demographic variables, getting older and having children are increasingly related to desegregation for South Asians and East Asians compared to the MENA population, being married show the opposite relationship. Being married and having children are increasingly related to segregation for the South Asian population in South and East Asian comparison yet indicate desegregation of South Asians with respect to increasing age. The positive coefficients of metropolitan area control variables—log of total population, percent of minority group—in MENA and South and East Asian comparison are increasingly related to desegregation for the South and East Asian populations while these same variables are increasingly related to segregation for the MENA population.

Table 2.4A. Coefficient and Standard Error Estimates from Difference in Differences Analysis of Change Over Time in Segregation and its Determinants, 2000-2016

	2000 to 2016 Differences						Difference in Differences					
	MENA		South Asian		East Asian		MENA-South		MENA-East		South-East	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	0.133	0.098	-0.016	0.098	0.012	0.104	0.148	0.098	0.121	0.101	-0.027	0.101
Average education (in years)	-0.746	1.148	-1.572	1.486	-1.111	1.495	0.826	1.329	0.365	1.349	-0.461	1.491
Average household income (in $000s)	-0.020	0.031	0.028	0.032	0.030	0.039	-0.048	0.031	-0.049	0.036	-0.001	0.036
Average years in U.S. (in years)	0.089	0.182	0.078	0.374	0.251	0.270	0.011	0.295	-0.162	0.234	-0.173	0.322
% native-born	-0.082	0.063	0.182	0.140	0.152	0.090	-0.264	0.109 *	-0.234	0.079 **	0.030	0.115
Other demographics												
Average age (in years)	0.111	0.205	-0.150	0.368	-0.086	0.271	0.261	0.299	0.197	0.243	-0.064	0.319
% married	-0.096	0.076	0.079	0.102	-0.060	0.095	-0.174	0.090	-0.035	0.087	0.139	0.098
% with children present	0.119	0.072	0.046	0.091	0.038	0.095	0.073	0.082	0.081	0.086	0.008	0.093
Metropolitan area characteristics												
Log of CBSA population	-0.260	0.694	-0.727	0.846	-1.247	0.730	0.466	0.775	0.987	0.714	0.521	0.785
% minority group in CBSA	3.210	2.119	-4.109	1.149 ***	-2.093	0.620 ***	7.319	1.699 ***	5.303	1.498 ***	-2.016	0.902 *
Midwest	-2.260	2.053	-1.737	2.441	0.722	2.311	-0.523	2.258	-2.982	2.198	-2.459	2.372
South	1.727	1.850	1.370	2.208	2.027	2.003	0.357	2.039	-0.301	1.935	-0.657	2.099
West	1.411	2.108	4.775	2.567	-2.412	2.661	-3.364	2.351	3.823	2.426	7.187	2.618 **
Intercept	5.682	0.632 ***	17.11	0.770 ***	13.67	0.695 ***	-11.43	0.705 ***	-7.991	0.667 ***	3.434	0.730 ***
Model df	135		138		163							

Notes : Data for the index of dissimilarity and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Corresponding with Table 2.4A, the results in Table 2.4B for education, household income and nativity show similar patterns. Coefficients related to English language proficiency continue to show similar patterns in MENA-South and MENA-East Asian comparisons. However, the opposite relationship was observed in the South Asian-East Asian comparison, with increased segregation for East Asians relative to the South Asian population. In terms of control variables, demographic characteristics display similar findings across the two tables with the exception of having children. But in the case of metropolitan area characteristics, while each variable is related to an increase of segregation for the MENA population in Table 2.4A, this became the opposite in Table 2.4B. For instance, an increase in the log of total population of the metropolitan area and the percent of that area made of minority groups are increasingly related to desegregation for the MENA population while the same variables are increasingly related to segregation for both the South and East Asian populations.

Ultimately, these difference in differences findings reveal variation in the strength of the relationships between the spatial assimilation and socioeconomic and acculturation variables across the three groups over time. Although we cannot draw a single general conclusion from these results, it is safe to say that in every two-pair comparison, the independent variables are not constant in their effects on segregation or desegregation across the three groups under consideration.

Table 2.4B. Coefficient and Standard Error Estimates from Difference in Differences Analysis of Change Over Time in Segregation and its Determinants, 2000-2016

	2000 to 2016 Differences						Difference in Differences					
	MENA		South Asian		East Asian		MENA-South		MENA-East		South-East	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	0.007	0.026	-0.015	0.021	0.013	0.018	0.022	0.023	-0.006	0.022	-0.028	0.019
Average education (in years)	0.004	0.304	0.061	0.320	-0.034	0.263	-0.057	0.312	0.038	0.282	0.096	0.290
Average household income (in $000s)	-0.002	0.008	-0.004	0.007	0.004	0.007	0.001	0.008	-0.006	0.008	-0.007	0.007
Average years in U.S. (in years)	0.000	0.048	-0.057	0.073	-0.013	0.050	0.058	0.062	0.013	0.049	-0.045	0.062
% native-born	-0.002	0.016	0.012	0.029	0.001	0.016	-0.014	0.023	-0.003	0.016	0.012	0.023
Other demographics												
Average age (in years)	0.022	0.054	-0.029	0.076	-0.019	0.051	0.051	0.066	0.040	0.053	-0.010	0.064
% married	-0.004	0.020	0.036	0.023	-0.011	0.021	-0.040	0.022	0.008	0.020	0.047	0.022 *
% with children present	0.015	0.019	0.015	0.017	-0.018	0.016	0.001	0.018	0.033	0.018	0.033	0.017
Metropolitan area characteristics												
Log of CBSA population	-0.033	0.182	0.491	0.173 **	0.142	0.146	-0.524	0.177 **	-0.174	0.163	0.349	0.159 *
% minority group in CBSA	-0.365	0.537	0.034	0.182	-0.255	0.124 *	-0.399	0.399	-0.110	0.373	0.289	0.153
Midwest	0.427	0.537	-0.324	0.482	-0.126	0.469	0.751	0.510	0.554	0.501	-0.197	0.475
South	0.598	0.485	0.121	0.433	-0.019	0.409	0.478	0.459	0.617	0.445	0.140	0.420
West	0.395	0.549	-0.248	0.485	-0.120	0.533	0.643	0.518	0.515	0.541	-0.128	0.512
Intercept	1.065	0.166 ***	2.450	0.155 ***	1.380	0.136 ***	-1.385	0.161 ***	-0.315	0.151 *	1.070	0.145 ***
Model df	135		138		163		135		138		163	

Notes : Data for the index of dissimilarity and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Discussion and Conclusions

The goal of this chapter was to examine residential patterns and trends of Middle Eastern and North African (MENA) immigrants in the United States. As discussed previously, the MENA population has been further racialized since the terrorist attacks on 9/11 and many other intermittent acts of violence perpetrated by Islamic terrorists in the U.S. and around the world. Since then Islam has been framed as "synonymous with terrorism, patriarchy, misogyny, and anti-American sentiments" (Selod 2015:77), putting the MENA population into the center of attention as a threat to national security and as sources of terrorism. Certainly, such perceptions influence their interactions in everyday life both at macro and micro level (Gaddis and Ghoshal 2015; Widner and Chicoine 2011). Despite that, literature has not examined the residential experiences of the MENA population in U.S. society. The current study aimed to shed light on this gap by: (1) examining the current patterns of residential segregation of the MENA population on the national level in U.S. society; and (2) showing whether the MENA population experienced spatial disadvantage compared to South and East Asian populations over time, considering the backlash after the 9/11 terrorist attacks. To do so, I used tract-level data from the 2000 U.S. census and 2016 ACS merged with 2000-2016 IPUMS data to calculate metropolitan area-level group means.

Descriptive analysis revealed that all three groups demonstrate, on average, moderate levels of segregation in 2000 and 2016, with the exception of the South Asian group (65.5 in 2016), which exceeds the threshold of 60 for a high level of residential segregation (Massey and Denton 1993). Most interestingly, the segregation level of all three groups increases over time and surpasses levels of residential segregation of Black and Hispanic populations, which historically have been hypersegrerated from white populations in American society (Massey and Denton 1993). Only the East Asian population reaches the same level of residential segregation

of the Black population in 2016 (Figure 1). Contrary to my first hypothesis, MENA immigrants are not more segregated than South Asian immigrants. However, consistent with my assumption, MENA immigrants are more segregated than East Asian immigrants. Also consistent with my expectation is that MENA's segregation increased from 2000 to 2016; yet, unexpectedly, this increase was larger for South and East Asian immigrants, especially South Asian immigrants.

Multivariate analyses showed that the effect of socioeconomic and acculturation indicators on residential incorporation is not usually consistent across the three groups. For instance, while English proficiency lowers the dissimilarity score for the MENA and South Asian population, this is not the case for East Asians; and while educational attainment lessens the dissimilarity score for MENA and East Asian immigrants, it does not influence the dissimilarity index of the South Asian population. Similarly, nativity status and length of residence also do not facilitate residential incorporation in the manner predicted by spatial assimilation models for MENA and South Asian groups. However, the effect of household income was consistent with the hypotheses of the spatial assimilation model; increasing family income attuned segregation scores for all three groups. Taken together, these findings suggest that not every variable from the spatial assimilation model, or variables' predicted relationships, is applicable to all immigrant groups.

The spatial assimilation model argues that the longer immigrants stay in the arrival society, the more they improve their educational attainment and income, and the more they overcome the language barrier, the more likely they are to live in American mainstream neighborhoods. Despite the fact that all three immigrant groups under consideration carry high social and economic capital in both years, their dissimilarity and isolation index rose post-9/11 (2016) compared to pre-9/11 (2000). This contradicts what the spatial assimilation hypothesis

suggests. How, then, can we explain the increased residential segregation of MENA and South and East Asian immigrants?

As previous researchers have addressed, "it may be neither economic nor social capital that determines one's spatial mobility but membership in a particular ethnic group" (White et al. 1993; Holsinger 2009:101), as well as racial and religious status, or a combination of these statuses. In the aftermath of September 11, the racialized status of MENA/Arab/Muslim groups has been conflated with terrorism (Naber 2008; Alsultany 2008), leading to excessive suspicion and surveillance that demonizes MENA populations in American society. Such a context of reception could account for the increasing residential segregation of MENA populations over time despite their high levels of SES and acculturation.

It is conceivable that the South Asian population's increased residential segregation post-9/11 can be explained by a similar context of reception that MENA immigrants have experienced—that is, a context of religious and cultural discrimination and racial profiling. The pervasiveness of the misconception that Muslims are predisposed to violence and terrorism puts every person who is perceived to look "Muslim" in danger (Love 2017). In the wake of 9/11, South Asian immigrants, like MENA, Arab, and Muslim immigrants, found themselves the objects of intensified suspicion, surveillance, violence and discriminatory attitudes. South Asian immigrants have been mistaken as MENA and/or Muslim because of their phenotypical similarities and common religious indicators (e.g. turban for Sikhs and hijab for Muslims) (Maira 2004:219; Love 2017). In addition, South Asian groups, particularly Indians have subjected to "racial discrimination in the form of 'model minority myth' [….] while simultaneously 'forever foreign'" in the United States (Schachter 2014:1492, Kyle and Lee 2016). In fact, research show that compared to Chinese, Filipino, Japanese, Koreans and Vietnamese, Asian Indians expressed the highest racial and immigrant based discrimination in the United States (Schachter 2014;

Jeung and Lim 2012) including the workplace, employment and neighborhood level (Brettell 2011) and have been viewed as "adversarial invaders and troublemaker (Aptekar 2009:1512-1529). Such treatment of discrimination is reflected in residential relations, preventing South Asians' spatial incorporation with non-Hispanic whites.

Taken together, all three immigrant groups' increasing residential segregation over time can be explained by immigration—an increase in their population size of immigrants' group (Hall et al. 2010) as well as the persistent discrimination in the housing market in the United States. Although discrimination in the housing market is especially pronounced among non-Hispanic white and Black residents (Ross and Turner 2005), several studies have identified bias and discrimination against Arabs and Muslims (Gaddis and Ghoshal 2015; Carpusor and Loges 2006; Ahmed, Andersson and Hammarstedt 2010, Hogan and Berry 2011, Friedman et. al 2019) as well as Asians (Park and Iceland 2011). For instance, when selecting potential roommates, Arab-sounding names are only 57 percent as likely as white-sounding names to receive a response to a roommate-request (Gaddis and Ghoshal 2015). Similarly, according to a study conducted by Carpusor and Loges (2006), compared to white names, Arab names receive significantly fewer positive responses when attempting to rent in corporate and privately-owned apartment complexes. Such housing discrimination for Muslims/Arabs and Asians in the rental market can explain increasing segregation and evidence of the limitations of socioeconomic standing in the United States.

This study also has several limitations. One is that I do not directly control for religious status. Even though one can assume that the majority of the MENA population in this study are Muslim, as they come from countries where Islam is the most common religion,[27] I could not control for religion affiliation because the U.S. census does not collect data on religion. Second,

[27] Pew Research Center (2015).

the MENA population is one of the fastest-growing minority populations in the United States. However, in order to compute a meaningful and reliable dissimilarity index and have comparable cases, I can only include metropolitan areas where at least 500 individuals from MENA or South and East Asian populations reside simultaneously. Such a restriction prevents me from examining the experiences of all MENA immigrants. While overcoming the second limitation in later research is dependent on population size, further research could address the first limitation. In order to better theorize the effect of religion on spatial location, future research should use data from other sources. This might not be possible for a national-level analysis but could be applicable to particular states by utilizing survey data at the local level.

In addition, in order to move beyond group-level experiences of residential patterns and reveal individual-level experiences, future research should disaggregate the category of MENA immigrants. This would help us better understand and identify the residential disadvantages particular to specific ethnic groups. Lastly, despite the fact that the current research shows that the MENA population is segregated from white neighborhoods, we do not know the characteristics of the neighborhoods where MENA populations reside. This is important because segregation connotes a negative meaning in terms of accessing socioeconomic and political resources and the concentration of poverty—in particular for Black and white segregation in the United States. To determine MENA populations' experiences of poverty and/or access to substantial resources, future research should examine the socioeconomic characteristics of neighborhoods where MENA populations are located.

Ultimately, this study adds to the existing literature on immigrant spatial patterns at the national level by assessing the extent to which the MENA population experiences residential segregation from non-Hispanic whites in the United States. Prior to this study, this has not been examined in detail. The current research acknowledges that the groups considered here—MENA,

East Asians, and South Asians—share similarities in socioeconomic status and origin continent and are often phenotypically distinguishable from the non-Hispanic white population. This study measures to what degree racial and ethnic status influence residential incorporation and to what extent socioeconomic status and acculturation shape residential patterns. Overall, my results demonstrate the significance of structural factors (i.e. discrimination), in addition to group-level characteristics.

Appendix Tables

Table 2.A1. Coefficient and Standard Error Estimates from Linear Regressions of the Dissimilarity Index (MENA vs. Non-Hispanic White) on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, 2000-2016

	MENA						South Asian						East Asian					
	2000		2016		Difference		2000		2016		Difference		2000		2016		Difference	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables																		
% speaking English well or only	-0.060	0.069	0.146	0.091	0.206	0.114	-0.088	0.069	-0.164	0.083	-0.076	0.108	-0.196	0.104	-0.105	0.106	0.091	0.149
Average education (in years)	-1.932	0.814 *	-3.207	0.971 **	-1.274	1.267	0.975	0.971	-0.710	1.279	-1.685	1.606	-0.384	1.205	-0.200	1.562	0.184	1.973
Average household income (in $000s)	-0.035	0.023	-0.060	0.025 *	-0.025	0.034	0.001	0.021	0.006	0.029	0.005	0.036	0.012	0.034	-0.056	0.045	-0.068	0.056
Average years in U.S. (in years)	-0.233	0.129	-0.100	0.141	0.133	0.191	-0.027	0.278	0.004	0.297	0.031	0.407	-0.416	0.265	-0.493	0.249 *	-0.077	0.364
% native-born	-0.022	0.043	-0.163	0.052 **	-0.141	0.067 *	-0.088	0.097	0.081	0.110	0.169	0.147	-0.053	0.080	0.098	0.083	0.151	0.115
Other demographics																		
Average age (in years)	-0.228	0.145	-0.045	0.159	0.183	0.215	-0.423	0.267	-0.266	0.306	0.157	0.406	-0.419	0.235	0.123	0.281	0.542	0.366
% married	0.088	0.053	0.103	0.071	0.015	0.088	-0.029	0.066	0.092	0.086	0.121	0.108	0.183	0.079 *	0.070	0.098	-0.113	0.126
% with children present	0.021	0.055	0.077	0.061	0.056	0.082	0.000	0.074	-0.096	0.061	-0.097	0.096	-0.236	0.082 **	-0.111	0.100	0.125	0.130
Metropolitan area characteristics																		
Log of CBSA population	-0.148	0.515	-0.289	0.534	-0.140	0.741	0.773	0.618	0.048	0.637	-0.725	0.887	1.472	0.644 *	0.862	0.604	-0.610	0.883
% minority group in CBSA	-10.390	1.744 ***	-7.812	1.133 ***	2.578	2.080	-0.864	1.288	-3.356	0.643 ***	-2.492	1.439	1.321	0.504 **	-0.242	0.389	-1.563	0.637 *
Midwest	6.081	1.428 ***	4.793	1.459 **	-1.288	2.042	2.364	1.759	2.031	1.716	-0.333	2.457	0.850	1.761	0.692	1.636	-0.158	2.403
South	4.111	1.304 **	4.934	1.368 ***	0.823	1.891	-1.357	1.597	1.184	1.549	2.541	2.225	0.176	1.560	2.363	1.508	2.187	2.170
West	-0.847	1.528	-0.149	1.491	0.698	2.135	-6.712	1.886 ***	-0.329	1.742	6.383	2.567 *	-5.077	2.259 *	-8.976	2.284 ***	-3.899	3.213
Intercept	49.569	0.444 ***	54.920	0.501 ***	5.350	0.670 ***	48.275	0.556 ***	65.506	0.570 ***	17.231	0.796 ***	38.558	0.611 ***	51.646	0.594 ***	13.088	0.852 ***
R^2	0.48		0.54				0.31		0.33				0.58		0.52			
Model df	120		120		120		120		120		120		120		120		120	

Notes : Data for the index of dissimilarity and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Table 2.A2. Coefficient and Standard Error Estimates from Linear Regressions of the Isolation Index on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, 2000-2016

	MENA						South Asian						East Asian					
	2000		2016		Difference		2000		2016		Difference		2000		2016		Difference	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables																		
% speaking English well or only	-0.008	0.018	0.009	0.027	0.017	0.033	-0.008	0.006	-0.020	0.022	-0.013	0.023	-0.030	0.023	-0.046	0.029	-0.016	0.037
Average education (in years)	-0.617	0.214 **	-0.541	0.290	0.076	0.361	0.084	0.088	0.322	0.344	0.237	0.355	0.035	0.270	0.742	0.422	0.708	0.501
Average household income (in $000s)	-0.004	0.006	-0.011	0.007	-0.007	0.010	0.001	0.002	-0.004	0.008	-0.005	0.008	-0.014	0.008	-0.024	0.012	-0.010	0.014
Average years in U.S. (in years)	0.027	0.034	0.023	0.042	-0.004	0.054	-0.010	0.025	-0.078	0.080	-0.068	0.084	0.023	0.059	-0.028	0.067	-0.052	0.090
% native-born	0.003	0.011	-0.003	0.015	-0.006	0.019	0.002	0.009	0.019	0.030	0.018	0.031	0.002	0.018	0.001	0.022	-0.001	0.029
Other demographics																		
Average age (in years)	-0.056	0.038	-0.006	0.048	0.050	0.061	-0.033	0.024	0.000	0.082	0.033	0.086	-0.062	0.053	0.023	0.076	0.085	0.092
% married	0.021	0.014	0.025	0.021	0.004	0.025	-0.001	0.006	0.030	0.023	0.031	0.024	0.015	0.018	-0.018	0.026	-0.033	0.032
% with children present	-0.005	0.014	0.014	0.018	0.018	0.023	0.004	0.007	0.010	0.016	0.005	0.018	-0.014	0.018	-0.015	0.027	-0.001	0.033
Metropolitan area characteristics																		
Log of CBSA population	0.025	0.135	0.017	0.160	-0.009	0.209	0.269	0.056 ***	0.780	0.171 ***	0.512	0.180 **	0.655	0.144 ***	1.014	0.163 ***	0.359	0.218
% minority group in CBSA	4.677	0.459 ***	4.322	0.339 ***	-0.356	0.570	2.424	0.116 ***	2.742	0.173 ***	0.318	0.209	2.365	0.113 ***	2.014	0.105 ***	-0.35	0.154 *
Midwest	0.686	0.376	1.171	0.436 **	0.486	0.576	-0.027	0.159	-0.294	0.462	-0.268	0.489	-0.228	0.395	-0.553	0.442	-0.325	0.593
South	0.531	0.343	1.000	0.409 *	0.469	0.534	-0.217	0.144	-0.136	0.417	0.081	0.441	-0.981	0.350 **	-1.068	0.407 **	-0.087	0.537
West	-0.239	0.402	0.066	0.446	0.305	0.600	-0.446	0.170 **	-0.622	0.469	-0.176	0.499	-1.293	0.507 *	-1.352	0.617 *	-0.059	0.798
Intercept	1.516	0.117 ***	2.522	0.150 ***	1.006	0.19 ***	1.697	0.050 ***	4.130	0.153 ***	2.433	0.16 ***	2.211	0.137 ***	3.387	0.160 ***	1.18	0.21 ***
R^2	0.58		0.68				0.86		0.82				0.86		0.87			
Model df	120		120		120		120		120		120		120		120		120	

Notes : Data for the isolation index and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Table 2.A3. Coefficient and Standard Error Estimates from Difference in Differences Analysis of Change Over Time in Segregation and its Determinants, 2000-2016

	2000 to 2016 Differences						Difference in Differences					
	MENA		South Asian		East Asian		MENA-South		MENA-East		South-East	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	0.206	0.114	-0.076	0.108	0.091	0.149	0.281	0.111 *	0.115	0.133	-0.166	0.130
Average education (in years)	-1.274	1.267	-1.685	1.606	0.184	1.973	0.411	1.446	-1.458	1.658	-1.869	1.799
Average household income (in $000s)	-0.025	0.034	0.005	0.036	-0.068	0.056	-0.030	0.035	0.043	0.046	0.072	0.047
Average years in U.S. (in years)	0.133	0.191	0.031	0.407	-0.077	0.364	0.102	0.318	0.210	0.290	0.108	0.386
% native-born	-0.141	0.067 *	0.169	0.147	0.151	0.115	-0.310	0.114 **	-0.292	0.094 **	0.018	0.132
Other demographics												
Average age (in years)	0.183	0.215	0.157	0.406	0.542	0.366	0.025	0.325	-0.360	0.300	-0.385	0.387
% married	0.015	0.088	0.121	0.108	-0.113	0.126	-0.106	0.099	0.128	0.109	0.234	0.117 *
% with children present	0.056	0.082	-0.097	0.096	0.125	0.130	0.152	0.089	-0.069	0.108	-0.221	0.114
Metropolitan area characteristics												
Log of CBSA population	-0.140	0.741	-0.725	0.887	-0.610	0.883	0.585	0.818	0.470	0.815	-0.114	0.885
% minority group in CBSA	2.578	2.080	-2.492	1.439	-1.563	0.637 *	5.070	1.789 **	4.141	1.538 **	-0.929	1.113
Midwest	-1.288	2.042	-0.333	2.457	-0.158	2.403	-0.956	2.259	-1.131	2.230	-0.175	2.430
South	0.823	1.891	2.541	2.225	2.187	2.170	-1.718	2.064	-1.364	2.035	0.354	2.197
West	0.698	2.135	6.383	2.567 *	-3.899	3.213	-5.685	2.361 *	4.597	2.728	10.28	2.908 ***
Intercept	5.350	0.670 ***	17.23	0.796 ***	13.09	0.852 ***	-11.88	0.735 ***	-7.738	0.766 ***	4.143	0.825 ***
Model df	120		120		120		120		120		120	

Notes : Data for the index of dissimilarity and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Table 2.A4. Coefficient and Standard Error Estimates from Difference in Differences Analysis of Change Over Time in Segregation and its Determinants, 2000-2016

	2000 to 2016 Differences						Difference in Differences					
	MENA		South Asian		East Asian		MENA-South		MENA-East		South-East	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	0.017	0.033	-0.013	0.023	-0.016	0.037	0.030	0.028	0.032	0.035	0.003	0.031
Average education (in years)	0.076	0.361	0.237	0.355	0.708	0.501	-0.161	0.358	-0.632	0.437	-0.470	0.434
Average household income (in $000s)	-0.007	0.010	-0.005	0.008	-0.010	0.014	-0.003	0.009	0.003	0.012	0.006	0.012
Average years in U.S. (in years)	-0.004	0.054	-0.068	0.084	-0.052	0.090	0.064	0.071	0.048	0.074	-0.016	0.087
% native-born	-0.006	0.019	0.018	0.031	-0.001	0.029	-0.023	0.026	-0.005	0.024	0.018	0.030
Other demographics												***
Average age (in years)	0.050	0.061	0.033	0.086	0.085	0.092	0.017	0.074	-0.034	0.078	-0.052	0.089
% married	0.004	0.025	0.031	0.024	-0.033	0.032	-0.027	0.025	0.037	0.029	0.064	0.028 *
% with children present	0.018	0.023	0.005	0.018	-0.001	0.033	0.013	0.021	0.019	0.028	0.006	0.026
Metropolitan area characteristics												
Log of CBSA population	-0.009	0.209	0.512	0.180 **	0.359	0.218	-0.520	0.195 **	-0.368	0.214	0.153	0.200
% minority group in CBSA	-0.356	0.570	0.318	0.209	-0.351	0.154 *	-0.673	0.429	-0.004	0.418	0.669	0.184 ***
Midwest	0.486	0.576	-0.268	0.489	-0.325	0.593	0.753	0.534	0.811	0.584	0.058	0.543
South	0.469	0.534	0.081	0.441	-0.087	0.537	0.388	0.490	0.556	0.536	0.167	0.492
West	0.305	0.600	-0.176	0.499	-0.059	0.798	0.481	0.552	0.364	0.706	-0.118	0.666
Intercept	1.006	0.190 ***	2.433	0.161 ***	1.176	0.211 ***	-1.426	0.176 ***	-0.169	0.201	1.257	0.188 ***
Model df	120		120		120		120		120		120	

Notes : Data for the index of dissimilarity and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

CHAPTER 3: THE SPATIAL CONCENTRATION AND CLUSTERING OF MIDDLE EASTERN AND NORTH AFRICAN IMMIGRANTS IN THE UNITED STATES, 2000-2016

Residential segregation is a longstanding feature of American society and has frequently been identified as a key contributor to ongoing racial and ethnic stratification (Massey and Denton 1985; Emerson, Chai and Yancey 2001). For this reason, the spatial assimilation of immigrants has long been of interest to scholars and is perceived to serve an important function in immigrants' incorporation, as it influences and determines individuals' access to socioeconomic resources (Massey and Mullan 1984, Massey and Denton 1992). Spatial assimilation theory suggests that upon entry to host societies, immigrants will settle in ethnic enclaves for financial and cultural reasons (Alba and Nee 2005; Portes and Rumbaut 2014). As soon as immigrants learn the host country's language and accumulate socioeconomic resources that grant them capital to move away from ethnic enclaves, they reside in high quality neighborhoods with greater shares of non-Hispanic whites[28] (Friedman et al. 2019).

Indeed, research consistently shows that disparities in socioeconomic status (e.g., income and education) and English language proficiency between Hispanic and Asian immigrants compared to non-Hispanic whites accounts for residential segregation, supporting the spatial assimilation model (Massey and Denton 1992; Frey and Farley 1996; Kim and White 2010; Iceland, Weinberg and Hughes 2014). Other research documents persistent segregation of Black and dark-skinned Hispanics as well as Muslims in American cities, controlling for individual-

[28] I recognize that scholars and activists increasingly use the term "Latinx" instead of "Hispanic." In my research, I choose to use the latter term to maintain consistency with the terminology used by the U.S. Census Bureau, the source of data for this paper. Moreover, a recent poll showed that about two-thirds of Hispanic respondents preferred either "Hispanic" (44%) or "Latino/a" (24%), while just 2% preferred "Latinx" (ThinkNow 2020). Similarly, according to the Pew Research Center (2020), most Hispanic adults (76%) have not heard the term "Latinx," and among those who have heard this term only 3% of them preferred to use it.

level characteristics (Farley 1977; Charles 2000; Denton and Massey 1988; Friedman et al. 2019). These findings are consistent with the tenets of the place stratification model, which argues that minority racial identity is substantially determines immigrant residential incorporation.

Although a large body of scholarship documents residential patterns in the United States, there is a dearth of literature on the spatial assimilation of immigrants[29] from the Middle East and North Africa (MENA).[30] Although the MENA population is smaller than other racial or ethnic groups, it has recently become one the fastest growing immigrant groups in the United States. In fact, the U.S. Census documents that the largest percentage increase in immigrants to the United States were from MENA countries such as Saudi Arabia, Iraq, and Egypt, with increases of 93%, 36%, and 25%, respectively (Camarota and Zeigler 2016). While there has been a considerable increase in research examining the backlash of the 9/11 terrorist attacks on this population, none of the research addresses their residential patterns (Naber 2008; Cainkar 2009; Schachter 2014; Love 2017).

One of the goals of this study is to examine the spatial assimilation (or lack thereof) of the MENA population in the United States by measuring their concentration and clustering patterns. As I discuss in more detail below, concentration refers to the extent to which minority groups locate in a small portion of physical space in the urban environment. Clustering indicates the extent to which minority groups reside in spatial areal units adjacent to one another (Massey

[29] The U.S. Census summary tape file data do not contain information on ancestry and generation simultaneously. Therefore, the term "immigrants" in this paper is used to refer to all individuals with MENA, South Asian, and East Asian ancestry. Based on my calculations from IPUMS data, in 2016 between 56% and 72% of MENA, South Asian, and East Asian individuals were foreign-born; hence, it is quite likely that the majority of members of these populations are either first, "1.5," or second generation.

[30] The umbrella term "MENA" is used to encompass a diverse set of national-origin groups who are both similar and different with regard to language, religion, culture, race and ethnicity, and precise geographic region (Haddad 2009; Marvasti and McKinney 2004; Awad 2010; Bozorgmehr et al. 1996). As I discuss at length below, in this study the MENA group comprises individuals with Egyptian, Iranian, Iraqi, Jordanian, Lebanese, Moroccan, Palestinian, Saudi Arabian, Syrian, Turkish, or "other Arab" ancestry.

and Denton 1988). These measures constitute separate dimensions of segregation (Massey and Denton 1988) and are important to assess because each measure captures a separate dimension of residential segregation. Given that residential segregation is a multidimensional social phenomena that forms and organizes individuals' lives (Massey and Denton 1988), each measure helps to reveal different outcomes of spatial segregation on groups' lives—from (not) having access to socioeconomic resources to being separated from the rest of metropolitan areas where groups become more identifiable and recognizable in a way that perceived to be "threat" by the rest of the host society.

This study fills several gaps in the spatial assimilation literature. First, as noted above, research is scarce that examines the segregation of the MENA population, and typically these studies only focus on a particular state or metro area and component of the MENA population (e.g., Arabs or Muslims) (Bozorgmehr, Der-Martirosian and Sabagh 1996; Holsinger 2007; Friedman et al. 2019). Thus, existing studies on MENA residential patterns do not provide a complete picture of their spatial assimilation at the national level. Second, in the wake of 9/11, the MENA population was increasingly stigmatized and racialized in the United States. Yet, surprisingly, there is no study on the possible effects of anti-Muslim sentiments on their residential patterns. Although the U.S. MENA population ranks high in income, education, and English competency, those attributes may not facilitate as straightforward a path to spatial assimilation as might be expected because of their racialized status. Hence, the MENA population presents a useful case to investigate an alternative explanation to the spatial assimilation model in assessing segregation patterns of immigrants to the United States.

The primary objective of this study is to examine the extent to which the concentration and clustering patterns of the MENA population relate to their household-level characteristics and to what extent those patterns are consistent with an explanation focusing on an increasingly

hostile context of reception after 9/11. Accordingly, using national level data from the U.S. Census and American Community Survey (ACS) and the Integrated Public Use Microdata Series (IPUMS), my study is guided by the following empirical questions:

1. What is the current level of concentration and clustering of MENA immigrants compared to South and East Asian immigrants?
2. How much variation is there across these three groups in the predictors of concentration and clustering?
3. How much change has each group experienced from the pre- to the post-9/11 period, both in levels of segregation (concentration and clustering) and in their predictors?

Ultimately, by comparing the MENA to the South and East Asian populations and analyzing changes in their concentration and clustering patterns in the pre- and post 9/11 period, this study contributes to our understanding of the effects of changing contexts of reception on the spatial assimilation of immigrants in the United States. The following section presents information on the demographic attributes of the MENA population and their experiences of anti-Muslim sentiments in American society, as well as my rationale for analyzing the experiences of South and East Asians as comparison groups. Subsequently, I derive hypotheses from theories of immigrant spatial incorporation and test those hypotheses with data from 2000 and 2016.

Middle Eastern and North African Immigrants in the United States

Countries of Origin

With a rise from 2.5 million to over 3.5 million people between 2009 to 2017[31], Middle Eastern and North African (MENA) immigrants became one of the fastest growing groups in the United

[31] Author's calculations are made using American Community Survey data.

States. Despite there being no consensus on who comprises the MENA population among scholars or well-known research centers (e.g., Pew Research Center, United Nations, U.S. Census Bureau, and the World Bank), literature converges on the fact that the MENA category is comprised of a multiethnic, multicultural, multilingual and multinational population—which usually includes Egyptians, Iraqis, Jordanians, Saudi Arabians, Lebanese, Moroccans, Palestinians, Syrians, Somalis, Sudanese, Armenians, Israelis, Cypriots, Iranians, Afghans, and Turks (Haddad 2009; Marvasti and McKinney 2004; Awad 2010; Bozorgmehr et al. 1996).

For the current study, I use the term MENA to encompass these ethnic groups. However, in accordance with purpose of this study I exclude some groups from the analysis using the following inclusion and exclusion criteria: (1) self-identification, (2) common categorization by former scholars, and (3) Muslim or Arab country of origin (or both). I argue that it is important to consider self-categorization, as it conveys personal experiences in the wider society. For instance, although previous scholars and many research institutions include Armenians, Israelis and Cypriots under the MENA moniker, the overwhelming majority of these people identify themselves as white[32] rather than MENA (U.S. Census Bureau 2015). Among MENA groups who come from Muslim countries, only Somalis, Sudanese, Afghans and Turks do not identify with the MENA category. The majority of the former two groups self-identified as Black, while the latter groups identified with some other race, or as white (U.S. Census Bureau 2015). Afghan and Turkish populations are included in this study because they have been categorized as MENA populations by previous scholars (Bozorgmehr et al. 1996; Bakalian and Bozorgmehr 2011; Marvasti and McKinney 2004) and come from predominantly Muslim countries (Pew Research Center 2015).

[32] In the existing race question in U.S. Census Bureau surveys, there is not a MENA category that allows individuals to be identified simultaneously as white and MENA. However, MENA populations can self-identify as "white" in the race question and write their ethnicity in the ancestry question. For the purpose of this study, I develop inclusion and exclusion criteria of groups by utilizing findings from the 2015 National Content Test conducted by the U.S. Census on whether to include a "MENA" category in the existing race question.

Immigration Patterns

There have been two primary waves of MENA emigration to the United States. The first migration stream began in the late 1880s and consisted overwhelmingly of Syrian and Lebanese immigrants. Nearly 100,000 Syrian and Lebanese immigrants came to the United States during this period (Marvasti and McKinney 2004). However, scholars argue this may be an underestimate because U.S. immigration records (until 1899) and U.S. Census Bureau records (until 1920) documented Middle Eastern immigrants as "Armenian," "Turk," or "Turk in Asia" because they were subjects of the Ottoman Empire at that time (Marvasti and McKinney 2004; Bakalian and Bozorgmehr 2013:1136).

The first wave of MENA immigration lasted until 1914 and then deescalated dramatically during World War I and the Great Depression. Following World War II, MENA immigration restarted with a second wave, largely driven by political turmoil in emigrants' home countries or in neighboring areas. Examples include the process of establishing the state of Israel in 1948, the Arab-Israeli war from 1967 to 1973, the Lebanese civil war in 1975, and the Iranian Islamic revolution of 1978 to 1979 (Bozorgmehr et al. 1996; Awad 2010; Tehranian 2009; Marvasti and McKinney 2004). The ongoing political and economic instabilities in the Middle East and North Africa continue to be an engine of MENA immigration to the United States, leading to the rapid recent growth noted above. Recent MENA immigrants tend to settle in gateway cities in California, New York, Michigan, New Jersey, Florida, and Massachusetts (American Community Survey 2016; Bozorgmehr et al. 1996).

Socioeconomic Status

Scholarship on the socioeconomic assimilation of the MENA population has shown that this group scores high in English language proficiency, educational attainment, and economic attainment (Bozorgmehr et al. 1996; Tehran 2009; McKinney 2004; Awad 2010). With regard to

educational attainment, the MENA population outpaces all immigrant groups, as well as native-born whites (Haddad 2009; Bakalian and Bozorgmehr 2013; Camarota 2002). In addition, about 43% of Middle Eastern[33] men occupied professional and management occupations in 1990 in Los Angeles, comparable to the figures for Asian (41.9%) and native-born white men (43.6%), and four times higher than Hispanic men (9.0%) (Bozorgmehr et al. 1996:353).

Racialization, Stigma, and Discrimination

The MENA population has suffered from growing rates of discrimination following the 9/11 terrorist attacks. They became highly stigmatized, and were often linked with violence, terrorism and savagery in the media and in public and political discourses (Maghbouleh 2017; Gaddis and Ghoshal 2015; Steve and Selod 2015; Selod 2015; Carpusor and Loges 2006; Joseph et al. 2008). They therefore experienced racialization, referring to "the process of assigning derogatory meaning to particular bodies distinguished by ethnicity, nationality, biology, or geography, as well as legitimizing discourses" (Alsultany 2008:208).

The racialization of the MENA population is not a new phenomenon. The political practices of their racialization have been shaped by interstate relations (e.g., war) as well as terrorist attacks that occur within or outside U.S. borders (Zarrugh 2016; Love 2017; Tehranian 2009). For instance, after the attacks on Israeli athletes at the 1972 Olympic Games in Munich, the U.S. government implemented policies as a precaution against terrorism, including restrictions on migration into United States, increased surveillance regardless of immigration status, and collection of data on individuals with Arab decent "who were 'potential terrorists' or likely to assist terrorists." This response contributed to the racialization of the Arab population includes (Tehranian 2009:121). This trend has been continued by the current Presidential

[33] This is the term used by the authors.

administration by banning emigrants from six Muslim countries—Iran, Iraq, Libya, Somalia, Sudan, Syria, and Yemen, from entering the United States.

Hence, the racial status of MENA/Arab/Muslim groups has been conflated with the category of terrorist long before, yet it accelerated following 9/11. A Zogby poll of Arab Americans after 9/11 found that while 31% of older Arab Americans (age 65 or older) had experienced discrimination due to their ethnic identity, 76% of younger Arab American (age 18 to 29) had experienced such discrimination (Tehranian 2009:119). Correspondingly, previous research reveals discrimination and bias toward Arab and Muslim immigrants when searching for roommates or rental units in numerous metropolitan areas in the United States, along with several places outside of the United States, such as Toronto and Sweden (e.g., Carpusor and Loges 2006; Ahmed, Andersson and Hammarstedt 2010; Hogan and Berry 2011; Gaddis and Ghoshal 2015; Friedman et al. 2019). Hence, despite MENA immigrants' demonstrating high English proficiency and high levels of socioeconomic attainment that at times outpace non-Hispanic whites, a hostile "context of reception" can force their concentration and limit their spatial integration, contrary to what their group-level characteristics would predict.

Limitations of Past Research on MENA Immigrants

As noted above, the MENA population has been understudied relative to other minority groups in the United States, despite an increase in their population size. The existing scholarship examines social and economic assimilation of the MENA population and their experiences of backlash post-9/11 (Bozorgmehr et al. 1996; Cainkar 2009; Schachter 2014; Love 2017), but their spatial assimilation patterns remain underexamined. Some studies measure spatial assimilation by looking at residential segregation indices in particular cities (e.g., Bozorgmehr et al. 1996), but to my knowledge no study has examined the clustering and concentration of MENA immigrants in U.S. metropolitan areas. Although not particularly focusing on MENA

population, Holsinger's (2009) research on Arab Americans in New York, Los Angeles, Chicago, and Detroit can be counted as partial exception—finding a moderate level of segregation of Arab Americans reflected in segregation measures including clustering and concentration.

Comparisons with South and East Asians

I analyze the MENA population's clustering and concentration patterns and trends along with those of two comparison groups—South and East Asians. These three groups, on average, are phenotypically different from native-born whites, and like MENA immigrants, East and South Asians score high on measures of education and income (Bozorgmehr et al. 1996; Cheng and Yang 1996; Schachter 2014). Hence, the MENA and South Asian comparison provides a unique opportunity to reveal to what extent the clustering and concentration patterns of MENA and South Asian population align, or are differentiated, holding all other attributes constant. In particular, comparing their residential patterns over time (pre and post-9/11) enables me to estimate the influence of a changing context of reception on these groups. Due to the possibility being racially misclassified as MENA, South Asians may face some similar hostile attitudes.[34] If this is true, then it is possible that their clustering and concentration index will look similar to those of their MENA counterparts. Nevertheless, if South Asian populations have not experienced the same kinds or the same degree of anti-immigrant backlash as have MENA groups, we ought to observe less clustering and concentration in South Asian populations relative to MENA populations from the pre- to post-9/11 periods. The answer to this question relies on careful empirical analysis.

[34] Research has shown that the South Asian population has been exposed to discriminatory attitudes in the post 9/11 period, due to their phenotypical similarities and religious markers with MENA immigrants (Maira 2004). South Asian Sikhs, in particular, can be mistaken as being Muslim or a MENA immigrant (Love 2017) due to American stereotypes of what wearing a turban signifies. Hence, the South Asian population may be exposed to a hostile environment because of their status as "foreigners" in the United States (Schuessler 2015).

Similarly, the East Asian immigrant comparison provides a case to test the power of ethnic, racial, and religious status on upward residential mobility. Similar to the MENA and South Asian comparison, the MENA and East Asian[35] comparison is used to estimate the effect of context of reception. However, in contrast to the former comparison, the latter facilitates estimating the effect of phenotypic differences on clustering and concentration, as these immigrant groups are distinct phenotypically while being similar in terms of average income and educational attainment. In this comparison, religion may play a significant role, considering the majority of MENA groups in this study emigrated from predominantly Muslim countries (Pew Research Center 2015). Unlike East Asian populations, MENA immigrants are more likely to wear indicators of their religious identity such as a scarf, hijab, *abaye,* or *bear* (Naber 2008). Besides religious markers, terrorism is associated with other signifiers. For example, Naber argues (2008:278) that "signifiers of an imagined 'Arab/Middle Eastern/Muslim' enemy" include "particular names (e.g. Mohammed), dark skin" […] and particular nations of origin (e.g. Iraq or Pakistan)." Such signifiers play a significant role in systematically excluding the MENA population from the larger community.

Theoretical Determinants of Immigrant Spatial Incorporation

Spatial Assimilation Theory

The research on spatial concentrations of populations dates back to the early Chicago School human ecology model, which suggested that the spatial processes of concentration and decentralization were determined by the expansion of cities in the way of a series of successive

[35] In contrast to the MENA population, East Asians may not have engendered the same kind or degree of hostility in the post 9/11 period. However, it is important to note that this may change in the context of the current COVID-19 pandemic. During the Covid-19 pandemic, Asian, particularity East Asian populations have been subjected to vicious racism that is normalized and strengthened by political discourses in the United States. Since this study uses data from 2000 and 2016, the results are not influenced by these current events.

"concentric circles" (Park, Burgess and McKenzie 1925; Burgess 1925:50). Social groups are sorted and relocated based on occupation and residence, which ultimately forms "homogenous concentric zones" (Park et al. 1925; Pamuk 2004:288). Among these social groups, new immigrant groups reside in "zones in transition" where slums are concentrated. However, following substantial acculturation and socioeconomic success, those immigrants (particularly the second generation) move to the next zone, predominantly composed of factory and shop workers, and eventually progress to the "promised land" at the edge of the city (Burgess 1925:56).

Largely resembling the human ecology model, Massey (1985) developed spatial assimilation theory to understand contemporary residential patterns. The basic logic of this theory is that individuals' residential mobility is rooted in their upward socioeconomic mobility (income and educational attainment) and acculturation (language profiency) (Iceland and Scopilliti 2008; Iceland and Nelson 2008; Lichter, Parisi, and Taquino 2015; Massey and Denton 1985). Thus, populations' geographic concentration or clustering in a given geographic area reflects the ability of immigrants to function culturally or pay for housing outside of ethnic enclaves (Allen and Turner 1996). Immigrants, particularly those who are newly arrived, may not have the necessary resources (e.g., language proficiency or income) to find housing in neighborhoods with high proportions of native-born whites. Thus, they tend to initially settle in inner-city ethnic enclaves where immigrants are able to live with limited linguistic or economic resources. As immigrants progress socioeconomically and gain proficiency in English (in the U.S. context), they begin to seek out locations where native-born whites tend to reside (Massey 1985). This is how the *de*clustering of immigrants—or spatial incorporation—transpires, according to the tenets of spatial assimilation theory (Alba, Logan and Crowder 1997).

Indeed, previous research confirms that, following cultural and socioeconomic assimilation, residential mobility improves for immigrants from Europe, Latin America, Asia and Arab countries (Massey and Denton 1985; Denton and Massey 1989; Alba and Logan 1991; Frey and Farley 1996; Logan et al. 1996; South and Crowder 1998; Freeman 2002; Fong and Wilk 2003; Timberlake and Iceland 2007; South et al. 2008; Holsinger 2009; Pais et al. 2012). Nonetheless, it is important to note that spatial clustering or concentration continues to be observed in various forms. This is thought to be a byproduct of the importance of dense social networks in supporting ethnic economies, a topic to which I now turn (Alba and Nee 2005; Li 2009; Allen and Turner 2009).

Ethnic Clustering and Concentration

Ethnic clustering and concentration can take different forms: ethnic communities, ethnoburbs, and ethnic enclaves. An ethnic community is described as "population concentration combined with infrastructure" that "cause[s] an area to be perceived both by group members and by outsiders as having a specific ethnic character" (Alba et al. 1997:866). Ethnic immigrant enclaves are an initial form of ethnic concentration and they are different from both ethnic communities and ethnoburbs in terms of socioeconomic status (Li 1998, 2009; Alba et al. 2002). The former host immigrants who have less human capital and live with limited socioeconomic resources relative to the standards of mainstream society; the latter are composed of immigrants with high socioeconomic standing and acculturation (Alba et al. 2002; Li 1998, 2009). Thus, immigrant enclaves are seen as an initial stop for new immigrants and as soon as immigrants gain financial resources that enable them to move away from an immigrant enclave, they begin residing in more affluent neighborhoods. Settling in ethnic communities, however, reflects the personal will and preferences of immigrants as ethnic communities "are selected as living environments by those who have wider options based on their market resources" (Alba et al.

2002:300). In that sense, ethnoburbs largely resemble the ethnic community model—that is, in terms of "choice" immigrants have over their settlements. Immigrant groups demonstrate a deliberate effort to create ethnoburbs, largely gathered around a socioeconomic interest (Li 2009). Overall, the economy is perceived to be a powerful impetus for clustering and concentration of ethnic groups; nevertheless, it is not the sole factor shaping residential patterns.

Ethnic spatial clustering and concentration can be driven by other factors such as discrimination in the housing market (Yinger 1991; Ahmed et al. 2010), "non-ethnic amenity preferences"—such as accessing quality schools and new housing (Allen and Turner 2009:215), as well as groups' preferences for living with their own ethnic groups (Li 1998, 2009; Allen and Turner 2009, Pamuk 2004). In fact, the research on Asian and Hispanic concentration documents that preferences for living with co-ethnic groups promote ethnic concentration in Los Angeles, San Francisco, and New York, for those with high incomes (Allen and Turner 2009). A similar pattern is observed in the concentration of affluent Chinese immigrants in San Francisco (Pamuk 2004). Ethnic clustering and ethnic communities can be beneficial in terms of sharing moral values with other community members, maintaining cultural values and traditions, and accessing religious and social services (Li 2009; Allen and Turner 2009). Thus, even when spatial incorporation is achievable, immigrants continue to concentrate in ethnic communities or ethnoburbs (Li 1998, 2009; Alba et al. 2002; Alba and Nee 2005; Portes and Rumbaut 2014) in order to maintain their social identity, establish ethnic solidarity, and preserve mutual economic interests. Despite these internal dynamics, it is significant to note that ethnic concentration is also propelled by "external push factors by the mainstream of society (prejudice and discrimination)" (Li 2009:17). Neither cultural nor financial interest is the sole factor generating ethnic concentration. Prejudice and discrimination also force ethnic and racial minorities to concentrate geographically—I will discuss *how* in the following section.

Place Stratification and the Context of Reception

Two closely related models—place stratification and contexts of reception—bring attention to structural patterns of society in accounting for the enduring residential segregation of minorities. The place stratification model focuses on the effects of discrimination in keeping racial minorities isolated from white neighborhoods. Indeed, research on the experiences of Black and dark-skinned minorities in the United States exhibit the limit of individual-level factors (e.g., English language proficiency, income, educational attainment) in explaining residential segregation (Massey and Mullan 1984; Massey and Denton 1988; Denton and Massey 1989; Massey and Denton 1993; Crowder 1999; Charles 2003; Wahl et al. 2007; South, Crowder and Pais 2008; Pais, South, and Crowder 2012). Thus, the place stratification model suggests that residential segregation is a reflection of the racial stratification of the United States, and as Massey and Denton (1993:2) argued "[…] it was manufactured by whites through a series of self-conscious actions and purposeful institutional arrangements that continue today" spanning from red-lining to the creation of reservations (Albrecht et al. 2005).

Similar to the place stratification model, the context of reception underlines structural factors in affecting the spatial assimilation process. Unlike the place stratification model, however, the context of reception reflects every aspects of an arrival society, from government policies, the character of the labor market, to the existence of ethnic communities (Portes and Rumbaut 2014). Not surprisingly, every immigrant group experiences different contexts of reception (welcome/unwelcome or positive/negative) based on their social identities and pre-defined stigmatized and racialized statuses. In unwelcomed/negative context of reception, immigrants confronted discrimination and prejudice in various institutions (e.g. job market, housing market, political institution). By contrast, a positive context of reception includes

acceptance and assistance of immigrants by the host government and population (Portes and Rumbaut 2001, 2014; Alba and Nee 2005, 1997).

These contexts of reception directly or indirectly determine immigrants' residential settlement patterns. For instance, when immigrants receive aid from the government (e.g. Cuban immigrants), their transition and settlements become smoother and they are more likely to demonstrate upward socioeconomic mobility. Residential settlement, then, whether in ethnic communities or mainstream neighborhoods, to some extent become a matter of choice. By contrast, when governments target specific immigrant groups with derogatory discourses (e.g. Mexican are criminal) or institute laws to ban particular groups from emigration to prevent terrorism (e.g. the Muslim ban of President Trump's administration), they fortify racial profiling and generate negative public perception. This increases the pervasiveness of discrimination and prejudice that immigrants encounter in everyday life. In turn, to avoid and protect themselves against these outside prejudices and acts of discrimination, immigrants settle in ethnic enclaves or form new ethnic communities somewhere else.

Ultimately, membership in a particular group commonly determines the extent to which immigrants experience positive or negative modes of spatial incorporation. As discussed previously, research confirms that individual-level socioeconomic characteristics have a significant impact on settlements patterns, but variations across socioeconomically similar groups yield imperfect results that do not fully account for between-group differences (see Allen and Turner 1996, 2009; Logan et al. 2002). I argue that the context of reception provides a more comprehensive understanding of other factors such as ethnic communities/enclaves as important modes of incorporation that determine immigrants' social, economic and spatial assimilation relative to place stratification model (Portes and Rumbaut 2014).

For this reason, my focus will remain on the context of reception to gauge differences (if any) in the spatial incorporation of groups by looking at their concentration and clustering with guideline of the numbers of hypotheses discussed below. I contend that spatial assimilation processes and the context of reception may intersect or may operate independently to determine an immigrant group's spatial incorporation into a host society (Portes and Rumbaut 2014). Only by including the context of reception can we fully comprehend the determinants of spatial incorporation and the interplay between household-level characteristics and the structural context of reception.

Overall, positive and negative contexts of reception are unevenly distributed across immigrant groups. Whether or not immigrants are positioned to have a positive reception is determined by their predefined stereotypes and racial positioning in American society. As discussed previously, in the wake of the 9/11 tragedy and the intermittent violence conducted by Islamic terrorists after 9/11, the MENA population, and particularly those who carry indicators of the Muslim religion, have been subject to a terrorist label upon their arrival in the United States (Jamal 2008; Cainkar 2008; Garner and Selod 2015; Selod 2015; Love 2009, 2017).

Regardless of their socioeconomic status (high income, educational attainment) and acculturation (English language competence), the MENA population may face discriminatory practices, including steering them into certain neighborhood and providing less informational and economic assistance, preventing their spatial incorporation into non-Hispanic white neighborhoods as other racialized minority groups (Yinger 1991). In fact, research conducted on residential patterns of Muslim and non-Muslim among Black and non-Black groups by Friedman and colleagues (2019:17) found that the "racialization of Muslims puts blacks at even more of a residential disadvantage than they experience by black and nonblack Muslims are significantly more likely than their non-Muslim counterparts." Similarly, research identified discriminatory

practices toward Arab and Muslim immigrants when searching for roommates or rental units in numerous metropolitan areas in the United States (Gaddis and Ghoshal 2015). In addition, there is harassment and hate-motivated practices documented toward Muslims by the National Fair Housing Alliance (NFHA 2017). For instance, The Fair Housing Advocates of Northern California reported that "housing provider called a 90-year old disabled client 'a filthy, dirty Muslim woman who wished this country harm,' before receiving a notice to terminate her tenancy" (NFHA 2017:95). Due to such housing discrimination, backlash after 9/11, and the stigmatized and racialized status of the MENA population, I presumed that the MENA population would have less spatial incorporation than South and East Asian populations. More formally, I test the following hypotheses:

Hypothesis 1: Controlling for acculturation and SES, South and East Asian immigrants are currently less concentrated or clustered than MENA immigrants.

Hypothesis 2: The negative cross-sectional relationship between acculturation and SES and concentration or clustering is stronger (i.e., more negative) for South and East Asian populations than for the MENA.

With regard to change over time, my hypotheses are constructed by the same logic. In addition to the literature cited above, considerable scholarship shows that MENA immigrants in the United States face individual- and institutional-level discrimination (Naber 2008; Tehranian 2009; Khoshneviss 2019). Such discriminatory practices became more pervasive, systematic, and overt after 9/11 and other global terrorist attacks (Zarrugh 2016). Thus, I anticipate that the levels and determinants of concentration and clustering of the MENA population will differ significantly from those of the South and East Asian populations. For the same reason, changes in the residential segregation patterns of MENA immigrants from the pre- to post-9/11 periods may differ from the changes experienced by their East and South Asian counterparts.

Hence, I pursue a "difference in differences" approach by estimating change over time in the levels and determinants of segregation for MENA immigrants compared to South and East Asian immigrants and then calculate the differences in those changes. Taking into consideration the shifts in the social and political context following the 9/11 terrorist attacks, acculturation and SES attributes of the MENA population may not operate in the way that spatial assimilation theory predicts for their concentration and clustering patterns. Accordingly, I hypothesize that:

Hypothesis 3: Differences in the average levels of concentration or clustering between MENA and South and East Asian populations will be significantly different in the post-9/11 period compared to the pre-9/11 period.

Hypothesis 4: Changes in the relationship between acculturation and SES and concentration or clustering will be significantly different in the post-9/11 period compared to the pre-9/11 period for the MENA population compared to the South and East Asian populations.

Hypotheses 3 and 4 both measure "difference in differences," but the former hypothesis predicts either that the growth in concentration and clustering will be higher for the MENA population versus the South and East Asian populations, or that the decrease will be lower. The latter predicts that the predicted negative relationships between acculturation and SES will be lower for the MENA population versus the South and East Asian populations in 2016 compared to 2000, or that the increase in these negative relationships will be weaker. Ultimately, the general hypothesis derived from the context of reception model is that MENA immigrants were more negatively affected by racialization and stigma from the pre-9/11 to the post-9/11 period.

Research Design

This study aims to determine whether residential segregation of the MENA population, compared to South and East Asian populations, have increased by examining their concentration

and clustering indexes both in 2000 (pre-9/11) and 2016 (post-9/11). Comparing MENA immigrants to South and East Asian immigrants, as well as analyzing changes over time, my goal is to estimate the indirect effects of the context of reception on residential segregation for MENA immigrants in the United States. As discussed above, according to the spatial assimilation model, residential exposure to non-Hispanic whites is expected to increase when immigrants become acculturated and gain socioeconomic capital. However, the presumption that the MENA population is a source of terrorism generates a social and political atmosphere that leads to a rise of counter-terrorism policies targeting them, and increased acts of discrimination at the micro level (Love 2017). Hence, the hypotheses of the spatial assimilation model may not be applicable to the MENA population's residential patterns. This research, then, reveals the effect of sociopolitical structures of the host country on the concentration and clustering of MENA immigrants, as well as to what degree spatial assimilation theory explains their residential patterns.

I follow two analytic approaches to evaluate the effect of household-level characteristics relative to the context of reception. First, I compare MENA immigrants to South and East Asian immigrants to estimate the impact of racial, ethnic, and religious status.[36] Then, I estimate the cumulative (though unobserved) impacts of changing political and social contexts of reception across two time periods: pre 9/11 (2000) and post-9/11 (2016). Although 2016 may be too recent to assess the immediate backlash of 9/11, I use this time point for several reasons. First, the backlash of 9/11 may necessitate a longer time frame to observe its consequences on residential patterns. Further, this time period (2000-2016) encompasses the effects of many other terrorist

[36] Religious status is not measured directly because the U.S. census does not collect data on religious affiliation. However, I used Pew Research Center Data to provide a proxy for religious affiliation of the MENA population in my research. Based on data from "Religious Composition by Country," it is safe to assume that a majority of MENA immigrants in the United States are Muslim (Pew Research Center 2015). Moreover, by eliminating Bangladeshis and Pakistanis (whose Muslim population as a percentage of the whole country is 91.7% and 96.5%, respectively) from the South Asian group, I keep South Asians (Indians and Sri Lankans' percentage of Muslim population is 18.4%; 12.3% respectively) distinct from the MENA population by excluding Muslims.

incidents in the U.S. and around the world (the Madrid train bombings in 2005, the London bombing in 2005, the Boston Marathon bombing in 2013, and the San Bernardino mass shooting in 2015 committed by an Islamist extremist) that may have led to increased public scrutiny of MENA groups (Widner and Chicoine 2011). Third, choosing this time period allows me to bypass the specific consequences of the housing crash that led to a dramatic decline in average housing prices between 2007 and 2010 (Kwak and Wallace 2018). Finally, using data from 2016 provides the most recent measures of residential patterns of MENA, South and East Asian populations in the United States. The following section presents the data and methodological procedures I use to test the hypotheses formulated above.

Data, Measures, and Methods

Data

Data for this study come from the 2000 U.S. Census Summary Tape Files (STF) to represent the pre-9/11 period and the 2012-2016 American Community Surveys (ACS) to represent the post-9/11 period. The ACS 5-year estimates are used because this is the only version that releases data at the tract level, which is necessary to calculate the dependent variables. To ensure the validity of comparisons across the period under study, all census boundaries from 2000 match those from 2016. Independent variables come from the 2000 STF and 2012-2016 ACS, including population size, percent of each group, and geographic region. In order to estimate average characteristics at the metropolitan area level for each immigrant group (e.g. English language proficiency, educational attainment, and income), I also use Integrated Public Use Microdata Sample (IPUMS).

Analytic sample. The unit of analysis is Metropolitan Statistical Areas (MSAs), which are relatively large units within the broader category of Core-Based Statistical Areas (CBSAs). To

heighten the reliability of measurement of concentration and clustering, I limited the sample to CBSA with at least 500[37] members of each group. This resulted in sample sizes of 164 CBSA in 2000 and 219 in 2016 for the MENA population, 164 CBSA in 2000 and 219 in 2016 for the South Asian population, and 164 CBSA in 2000 and 220 in 2016 for the East Asian population. In addition, I created a sample of CBSA where these criteria were met for each group simultaneously in both 2000 and 2016, yielding a sample of 127 CBSA[38] for 2000 and 130 CBSA in 2016.

Note that MENA immigrants are not counted as a separate category in the U.S. Census; they are included in the "white" racial category. However, the ancestry question makes it possible to generate the category of MENA immigrants that includes people of Egyptian, Iraqi, Jordanian, Lebanese, Moroccan, Palestinian, Syrian, Turkish, Iranian, Afghan, Arab and other Arab ancestries. Likewise, I generated a South Asian category from respondents reporting an Asian Indian or Sri Lankan ancestry as well as an East Asian category from respondents reporting Chinese, Korean, Taiwanese, and Japanese ancestries. I also created the white comparison group by subtracting the MENA tract count from the non-Hispanic white count.[39] Note that Bangladeshis and Pakistanis are often considered part of the South Asian population,

[37] I also ran my analyses with 1,000 as the population cutoff and the results are not substantially different; however, this higher threshold resulted in the loss of many cases (i.e., metropolitan areas) for each group; hence, I focus on results using the 500-person threshold.

[38] Note that in this research the unit of analysis in metropolitan area is the CBSA, the characteristics of which were measured with decennial Census, ACS, or IPUMs data. Although these data sources are themselves samples, the units of analysis are better thought of as a purposive sample of CBSAs with at least 500 of members of MENA, South Asian, or and East Asian residents. This sample selection criterion alters the interpretation of the standard error estimates (and *t*-ratios and *p*-values) produced below because those estimates were generated under the assumption that data came from a simple random sample. Hence, the standard error estimates should be treated cautiously and as "estimates of parameter dispersion contaminated by measurement error" rather than sampling variability (Grodsky and Pager 2001:552). Accordingly, I focus my discussion of the regression results on coefficient estimate sizes and differences rather than statistical significance in the conventional sense because "when there is no random sampling […] *p*-values are essentially uninterpretable" (Hirschauer et al. 2020:87).

[39] There may be some overlap between the non-Hispanic white and MENA populations because they are derived from different questions on the U.S. Census and ACS. However, according to 2015 National Content Test conducted by the U.S. Census in order to plan the content of the 2020 Census race/ethnicity questions, the MENA population overwhelmingly identified themselves in the "white" category, with the sole exception of Afghanis.

but I exclude them from the South Asian category since they come from majority-Muslim countries—91% and 96%, respectively (Pew Research Center 2015). As discussed previously, I aimed to minimize religious similarities across the comparative groups to serve the purposes of the current study. Finally, it is important acknowledge that the U.S. Census and ACS are the most accurate data sources available to study MENA immigrants in the United States at the national level (Holsinger 2009).

Measures

Dependent variables. The dependent variables in this analysis are measures of the spatial concentration and clustering of MENA, South Asian and East Asian immigrants in metropolitan areas. To calculate the relative concentration index (RCO), I use the formula below:

$$\frac{\left[\left[\frac{\sum_{i=1}^{n}\left(\frac{a_i g_i}{G}\right)}{\sum_{i=1}^{n}\left(\frac{a_i w_i}{W}\right)}\right]-1\right]}{\left[\left[\frac{\sum_{i=1}^{n_1}\left(\frac{a_i t_i}{T_1}\right)}{\sum_{i=n_2}^{n}\left(\frac{a_i t_i}{T_2}\right)}\right]-1\right]} \quad (3)$$

In the overall numerator, a_i is the area (in square miles), g_i is the population of group g (e.g., MENA, South Asian, or East Asian), and w_i is the population of non-Hispanic whites in tract i. G and W refer to the total population of group g and whites in the CBSA, respectively. In the overall denominator, a_i is defined as above and t_i indicates the total population of tract i. In the numerator of the overall denominator, tracts are ordered from smallest to largest according to area. n_1 refers to the tract rank in which the cumulative population of tracts (T_1) equals the total population of group g in the CBSA, summing from the smallest areal unit up to n_1. In the denominator of the overall denominator, tracts are ordered from largest to smallest according to area. n_2 refers to the tract rank in which the cumulative population of tracts (T_2) equals the total population of group g in the CBSA, summing from the largest areal unit down to n_2. This index

computes the ratio of the concentration of members of group *g* to whites and compares it with the maximum possible ratio that would be obtained if group *g* had the highest possible level of concentration.

In short, RCO measures the proportion of the total available urban space occupied by group *g* compared to whites. As calculated above, RCO ranges from −100 to 100, where a score of −100 means that the concentration of whites is at the highest possible level, corresponding to all members of whites living in the smallest areal unit. A score of 100 means the converse, that group *g* is maximally concentrated relative to whites. Finally, a score of 0 indicates that both groups are equally spatially concentrated (Massey and Denton 1988:290-291).

To measure the degree of spatial clustering, I use the formula presented below:

$$SP = \left(\frac{G[P_{gg}]+W[P_{ww}]}{(G+W)P_{gw}} - 1\right) \times 100, \quad (4a)$$

where *G* and *W* are again the total populations of group *g* and whites in each CBSA. P_{gg} refers to the average proximities between members of group *g*, P_{ww} refers to average proximities between whites, and P_{gw} refers to the average proximities between group *g* and whites taken together. Hence, the measure can be interpreted as the average of the intra-group proximities (P_{gg} / P_{gw} and P_{ww} / P_{gw}), weighted by the proportion of each group in the two-group population comparison (G / [G + W] and W / [G + W]).

The components of the index, P_{gg}, P_{ww}, and P_{tt}, are computed as follows (see White 1983; Massey and Denton 1988): first, I computed an $n \times n$ matrix of distances in miles between the centroids of each of the *n* tracts in each CBSA. These distances between each pair of tracts *i* and *j* (d_{ij}) are then converted via a distance-decay function, where $c_{ij} = e^{-d_{ij}}$ to capture the declining influence of tract populations on each other as distance between them increases. In order to avoid double-counting tract distances, I inserted 0s on the upper triangle of the distance matrix, and in order to account for average distances between members of groups in the same tract, I replaced

the diagonal with the value $0.60a_i$, where a_i is the area of the tract (Massey and Denton 1988:294-295).

Equation 4b presents the formula for P_{gg} in algebraic notation, while equation 4c presents the same formula partially in matrix notation, as that is how I actually calculated P_{gg}, P_{ww}, and P_{gw} in Stata.

$$P_{gg} = \left(\frac{\sum_{i=1}^{n} \sum_{j=1}^{n} g_i g_j c_{ij}}{G^2} \right) \tag{4b}$$

$$P_{gg} = \frac{\mathbf{G'CG}}{G^2} \tag{4c}$$

In equation 4c, $\mathbf{G}$ is an $n \times 1$ vector of tract population sizes of group g, $\mathbf{G'}$ is the $1 \times n$ transpose of $\mathbf{G}$, represented as g_i and g_j in equation 4b, and $\mathbf{C}$ is the $n \times n$ matrix of distances between tracts noted above, represented as c_{ij} in equation 4b. Pre-multiplying $\mathbf{C}$ by $\mathbf{G'}$and post-multiplying by $\mathbf{G}$ yields a 1×1 matrix (a scalar), which is then divided by G^2, or the squared total population of group g. The same steps are carried out to calculate P_{ww} and P_{gw}, leading to equation 4a.

By subtracting 1 from what is essentially a ratio of spatial proximities and then multiplying by 100 (see equation 4a), the measure can be interpreted similarly to other conventional segregation indexes in terms of points on a scale, generally representing a deviation from no segregation. That is, when there are no differences between group g and whites in terms of clustering, the index equals 0; however, when members of each group live near to their own groups and far away from each other, the index become greater than 0. In the unlikely situation that each immigrant group resides nearer to whites than to their own, the index would be less than 0.

Focal independent variables. Relying on the assimilation model and scholarship on residential patterns, the focal independent variables reveal the impact of socioeconomic status and acculturation level on residential segregation. As stated previously, I used IPUMS data for

each time point (2000 and 2016) to calculate averages for heads of household for each group in each CBSA. To estimate the effects of acculturation on spatial concentration and clustering, I calculated English language proficiency by taking the percentage of household heads in each group and each CBSA who spoke English very well or only. The effects of socioeconomic status on spatial concentration and clustering is measured by average household income (in 2016 dollars) and the average education level (in years) for each group's household heads. Note that acculturation and socioeconomic attainment can both be outcomes of spatial incorporation, however my goal in this research is to gauge whether such individual attributes influence spatial incorporation, and if so, how strong this relationship is and how it may differ across groups.

Analytic approach. I conducted multivariate analyses to determine the relationship between spatial concentration and clustering and acculturation and SES. Formally—and generally—the multivariate OLS models can be written as shown in Equation 3:

$$Y_{j_{g,t}} = \beta_{0_{g,t}} + \sum_{r=1}^{R} \beta_{r_{g,t}} x_{r j_{g,t}} + \sum_{s=R+1}^{R+S} \gamma_{s_t} z_{s j_t} + \varepsilon_{j_t}, \quad (3)$$

where $Y_{j_{g,t}}$ is the score on the dependent variable for group *g* in metropolitan area *j* at time *t* (i.e., 2000 or 2016). When the covariates x_r and z_s are centered around their respective grand means, the following estimates are derived: $\beta_{0_{g,t}}$ is the covariate-adjusted average score on the dependent variable for members of group *g* at time *t*; $\beta_{r_{g,t}}$ are partial effects of acculturation and SES on the dependent variable for members of group *g* at time *t*; γ_{s_t} are partial effects of metropolitan area-level characteristics on the dependent variable for members of group *g* at time *t*; and ε_{j_t} is an error term, representing unexplained variation in the dependent variable for group *g* at time *t*.[40]

[40] These models are unweighted, although I control for the size of each minority group and the log of population size. As such, the unit of analysis is the CBSA; therefore, the coefficients should be interpreted as estimates of the relationship between average group characteristics and the level of segregation at the CBSA level.

I first present my analysis with descriptive tables and figures that show concentration and clustering indexes for MENA, South Asian and East Asian immigrants in 2010 and 2016. Then, I focus on the 2016 period to estimate the relationship between acculturation and socioeconomic attributes and concentration or clustering patterns, followed by a fuller model that includes control variables. For this analysis I use the largest analytic samples possible, by selecting CBSAs with at least 500 members of each group taken separately.

Finally, to estimate change over time for these groups, I run similar models for 2000 and calculate differences in differences between groups, based on a consistent sample of 120 CBSA with at least 500 of each group in each time period. To do this, I first calculate the change from 2000 to 2016 in levels of concentration and clustering and its predictors for the MENA, South Asian, and East Asian populations separately. I then take the difference between the MENA difference and the differences of the other groups to assess the extent to which changes over time have been similar or different for the three groups. As noted above, I expect that concentration and clustering will increase more (or decline less) for the MENA population versus the comparison groups, and that the relationships between acculturation and SES will have lessened over time for MENA immigrants compared to their counterparts.

Findings

Descriptive Statistics

Table 3.1 presents socioeconomic and demographic characteristics of the MENA, South Asian and East Asian populations as well as metropolitan area characteristics in 2000 and 2016. On average, all three groups under consideration are comparatively similar with their high levels of English proficiency and educational attainment in both years. While the MENA and East Asian

populations had relatively similar average household incomes, it is important to note that South Asians in both years surpassed the MENA and East Asian populations in household income.

There are notable variations in nativity among the three groups. While on average about 40% of MENA immigrants were native-born and had lived in the United States for an average of 23 years in 2016,[41] only 10% of South Asians and 29% of East Asians were native-born, with an average of 21 and 25 years of residence in the United States, respectively. It is important to note that the percent native-born mirrors the average of MSAs for each immigrant group residing in metropolitan areas because the unit of analysis is the CBSA. In terms of demographic patterns, all three groups cluster around the same ages, on average. There are similar patterns with regards to age and having children at home, although the married proportion of the South Asian population and the presence of children for MENA and East Asian populations are higher in both observed years. Lastly, it is noteworthy that the proportion of each minority group in CBSA increases from 2000 to 2016—MENA (25%) and South Asians (34%) show very similar and relatively higher increases compared to East Asians (28%).

[41] This figure may seem relatively high, although it reflects the CBSA average, which isn't necessarily the same as the population average. I disaggregated the MENA category by ancestry to investigate this high native-born percentage and found that one of the largest MENA ancestries in the IPUMS data was Lebanese, who have a very high native-born percentage compared to other groups and contribute to the high nativity average for the MENA population overall.

Table 3.1. Means and Standard Deviations of Independent Variables Used in the Analysis, by Immigrant Group and Year

	MENA				South Asian				East Asian			
	2000		2016		2000		2016		2000		2016	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Spatial assimilation variables												
% speaking English well or only	83.8	9.42	79.2	12.23	83.6	12.60	84.5	10.20	61.5	11.70	64.8	11.28
Average education (in years)	8.2	0.76	8.6	0.81	9.3	1.02	9.7	0.74	8.3	0.87	8.6	0.74
Average household income (in $000s)	93.1	22.01	84.9	30.58	115.6	40.39	123.7	34.16	82.7	26.17	84.6	26.17
Average years in U.S. (in years)	18.2	4.55	23.0	7.18	15.0	3.33	20.9	4.77	17.7	5.06	25.3	6.35
% native-born	44.8	17.95	40.3	16.72	7.5	6.79	9.9	7.46	25.8	13.66	28.7	14.24
Other demographics												
Average age (in years)	45.2	4.35	47.9	5.51	40.6	4.11	44.4	4.90	42.8	5.16	46.5	5.85
% married	61.7	10.62	59.2	11.72	73.1	13.77	72.7	11.61	60.7	12.16	57.4	16.67
% with children present	46.4	11.30	43.0	13.63	52.7	13.15	48.0	14.35	43.2	12.16	38.6	11.92
Metropolitan area characteristics												
Log of CBSA population	13.3	1.03	12.7	1.12	13.3	1.02	12.9	1.08	12.8	1.14	12.6	1.13
% minority group in CBSA	0.46	0.27	0.71	0.43	0.53	0.55	0.87	0.96	1.19	2.33	1.18	1.46
Midwest	0.212	–	0.227	–	0.231	–	0.203	–	0.234	–	0.188	–
South	0.378	–	0.418	–	0.374	–	0.401	–	0.348	–	0.399	–
West	0.202	–	0.195	–	0.214	–	0.219	–	0.267	–	0.252	–
No. of CBSAs	158		204		154		187		194		219	

Notes : Data for metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data.

2000 and 2016 Average Relative Concentration and Spatial Proximity

Figure 1 depicts the relative concentration index (RCO) in the same sets of CBSA with sufficient populations for the MENA, South Asian, East Asian, Black and Hispanic populations in 2000 to 2016. Black and Hispanic populations are included in the analysis to provide more familiar comparison points for the three groups under consideration. As is apparent from Figure 1, there are slight differences in RCO for the MENA, South Asian, East Asian and Hispanic groups in 2000 and 2016. The highest RCO belongs to the South Asian (64.8), followed by East Asian (59.3), Black (57.7) and MENA (56.41) populations in 2000. The lowest RCO belongs to the Hispanic (40.8-42.5) population in both years. However, it is important to note that an increase in concentration was only observed for the MENA population compared to the South and East Asian populations. With a figure of 59.1 points, the MENA population has the highest concentration among all the groups compared to the concentration of the non-Hispanic white population.

Figure 2 indicates the spatial proximity index (SP) for the MENA, South Asian, East Asian, Black and Hispanic populations in 2000 and 2016. Although there is a rise in the clustering of each group from 2000 to 2016, the increase for South Asians is greatest (from 1.04 to 3.3) compared to the MENA (from 0.72 to 1.74) and East Asian (from 1.42 to 2.79) populations. That is, on average, clustering increased by 2.79 points for the MENA population, 3.3 points for the South Asian population, and 1.74 points for the East Asian population. Each immigrant group had a greater degree of clustering compared to non-Hispanic whites in 2016.

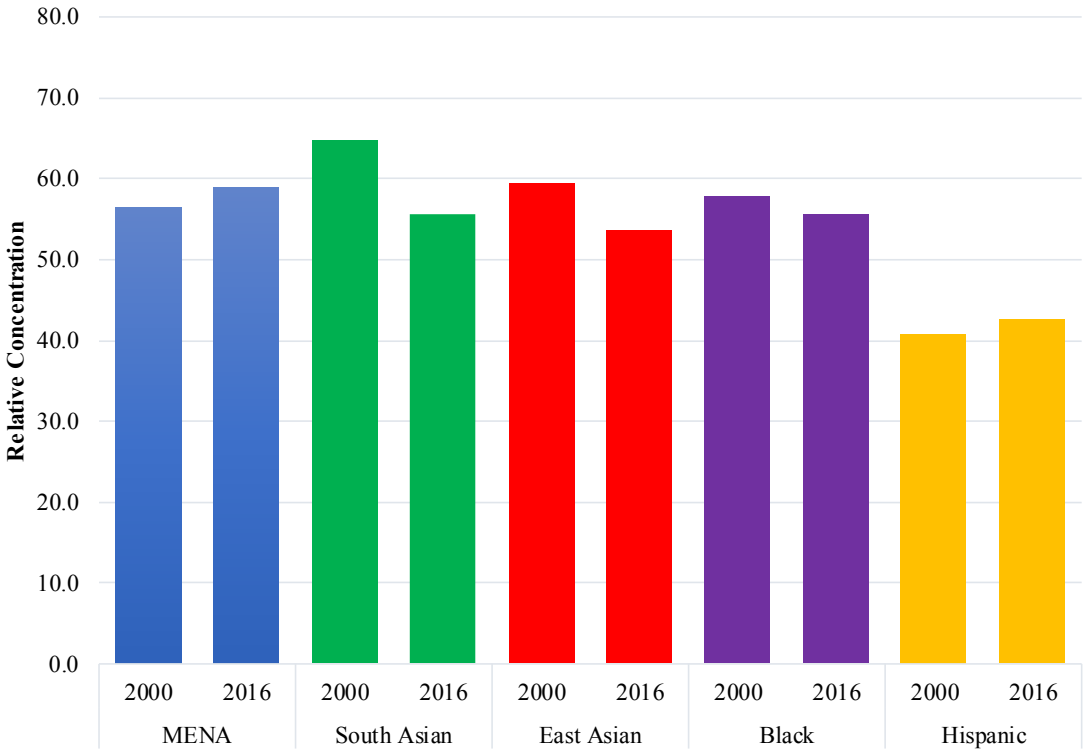

Figure 3.1. Relative Concentration Index (relative to non-Hispanic Whites) for the MENA, South Asian and East Asian Populations, 2000 and 2016

Note : The sample sizes are the 164 CBSAs in 2000 and the 219 CBSAs in 2016 in which there were at least 500 members of each of the five minority groups.

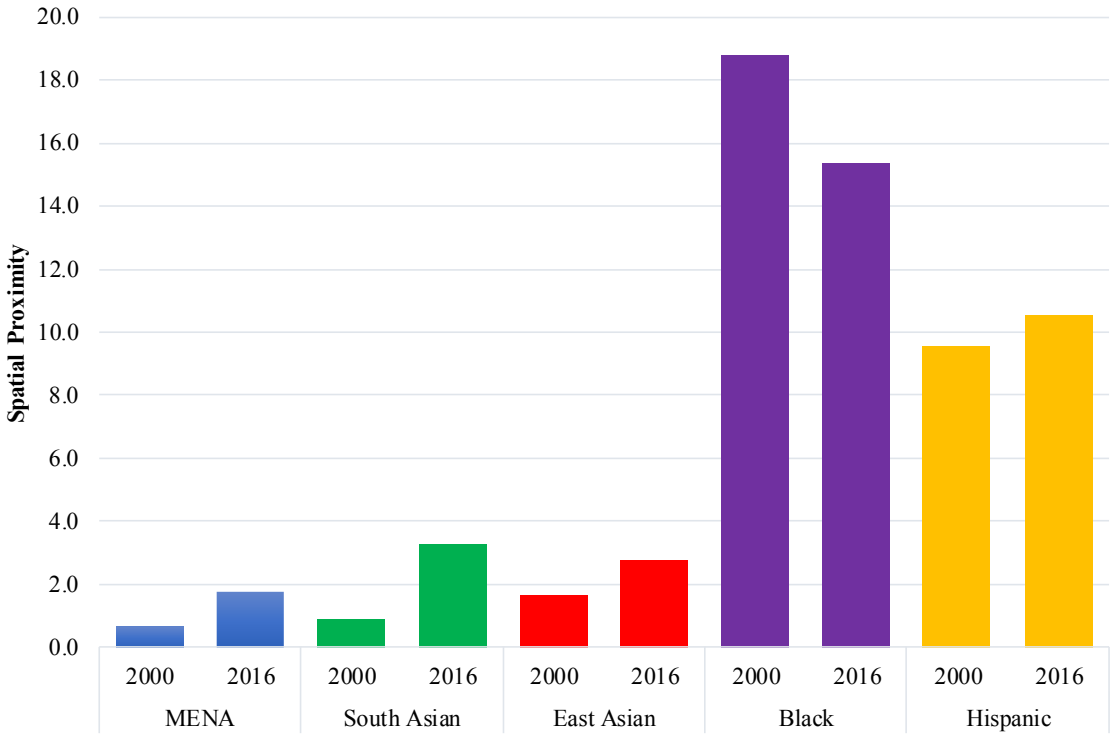

Figure 3.2. Spatial Proximity Index for the MENA, South Asian and East Asian Populations, 2000 and 2016

Note : The sample sizes are the 155 CBSAs in 2000 and the 220 CBSAs in 2016 in which there were at least 500 members of each of the five minority groups.

Synchronic Regression Findings

Note that the concentration and clustering patterns of MENA, South Asian and East Asian populations in any given metropolitan area reflects the extent to which those groups are concentrated or clustered above the concentration or clustering of whites. For the sake of simplicity, my focus in the interpretation of the regression analysis will be on the direction of the coefficient—negative or positive—than the figure itself. A positive coefficient means that increases in the variable leads to more concentration or clustering relative to the white population; a negative coefficient indicates the opposite.

Table 3.2A exhibits results from OLS regressions for the MENA, South Asian and East Asian populations in 2016. The dependent variable is the relative concentration index and the

focal independent variables are markers of spatial assimilation, including English language proficiency, education, income, average number of years in the U.S. for the immigrant population, and percent native-born. The first model compares the relationship between indicators of spatial assimilation and concentration for each group. The second set of models include other demographics and metropolitan characteristics that show the extent to which these factors attenuate the effects of the spatial assimilation variables.

In Model 1, a salient pattern emerges with regard to education. The effect of education on the concentration of MENA, South Asian, and East Asian populations is opposed to the prediction of assimilation theory. In other words, higher levels of education lead to more concentration of all three groups versus non-Hispanic whites. By contrast, English language competence, increases in average household income, and years in the United States decrease the concentration of the MENA, South and East Asian populations—which corresponds with hypotheses of spatial assimilation theory. A similar pattern appears for nativity in the case of South Asians, yet the opposite arises for MENA and East Asian populations. While being native leads to less concentration for South Asians, it generates more concentration for the MENA and East Asian populations. Adding other demographics as well as metropolitan area characteristics to the Model 2 does not change the observed patterns between spatial assimilation variables and the relative concentration index. Only the effect of average years in United States changed direction for the East Asian population—that is, as the years of residence in the U.S. increases for East Asians, the degree of concentration increases as well, controlling for demographics and metropolitan area characteristics.

Table 3.2A. Coefficient and Standard Error Estimates from Linear Regressions of the Relative Concentration Index (vs. Non-Hispanic White) on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, by Immigrant Group: 2016

	MENA				South Asian				East Asian			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	-0.368	0.197	-0.448	0.193 *	-0.258	0.246	-0.393	0.251	-0.075	0.196	-0.191	0.214
Average education (in years)	2.641	2.502	1.190	2.477	6.458	3.656	5.631	4.110	4.828	3.017	0.943	3.131
Average household income (in $000s)	-0.023	0.061	-0.007	0.061	-0.155	0.065 *	-0.082	0.071	-0.167	0.071 *	-0.078	0.086
Average years in U.S. (in years)	-1.115	0.257 ***	-0.631	0.307 *	-1.122	0.488 *	-0.632	0.829	-0.625	0.347	0.079	0.505
% native-born	0.139	0.129	0.314	0.131 *	-0.091	0.287	-0.397	0.312	0.142	0.153	0.155	0.175
Other demographics												
Average age (in years)	–	–	-1.309	0.405 **	–	–	-0.618	0.884	–	–	-1.201	0.570 *
% married	–	–	0.143	0.167	–	–	-0.338	0.264	–	–	0.043	0.180
% with children present	–	–	-0.340	0.142 *	–	–	-0.222	0.198	–	–	-0.413	0.171 *
Metropolitan area characteristics												
Log of CBSA population	–	–	4.664	1.649 **	–	–	2.179	2.203	–	–	2.143	1.586
% minority group in CBSA	–	–	1.539	4.204	–	–	0.039	2.329	–	–	1.993	1.221
Midwest	–	–	11.23	4.996 *	–	–	12.95	6.711	–	–	10.68	5.173 *
South	–	–	-0.430	4.531	–	–	11.95	5.985 *	–	–	9.938	4.585 *
West	–	–	9.481	4.990	–	–	18.40	6.760 **	–	–	11.74	5.982
Intercept	57.02	1.599 ***	55.55	1.606 ***	55.71	2.035 ***	55.36	2.076 ***	52.44	1.541 ***	51.95	1.669 ***
R^2	0.160		0.304		0.108		0.184		0.105		0.193	
Model df	197		189		179		171		212		204	

Notes : Data for the relative concentration index and metropolitan area-level characteristics come from 2012-2016 ACS. All other independent variables come from 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Among the second set of variables, age, marital status and whether there are children present—being married leads to higher concentrations for MENA and East Asian populations, yet it decreases the concentration of the South Asian population. The remaining demographic variables lead to lower concentrations for each immigrant group. By sharp contrast, the metropolitan area characteristics, the log population size, and the rise in the percentage of the total population of each minority group represents in CBSA increases the concentration of MENA, South and East Asian population. Lastly, region as one of the metropolitan variables reveals the concentration patterns of MENA, South, and East Asian immigrants across four regions with the Northeast as the omitted category. The concentrations of the MENA, South, and East Asian populations are higher in the Midwest and West compared to the Northeast. Likewise, the concentrations of the South and East Asian populations are higher in the South compared to the Northeast, yet it is lower for the MENA population. Finally, R-squares for the fullest models indicate that Model 2 explains about 30%, 18%, and 19% of the variation in concentrations of MENA, South, and East Asian populations, respectively.

Table 3.2B shows the OLS results for clustering for the three groups. In Model 1, English language proficiency and nativity lead to less clustering for all immigrants under consideration. While higher levels of education decrease the clustering of the MENA (−0.80) and South Asian (−1.22) populations, it increases the clustering for the East Asian population (0.34). Among indicators of the spatial assimilation model, higher average household incomes decrease the clustering of all three groups. I observed relatively similar patterns in Model 2 after adding other demographic factors and metropolitan area characteristics into the second set of models for each immigrant group. All spatial assimilation variables lead to less clustering for East Asian, MENA and South Asian populations except that nativity for the MENA population and income for the South Asian population generate more clustering.

Table 3.2B. Coefficient and Standard Error Estimates from Linear Regressions of the Spatial Proximity Index (vs. Non-Hispanic White) on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, by Immigrant Group: 2016

	MENA				South Asian				East Asian			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	-0.008	0.021	-0.008	0.020	-0.047	0.034	-0.037	0.024	-0.072	0.024 **	-0.005	0.018
Average education (in years)	-0.798	0.269 **	-0.569	0.252 *	-1.216	0.500 *	-0.116	0.394	0.344	0.364	-0.164	0.270
Average household income (in $000s)	0.003	0.007	-0.001	0.006	0.029	0.009 **	0.003	0.007	0.025	0.009 **	-0.004	0.007
Average years in U.S. (in years)	0.037	0.028	0.049	0.031	-0.109	0.066	-0.006	0.080	-0.045	0.042	-0.080	0.044
% native-born	-0.031	0.014 *	-0.007	0.013	-0.044	0.039	-0.025	0.030	-0.003	0.018	-0.009	0.015
Other demographics												
Average age (in years)	–	–	0.007	0.041	–	–	0.046	0.084	–	–	0.061	0.049
% married	–	–	-0.018	0.017	–	–	0.008	0.025	–	–	0.018	0.015
% with children present	–	–	0.020	0.014	–	–	0.017	0.019	–	–	-0.005	0.015
Metropolitan area characteristics												
Log of CBSA population	–	–	-0.075	0.166	–	–	0.320	0.211	–	–	0.706	0.137 ***
% minority group in CBSA	–	–	3.102	0.428 ***	–	–	2.790	0.223 ***	–	–	1.267	0.105 ***
Midwest	–	–	0.959	0.509	–	–	0.494	0.640	–	–	-0.497	0.446
South	–	–	1.656	0.461 ***	–	–	1.079	0.574	–	–	-0.386	0.395
West	–	–	0.727	0.508	–	–	1.627	0.649 *	–	–	-0.447	0.516
Intercept	1.764	0.171 ***	1.813	0.163 ***	3.565	0.278 ***	3.377	0.198 ***	2.458	0.186 ***	2.283	0.144 ***
R^2	0.115		0.341		0.124		0.608		0.131		0.600	
Model df	198		190		181		173		212		204	

Notes : Data for the spatial proximity index and metropolitan area-level characteristics come from 2012-2016 ACS. All other independent variables come from 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Demographic attributes of immigrant groups, however, have the reverse effect. In other words, age increases clustering for all three groups. Marriage is also an important factor leading to clustering of the South and East Asian populations, but not for the MENA group. However, the presence of children diminishes clustering only for the East Asian population. Further, in the final rows, the figures on the metropolitan area characteristics, including log population size, the percentage of the total population each minority group represents, and the region (with the Northeast as the omitted category), have similar effects on the clustering of each group, especially for the MENA and South Asian populations. While CBSA size leads to more clustering for the South and East Asian populations, the inverse is true for MENA immigrants. Consistent with existing literature, increasing the proportion of groups in a given metropolitan area leads to more clustering for all immigrant groups. Lastly, compared to the omitted Northeast category, both the MENA and South Asian populations are more clustered in the Midwest, South and West. Conversely, the East Asian population is less clustered in the Midwest, South and West region compared to Northeast.

In Tables 3.2A and 3.2B, the effect of socioeconomic and acculturation patterns on concentration and clustering of groups was relatively similar for each immigrant group, despite there being differences in the magnitude of their coefficients. Corresponding with tenets of spatial assimilation theory, the more acculturated (e.g. speaking English well) the MENA, South, and East Asian populations are, the less concentrated and clustered they become. The impact of language on my focus groups' residential patterns is consistent with existing literature. Not surprisingly, language proficiency in arrival societies is perceived to be a significant factor in shaping immigrants' residential patterns: Immigrants with no English language competency tend to reside in ethnic enclaves to overcome the language barriers, as illustrated in the case of Mexican immigrants in the United States (McConnell 2008). Interestingly, however, the findings

show important variations in the connection between immigrants' other individual-level characteristics and whether they were concentrated or clustered. For instance, higher education leads to less clustering of MENA, South, and East Asian groups, but it contributes more to their concentration. By contrast, higher income generates less concentration of all those groups, but leads to more clustering. Thus, to some extent my results run against the spatial assimilation model arguing higher socioeconomic attributes contributes to spatial incorporation of immigrants in the United States.

Overall, controlling for acculturation (e.g., English language proficiency) and SES (e.g., education, income), I expected to observe the MENA population to be more concentrated or clustered relative to South and East Asian populations due to Islamophobic or anti-Muslim sentiments. Parallel to my expectations, the MENA population (57.02) is more concentrated relative to non-Hispanic whites than South Asian (55.71) or East Asian (52.44) populations (Table 3.2A). By contrast, the MENA population is less clustered relative to non-Hispanic whites (1.76) than South Asian (3.56) and East Asian (2.46) populations. Thus, my findings fail to support Hypothesis 1 with regards to clustering, but support Hypothesis 1 with regards to concentration. In addition, the negative cross-sectional relationship between income and concentration is stronger for South and East Asian populations as Hypotheses 2 suggested.

However, the negative cross-sectional relationship between English language proficiency and concentration is stronger for the MENA population. Higher education does not lower concentration for any of the three groups; the magnitude is lowest for MENA immigrants. Therefore, my findings fail to support Hypothesis 2 with regards to concentration. In terms of clustering, there are variations between two comparison groups. In other words, the negative cross-sectional relationship between English language proficiency, education, length of residence, nativity, and clustering is stronger for the South Asian population compared to the

MENA population. However, this negative cross-sectional relationship is only observed for English language proficiency and length of residence for East Asians compared to the MENA population. Hence, my findings support Hypothesis 2 in terms of clustering for the South Asian population yet fail to support to Hypothesis 2 for the East Asian population.

Diachronic Regression Findings

Tables 3.3A and 3.3B[42] show the OLS regression results of concentration and clustering of MENA, South Asian, and East Asian populations relative to non-Hispanic whites in 2000 and 2016. I argue that concentration and clustering of the MENA population will increase over time considering the prevalence of anti-Muslim sentiments and discriminatory discourses targeting them following the tragedy of 9/11, relative to other two minority groups: South and East Asians. In these tables, the first column figures are from the year 2000 before the terrorist attacks of September 11th, and the second are from 2016 representing the post-9/11 period. The third column, however, displays the differences in the relative concentration index (Table 3.3A) and spatial proximity index (Table 3.3B) by subtracting the coefficient value of 2016 from the coefficient of value of 2000. Since my goal is to evaluate the differences in concentration and clustering of each group by controlling for individual and metropolitan area-level characteristics, I will focus on the third column in my interpretation of results.

[42] Tables 3A and Table 3B represent the fullest samples of these populations, and therefore better reflect the overall experiences of the immigrant groups under consideration. I also ran a set of analyses with one consistent set of places across time for all three groups (tables are included in the appendix). Although there are slight numerical differences, the results are consistent with those in Tables 3A and 3B.

Table 3.3A. Coefficient and Standard Error Estimates from Linear Regressions of the Relative Concentration Index (vs. Non-Hispanic White) on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, 2000-2016

	MENA						South Asian						East Asian					
	2000		2016		Difference		2000		2016		Difference		2000		2016		Difference	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables																		
% speaking English well or only	-0.242	0.245	-0.353	0.214	-0.112	0.325	0.016	0.152	-0.368	0.270	-0.384	0.310	0.003	0.158	-0.515	0.259 *	-0.519	0.303
Average education (in years)	-0.101	2.758	2.338	2.686	2.439	3.850	1.660	2.314	4.117	4.302	2.457	4.885	-0.633	2.185	0.597	3.727	1.231	4.320
Average household income (in $000s)	-0.056	0.081	-0.080	0.071	-0.023	0.108	-0.080	0.039 *	-0.039	0.099	0.042	0.107	-0.160	0.069 *	-0.069	0.091	0.091	0.114
Average years in U.S. (in years)	-0.571	0.391	-0.382	0.416	0.189	0.571	-0.017	0.653	-1.746	0.916	-1.729	1.125	-0.720	0.509	0.161	0.586	0.882	0.776
% native-born	0.076	0.151	0.151	0.136	0.075	0.203	-0.076	0.231	0.577	0.369	0.653	0.435	-0.269	0.156	0.620	0.217 **	0.889	0.267 **
Other demographics																		
Average age (in years)	-0.661	0.480	-1.160	0.480 *	-0.499	0.679	-0.954	0.598	0.048	0.957	1.001	1.129	-0.378	0.482	-1.963	0.640 **	-1.585	0.802 *
% married	-0.016	0.182	-0.004	0.173	0.012	0.252	-0.023	0.142	-0.400	0.293	-0.377	0.326	0.148	0.162	0.009	0.204	-0.138	0.261
% with children present	-0.244	0.177	-0.117	0.166	0.126	0.243	-0.273	0.158	-0.100	0.217	0.173	0.268	-0.403	0.161 *	-0.376	0.219	0.027	0.272
Metropolitan area characteristics																		
Log of CBSA population	3.648	1.813 *	2.475	1.576	-1.174	2.402	-0.176	1.389	1.610	2.293	1.785	2.681	3.549	1.417 *	3.153	1.615	-0.396	2.149
% minority group in CBSA	5.055	6.632	-0.926	3.750	-5.981	7.619	0.836	2.395	-0.330	2.159	-1.166	3.225	2.626	1.355	1.900	1.186	-0.726	1.801
Midwest	17.67	5.208 ***	8.777	4.511	-8.89	6.890	14.15	4.235 **	8.839	6.250	-5.308	7.550	12.95	4.527 **	7.144	5.095	-5.806	6.815
South	17.67	4.741 ***	-1.076	4.189	-18.74	6.326 **	13.82	3.839 ***	10.14	5.693	-3.681	6.867	16.90	3.953 ***	11.30	4.523 *	-5.599	6.007
West	16.05	5.617 **	7.636	4.711	-8.42	7.332	15.65	4.641 ***	18.44	6.431 **	2.795	7.931	18.94	5.133 ***	9.820	6.115	-9.12	7.984
Intercept	53.50	1.581 ***	59.34	1.408 ***	5.84	2.12 **	64.25	1.306 ***	56.63	1.935 ***	-7.62	2.33 **	56.61	1.486 ***	52.46	1.636 ***	-4.16	2.21
R^2	0.212		0.300				0.324		23.94				0.338		0.281			
Model df	143		146		143		140		142		140		163		178		163	

Notes : Data for the relative concentration index and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

According to Table 3.3A, the concentration of the MENA population in 2000 is 53.50. With figures of 5.84, the concentration of the MENA population rises to 59.34 in 2016. As predicted, only the concentration of the MENA population increased over time—both the concentration of South Asian (64.25; 56.63) and East Asian (56.61; 52.46) populations declined from 2000 to 2016. However, with 7.62 points the concentration of the South Asian population decreased the most of the three groups. Overall, these findings support Hypothesis 3 as the differences in average levels of concentration between the MENA and East and South Asian populations are significantly different in the post-9/11 period compared to the pre-9/11 period. The differences were higher for the MENA population, as was expected.

Looking at the differences in the relationship between acculturation, SES, and concentration in the post-9/11 period compared to the pre-9/11 period, relatively similar patterns emerge for each immigrant group. For all of the groups under consideration, the relationship between concentration and education become stronger in 2016 compared to 2000. Similarly, the length of residence and nativity decreased concentration, that is segregation scores for all groups over time, excluding South Asians for the former. The results indicate a similar relationship between concentration and income for the South and East Asian populations, but not for the MENA population. While income became a stronger predictor for the concentration of South and East Asian groups in 2016, its effect declines for the concentration of MENA population over time, unlike what the spatial assimilation theory would predict. Again, the relationship between English language proficiency and concentration contradicts the tenets of spatial assimilation theory as it does not play a role in lowering the concentration of MENA or South and East Asian populations.

Table 3.3B. Coefficient and Standard Error Estimates from Linear Regressions of the Spatial Proximity Index on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, 2000-2016

	MENA						South Asian						East Asian					
	2000		2016		Difference		2000		2016		Difference		2000		2016		Difference	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables																		
% speaking English well or only	-0.003	0.003	0.009	0.025	0.012	0.025	-0.007	0.006	-0.051	0.030	-0.044	0.030	-0.014	0.008	-0.026	0.025	-0.012	0.026
Average education (in years)	-0.045	0.039	-0.427	0.317	-0.382	0.319	-0.059	0.097	-0.358	0.473	-0.299	0.483	0.120	0.105	-0.150	0.358	-0.271	0.373
Average household income (in $000s)	-0.001	0.001	-0.010	0.008	-0.010	0.008	0.000	0.002	0.012	0.011	0.012	0.011	-0.003	0.003	-0.001	0.009	0.002	0.009
Average years in U.S. (in years)	0.004	0.005	0.028	0.049	0.023	0.049	0.017	0.027	0.008	0.101	-0.009	0.104	-0.009	0.025	-0.077	0.056	-0.068	0.061
% native-born	-0.003	0.002	-0.019	0.016	-0.016	0.016	-0.003	0.010	-0.032	0.041	-0.029	0.042	0.000	0.007	-0.006	0.021	-0.006	0.022
Other demographics																		
Average age (in years)	0.003	0.007	0.038	0.057	0.035	0.057	0.003	0.025	-0.052	0.105	-0.056	0.108	0.021	0.023	0.048	0.061	0.027	0.066
% married	0.003	0.003	-0.007	0.020	-0.010	0.021	0.004	0.006	0.010	0.032	0.006	0.033	0.005	0.008	0.015	0.020	0.009	0.021
% with children present	0.002	0.002	0.023	0.020	0.021	0.020	0.001	0.007	0.034	0.024	0.034	0.025	-0.003	0.008	-0.011	0.021	-0.008	0.022
Metropolitan area characteristics																		
Log of CBSA population	0.050	0.027	0.088	0.184	0.038	0.186	0.096	0.064	0.397	0.252	0.301	0.260	0.300	0.072 ***	0.775	0.155 ***	0.475	0.171 **
% minority group in CBSA	0.818	0.110 ***	3.426	0.442 ***	2.608	0.456 ***	2.276	0.102 ***	2.649	0.238 ***	0.373	0.259	1.328	0.065 ***	1.227	0.114 ***	-0.101	0.131
Midwest	0.156	0.074 *	1.082	0.532 *	0.926	0.537	0.150	0.182	0.332	0.688	0.183	0.711	-0.152	0.220	-0.486	0.489	-0.333	0.536
South	0.211	0.068 **	1.520	0.494 **	1.309	0.498 **	0.181	0.166	1.238	0.626	1.057	0.648	-0.168	0.193	-0.421	0.434	-0.253	0.475
West	-0.073	0.080	0.690	0.555	0.763	0.561	0.079	0.201	1.323	0.708	1.244	0.736	-0.488	0.247	-0.305	0.587	0.183	0.637
Intercept	0.627	0.022 ***	1.703	0.166 ***	1.077	0.17 ***	1.056	0.055 ***	3.751	0.213 ***	2.695	0.22 ***	1.522	0.071 ***	2.592	0.157 ***	1.071	0.17 ***
R^2	0.472		0.425				0.825		0.644				0.857		0.604			
Model df	135		147		135		132		142		132		169		178		169	

Notes : Data for the spatial proximity index and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Table 3.3B displays the results of OLS regressions used to predict clustering in 2000 and 2016, as well as the differences in clustering between 2000 and 2016. The degree of clustering experienced by each group increased significantly from 2000 to 2016 for the MENA (0.62; 1.70); South Asian (1.05; 3.75); and East Asian (1.52; 2.59) populations. Nonetheless, despite a rise in clustering of MENA immigrants in the post-9/11 period compared to the pre-9/11 period, the increase was not greatest for the MENA compared to South and East Asian populations, as was expected. Thus, these findings fail to support Hypotheses 3 with regard to clustering.

In terms of the relationship between acculturation, SES, and clustering, the results document variations across groups. For instance, except income, all spatial assimilation variables yield less clustering for the East and South Asian population over time, supporting the assimilation model hypotheses. Educational attainment, household income, and nativity were associated with less clustering over time for the MENA population. Length of residence and English language proficiency for the MENA populations whereas household income for the South and East Asian group demonstrate a weaker relationship with clustering in 2016 compared to 2000.

Other demographic aspects also influenced concentration and clustering patterns (Tables 3.3A 3.3B). While getting older leads to less concentration for MENA and East Asian populations, it contributes to higher concentration over time for the South Asian population. The reverse relationship is observed for the case of children's presence in the household (Table 3.3A). In the case of changes to clustering patterns, only marital status for the MENA population, age for the South Asian population, and having children contribute to declustering of East Asian population. Other remaining demographic variables have a greater effect on the clustering of each group in 2000 than 2016. Differences in effects are more pronounced in metropolitan area variables across the two tables, especially for the MENA and South Asian

populations. All the metropolitan area characteristics contribute to less concentration of MENA groups over time (Table 3.3A), but the same metropolitan area variables have a greater effect on their clustering (Table 3.3B). Similar patterns are observed for the South Asian population, excluding log of population. In the case of the East Asian population, similar results are observed across the two tables (with exception of log of population) and except that compared to the omitted category of the Northeast, the West becomes less concentrated (Table 3.3A) and more clustered (Table 3.3B) over time.

Ultimately, these findings strengthen the argument of the present study. I argue that the 9/11 terrorist attacks and many others around the world, and ongoing (cold) war/political tension between states (e.g., Iran, Syria and USA), have fed and maintained pervasive anti-Muslim/Arab sentiments, have reinforced the racialized status of the MENA immigrant population, and have overwhelmingly influenced the everyday lives of the MENA population in the United States. For this reason, I expected to see the largest increase in clustering of MENA immigrants as they may tend to reside with their coethnic group in order to shield themselves from outside prejudice and discrimination. I expected to see a similar but smaller increase in clustering of South Asian immigrants, as they have sometimes been mistaken as MENA immigrants (Love 2017).

Difference in Differences Findings

Tables 3.4A and 3.4B shows the 2000 to 2016 difference, and difference in differences analysis of change over time in concentration and clustering patterns and its determinants for the MENA, South Asian, and East Asian populations. For the 2000 to 2016 difference, only the MENA population's concentration showed a significant rise over time (Table 3.4A). In terms of clustering, all three immigrant groups showed a significant rise over time, however with a figure of 2.70 the South Asian population saw the highest increase in clustering, followed by MENA (1.08) and East Asian (1.07) and populations.

Table 3.4A. Coefficient and Standard Error Estimates from Difference in Differences Analysis of Change Over Time in Relative Concentration and its Determinants, 2000-2016

	2000 to 2016 Differences						Difference in Differences					
	MENA		South Asian		East Asian		MENA-South		MENA-East		South-East	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	-0.112	0.325	-0.384	0.310	-0.519	0.303	0.273	0.318	0.407	0.313	0.134	0.306
Average education (in years)	2.439	3.850	2.457	4.885	1.231	4.320	-0.018	4.391	1.208	4.111	1.226	4.584
Average household income (in $000s)	-0.023	0.108	0.042	0.107	0.091	0.114	-0.065	0.107	-0.114	0.112	-0.049	0.111
Average years in U.S. (in years)	0.189	0.571	-1.729	1.125	0.882	0.776	1.918	0.888 *	-0.693	0.689	-2.611	0.950 **
% native-born	0.075	0.203	0.653	0.435	0.889	0.267 **	-0.578	0.338	-0.815	0.240 ***	-0.237	0.353
Other demographics												
Average age (in years)	-0.499	0.679	1.001	1.129	-1.585	0.802 *	-1.500	0.928	1.086	0.748	2.587	0.963 **
% married	0.012	0.252	-0.377	0.326	-0.138	0.261	0.389	0.291	0.150	0.257	-0.239	0.292
% with children present	0.126	0.243	0.173	0.268	0.027	0.272	-0.047	0.255	0.099	0.259	0.146	0.270
Metropolitan area characteristics												
Log of CBSA population	-1.174	2.402	1.785	2.681	-0.396	2.149	-2.959	2.543	-0.777	2.269	2.182	2.404
% minority group in CBSA	-5.981	7.619	-1.166	3.225	-0.726	1.801	-4.815	5.878	-5.255	5.328	-0.440	2.545
Midwest	-8.89	6.890	-5.308	7.550	-5.806	6.815	-3.585	7.223	-3.087	6.850	0.498	7.157
South	-18.74	6.326 **	-3.681	6.867	-5.599	6.007	-15.06	6.598 *	-13.15	6.156 *	1.918	6.410
West	-8.42	7.332	2.795	7.931	-9.12	7.984	-11.21	7.633	0.701	7.691	11.91	7.960
Intercept	5.842	2.117 **	-7.622	2.335 **	-4.156	2.211	13.46	2.227 ***	9.998	2.168 ***	-3.465	2.267
Model df	145		141		171		145		141		171	

Notes : Data for the relative concentration index and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Since the results on the left side of the panels Table 3.4A and Table 3.4B have already been discussed, my interpretation will focus on the right side of the panels. Note that a positive coefficient means the impact of the variable on segregation is increasing (more concentrated or clustered) more rapidly for the first group in comparison to the second group. Negative coefficients indicate the opposite (less concentrated or clustered), that variables became markedly more related to desegregation for the first group relative to the second. To illustrate, consider the MENA vs South Asian and MENA vs East Asian comparisons in Table 3.4A, where the relationship between concentration and English language proficiency and average years in U.S. is stronger for the South Asian population (leads to less concentration), and this relationship grows stronger in the case of English language proficiency and education for the East Asian populations relative to the MENA population. I observed the opposite pattern in the case of educational attainment, household income, and nativity in the MENA versus South Asian comparison; as well as for household income, length of residence, and nativity in the MENA versus East Asian comparison. Although higher educational attainment and nativity leads to more concentration for all three groups, the effect was greater for South and East Asian populations, leading to a negative difference in differences coefficient on educational attainment and nativity in both comparisons.

In the South-East Asian comparison, average household income, length of residence, and nativity grow stronger in relation to concentration. However, it is observed in the MENA comparison of those two groups, income and nativity leads to more concentration for both groups, yet the effect was greater for the East Asian population relative to the South Asian population, leading to negative difference in differences coefficients. The reverse pattern appears for the effect of English language competence and educational attainment on concentration in the

South-East Asian comparison. English language competency and higher educational attainment lead to less concentration for the East Asian population.

In terms of demographic attributes, we can follow the same logic. In the MENA-South Asian comparison, excluding marital status, the relationship between concentration, age, and having children grows stronger for the South Asian population. I observed the exact opposite relation in the pairwise comparison of South Asian and East Asian populations—excluding marital status, age and having children has a greater impact on the deconcentration of the East Asian population. In the case of the MENA-East Asian comparison, all demographic attributes of immigrants lead to more deconcentration for the East Asian group. Lastly, both the MENA-South Asian and MENA-East Asian comparisons demonstrate that all of the metropolitan area control variables are increasingly related to desegregation (less concentration) for South and East Asian populations while these same variables are increasingly related to segregation (more concentration) for the MENA population.

I observed relatively similar patterns in the MENA-South Asian and MENA-East Asian comparisons in Table 3.4B. Coefficients related to average household income remains in higher negative relationship for the MENA compared to South and East Asian population. Likewise, English language proficiency becomes stronger in its positive relationship on clustering of South and East Asian populations relative to the MENA population over time. The same aspects emerge for nativity in the MENA-East Asian comparison. In the South-East Asian comparison, the negative coefficient for English language proficiency, educational attainment and nativity demonstrates a higher negative relationship for South Asian's clustering pattern. That is, the impact of English language proficiency, educational attainment and being native on declustering of the South Asian population grows weaker over time compared to the East Asian group.

Table 3.4B. Coefficient and Standard Error Estimates from Difference in Differences Analysis of Change Over Time in Spatial Proximity and its Determinants, 2000-2016

	2000 to 2016 Differences						Difference in Differences					
	MENA		South Asian		East Asian		MENA-South		MENA-East		South-East	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	0.012	0.025	-0.044	0.030	-0.012	0.026	0.056	0.028 *	0.024	0.026	-0.032	0.028
Average education (in years)	-0.382	0.319	-0.299	0.483	-0.271	0.373	-0.084	0.409	-0.112	0.350	-0.028	0.425
Average household income (in $000s)	-0.010	0.008	0.012	0.011	0.002	0.009	-0.021	0.010 *	-0.012	0.009	0.009	0.010
Average years in U.S. (in years)	0.023	0.049	-0.009	0.104	-0.068	0.061	0.033	0.081	0.091	0.056	0.058	0.083
% native-born	-0.016	0.016	-0.029	0.042	-0.006	0.022	0.013	0.032	-0.009	0.020	-0.022	0.032
Other demographics												
Average age (in years)	0.035	0.057	-0.056	0.108	0.027	0.066	0.091	0.086	0.008	0.062	-0.082	0.087
% married	-0.010	0.021	0.006	0.033	0.009	0.021	-0.016	0.027	-0.019	0.021	-0.004	0.027
% with children present	0.021	0.020	0.034	0.025	-0.008	0.022	-0.013	0.022	0.029	0.021	0.042	0.023
Metropolitan area characteristics												
Log of CBSA population	0.038	0.186	0.301	0.260	0.475	0.171 **	-0.263	0.226	-0.437	0.178 *	-0.175	0.215
% minority group in CBSA	2.608	0.456 ***	0.373	0.259	-0.101	0.131	2.236	0.371 ***	2.709	0.319 ***	0.473	0.198 *
Midwest	0.926	0.537	0.183	0.711	-0.333	0.536	0.744	0.630	1.260	0.537 *	0.516	0.619
South	1.309	0.498 **	1.057	0.648	-0.253	0.475	0.252	0.577	1.561	0.485 **	1.309	0.558 *
West	0.763	0.561	1.244	0.736	0.183	0.637	-0.480	0.654	0.580	0.604	1.060	0.682
Intercept	1.077	0.167 ***	2.695	0.220 ***	1.071	0.172 ***	-1.618	0.195 ***	0.006	0.170	1.624	0.195 ***
Model df	139		137		174		139		137		174	

Notes : Data for the spatial proximity index and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

With regards to demographic attributes, being married and having children has a greater negative relationship to clustering for the MENA compared to South Asian population over time. In the MENA-East and South-East comparisons, marital status has a more positive relationship on clustering for the latter group in both comparisons. In the case of metropolitan area characteristics—across two tables for each comparison while the log of total population of the metropolitan area displays similar findings, the opposite is observed for the percent of that area made of minority groups.

Taken together, the difference in difference findings illustrate the change in relationship between concentration and focal variables—the indicators of spatial assimilation and control variables—demographic and metropolitan area characteristics. Difference in difference analysis was conducted particularly to look at the extent to which the association between socioeconomic characteristics, concentration, and clustering changes in effect (magnitude and direction) across groups in the pre-9/11 and post-9/11 periods. I argue that following the 9/11 terrorist attacks, changes in the political and social context heightened a public discourse of threat to the MENA population. As a result, the MENA population came to be perceived as a threat on a national and local level. At the national level, prohibitions on their right to enter the country (Muslim ban) as immigrants, contributed to fears of terrorism. At the local level, MENA immigrants are perceived as threat to local communities by concentrating or clustering with their own co-ethnic groups even if they have the socioeconomic resources that grant them the power of "choose" to where they can live.

Considering the association between MENA immigrants and terrorists as well as social and cultural processes of becoming a dangerous *Other* and potential criminal in public perception, I predicted that the changes in the relationship between acculturation, SES, and concentration or clustering would be significantly different in the post-9/11 period compared to

the pre-9/11 period for the MENA compared to the South and East Asian populations. To put it differently, I predicted that MENA immigrants would be more negatively affected by racialization and stigma from the pre-9/11 to the post-9/11 period. Unlike what I predicted, in MENA-South Asian pairwise comparisons, educational attainment, average household income, and nativity show a higher negative relationship on concentration of MENA population. Similarly, in the MENA-East Asian comparison, average household income, years of residence, and nativity show a higher negative relationship for the MENA population (Table 3.4A). In terms of clustering, in both comparisons, educational attainment and average household income indicate a higher negative relationship for the MENA population (Table 3.4B). Therefore, my findings fail to support Hypothesis 4.

Discussion and Conclusions

The objective of this study was to examine the spatial assimilation of the MENA population in the United States by investigating their concentration and clustering patterns. My analysis enabled me to address the extent to which the concentration and clustering of the MENA population was determined by spatial assimilation variables (e.g., educational attainment, income, English language proficiency) and to what extent their concentration and clustering was determined by a hostile social and political context following the 9/11 terrorist attacks, compared to South and East Asian populations. Despite existing research on the impact of 9/11 on MENA immigrants' experiences, the impact of the 9/11 tragedy on their residential outcomes remain underexamined. The overarching goal of this research is to demonstrate the effect of the context of reception on residential patterns of MENA immigrants as well as identify the any change in their concentration and clustering patterns as a result of the 9/11 tragedy.

Using census-tract level data from the U.S Census and the ACS merged with IPUMS data to control for average group level characteristics at metropolitan areas, I conducted descriptive and multivariate analyses. My initial findings show that the MENA population is more concentrated than the South and East Asian populations in both 2000 and 2016. However, relatively opposite outcomes are observed for the spatial proximity index. The MENA population clustered the least compared to the other two groups. Multivariate analysis demonstrates similar patterns: controlling for socioeconomic and acculturation variables, the MENA population remains the highest in their concentration, yet the lowest in their clustering patterns.

I argue that the MENA population's residential patterns are determined largely by negative context of reception that American society produced following the 9/11 terrorist attacks. This response was reinforced over time by media and political discourses due to ongoing violence perpetrated by Islamist fanatics within and outside of the United States. Indeed, the MENA population has faced excessive surveillance and systematic discrimination, including in the housing market (Gaddis and Ghoshal 2015; Steve and Selod 2015; Selod 2014; Carpusor and Loges 2006; Ahmed, Andersson and Hammarstedt 2010; Hogan and Berry 2011; Zarrugh 2016; Friedman et al. 2019). Accordingly, I presumed that the determinative power of socioeconomic status and acculturation on desegregation of the MENA population would be weaker for the post-9/11 period relative to South and East Asian populations. Consistent with my assumption, and controlling for socioeconomic attributes and English language proficiency, the relative concentration index increased the most for the MENA population compared to their South and East Asians counterparts, post-9/11. The residential clustering, however, increased the most for the South Asian population, followed by MENA population. I expected to observe a similar increase in clustering of South Asian groups as they may be mistaken as MENA immigrants, but

I did not expect that they would exceed the MENA population's clustering. Nevertheless, in both cases the results support my argument. I found the context of reception has a negative impact on residential segregation for the MENA population, as I observed a rise in clustering of the MENA population following the 9/11 tragedy, controlling for spatial assimilation variables, demographic attributes, and metropolitan area characteristics.

The relationship between the concentration index and the spatial assimilation variables, however, are successfully predicted by the spatial assimilation model and this relationship is persistent across groups. In other words, English language proficiency, income, and length of residence attuned the residential concentration of MENA, South and East Asian groups, supporting the tenets of spatial assimilation theory. This finding is consistent with previous research examining the segregation of immigrant groups from non-Hispanic whites (Alba and Logan 1991; Frey and Farley 1996; Logan et al. 1996; South and Crowder 1998; Freeman 2002; Timberlake and Iceland 2007; ; South et al. 2008; Pais et al. 2012; Friedman et al., 2019). However, the relationship between educational attainment and concentration contradicts the spatial assimilation model—higher education does not lead to less concentration of groups under consideration. Similarly, although English language proficiency and higher education lessens the clustering of all the three groups (excluding East Asian Table 3.2A-Model 1), income for all groups and length of residence and nativity do not contributes of declustering of MENA groups, supporting the argument for the context of reception.

The findings regarding differences in average level of concentration and clustering of groups as well as changes in the relationship between acculturation, SES, and clustering and concentration of groups compared pre-9/11 to post-9/11 simultaneously align and contradict with the tenets of assimilation theory. For instance, while education and nativity become weaker in decreasing concentration of the MENA population after the 9/11 tragedy as predicted, English

language and income play roles in their deconcentration. Likewise, the relationship grows stronger in the case of income for the MENA population compared to the South and East Asian populations; the opposite is observed for English language proficiency.

Taken together, these findings suggest that immigrants' residential segregation cannot be explained solely by the spatial assimilation model. Despite that, this model did identify a significant set of household-level factors that are useful to explain spatial assimilation of immigrants in arrival societies. The fact that socioeconomic attributes and acculturation have enabled some immigrant groups, but not others, to lessen their concentration and clustering rates, demonstrates the inadequacy of the spatial assimilation model for explaining variations across groups. Other theoretical frameworks such as the ethnic community model and ethnoburbs may explain the concentration and/or clustering of immigrants: immigrants may prefer to live with their own coethnic groups in order to maintain their social identity and cultural values (Alba et al. 2002; Li 1998, 2009; Allen and Turner 2009). Although my research is limited in terms of identifying the underlying reasons of immigrants' concentration and clustering, I find explanations for immigrants' segregation that center on immigrants' choices to be problematic. I do not mean to ignore immigrants' agency in their residential choices. However, I wish to draw attention to the structural external factors that determine immigrants' settlement patterns. Even though immigrants may *choose* to live among their own ethnic group, and they may have the ability to monitor their own actions over their settlement, the range of choices granted them are structurally limited (Bauman and May 2001). That is, harassment and discrimination at the neighborhood level may force minority groups' concentration and clustering in ways that generate spatial and social exclusion of groups over time. As Zubrinsky and Bobo (1996:372) state racial identity is matter in preferences, "and it matters not merely because members of any given group prefer ''their own kind,'' but because everyone is aware of and must adapt to the

historically developed, structurally rooted, and psychologically unavoidable American racial order or hierarchy." Thus, spatial concentration or clustering can be viewed as a byproduct of a hostile context of reception in a neighborhood and as a way for immigrant groups to resist and to shield themselves from outside prejudice and discrimination.

Note that this research has several limitation worth mentioning. Although one of the goals of this study is to estimate the effect of anti-Muslim sentiment on the MENA population's residential segregation, religious status is not controlled directly because the U.S. Census does not collect data on immigrants' religious characteristics. I generated MENA and South Asian categories specifically to include ethnic groups emigrating from majority Muslim countries for the former group, and by excluding ethnic groups emigrating from majority Muslim countries for the latter group. However, future research may overcome this shortcoming by utilizing data from local and state level datasets. Additionally, while this study provides national level findings on the concentration and clustering of MENA, South Asian, and East Asian immigrants, in order to provide meaningful and comparative results I limited the population size of the three groups to 500 in each metropolitan area of the United States. Thus, the analysis does include the concentration and clustering experiences of MENA, South, and East Asian immigrants in MAs where their number is less than 500.

Overall, by focusing on the spatial assimilation of the MENA population at a national level in the United States this study contributes significantly to the spatial assimilation literature by revealing the experiences of an understudied, stigmatized, and racialized group. Second, whereas most studies of "Asian" segregation in the United States treat this group as an undifferentiated mass, I disaggregate the Asian population into two mutually exclusive (though not exhaustive) and theoretically-motivated subgroups. Last but foremost, this study is the first to my knowledge to attempt to measure, albeit indirectly, the impact of the context of reception on

the spatial incorporation of MENA immigrants by investigating their concentration and clustering patterns. In doing so, I showed that the argument of spatial assimilation theory that emerged from the experiences of European immigrants neglects important group differences, and by focusing on only individual-level attributes (e.g. SES and acculturation) overlooks the complex spatial incorporation process, ultimately limiting our understanding of this process.

Appendix Tables

Table 3.A1. Coefficient and Standard Error Estimates from Linear Regressions of the Relative Concentration Index (vs. Non-Hispanic White) on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, 2000-2016

	MENA						South Asian						East Asian					
	2000		2016		Difference		2000		2016		Difference		2000		2016		Difference	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables																		
% speaking English well or only	-0.289	0.255	-0.452	0.268	-0.164	0.370	0.109	0.109	-0.254	0.310	-0.363	0.329	-0.347	0.272	-0.068	0.300	0.280	0.405
Average education (in years)	2.187	3.140	2.877	3.101	0.690	4.414	0.740	0.740	5.602	4.784	4.863	4.840	2.917	3.176	-2.061	4.385	-4.978	5.414
Average household income (in $000s)	-0.066	0.087	-0.080	0.083	-0.014	0.120	-0.113	-0.113	-0.052	0.108	0.062	0.157	-0.052	0.093	-0.002	0.123	0.050	0.154
Average years in U.S. (in years)	-0.918	0.446 *	-0.453	0.467	0.465	0.646	-0.028	-0.028	-2.492	1.068 *	-2.465	1.069 *	-0.134	0.718	-0.854	0.739	-0.720	1.031
% native-born	0.222	0.161	0.205	0.153	-0.017	0.222	-0.083	-0.083	0.569	0.407	0.652	0.415	0.112	0.215	0.569	0.244 *	0.456	0.325
Other demographics																		
Average age (in years)	-0.426	0.535	-1.092	0.518 *	-0.666	0.745	-1.184	-1.184	0.674	1.080	1.857	1.602	-1.189	0.648	-2.058	0.855 *	-0.868	1.073
% married	-0.061	0.193	-0.073	0.228	-0.012	0.299	0.077	0.077	-0.399	0.310	-0.476	0.319	-0.038	0.210	0.295	0.272	0.332	0.344
% with children present	-0.148	0.195	-0.167	0.196	-0.019	0.276	-0.350	-0.350	-0.203	0.233	0.147	0.421	-0.367	0.227	-0.302	0.282	0.066	0.362
Metropolitan area characteristics																		
Log of CBSA population	3.157	1.945	3.132	1.764	-0.024	2.626	0.425	0.425	2.764	2.446	2.339	2.482	2.968	1.761	1.949	1.783	-1.018	2.506
% minority group in CBSA	4.544	6.700	-1.075	3.881	-5.6	7.743	-1.705	-1.705	-1.912	2.488	-0.2	3.016	2.041	1.387	1.622	1.116	-0.4	1.780
Midwest	20.95	5.369 ***	8.145	4.722	-12.81	7.150	13.34	13.34	8.161	6.529	-5.175	14.85	11.83	4.840 *	3.654	4.880	-8.18	6.873
South	17.96	4.980 ***	-1.096	4.485	-19.06	6.702 **	13.31	13.31	7.786	5.959	-5.523	14.58	16.40	4.281 ***	9.802	4.551 *	-6.602	6.248
West	20.03	5.910 ***	6.646	5.010	-13.38	7.747	13.45	13.45	19.05	6.758 **	5.599	15.05	18.10	6.278 **	15.56	6.939 *	-2.542	9.358
Intercept	55.38	1.633 ***	60.17	1.478 ***	4.8	2.20 *	64.12	64.12	56.13	2.014 ***	-8.0	64.15	58.41	1.511 ***	55.19	1.537 ***	-3.2	2.16
R^2	0.203		0.282				0.346		0.270				0.361		0.369			
Model df	127		130		127		127		131		127		127		130		127	

Notes : Data for the relative concentration index and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Table 3.A2. Coefficient and Standard Error Estimates from Linear Regressions of the Spatial Proximity Index on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, 2000-2016

	MENA						South Asian						East Asian					
	2000		2016		Difference		2000		2016		Difference		2000		2016		Difference	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables																		
% speaking English well or only	-0.002	0.004	0.020	0.033	0.022	0.033	-0.008	0.006	-0.055	0.033	-0.047	0.033	-0.009	0.014	-0.058	0.036	-0.048	0.039
Average education (in years)	-0.073	0.047	-0.467	0.377	-0.394	0.379	0.047	0.081	-0.554	0.509	-0.601	0.516	0.114	0.169	0.382	0.527	0.267	0.554
Average household income (in $000s)	-0.001	0.001	-0.017	0.010	-0.017	0.010	0.002	0.002	0.016	0.012	0.014	0.012	-0.008	0.005	-0.023	0.015	-0.015	0.016
Average years in U.S. (in years)	0.007	0.007	0.059	0.057	0.052	0.057	0.011	0.023	0.028	0.114	0.017	0.116	0.013	0.038	-0.039	0.089	-0.052	0.097
% native-born	-0.003	0.002	-0.024	0.018	-0.021	0.019	-0.003	0.008	-0.044	0.043	-0.042	0.044	0.000	0.011	0.011	0.029	0.011	0.031
Other demographics																		
Average age (in years)	-0.001	0.008	0.032	0.063	0.033	0.063	-0.003	0.021	-0.064	0.115	-0.061	0.117	0.005	0.034	0.062	0.103	0.057	0.108
% married	0.003	0.003	0.000	0.028	-0.003	0.028	-0.001	0.005	0.003	0.033	0.004	0.033	0.003	0.011	0.014	0.033	0.011	0.035
% with children present	0.003	0.003	0.035	0.024	0.032	0.024	0.002	0.006	0.024	0.025	0.022	0.026	0.003	0.012	0.011	0.034	0.008	0.036
Metropolitan area characteristics																		
Log of CBSA population	0.033	0.031	0.018	0.212	-0.015	0.214	0.198	0.054 ***	0.341	0.260	0.142	0.266	0.467	0.100 ***	1.109	0.214 ***	0.642	0.237 **
% minority group in CBSA	0.851	0.118 ***	3.590	0.471 ***	2.739	0.486 ***	1.805	0.111 ***	2.822	0.265 ***	1.017	0.287 ***	1.391	0.075 ***	1.309	0.134 ***	-0.081	0.154
Midwest	0.163	0.082 *	1.301	0.573 *	1.139	0.579	0.045	0.148	0.587	0.695	0.542	0.711	-0.249	0.266	-0.601	0.587	-0.352	0.644
South	0.230	0.077 **	1.658	0.544 **	1.428	0.549 *	0.095	0.134	1.426	0.634 *	1.331	0.648 *	-0.327	0.237	-0.454	0.547	-0.127	0.596
West	-0.071	0.090	0.603	0.608	0.674	0.614	0.053	0.163	1.386	0.720	1.333	0.738	-0.881	0.340 *	-0.901	0.835	-0.020	0.901
Intercept	0.656	0.024 ***	1.849	0.179 ***	1.193	0.181 ***	0.961	0.045 ***	3.680	0.214 ***	2.718	0.219 ***	1.747	0.082 ***	3.153	0.185 ***	1.406	0.202 ***
R^2	0.460		0.445				0.757		0.640				0.820		0.624			
Model df	119		131		119		119		131		119		119		130		119	

Notes : Data for the spatial proximity index and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Table 3.A3. Coefficient and Standard Error Estimates from Difference in Differences Analysis of Change Over Time in Relative Concentration and its Determinants, 2000-2016

	2000 to 2016 Differences						Difference in Differences					
	MENA		South Asian		East Asian		MENA-South		MENA-East		South-East	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	-0.164	0.370	-0.363	0.329	0.280	0.405	0.199	0.350	-0.443	0.388	-0.643	0.369
Average education (in years)	0.690	4.414	4.863	4.840	-4.978	5.414	-4.173	4.632	5.668	4.939	9.840	5.135
Average household income (in $000s)	-0.014	0.120	0.062	0.157	0.050	0.154	-0.076	0.140	-0.065	0.138	0.011	0.156
Average years in U.S. (in years)	0.465	0.646	-2.465	1.069 *	-0.720	1.031	2.930	0.883 **	1.185	0.860	-1.745	1.050
% native-born	-0.017	0.222	0.652	0.415	0.456	0.325	-0.669	0.333 *	-0.474	0.278	0.195	0.373
Other demographics												
Average age (in years)	-0.666	0.745	1.857	1.602	-0.868	1.073	-2.524	1.249 *	0.202	0.923	2.726	1.363 *
% married	-0.012	0.299	-0.476	0.319	0.332	0.344	0.464	0.309	-0.345	0.322	-0.808	0.332 *
% with children present	-0.019	0.276	0.147	0.421	0.066	0.362	-0.166	0.356	-0.085	0.322	0.081	0.392
Metropolitan area characteristics												
Log of CBSA population	-0.024	2.626	2.339	2.482	-1.018	2.506	-2.364	2.555	0.994	2.566	3.357	2.494
% minority group in CBSA	-5.619	7.743	-0.206	3.016	-0.419	1.780	-5.413	5.876	-5.200	5.618	0.213	2.476
Midwest	-12.81	7.150	-5.175	14.85	-8.18	6.873	-7.63	11.65	-4.63	7.01	3.00	11.57
South	-19.06	6.702 **	-5.523	14.58	-6.602	6.248	-13.53	11.35	-12.45	6.48	1.08	11.22
West	-13.38	7.747	5.599	15.05	-2.542	9.358	-18.98	11.97	-10.84	8.59	8.14	12.53
Intercept	4.781	2.203 *	-7.99	64.15	-3.22	2.155	12.77	45.39	8.00	2.18 ***	-4.77	45.39
Model df	129		129		129		129		129		129	

Notes : Data for the relative concentration index and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

Table 3.A4. Coefficient and Standard Error Estimates from Difference in Differences Analysis of Change Over Time in Spatial Proximity and its Determinants, 2000-2016

	2000 to 2016 Differences						Difference in Differences					
	MENA		South Asian		East Asian		MENA-South		MENA-East		South-East	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	0.022	0.033	-0.047	0.033	-0.048	0.039	0.070	0.033 *	0.070	0.036	0.001	0.036
Average education (in years)	-0.394	0.379	-0.601	0.516	0.267	0.554	0.207	0.453	-0.662	0.475	-0.869	0.535
Average household income (in $000s)	-0.017	0.010	0.014	0.012	-0.015	0.016	-0.031	0.011 **	-0.002	0.013	0.029	0.014 *
Average years in U.S. (in years)	0.052	0.057	0.017	0.116	-0.052	0.097	0.036	0.091	0.104	0.079	0.068	0.107
% native-born	-0.021	0.019	-0.042	0.044	0.011	0.031	0.021	0.034	-0.032	0.026	-0.053	0.038
Other demographics												***
Average age (in years)	0.033	0.063	-0.061	0.117	0.057	0.108	0.094	0.094	-0.024	0.089	-0.119	0.113
% married	-0.003	0.028	0.004	0.033	0.011	0.035	-0.007	0.031	-0.013	0.031	-0.007	0.034
% with children present	0.032	0.024	0.022	0.026	0.008	0.036	0.010	0.025	0.024	0.031	0.014	0.031
Metropolitan area characteristics												
Log of CBSA population	-0.015	0.214	0.142	0.266	0.642	0.237 **	-0.158	0.241	-0.657	0.226 **	-0.500	0.252 *
% minority group in CBSA	2.739	0.486 ***	1.017	0.287 ***	-0.081	0.154	1.722	0.399 ***	2.820	0.360 ***	1.099	0.230 ***
Midwest	1.139	0.579	0.542	0.711	-0.352	0.644	0.597	0.648	1.491	0.613 *	0.894	0.678
South	1.428	0.549 *	1.331	0.648 *	-0.127	0.596	0.097	0.601	1.555	0.573 **	1.458	0.623 *
West	0.674	0.614	1.333	0.738	-0.020	0.901	-0.659	0.679	0.695	0.771	1.353	0.824
Intercept	1.193	0.181 ***	2.718	0.219 ***	1.406	0.202 ***	-1.526	0.201 ***	-0.214	0.192	1.312	0.211 ***
Model df	125		125		125		125		125		125	

Notes : Data for spatial proximity the index and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data. *** p < .001; ** p < .01; * p < .05, two-tailed tests.

CHAPTER 4: THE SUBURBANIZATION OF MIDDLE EASTERN AND NORTH AFRICAN IMMIGRANTS IN THE UNITED STATES, 2000-2016

Evaluating to what extent immigrants achieve spatial incorporation with mainstream[43] American society has been a central focus of scholars of racial and ethnic inequality in the United States (Massey and Mullan 1984). Residence in U.S. suburbs reflects success in "locational attainment" in terms of accessing the quality of services and amenities including accessing the high quality to school to degree of exposing crime. (Alba and Logan 1993; Alba and Nee 2003; Friedman and Rosenbaum 2007). For immigrants, suburbanization implies the ability to move away from ethnic enclaves, which were historically concentrated in principal cities of U.S. metropolitan areas (Mullan and Massey 1984; Massey and Denton 1985; Fong and Shibuya 2000). Therefore, immigrant suburbanization has received a great deal of attention in studies aiming to assess the overall spatial assimilation of immigrant groups compared to native-born whites.

Hypotheses derived from spatial assimilation theory predict that increases in immigrants' educational attainment, income, and language proficiency increase the likelihood of upward spatial mobility, such that racial and ethnic minorities gain increasing access to qualitatively more desirable resources in suburban neighborhoods (Alba et al. 1999). The majority of the extant research confirms the tenets of the spatial assimilation model, showing that suburbanization is a product of acculturation (e.g., English language proficiency) and increasing socioeconomic status (SES, e.g., educational attainment and income). For instance, studies have found that the socioeconomic attainment of Asian immigrants is positively associated with their suburbanization rate (Denton and Massey 1988; Frey and Farley 1996). Likewise, increases in the socioeconomic attainment of Latin American and Arab immigrants increase the probability

[43] The term "mainstream" has been used in the literature to refer to the middle-class white population in the United States (Alba and Nee 2005; Portes and Rumbaut 2014), and I adopt this practice in my research.

of their residence in suburbs (South, Crowder, and Chavez 2005; Timberlake and Iceland 2007; Wahl, Breckenridge, and Gunkel 2007; Holsinger 2009). However, some studies contradict the predictions of spatial assimilation theory, showing that socioeconomic status is not strongly related to suburbanization for African Americans and Black Hispanics (Massey and Denton 1993; Crowder 1999; Charles 2003; Pais et al., 2012).

Research has changed its focus from examining suburbanization of Black people and the vast majority of research continues to focus on certain immigrant groups such as Mexican and Chinese immigrants (Li 2009; Logan, Alba and Leung 1996). One of the objectives of this study is to move away from the conventional focus on these large immigrant groups and examine a relatively small, but rapidly increasing minority group in American society—Middle Eastern and North African (MENA[44]) immigrants[45]. Indeed, according to the U.S. Census Bureau, from 2010 to 2014, the largest percentage increase in immigrants to the United States were from MENA countries such as Saudi Arabia (an increase of 93 percent), Iraq (36 percent), and Egypt (25 percent) (Camarota and Zeigler 2016).

My focus on MENA immigrants stems not only from their underrepresentation in the immigration literature, but more significantly from their unique place in the American racial order. On average, MENA immigrants in the United States possess high levels of social, economic and cultural capital; however, they have also been subjected to severe hostilities due to their stigmatization as a potential violent threat after the 9/11 terrorist attacks. Since then, public

[44] The umbrella term "MENA" is used to encompass a diverse set of national-origin groups who are both similar and different with regard to language, religion, culture, race and ethnicity, and precise geographic region (Haddad 2009; Marvasti and McKinney 2004; Awad 2010; Bozorgmehr et al. 1996). As I discuss at length below, in this study the MENA group comprises individuals with Egyptian, Iranian, Iraqi, Jordanian, Lebanese, Moroccan, Palestinian, Saudi Arabian, Syrian, Turkish, or "other Arab" ancestry.

[45] The U.S. Census summary tape file data do not contain information on ancestry and generation simultaneously. Therefore, the term "immigrants" in this paper is used to refer to all individuals with MENA, South Asian, and East Asian ancestry. Based on my calculations from IPUMS data, in 2016 between 56% and 72% of MENA, South Asian, and East Asian individuals were foreign-born; hence, the majority of members of these populations are either first, "1.5," or second generation.

perception has tended to conflate Muslim and Arab identities with "dark and evil" images that are often reinforced by government discourses and media representations (Naber 2008:23; Joseph, D'Harlingue, and Wong 2008; Selod 2015). Not surprisingly, the MENA population overall has been affected by specifically anti-Muslim sentiments in multiple domains, including housing discrimination, policing, harassment, and employment (Joseph et al. 2008; Widner and Chicoine 2011; Gaddis and Ghoshal 2015).

The primary objective of this study is to evaluate to what degree the relationship between MENA immigrants' socioeconomic and acculturation characteristics and their suburban attainment conform to the tenets of the spatial assimilation model, and to what extent such a relationship may be influenced by a relatively hostile "context of reception" in the post-9/11 period. First, I compare the MENA population's suburbanization rate with those of South and East Asians. All three immigrant groups have high socioeconomic status and are, on average, phenotypically different from non-Hispanic whites.[46] However, particularly in the post-9/11 period, these latter two groups' experiences of hostile attitudes may have been somewhat less pronounced, potentially leading to different levels and determinants of suburbanization. Second, I provide a comparison between two time periods—pre 9/11 (2000) and post 9/11 (2016). I pursue a "difference in differences" approach by estimating change over time in the levels and determinants of suburbanization for MENA immigrants compared to South and East Asian immigrants, and then estimate the differences in those changes. In so doing, I provide an indirect test of the effects of differential "contexts of reception" on spatial assimilation outcomes.

[46] I recognize that in the literature scholars have increasingly used the phrase "non-Latinx white" instead of non-Hispanic white. In my research, I choose to use the latter term to maintain consistency with the terminology used by the U.S. Census Bureau, the source of data for this paper. Moreover, a recent poll showed that about two-thirds of Hispanic respondents preferred either "Hispanic" (44%) or "Latino/a" (24%), while just 2% preferred "Latinx" (ThinkNow 2020). Similarly, according to Pew Research Center (2020), most Latino adults (76 %) have not heard the term "Latinx", among those who heard "Latinx" term only 3% of them preferred to use it.

I analyze data from the U.S. Census and American Community Survey (ACS) and the Integrated Public Use Microdata Series (IPUMS) to address the following questions: (1) what are the levels and determinants of suburban residence for MENA immigrants in U.S. metropolitan areas, compared to those of South and East Asians? And (2) how have the levels and determinants of suburbanization changed over time for each group under consideration?

In answering these questions, this study contributes to the literature in several ways. First, I analyze the spatial assimilation experiences of the MENA population, which have received little attention in past research (exceptions include Holsinger 2007, Bozorgmehr, Der-Martirosian and Sabagh 1996, Friedman et al. 2019). Second, I provide one of the first indirect tests of the cumulative effects of the context of reception of these immigrant groups by comparing changes over time in the suburbanization of MENA, South Asian, and East Asian immigrants. Lastly, by disaggregating the Asian immigrant category into MENA (at least for some countries), East Asian, and South Asian immigrant groups, this study provides more precise estimates of these groups' experiences and avoids the limitation of lumping them in one large pan-ethnic "Asian" category.

In the following section I provide information on the demographic profile of MENA immigrants, discuss their recent experiences with hostile treatment, and explain my rationale for analyzing the experiences of South and East Asians as comparison groups. Subsequently, I derive hypotheses from theories of immigrant spatial incorporation and test those hypotheses with data from 2000 and 2016.

Middle Eastern and North African Immigrants in the United States

The MENA population is one of the fastest growing groups in the United States, increasing from 2.5 million to over 3.5 million people between 2009 to 2017.[47] The term "MENA" is socially constructed, "invented from political consideration, not any natural geography" (Tehranian 2009:65). Thus, there is not consensus on who composes the MENA population among scholars or research institutes that employ the term (e.g., Pew Research Center, United Nations, U.S. Census Bureau, and the World Bank). In spite of this, MENA immigrants are most commonly conceptualized by scholars as including the following groups: Egyptians, Iraqis, Jordanians, Saudi Arabians, Lebanese, Moroccans, Palestinians, Syrians, Somalis, Sudanese, Armenians, Israelis, Cypriots, Iranians, Afghans, and Turks (Marvasti and McKinney 2004; Bozorgmehr et al. 1996; Awad 2010; Bakalian and Bozorgmehr 2013). This long list makes apparent that "MENA" encompasses a large set of national-origin groups who are both similar and dissimilar in terms of language, religion, culture, race and ethnicity, and precise geographic region (Haddad 2009; Marvasti and McKinney 2004; Awad 2010; Bozorgmehr et al. 1996).

For the purposes of this study, I include ancestries in the MENA category according to three criteria: self-identification, common categorization by scholars, and Muslim or Arab country of origin (or both). When ethnic groups do not meet at least two of these inclusion criteria, I exclude them from the study, as is the case for Armenians, Israelis, Cypriots, Somalis, and Sudanese. Although some previous scholars and many research institutes include these groups under the MENA moniker, the overwhelming majority of respondents from these countries identified as white or Black rather than MENA in a recent Census Bureau survey experiment (U.S. Census Bureau 2015). In that same experiment, Afghans and Turks also tended not to identify with the MENA category; however, they are included in this study because they

[47] Author's calculation from American Community Survey data.

meet the other two criteria—coming from a predominantly Arab or Muslim country and being categorized under the MENA label by most scholars (Bozorgmehr et al. 1996; Bakalian and Bozorgmehr 2011; Marvasti and McKinney 2004).

Immigration Patterns

MENA immigration to the United States happened in two large waves. First, Syrians and Lebanese began arriving in the late 1800s, due to oppression under the Ottoman Empire and the promise of better living conditions in the United States (Awad 2010; Tehranian 2009; Marvasti and McKinney 2004). Approximately 100,000 Syrian and Lebanese immigrants came to the United States during this period (Marvasti and McKinney 2004), though this may be an underestimate as U.S. immigration records (until 1899) and U.S. census records (until 1920) documented Middle Eastern immigrants as "Armenian," "Turk," or "Turk in Asia" because they were subjects of the Ottoman Empire at that time (Bakalian and Bozorgmehr 2013:1136).

This first wave decelerated due to World War I and the Great Depression, and resumed after World War II in a second wave. MENA immigrants arrived in massive numbers between the 1960s and 1970s due to immigration reform in 1965 that eroded the restrictions on immigration placed in the 1920s (Haddad 2009). As was the case with the first wave, the second wave was motivated by push factors, particularly political instabilities in MENA countries. For instance, the process of establishing the state of Israel in 1948, the Arab-Israeli war from 1967 to 1973, the Lebanese civil war in 1975, and the Iranian Islamic revolution of 1978 to 1979 all contributed to MENA migration to the United States (Bozorgmehr et al. 1996; Awad 2010; Tehranian 2009; Marvasti and McKinney 2004), with the majority settling in California, New York, Michigan, New Jersey, Florida, and Massachusetts (American Community Survey 2016; Bozorgmehr et al. 1996).

Socioeconomic Status

Although the MENA immigrant populations are not the subject of many spatial assimilation studies, some scholars have focused on their social and economic assimilation in the United States. Overall, scholars have found that on average MENA populations have high levels of English language proficiency, educational attainment, and income (Bozorgmehr et. al. 1996, Tehran 2009, McKinney 2004, Awad 2010). In fact, several studies showed that MENA immigrants have the highest educational attainment among all minority groups, even outpacing native-born whites (Haddad 2009, Bakalian and Bozorgmehr 2013, Camarota 2002). In terms of occupational status, about 43 percent of Middle Eastern[48] men occupied professional and management occupations in 1990 in Los Angeles, comparable to the figures for Asian (41.9 percent) and native-born white men (43.6 percent), and four times higher than Hispanic men (9.0 percent) (Bozorgmehr et. al. 1996:353).

Racialization, Stigma, and Discrimination

As noted above, in 2015 the U.S. Census Bureau experimented with including a MENA racial category in future Census surveys. However, that proposal was never implemented, and findings have shown that the majority of MENA immigrants, given the available options, self-identify as white. Given this, and given their high socioeconomic attainment, one might expect that MENA immigrants would enjoy many of the privileges of non-Hispanic whites in American society (Maghbouleh 2017). However, MENA immigrants' experiences in everyday life do not necessarily fit with their place in the U.S. racial stratification system. In other words, their self-categorization as white does not automatically confer "white privilege" (Bonilla-Silva 2006) on the contrary, they experience discrimination and negative racialization, particularly in the aftermath of the 9/11 terrorist attacks.

[48] This is the term used by the authors.

To be sure, the MENA population faced discrimination and xenophobic attitudes prior to September 11th, 2001, but in the time after the attacks they faced heightened stigmatization, and their names were associated with violence, terrorism and savagery in media, public, and political discourses. This racialization, described as "the process of assigning derogatory meaning to particular bodies distinguished by ethnicity, nationality, biology, or geography, as well as legitimizing discourses" influences every aspect of their lives (Alsultany 2008:208). Thus, I argue that although MENA immigrants in the United States demonstrate high English proficiency and levels of socioeconomic attainment that at times outpace non-Hispanic whites, a hostile "context of reception" may limit their capacity to achieve the degree of suburbanization that their group-level characteristics would predict. Indeed, previous research provides evidence of discrimination and bias toward Arab and Muslim immigrants when searching for roommates or rental units in several metropolitan areas in the United States, along with several places outside of United States such as Toronto and Sweden (e.g. Carpusor and Loges 2006; Ahmed, Andersson and Hammarstedt 2010, Hogan and Berry 2011; Gaddis and Ghoshal 2015). For instance, when selecting potential roommates, Arab-sounding names are only 57 percent as likely as white-sounding names to receive a response to a roommate request (Gaddis and Ghoshal 2015). Similarly, according to a study conducted by Carpusor and Loges (2006), compared to white names, Arab names receive significantly fewer positive responses when attempting to rent in corporate and privately-owned apartment complexes.

Limitations of Past Research on MENA Immigrants

Despite an increase in their population size in the United States, the MENA population has received very little attention in studies of residential patterns. Although we have a sense of where the MENA population is concentrated across states, our knowledge of their spatial incorporation patterns is limited. There are studies that measure spatial assimilation by looking at

residential segregation indices (e.g. Bozorgmehr et al. 1996), but to my knowledge no study examines the suburbanization of the MENA population in the United States. The focus of Holsinger (2009) on Arab suburbanization and Friedman and colleagues (2019) on Muslim suburbanization are a partial exception. While the former study found that an increase in SES results in an increase in suburbanization for Arab Americans in New York, Los Angeles, Chicago, and Detroit from 1990 to 2000 and the latter study found Black Muslim are less likely to live in suburbs than black non-Muslims in Philadelphia. Though these studies contribute to our understanding of suburbanization of *some* MENA groups, its exclusive study of Arab Americans in New York, Los Angeles, Chicago, and Detroit and Muslim Philadelphia is inadequate to reflect the suburbanization experiences of the MENA population as a whole and on a national level. Further, the category of 'Arab' and 'Muslim' do not disaggregate groups' origin countries—which hinder to reveal differences in experiences of suburbanization of groups rooted in racial/ethnic identity. In addition, although there are plenty of studies examining MENA immigrants' experiences of backlash post 9/11(Cainkar 2009; Schachter 2014; Love 2017), no study investigates the potential effects of such backlash on their residential patterns—suburban versus city residence.

Comparisons with South and East Asians

I analyze MENA suburbanization patterns and trends along with those of two comparison groups—South and East Asians. Like the MENA population, these groups are phenotypically different, on average, from native-born whites and score high on measures of education and income (Bozorgmehr et. al 1996; Cheng and Yang 1996; Schachter 2014). It is true that the South Asian population has been exposed to discriminatory attitudes in the post 9/11 period as well, due to their phenotypical similarities and religious markers with MENA immigrants (Maira 2004). South Asian Sikhs especially can be mistaken as being Muslim or a MENA immigrant

(Love 2017). Hence, the South Asian population may be exposed to a hostile environment because of their status as "foreigners" in the United States (Schuessler 2015).

However, the MENA and South Asian comparison provides a unique opportunity to reveal to what extent suburbanization patterns of MENA and South Asian population align, or are differentiated, holding all other attributes constant. In particular, comparing their residential patterns over time (pre and post-9/11) enables me to estimate the influence of a changing context of reception on those groups. Due to the possibility of being racially misclassified as MENA, South Asians may face some similar hostile attitudes. If this is true, then it is possible that their suburbanization rates will look similar to those of their MENA counterparts. Nevertheless, if South Asian populations have not experienced the same kinds or the same degree of anti-immigrant backlash as have MENA groups, we ought to observe improvements (rise) in South Asian suburbanization rates (which shows access to better amenities and more resources) relative to MENA populations from the pre- to post-9/11 periods. The answer to this question requires empirical analysis.

Likewise, the East Asian immigrant comparison provides a case to test the power of ethnic, racial, and religious status on upward residential mobility. Similar to the MENA and South Asian comparison, the MENA and East Asian[49] comparison is used to estimate the effect of context of reception. However, in contrast to the former comparison, the latter facilitates estimating the effect of phenotypic differences on suburban versus city residence, as these immigrant groups are distinct phenotypically while being similar in terms of average income and educational attainment. In this comparison religion plays a significant role, considering the majority of MENA groups in this study emigrated from predominantly Muslim countries (Pew

[49] In contrast to the MENA population, East Asians may not have engendered the same kind or degree of hostility in the post 9/11 period. However, it is important to note that this may change in the context of the current COVID-19 pandemic. During the Covid-19 pandemic, Asian, particularity East Asian populations have been subjected to vicious racism that is normalized and strengthened by political discourses in the United States. Since this study uses data from 2000 and 2016, the results are not influenced by these current events.

Research Center 2015). Also, unlike East Asian populations, MENA immigrants are more likely to wear indicators of their religious identity such as a scarf, hijab, *abaye* or *bear* (Naber 2008). Besides religious markers, terrorism is associated with other signifiers. Naber argues (2008:278) that "signifiers of an imagined 'Arab/Middle Eastern/Muslim' enemy" include "particular names (e.g. Mohammed), dark skin" […] and particular nations of origin (e.g. Iraq or Pakistan)." Such signifiers play a significant role in systematically excluding the MENA population from the larger community.

Theoretical Determinants of Immigrant Spatial Incorporation

Spatial Assimilation Theory

Traditional spatial assimilation theory asserts that acculturation (typically conceived of as linguistic proficiency and familiarity with dominant societal norms) and advancement in socioeconomic status (such as educational attainment and household income) result in upward residential mobility for immigrants, meaning occupying higher status suburban neighborhood (Gordon 1964; Massey and Denton 1985; Alba and Logan 1993; Rosenbaum and Friedman 2007; Logan and Zhang 2012; Tesfai 2019). When immigrants arrive in destination societies, they tend to settle in established enclaves or gateways—frequently in central cities—until they accumulate sufficient cultural, human, and economic capital. As cultural and socioeconomic status (SES) differences between immigrants and mainstream society wane over time, immigrants (particularly, though not exclusively, second- and third-generation immigrants) are able to move away from ethnic enclaves and into whiter and more suburban neighborhoods that have more advantages and amenities (Wen, Lauderdale and Kandula 2009). This phenomenon—immigrants experiencing "spatial assimilation" in suburban neighborhoods, is seen as a crucial step in achieving full assimilation because it reduces obstacles that prevent minority-white

interaction and facilitates further stages of the assimilation process (Massey and Mullan 1984; Wen et al. 2009, Ehrenhalt 2012).[50]

According to spatial assimilation theory, then, suburban attainment is largely an individual- or family-level process, in which immigrants first settle in central cities, and then, via processes of acculturation and SES attainment, move to the suburbs, leaving behind the less acculturated and poorer members of an immigrant group in central cities (Li 2009). Numerous studies confirm the predictions of spatial assimilation theory, indicating that high levels of English language proficiency and SES, as well as other immigrant attributes (e.g., length of residency, nativity) result in the upward residential mobility of immigrants from European, Latin American, Asian, and Arab countries (Massey and Denton 1985; Denton and Massey 1989; Alba and Logan 1991; Frey and Farley 1996; Logan et al. 1996; South and Crowder 1998; Freeman 2002; Fong and Wilk 2003; Timberlake and Iceland 2007; South et al. 2008; Holsinger 2009; Pais et al. 2012).

However, some empirical results challenge the spatial assimilation model by highlighting the emergence of new ethnic neighborhoods in American suburbia (Li 2009:17; Logan, Zhang and Alba 2002). Contrary to the expectations of spatial assimilation theory, some immigrants (particularly those who come with high levels of social and economic capital) bypass established enclaves and settle directly into affluent ethnic suburbs (Wen et al. 2009; Li 1998; Friedman et al. 2005). This relatively new suburban pattern, what Li (1998, 2009) refers to as *ethnoburbs*, challenges the mode of incorporation proposed by the spatial assimilation model by arguing that immigrants establish ethnoburbs to preserve and maintain their cultural heritage as well as to

[50] Although historically suburban residence is seen as an indicator of spatial assimilation and access to whiter and more socioeconomically advantaged neighborhoods, it is important to note that scholars have increasingly studied the existence of low-SES suburbs, especially in the inner ring (Charles 2003; Argeros 2018). Additionally, scholars have argued there has been a growing "great inversion," along the lines of what occurred in Europe, in which the historical meaning of suburban residence in the U.S. has been changing, such that suburban residence is not necessarily an indicator of residential advantage, especially considering the recent growth in suburban ethnic enclaves (Li 1998; Alba et al. 1999; Ehrenhalt 2012)

"resist complete assimilation into non-Hispanic white cultural and social 'norms' of American society" (Li:2009:4). That is, this residential pattern does not arise from structural constraints or low socioeconomic status of immigrants; rather, it is a purposive effort that aims to preserve ethnic identity and cultural heritage.

Similar to Li's ethnoburb model, Logan and colleagues (2002) have developed an "ethnic community model" that challenges conventional understandings of spatial assimilation. The ethnic community model is characterized by purposive action of immigrant groups in their settlement preferences. Skilled immigrants generate ethnic concentration in suburbs where quality of life is similar to that of white suburbs. The main feature of ethnic communities is their intentional reliance on the preferences of immigrant groups to with their own ethnic groups. Thus, they are defined as "ethnic neighborhoods that are selected as living environments by those who have wider options based on their market resources" (Logan et al. 2002:300). In other words, even if immigrants are able to incorporate into non-Hispanic suburbs due to their high levels of human and economic capital, they opt to settle in ethnic community suburbs to maintain and preserve their ethnic identities instead.

Place Stratification and the Context of Reception

A second challenge to the individual- and family-level focus of traditional spatial assimilation theory comes from research on the experiences of Black and dark-skinned minorities in the United States (Massey and Mullan 1984; Massey and Denton 1988; Denton and Massey 1989; Massey and Denton 1993; Crowder 1999; Charles 2003; Wahl et al. 2007; Pais, Jeremy, South, and Crowder 2012). These studies show that such minorities do not live in suburbs with non-Hispanic whites at levels that would be predicted by their English language proficiency and SES (Freeman 2002). For instance, Denton and Massey (1989) show that Black Hispanics are less spatially assimilated than white Hispanics, controlling for socioeconomic

attributes. Similarly, compared to white Mexicans, Mestizos[51] are significantly less likely to achieve suburban residence (Massey and Denton 1992).

The relative inefficacy of the spatial assimilation model in explaining residential patterns of Black and dark-skinned minorities provides support for the place stratification model, which argues that the hierarchy of neighborhoods and communities in most cities in the United States mirrors the racial/ethnic hierarchy (Alba and Logan 1991; Massey and Denton 1992; Alba and Logan 1993; Charles 2003; Logan and Zhang 2012). According to the place stratification model, the persistent segregation of the Black population in American society is not due to low socioeconomic status, but rather race. Race is a central factor in shaping residential segregation and has been used as an effective apparatus to steer prospective Black residents away from white neighborhoods. The place stratification model has been supported by research showing that members of minority groups do not achieve locational outcomes equivalent to comparable majority group members, even after controlling for socioeconomic attributes (Wilkes and Iceland 2004).

A related viewpoint emphasizes the "context of reception,"[52] positing that the assimilation process is significantly influenced by the social structure of the host society. Portes and Rumbaut (2014:139) assert that the context of reception is shaped "by the policies of receiving government, the character of the host labor market, and the features of their own ethnic communities." Contexts of reception, accordingly, subsume the social, economic and political structures of the destination society as well as ethnic enclaves (Portes and Rumbaut 2001, 2014; Alba and Nee 2005, 1997). Contexts of reception can be both negative and positive for immigrants. Negative contexts of reception involve the public's hostile attitudes and

[51] Mestizos are generally defined based on mixture of Spanish and indigenous descent (Villarreal 2010).
[52] Because the context of reception encompasses the proponents of the place stratification model and provides a more comprehensive understanding of other factors (e.g. ethnic enclaves) that may generate differences in the assimilation experiences of immigrants, in this research my focus will remain on the context of reception to measure differences (if any) in the spatial incorporation of groups.

discrimination (e.g., employment or housing discrimination) and as a result, generate exclusion and isolation of immigrants from the larger society. In the case of positive contexts of reception, on the other hand, immigrants are welcomed and do not have to cope with any major discrimination preventing them from being successful in the receiving society. In fact, in some cases (e.g., Cuban immigrants in the United States), immigrants even receive government assistance that strengthen their incorporation in a receiving society (Portes and Rumbaut 2014). Not surprisingly, compared to those who encounter a negative context of reception, immigrants facing a positive context of reception are more likely to acculturate and involve themselves in socioeconomic life, accelerating their incorporation process.

It is important to note that the context of reception and the place stratification model draw attention to immigrants' racial and ethnic status and its determining power over residential patterns. Both models are differentiated from the spatial assimilation model by asserting the significance of structural factors on upward residential mobility instead of only focusing on individual- or family-level characteristics (on the bases of class and acculturation). However, the context of reception subsumes the place stratification model's arguments and provides a more comprehensive understanding of other factors such as ethnic communities or enclaves as important modes of incorporation that determine immigrants' social, economic and spatial assimilation (Portes and Rumbaut 2014). Therefore, in this research my focus will remain on the context of reception to measure differences (if any) in the spatial incorporation of groups—by looking at their level of suburbanization with guideline of hypotheses discussed below. Overall, I argue that spatial assimilation processes and the context of reception may intersect or may operate independently to determine an immigrant group's spatial incorporation into a host society (Portes and Rumbaut 2014). To fully comprehend the determinants of spatial

incorporation, it is crucial to investigate the interplay between individual- or household-level characteristics and the structural context of reception.

In sum, different contexts of reception may be a significant source of variation in locational attainment. Such differences are substantially shaped and determined by the perceived position of immigrant group in the American racial hierarchy and their association with existing stigmatized and racialized statuses. For instance, the identities of immigrants from MENA countries may be altered after arriving in the United States because of the current sociopolitical climate that stigmatizes them by stereotyping them as a source of violence and terror (Jamal 2008; Cainkar 2008; Love 2017). Hence, those immigrants' everyday experiences and micro- or macro-level interactions in American society are likely influenced by anti-Muslim sentiments, regardless of their socioeconomic status upon arrival. Thus, I anticipate that the suburbanization rate of MENA immigrants will be lower compared to South and East Asian immigrants (Hypothesis 1) and that the translation of human and economic capital into suburban residence for MENA immigrants will be lower (Hypothesis 2) as a result of this backlash. I test the following hypotheses:

Hypothesis 1: Controlling for acculturation and SES, MENA immigrants are currently less suburbanized than South and East Asians.

Hypothesis 2: The positive cross-sectional relationship between acculturation or SES and suburbanization is stronger (i.e., more positive) for South and East Asians than for MENA populations.

With regard to change over time, my hypotheses are grounded in the same logic. A great deal of literature has shown that MENA immigrants in the United States face individual- and institutional-level discrimination (Naber 2008; Tehranian 2009; Khoshneviss 2019). However, after 9/11 and following other global terrorist attacks, they have become subject to systematic

and overt discrimination. Having been perceived as potential terrorists, they are exposed to extremely hostile environments including harassment and hate crimes (Naber 2008; Zarrugh 2016). The backlash of terrorism and anti-Muslim sentiments against MENA immigrants leads me to expect that suburbanization of MENA immigrants may differ significantly from South Asians and East Asians. For the same reason, changes in the suburbanization rate of MENA immigrants may differ from pre- to post-9/11. Hence, I pursue a "difference in differences" approach by estimating change over time in the levels and determinants of suburbanization for MENA immigrants compared to South and East Asians and then estimate the differences in those changes. Taking into consideration the shifts in the social and political context following the 9/11 terrorist attacks, acculturation and SES attributes of the MENA population may not operate in the way that spatial assimilation theory predicts for suburbanization patterns. Accordingly, I hypothesize that:

Hypothesis 3: Differences in average levels of suburbanization between MENA and South and East Asian populations will be significantly different in the post-9/11 period compared to the pre-9/11 period.

Hypothesis 4: Changes in the relationship between acculturation and SES and suburbanization will be significantly different in the post-9/11 period compared to the pre-9/11 period for the MENA population compared to the South and East Asian populations.

Hypotheses 3 and 4 both measure "difference in differences" but the former hypothesis predicts either that the growth in suburbanization will be lower for MENA versus the South and East Asian populations, or the increase will be lower. The latter predicts that growth in negative relationships between acculturation and SES will be higher for the MENA versus the South and East Asian populations, or the growth in positive relationships will be weaker. Ultimately, the

general hypothesis derived from the context of reception model is that MENA immigrants were more negatively affected by racialization and stigma from the pre-9/11 to the post-9/11 period.

Research Design

The primary goal of this study to estimate change in the suburban residence of the MENA population compared to South and East Asians. In doing so, I aim to test (indirectly) the influence of the context of reception on the spatial assimilation of these three groups. As extensively discussed earlier, spatial assimilation theory suggests that when members of minority groups acculturate and gain high socioeconomic attainment, they will be able to leave ethnic enclaves and move into suburbs with greater advantages and amenities than they had in their previous location. However, taking into consideration the shifts in the social and political context following the 9/11 terrorist attacks, acculturation and SES attributes of the MENA population may not operate in the way that spatial assimilation theory predicts for suburbanization patterns. This research, then, attends to the ways in which the sociopolitical structures of the host country influence suburbanization of MENA immigrants, in addition to testing whether the spatial assimilation hypothesis is applicable to them.

To do so, I employ two analytic strategies. Initially, I compare the experiences of MENA immigrants with South and East Asian immigrants to estimate the impact of racial, ethnic, and religious status.[53] Then, I estimate the cumulative (though unobserved) impacts of changing political and social contexts of reception across two time periods: pre 9/11 (2000) and post-9/11 (2016). Although 2016 may be too recent to assess the immediate backlash of 9/11, I use this

[53] Religious status is not measured directly because the U.S. census does not collect data on religious affiliation. However, I used Pew Research Center Data to provide a proxy for religious affiliation of the MENA population in my research. Based on data from "Religious Composition by Country," it is safe to assume that a majority of MENA immigrants in the United States are Muslim (Pew Research Center 2015). Moreover, by eliminating Bangladeshis and Pakistanis (whose percentage of Muslim population as a whole country is 91.7% and 96.5 %, respectively) from the South Asian group, I want to keep South Asians (Indians and Sri Lankans' percentage of Muslim population is 18.4 %; 12.3 % respectively) distinct from the MENA population by excluding many Muslims.

time point for several reasons. First, the backlash of 9/11 may necessitate a longer time frame to observe its consequences on residential patterns. Further, this time period (2000-2016) encompasses the effects of many other terrorist incidents in the U.S and around the world, including the Madrid train bombings in 2005, the London bombing in 2005, the Boston Marathon bombing in 2013, and the San Bernardino mass shooting in 2015 and Orlando Pulse mass shooting 2016 committed by an Islamist extremist, all of which may have led to further public scrutiny of MENA groups (Widner and Chicoine 2011). Third, choosing this time period allows me to bypass the specific consequences of the housing crash that led to a dramatic decline in average housing prices between 2007 and 2010 (Kwak and Wallace 2018). Lastly, using data from 2016 provides the most recent measures about residential patterns of MENA, South and East Asian populations in the United States. The following section presents the data and methodological procedures I use to test the hypotheses formulated above.

Data, Measures, and Methods

Data

To assess the levels and determinants of suburban versus city residence for the MENA, South Asian, and East Asian populations, I analyze data from the 2000 U.S. Census Summary Tape Files (STF) and the 2012-2016 American Community Surveys (ACS)[54]. The former data represent the pre-9/11period and the latter the post-9/11 period. In order to calculate the dependent variable (group suburbanization rates), I use the ACS five-year estimates so as to reduce year-to-year sampling variability. Moreover, all census boundaries from 2000 match those from 2016, which ensures the validity of comparisons across the period under study.

[54] In my analysis I use aggregate-level data instead of individual-level data for two reason: first, although individual-level data are available from IPUMS, the minimum size of the Public Use Microdata Areas is too large to allow analysts to determine whether individuals live in a principal city or a suburb for a large proportion of cases. Second, I am interested in suburbanizing as a metropolitan area characteristic. Considering groups, rather than individuals, are segregated, I examine suburbanization as a group-level phenomenon at the metropolitan area level.

Several of the independent variables come from the 2000 STF and 2012-2016 ACS, including population size, percent of each group, percent of suburban housing and geographic region. I also draw on data from Integrated Public Use Microdata Sample (IPUMS) in order to measure average characteristics at the metropolitan area level for each immigrant group, including English language proficiency, educational attainment, and income.

Analytic sample. The unit of analysis is Metropolitan Statistical Areas (MSAs), which are relatively large units within the broader category of Core-Based Statistical Areas (CBSAs). I limited the sample to MSAs with at least 500[55] members of each group taken separately. This limitation lead to sample sizes of 187 MSAs in 2000 and 282 in 2016 for the MENA population, 175 MSAs in 2000 and 238 in 2016 for the South Asian population, and 263 MSAs in 2000 and 323 in 2016 for the East Asian population. Imposing this selection criterion escalates the reliability of measurement of suburbanization rates. In addition, I created a sample of MSAs where these criteria were met for each group simultaneously in both 2000 and 2016, yielding a sample of 118 MSAs.[56]

As stated previously, MENA immigrants are not classified as a separate racial or ethnic group. However, with the ancestry question, I generated the MENA category by summing counts of people listing Egyptian, Iraqi, Jordanian, Lebanese, Moroccan, Palestinian, Syrian, Turkish, Iranian, Afghan, Arab and other Arab ancestries. In a similar vein, I created a South Asian

[55] I also ran my analyses with 1,000 as the population cutoff and the results are not substantially different; however, this higher threshold resulted in the loss of many cases (i.e., metropolitan areas) for each group; hence, I focus on results using the 500-person threshold.

[56] Note that in this research the unit of analysis in metropolitan area is the CBSA, the characteristics of which were measured with decennial Census, ACS, or IPUMs data. Although these data sources are themselves samples, the units of analysis are better thought of as a purposive sample of CBSAs with at least 500 of members of MENA, South Asian, or and East Asian residents. This sample selection criterion alters the interpretation of the standard error estimates (and *t*-ratios and *p*-values) produced below because those estimates were generated under the assumption that data came from a simple random sample. Hence, the standard error estimates should be treated cautiously and as "estimates of parameter dispersion contaminated by measurement error" rather than sampling variability (Grodsky and Pager 2001:552). Accordingly, I focus my discussion of the regression results on coefficient estimate sizes and differences rather than statistical significance in the conventional sense because "when there is no random sampling […] *p*-values are essentially uninterpretable" (Hirschauer et al. 2020:87).

category from respondents reporting Asian Indian and Sri Lankan ancestry. Although Bangladeshis and Pakistanis are often considered part of the South Asian population, I intentionally exclude them from this category as they come from majority-Muslim countries—91 and 96 percent, respectively (Pew Research Center 2019). I created the East Asian category using Chinese, Korean, Taiwanese, and Japanese ancestries. Finally, I created the white comparison group by subtracting the MENA tract count from the non-Hispanic white count.[57] Thus, the U.S. Census and ACS are the most accurate data sources available to study MENA immigrants in the United States at the national level (Holsinger 2009).

Measures

Dependent variables. The dependent variable in this analysis is the suburbanization rate of MENA, South Asian and East Asian immigrants, defined as the percentage of each group that resides in the suburbs of metropolitan areas in each census or ACS year. More formally, I define the suburbanization rate *SR* for group *g* in MSA *j* at time *t* as:

$$SR_{gjt} = \frac{GS_{gjt}}{G_{gjt}} \times 100, \quad (1)$$

where GS_{gjt} indicates the number of members of group *g* who live in the suburbs of metropolitan area *j* at time *t* and G_{gjt} indicates the total number of members of group *g* in metro area *j* at time *t*.

Focal independent variables. Based on the tenets of the spatial assimilation model and previous research, the focal independent variables capture the impact of acculturation and SES on residential segregation. As noted above, I used IPUMS data for each time point (2000 and 2016) to calculate averages for heads of household for each group in each MSA. In order to estimate the effects of acculturation on residential segregation, I calculated English language proficiency by taking the percentage of household heads in each group and each MSA who

[57] There may be some overlap between the non-Hispanic white and MENA populations because they are derived from different questions on the U.S. Census and ACS. However, according to 2015 National Content Test conducted by the U.S. Census in order to plan the content of the 2020 Census race/ethnicity questions, the MENA population overwhelmingly identified themselves in the "white" category, with the sole exception of Afghanis.

spoke English very well or only. To capture the effects of socioeconomic status on residential segregation, I measured average household income (in 2016 dollars) and the average education level (in years) for each group's household heads. Although acculturation and socioeconomic attainment can both be outcomes of spatial incorporation, my goal in this research is to measure whether such individual attributes influence spatial incorporation, and if so, how strong this relationship is and how it may differ across groups.

Control variables. In addition to the focal independent variables, I calculated group averages within each MSA for nativity (in percent native-born), length of residence in the United States (in years). I also control for age (in years), marital status (in percent married), and presence of children (in percent of household heads with children present in the household) as existing literature indicates that older people and married couples are more likely to own homes and live in suburbs. There is a similar tendency for families who have kids because suburbs are seen as an appealing setting for raising children, in terms of providing a safer environment and better resources (Fong and Shibuya 2000; Iceland et al. 2010). Metropolitan area characteristics also influence suburbanization (Logan, Stults, and Farley 2004; Wilkes and Iceland 2004; Timberlake, Howell and Staight 2011). To account for this, I include the log of the population size of the MSA in question, the percentage of the total population the minority group composes, region (Northeast, Midwest, South or West), and percentage of the metro area's housing stock that is in suburban areas. Taking into consideration the supply of suburban housing is important because in MAs where there is more suburban housing stock, we would expect to observe high suburbanization rates for all ethnic/racial groups compared to MAs where there is less (Timberlake et al. 2011).

Methods

Analytic approach. To measure the degree to which suburban residence is explained by acculturation and SES, I conduct multivariate analyses. Formally—and generally—the multivariate OLS models can be written as shown in Equation 2:

$$SR_{gjt} = \beta_{0_{gt}} + \sum_{r=1}^{R} \beta_{r_{gt}} X_{r_{gjt}} + \sum_{s=R+1}^{R+S} \gamma_{s_t} Z_{s_{gjt}} + \varepsilon_{gjt} \quad (2)$$

Where SR_{gjt} is the suburbanization rate for group *g* (i.e., MENA, South Asians, East Asian) in metropolitan area *j* at time *t* (i.e., 2000 or 2016). When the covariates X_r and Z_s are centered around their respective grand means, the following estimates are derived: $\beta_{0_{gt}}$ is the covariate-adjusted average score on the dependent variable for group *g* at time *t*; the $\beta_{r_{gt}}$ are partial effects of acculturation and SES on the dependent variable for group *g* at time *t*; the γ_{s_t} are partial effects of metropolitan area-level characteristics on the dependent variable for group *g* at time *t*; and ε_{gjt} is an error term, representing unexplained variation in the dependent variable for group *g* at time *t*.[58]

Initially, I present descriptive tables and figures that show the average MSA-level suburbanization rate for MENA, South Asian and East Asian immigrants in 2010 and 2016. Then I focus on the 2016 period to estimate the relationship between socioeconomic and acculturation attributes and suburbanization patterns, followed by a fuller model that includes control variables[59]. As noted above, for this analysis I use the largest analytic samples possible by selecting MSAs with at least 500 members of each group taken separately.

[58] These models are unweighted, although I control for the size of each minority group and the log of population size. As such, the unit of analysis is the MSA; therefore, the coefficients should be interpreted as estimates of the relationship between average group characteristics and the level of segregation in MSAs.

[59] I examined correlation matrices for all independent variables used in my analyses for each group under consideration. None of the correlations are so large to cause major concern over multicollinearity in my regression analysis. For instance, the highest correlation observed is between age and average year of immigration, with figures of 0.69 for MENA and 0.82 for the South Asian and East Asian populations. In order to further test for multicollinearity in my regression analysis, I also calculated variance inflation factors (VIF) for each regression model. The average values of VIF for all groups are relatively low (from 1 to 3, where averages of 10 are a concern) and no single variable had a concerning VIF. Hence, I conclude that multicollinearity is not a significant problem in these analyses.

Finally, to estimate change over time for these three groups, I run similar models for 2000 and calculate differences in differences between groups, based on a consistent sample of 119 MSAs with at least 500 of each group in each time period. To do this, I first calculate the change from 2000 to 2016 in levels of suburbanization and its predictors for the MENA, South Asian, and East Asian populations separately. I then take the difference between the MENA difference and the differences of the other groups to assess the extent to which changes over time have been similar or different for the three groups. As noted above, I expect that not only will the suburbanization rate decline (or increase less) for the MENA population compared to the comparison groups, but that the relationships between acculturation and SES will have lessened over time for MENA immigrants compared to their counterparts.

Findings

2000 and 2016 Average Suburbanization Rates

Figure 1 displays suburbanization rates in the same sets of MSAs with sufficient populations for analysis for the MENA, South Asian, East Asian, Black. Hispanic and non-Hispanic white populations in 2000 to 2016. I include the Black, Hispanic and non-Hispanic white populations in order to provide more familiar comparison points for the three groups under consideration. As is apparent from the figure, there are only slight differences in the suburbanization rates of the MENA, South Asian, East Asian and Hispanic groups both in 2000 and 2016. Black suburbanization rates are the lowest of all four groups in both years. Despite only slight differences, and in accordance with my expectation, the lowest suburbanization rate was that of the MENA population (61.6 in 2000 and 58.7 in 2016) compared to the South Asian (64.3 and 60.1) and East Asian (62.1 and 58.9) populations. Except non-Hispanic white whose suburbanization rate increased from 73.0 to 75.0, the suburbanization rate for all groups,

decreased from 2000 to 2016. However, the largest decrease observed was for the Black population, from 48.1 to 43.4, followed by the South Asian population, from 64.3 to 60.1.

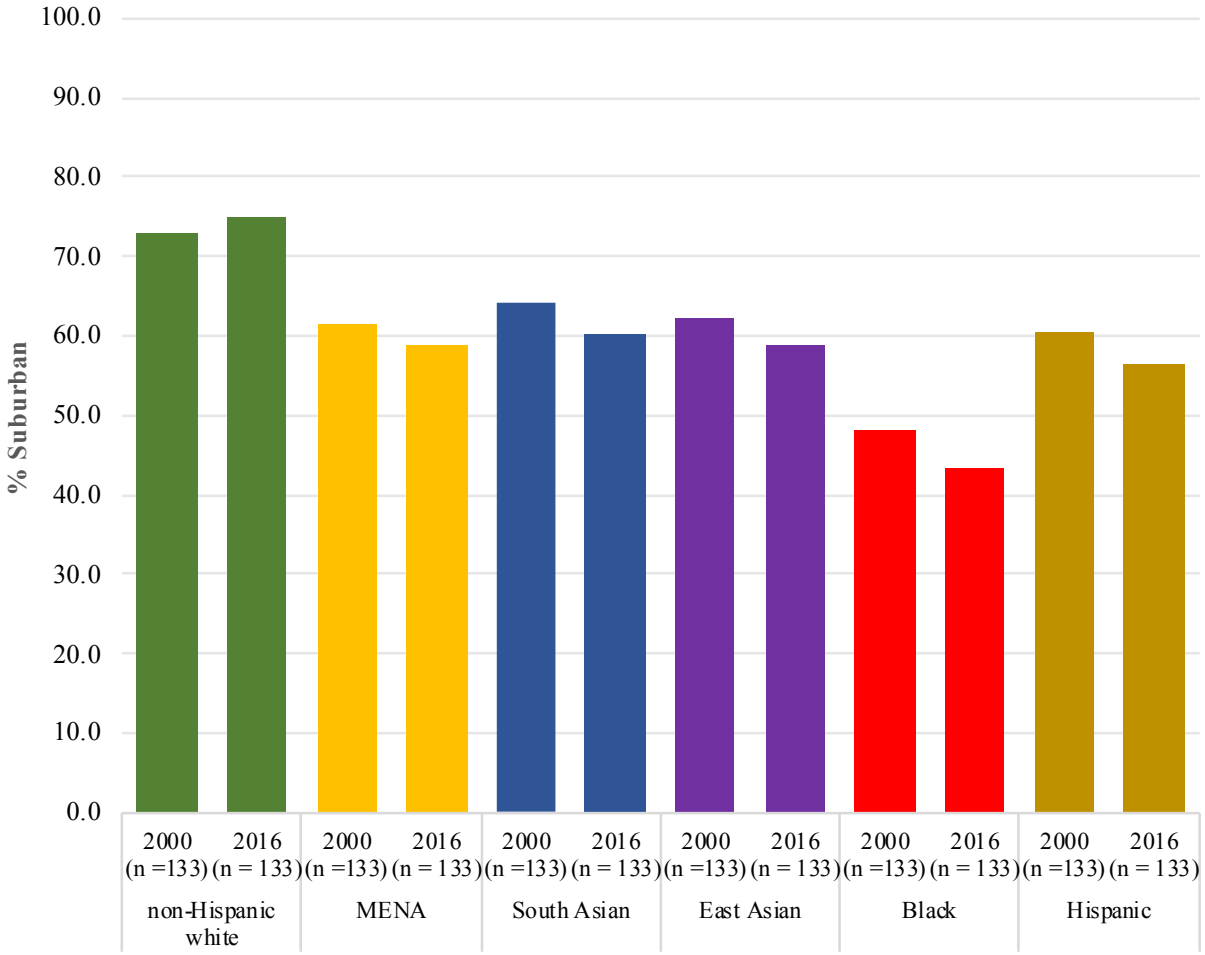

Figure 1. Group Suburbanization Rates, 2000 and 2016

Descriptive Statistics

Table 4.1 shows socioeconomic and demographic characteristics of MENA, South Asian and East Asian immigrants, as well as metropolitan area characteristics in 2000 and 2016. The three populations are relatively similar in terms of their high levels of English proficiency and educational attainment in both given years. MENA and East Asian populations had similar

average household incomes, particularly in 2016. However, South Asians in both years surpassed the MENA and East Asian populations in household income.[60] While average household income increased for East and South Asians groups over time, it decreased for the MENA population.

There are differences in nativity across the three groups. On average, about 40 percent of MENA immigrants were native-born, and had lived in the United States for an average of 23 years in 2016.[61] Comparatively, 29 percent of East Asian immigrants were native-born, and averaged 25 years of residence in America. For South Asians, this percentage dropped to 10 percent, with time lived in the United States averaging 21 years. Note that the percent native-born reflects the average of MSAs for each immigrant group residing in metropolitan areas because the unit of analysis is the CBSA. The three groups, on average, have very similar age compositions that have increased over time. The married proportion of the MENA and East Asian populations are also similar and decrease over time, whereas the married proportion of South Asians remains high and constant. All three immigrant groups have a similar average regarding children in the home in both years (on average over 40 percent).

[60] Household income is likely to vary across groups in part due to household size, especially as that would be related to multiple earners in the household. However, because the overall goal of this analysis is to estimate group-level relationships between, for example, SES and suburbanization rates, what matters is the income at the disposal of households, which may be related to their propensity or capacity to live in the suburbs.

[61] This figure may seem relatively high, although it reflects the MSA average, which isn't necessarily the same as the population average. I disaggregated the MENA category by ancestry to investigate this high native-born percentage and found that one of the largest MENA ancestries in the IPUMS data was Lebanese, who have a very high native-born percentage compared to other groups and contribute to the high nativity average for the MENA population overall.

Table 4.1. MSA-Level Means and Standard Deviations of Independent Variables Used in the Analysis, by Immigrant Group and Year

	MENA				South Asian				East Asian			
	2000		2016		2000		2016		2000		2016	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Spatial assimilation variables												
% speaking English well or only	83.89	9.42	79.23	12.19	83.56	12.60	84.48	10.20	61.47	11.48	64.85	11.50
Average education (in years)	8.23	0.76	8.56	0.81	9.27	1.02	9.69	0.74	8.32	0.87	8.63	0.74
Average household income (in $000s)	93.13	22.07	85.25	30.52	115.46	40.48	123.69	34.16	82.73	26.24	84.55	26.29
Average years in U.S. (in years)	18.23	4.56	23.01	7.20	14.97	3.34	20.92	4.77	17.71	5.07	25.40	6.27
% native-born	44.89	17.97	40.38	16.75	7.41	6.77	9.89	7.46	25.82	13.68	28.50	13.91
Other demographics												
Average age (in years)	45.19	4.36	47.87	5.54	40.57	4.11	44.43	4.90	42.81	5.17	46.46	5.88
% married	61.76	10.64	59.36	11.63	73.08	13.81	72.67	11.61	60.65	12.18	57.56	12.14
% with children present	46.32	11.33	43.07	13.61	52.65	13.19	48.05	14.35	43.20	12.19	38.68	11.93
Metropolitan area characteristics												
Percent suburban housing	59.12	16.75	61.72	16.74	59.04	16.80	60.68	17.15	58.83	16.74	60.75	17.24
Log of CBSA population	13.22	1.01	12.74	1.12	13.29	1.00	12.94	1.08	12.80	1.13	12.59	1.13
% minority group in CBSA	0.46	0.27	0.71	0.42	0.52	0.56	0.83	0.89	1.08	1.72	1.20	1.55
Midwest	0.21	–	0.23	–	0.22	–	0.24	–	0.23	–	0.23	–
South	0.39	–	0.42	–	0.39	–	0.42	–	0.36	–	0.37	–
West	0.19	–	0.20	–	0.21	–	0.19	–	0.27	–	0.26	–

Notes : Data for metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data.

The percentage of suburban housing supply demonstrates an average of 59.1 for MENA, 59.0 for South Asian, and 58.8 for East Asian populations in 2000. I observe an increase in the percentage of suburban housing for all three groups in 2016, at 61.7, 60.6, and 60.7 for the MENA, South Asian and East Asian groups, respectively.

Synchronic Regression Findings

Table 4.2 presents results from OLS regressions for the MENA, South Asian and East Asian populations in 2016 compared to the non-Hispanic white population. The dependent variable is the suburbanization rate and the focal independent variables are spatial assimilation indicators, including English language proficiency, education, income, average number of years in the U.S. for the immigrant population, and percent native-born. In the first model, I compare the relationship between indicators of spatial assimilation and suburbanization for each immigrant group. I also present a second of set models that include other demographics and metropolitan characteristics to show the extent to which these factors strengthen or attenuate the effects of the spatial assimilation variables.

Looking at the first model across three groups, although there are differences in the magnitudes of coefficients, household income and length of residence increase the rate of suburbanization of MENA, South and East populations, as predicted by spatial assimilation theory. As average household incomes increase by $1,000, the suburbanization rate rises by 0.08% for MENA immigrants, 0.07% for South Asian immigrants, and 0.25% for East Asian populations. Similarly, on average, for every year of residence in the United States the suburbanization rate rises for MENA immigrants by 0.69%, South Asian immigrants by 0.94% and East Asian immigrants by 0.56%. With regard to English language proficiency the results show that a one-unit increase in the percentage of MENA and South Asian residents who speak

English very well or only increases the suburbanization rate by 0.31% and 0.45%, respectively. This positive association is not observed for the East Asian population.

In contrast to the predictions of spatial assimilation theory, being native-born and increasing educational attainment do not raise the suburbanization rate substantially for any of the three groups. On average, for each one-year average increase in educational attainment for MENA, South and East Asian populations, suburbanization drops by 4.3%, 3.3% and 3.5%, respectively. Likewise, being native-born lowers the suburbanization rate for MENA, South and East Asian populations which indicates we should be careful to avoid the cross groups generalization of the positive effect of nativity on suburbanization rates.

So far, taking into consideration all indicators of spatial assimilation variables in Model 1, it is important to note that on average the South Asian population has the highest suburbanization rate of 61.58 controlling for acculturation and SES, followed by the MENA population's rate of 59.69 and the East Asian population's rate of 57.92. These findings partially confirm Hypothesis 1, as only East Asians have a suburbanization rate lower than the MENA population. In addition, the cross-sectional relationships between acculturation or SES and suburbanization rates vary among groups. Even though educational attainment lowers rates of suburban residence for the three groups, this negative relation is weaker for South and East Asians compared to the MENA population. The influence of English language proficiency on suburbanization, however, is stronger for South Asian and weaker for East Asian populations compared to the MENA population. In the case of household income, the association between income and suburbanization appears to be weakest for South Asian immigrants compared to MENA and East Asian immigrants. In these cases, the findings partially support Hypotheses 2.

Table 4.2. Coefficient and Standard Error Estimates from Linear Regressions of the 2016 Suburbanization Rate on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, by Immigrant Group

	MENA				South Asian				East Asian			
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	0.313	0.209	0.282	0.142 *	0.453	0.257	0.300	0.186	-0.122	0.217	0.023	0.162
Average education (in years)	-4.319	2.643	0.081	1.816	-3.268	3.839	0.610	3.065	-3.530	3.337	-0.996	2.338
Average household income (in $000s)	0.080	0.065	0.025	0.045	0.066	0.068	-0.035	0.052	0.245	0.079 **	0.110	0.065
Average years in U.S. (in years)	0.687	0.271 *	0.259	0.226	0.944	0.504	0.089	0.615	0.559	0.396	0.254	0.398
% native-born	-0.026	0.136	0.031	0.096	-0.875	0.298 **	-0.250	0.228	-0.247	0.173	0.033	0.132
Other demographics												
Average age (in years)	–	–	0.252	0.299	–	–	0.688	0.644	–	–	0.679	0.438
% married	–	–	0.190	0.124	–	–	0.340	0.194	–	–	-0.058	0.135
% with children present	–	–	0.123	0.104	–	–	0.111	0.143	–	–	0.066	0.129
Metropolitan area characteristics												
Percent suburban housing	–	–	1.013	0.077 ***			1.066	0.103 ***			0.979	0.074 ***
Log of CBSA population	–	–	5.404	1.198 ***	–	–	6.850	1.623	–	–	6.463	1.184 ***
% minority group in CBSA	–	–	3.880	3.085	–	–	1.908	1.723 ***	–	–	-0.119	0.914
Midwest	–	–	-1.416	3.948	–	–	4.986	5.292	–	–	2.526	4.136
South	–	–	-6.069	3.546	–	–	-7.324	4.764	–	–	-4.101	3.667
West	–	–	2.454	4.010	–	–	-3.868	5.651	–	–	-8.688	4.812
Intercept	59.69	1.693 ***	59.68	1.092 ***	61.58	2.135 ***	61.64	1.459 ***	57.92	1.71 ***	57.99	1.118 ***
R^2	0.11		0.65		0.10		0.60		0.09		0.63	
Model df	196		187		180		171		210		201	

Notes: Data for the suburbanization rate and metropolitan area-level characteristics come from 2012-2016 ACS. All other independent variables come from 2016 IPUMS data.
*** p < .001; ** p < .01; * p < .05, two-tailed tests.

After adding demographic and metropolitan area characteristics to Model 2, the groups demonstrate notable differences, both in direction and magnitude of the coefficients. For instance, educational attainment remains negatively associated with suburban residence for the East Asian population, but becomes positively associated with suburban residence for the MENA and South Asian populations. The opposite pattern observed for East Asian is generally associated with tendency of living with co-ethnic neighborhood or ethnoburbs in previous research (Li 1998, 2009; Alba et al. 2002). Household income becomes negatively correlated with suburban residence for the South Asian population. Although household income remains the same in its direction, its effect decreases in magnitude for MENA and East Asian rates of suburbanization. The assumption is that when immigrants have educational capital and accumulate economic capital, they translate them into suburban living to access better resources. The spatial assimilation hypothesis develops accordingly by positing that educational attainment and household income are significant determinants of suburbanization, but my findings do not support this prediction for all of the three groups studied. To some extent this pattern can be explained with the ethnic community model, which suggests that even if an immigrant group gains socioeconomic capital, they live in their own ethnic community or form new ethnic communities in the suburbs. Although my analysis cannot provide evidence for this form of settlement, the existing research supports the ethnic community model, particularly for the East Asian population (Li 1999).

In addition, the direction changes for the nativity variable for MENA and East Asian populations while it remains the same for the South Asian population. Being native-born increases rates of suburban residence for the MENA population by 0.031 and the East Asian population by 0.03, but it lowers rates of suburban residence for the South Asian population by 0.250. Similarly, English language proficiency as an acculturation measure and predictor of the

spatial assimilation model continues to support suburban residence for the groups presented. Length of residence, although it is lower in magnitude, maintains its effect of suburbanization for MENA, South and East Asian immigrants.

The second set of variables includes demographic characteristics, including age, marital status and whether there are children present. Interestingly, marital status is not determinative of suburban residence for East Asians, yet it increases the rate of suburban residence for MENA and South Asian populations by 0.190 and 0.340, respectively. When we turn to married couples with children, for all three groups the findings are consistent: parents are more likely to live in suburbs.

The final rows in Table 4.2 demonstrate the figures of the metropolitan area characteristics, including the percentage of suburban housing in the MSA, log population size, the percentage of the total population each minority group represents, and the region (with the Northeast as the omitted category). The coefficient for percentage of suburban housing in MSAs increases all groups' suburbanization rates by roughly one percent, with coefficients of 1.013, 1.066 and 0.979 for the MENA, South Asian, and East Asian groups, respectively. This finding consistent with previous research strengthening the fact that metropolitan areas with higher share of suburban homeownership minorities more likely to access to suburbs (Howell and Timberlake 2014). Likewise, and consistent with previous research, for all three groups, MSA size is associated with increasing suburbanization, with coefficients of 5.40 for MENA, 6.85 for South Asian, and 6.46 for East Asian immigrants (Timberlake et al. 2011). However, those association is stronger for South and East Asian population compared to MENA population displaying the significance of non-group characteristics in explaining disparities in the level suburbanization rates of these groups. In the case of the effect of percent of minority population on suburban versus city residence, the results show that an increase in the proportion of a minority in the

population results in a decrease in their suburban residence (Alba and Logan 1991). This pattern holds true only for East Asians: the increase in percent of the East Asian population lowers the suburbanization rate by 0.12 for East Asians. By contrast, increasing the percent of MENA and South Asian populations raises their suburbanization rate by 3.88 and 1.90, respectively. Note that relying on my analysis, I am not able to render a judgment whether or not East Asian prefer to live with their own ethnic group, yet the previous research demonstrate that East Asians do prefer to reside with their own ethnic group to preserve and maintain their ethnic identity, cultural values and traditions (Li 1998, 2009).

The last metropolitan variable reflects the suburbanization patterns of MENA, South and East Asian immigrants across four regions in the United States. Compared to the omitted Northeast category, all groups exhibit significantly lower suburban residence in the South, albeit with varying magnitudes of effect. The suburbanization rate of the MENA population is higher in the West compared to the Northeast but is lower for South and East Asian populations. We observe an increase of suburban residence in the Midwest, but not for MENA immigrants. For instance, the suburbanization rate of the MENA population drops by 1.41 in the Midwest but increases by 4.98 and 2.53 for South and East Asian populations, respectively. Lastly, it is worth mentioning that the R-squares for the fullest models indicate that Model 2 explains about 65%, 60%, 63% of the variation in suburban residence of MENA, South and East Asian, respectively.

Taken together, the results show that the relationships between socioeconomic status and suburban residence vary considerably. Similarly, English language proficiency, educational attainment, and nativity as components of acculturation and SES variables demonstrate an unexpected negative impact on suburban residence for some groups. Ultimately, considering demographic and metropolitan area characteristics, the results show that the association between

socioeconomic status and suburbanization for MENA, South and East Asian immigrants is not necessarily uniformly positive, as is suggested by spatial assimilation theory.

Diachronic Regression Findings

Table 4.3 and Table 4.A1[62] present the OLS regression results of group suburbanization rates for the three groups across two time periods: 2000 and 2016. The purpose of this table is to provide complete information on each group in each time period. As noted previously, the most important goal of this study is to estimate the change in the suburbanization rates of the MENA population, compared to the two other groups. This enables me to demonstrate the influence of contextual factors while controlling for spatial assimilation and metropolitan area-level predictors, as well as group-level characteristics. The figures before the terrorist attacks of September 11th are derived from the year 2000, and 2016 represents the post-9/11 period. The third column for each group in Table 4.3 shows the differences in suburbanization rates by subtracting the coefficient value of 2016 from the coefficient of figure of 2000. Since I aim to estimate the aggregate change in suburbanization rates for each group, controlling for group level and metropolitan area-level characteristics, the discussion to follow will focus on the figures in these columns. In the final section of the results, I reconfigure the data from Table 4.3 to calculate and interpret the difference in differences estimates.

[62] In order to have more comparable results for MENA, South Asian, and East Asian populations, I ran an OLS regression with one consistent set of places where every group's sample of MSAs is 118 to estimate suburban versus city residence (Tables are included in appendix). Although there are slight numerical differences, the results are consistent with those in Tables 3 and A2. Thus, I choose to present Tables 3 and 4 because they represent fuller samples of these populations, and therefore better reflect the overall experiences of suburbanization rates of the immigrant groups under consideration.

Table 4.3. Coefficient and Standard Error Estimates from Linear Regressions of the Suburbanization Rate on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, 2000-2016

	MENA						South Asian						East Asian					
	2000		2016		Difference		2000		2016		Difference		2000		2016		Difference	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables																		
% speaking English well or only	0.033	0.202	0.114	0.208	0.081	0.290	0.074	0.177	0.504	0.233 *	0.430	0.292	0.147	0.153	0.158	0.225	0.011	0.272
Average education (in years)	0.811	2.268	1.571	2.534	0.760	3.401	0.060	2.629	0.683	3.569	0.623	4.433	1.260	2.158	0.219	3.255	-1.040	3.905
Average household income (in $000s)	0.248	0.068 ***	0.114	0.065	-0.134	0.094	-0.007	0.046	-0.116	0.085	-0.109	0.096	0.136	0.065 *	0.099	0.078	-0.036	0.102
Average years in U.S. (in years)	0.457	0.370	-0.069	0.392	-0.526	0.539	-0.485	0.756	0.143	0.782	0.628	1.088	0.131	0.496	-0.047	0.502	-0.178	0.705
% native-born	-0.043	0.128	0.103	0.135	0.147	0.186	-0.076	0.269	-0.380	0.312	-0.304	0.412	0.131	0.147	-0.147	0.184	-0.278	0.235
Other demographics																		
Average age (in years)	0.032	0.417	0.461	0.449	0.429	0.612	1.057	0.692	0.503	0.831	-0.554	1.081	0.550	0.461	0.975	0.548	0.425	0.716
% married	-0.262	0.155	0.174	0.165	0.436	0.226	0.263	0.165	0.378	0.256	0.115	0.305	-0.073	0.168	-0.145	0.183	-0.071	0.248
% with children present	0.260	0.150	0.062	0.153	-0.198	0.214	-0.120	0.190	0.301	0.181	0.421	0.263	0.226	0.157	0.084	0.193	-0.142	0.249
Metropolitan area characteristics																		
Percent suburban housing	1.099	0.090 ***	1.035	0.090 ***	-0.064	0.127 ***	1.088	0.103 ***	1.002	0.118 ***	-0.086	0.156 ***	0.995	0.084 ***	0.964	0.087 ***	-0.031	0.121 ***
Log of CBSA population	6.191	1.477 ***	5.586	1.439 ***	-0.605	2.062	8.997	1.601 ***	6.913	1.899 ***	-2.085	2.484	6.629	1.335 ***	5.793	1.354 ***	-0.836	1.901
% minority group in CBSA	3.460	5.428	5.943	3.332	2.483	6.370	0.531	2.703	2.257	1.792	1.726	3.243	-0.746	1.249	-0.264	1.033	0.482	1.620
Midwest	-2.910	4.706	1.008	4.522	3.918	6.526	-0.111	5.254	0.908	5.636	1.019	7.705	4.457	4.549	4.472	4.525	0.015	6.416
South	-4.366	4.143	-2.016	4.098	2.350	5.827	-5.560	4.777	-7.705	5.165	-2.145	7.036	-4.038	3.920	-3.244	4.079	0.795	5.657
West	6.183	4.966	5.267	4.627	-0.915	6.787	3.628	5.872	-7.165	5.969	-10.793	8.373	-4.541	5.031	-6.536	5.367	-1.995	7.356
Intercept	57.94	1.296 ***	59.14	1.358 ***	1.203	1.877	58.98	1.490 ***	60.46	1.692 ***	1.477	2.255	56.45	1.248 ***	58.70	1.318 ***	2.250	1.815
R^2	0.67		0.64				0.63		0.60				0.62		0.59			
Model df	133		133		133		130		130		130		161		161		161	

Notes : Data for the suburbanization rate and metropolitan area-level characteristics come from 2012-2016 ACS. All other independent variables come from 2016 IPUMS data.
*** p < .001; ** p < .01; * p < .05, two-tailed tests.

Findings from 2000 and 2016. Focusing first on the Intercept row, although there were no dramatic changes in average suburbanization rates for these groups (controlling for other group- and MSA-level characteristics), the change for the MENA population (an increase of 1.20 from 2000 to 2016) was slightly lower than that for the South Asian (1.48) and East Asian (2.25) groups. This provides some support for Hypothesis 3.

Changes in the effects of acculturation (English language proficiency and nativity) and socioeconomic variables (educational attainment and household income) on suburban residence vary for the MENA, South Asian, and East Asian populations. For instance, the effect of educational attainment on suburban residence lessens over time for the East Asian population (a coefficient of -1.040), while it increases for the MENA (0.76) and South Asian (0.623) populations. English language proficiency has a greater effect on all three groups' suburbanization rates in 2016, yet the relationship between English language proficiency and suburban residence is stronger for the South Asian population than it is for the MENA and East Asian populations. However, the impact of household income on suburban versus city residence considerably decreased in 2016 compared to 2000 for all three groups.

In other words, of the components of socioeconomic characteristics, household income has a stronger determinative power in suburbanization rates of MENA, South and East Asian population in 2000 compared to 2016. It is also important to note that differences in negative effects of income are larger for MENA and South Asian populations compared to the East Asian population. Further, considering educational attainment differences, the positive effect of education is larger for the MENA population compared to the South Asian population. In this case, the results partially support Hypothesis 4 because differences in household income and English language proficiency are higher for the MENA population, as was expected.

Difference in differences findings. The left-hand panel of Table 4.4 portrays the 2000 to 2016 differences from Table 4.3, and the right-hand panel shows the differences in those differences for each pairwise comparison of the MENA, South Asian and East Asian populations. As noted above, all three immigrant groups' average suburbanization rates displayed a very minor rise over time; however, with an intercept of 2.25, the East Asian population has the highest increase in their suburbanization rate, followed by South Asians (1.48) and the MENA population (1.20). The differences in those differences are shown in the Intercept row in the "Coeff." column in the right-hand panel of Table 4.3. Note that none of these differences is "statistically significant," although see footnote 13 for a discussion of the interpretation of standard error estimates and p-values in this analysis.

In terms of differences in differences in the regression coefficients, in the right-hand panel of Table 4.4 a positive coefficient means that the effect of the variable on suburbanization is rising more for the first group in the comparison relative to the second group. Negative coefficients indicate the reverse—that the variables became less related to suburbanization for the first group relative to the second. For instance, the association between suburban residence and educational attainment or being native-born became stronger over time for the MENA population compared to South Asians. The difference in differences coefficients for education (0.14) and nativity (0.45) tell us that educational attainment and nativity are increasing in importance for both the MENA and South Asian groups, but that this increase was greater for the MENA relative to the South Asian population. I observed the opposite pattern in the case of English language proficiency—although English language proficiency is increasingly related to suburbanization for the MENA and South Asian groups, this increase was greater for South Asians, leading to a negative difference in differences coefficient on English proficiency in the MENA-South Asian comparison.

Table 4.4. Coefficient and Standard Error Estimates from Difference in Differences Analysis of Change Over Time in Suburbanziation and its Determinants, 2000-2016

	2000 to 2016 Differences (from Table 3)						Difference in Differences					
	MENA		South Asian		East Asian		MENA-South		MENA-East		South-East	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	0.081	0.290	0.430	0.292	0.011	0.272	-0.349	0.291	0.070	0.281	0.419	0.282
Average education (in years)	0.760	3.401	0.623	4.433	-1.040	3.905	0.137	3.945	1.800	3.686	1.663	4.149
Average household income (in $000s)	-0.134	0.094	-0.109	0.096	-0.036	0.102	-0.025	0.095	-0.098	0.098	-0.073	0.099
Average years in U.S. (in years)	-0.526	0.539	0.628	1.088	-0.178	0.705	-1.154	0.856	-0.348	0.636	0.806	0.897
% native-born	0.147	0.186	-0.304	0.412	-0.278	0.235	0.451	0.318	0.425	0.214 *	-0.026	0.326
Other demographics												
Average age (in years)	0.429	0.612	-0.554	1.081	0.425	0.716	0.983	0.876	0.004	0.671	-0.979	0.898
% married	0.436	0.226	0.115	0.305	-0.071	0.248	0.321	0.268	0.507	0.239 *	0.187	0.275
% with children present	-0.198	0.214	0.421	0.263	-0.142	0.249	-0.619	0.239 *	-0.055	0.234	0.563	0.255 *
Metropolitan area characteristics												
Percent suburban housing	-0.064	0.127 ***	1.088	0.156 ***	-0.031	0.121 ***	-1.152	0.142 ***	-0.033	0.124 ***	0.434	0.138 ***
Log of CBSA population	-0.605	2.062	-2.085	2.484	-0.836	1.901	1.480	2.280	0.231	1.975	-1.248	2.181
% minority group in CBSA	2.483	6.370	1.726	3.243	0.482	1.620	0.757	5.071	2.001	4.449	1.244	2.480
Midwest	3.918	6.526	1.019	7.705	0.015	6.416	2.899	7.133	3.903	6.466	1.004	7.021
South	2.350	5.827	-2.145	7.036	0.795	5.657	4.495	6.453	1.556	5.735	-2.939	6.311
West	-0.915	6.787	-10.79	8.373	-1.995	7.356	9.878	7.613	1.080	7.104	-8.798	7.827
Intercept	1.203	1.877	1.477	2.255	2.250	1.815	-0.274	2.072	-1.048	1.843	-0.773	2.023
Model df	133		130		161							

Notes: Data for the suburbanization rate and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data.

*** p < .001; ** p < .01; * p < .05, two-tailed tests.

In the case of MENA and East Asian immigrant differences, the positive coefficients in left side of the panel show that the effect on suburbanization is rising more for both groups, however the positive coefficient in the right of panel shows that the effect on suburbanization is increasing for the first group in the comparison relative to the second group. For example, educational attainment's effect on suburbanization rates rises in importance both for the MENA and East Asian populations (left-hand panel of Table 4.4), however this increase is greater for the MENA compared to East Asian population (right-hand panel of Table 4.4). The negative coefficient of household income and length of residence for both the MENA and East Asian populations portrays a decline in importance for suburbanization—however difference in differences comparisons shows that this decline is larger for East Asians relative to the MENA population.

The coefficients for the pairwise comparison of South Asian and East Asian populations are interpreted similarly. For instance, the positive coefficient in English language proficiency shows a rise in importance for suburbanization of both groups. Yet for the differences in differences comparisons of South and East populations, the positive coefficient in English language proficiency shows that this rise is larger for the South Asian relative to East Asian population.

Taken together, my findings from the difference in difference comparisons of MENA immigrants and South and East Asian immigrants show differences across the three groups. In Hypothesis 4, I argue that the changes in the relationship between acculturation and SES and suburbanization will be significantly different in the post-9/11 period compared to the pre-9/11 period for MENA immigrants compared to South and East Asian immigrants due to the context of reception model. That is, MENA immigrants would be more negatively affected by racialization and stigma from the pre-9/11 to the post-9/11 period. English language proficiency

and household income, the markers of acculturation and SES, and length of residence show a higher negative relationship for the MENA compared to South Asian population. I observed the same patterns for the MENA and East Asian comparison, except the English language proficiency. However, educational attainment becomes stronger for the MENA population in both the South and East Asians comparisons. Therefore, Hypothesis 4 is partially supported by these findings.

Discussion and Conclusions

In this study I examined the suburbanization rates of the MENA and South and East Asian populations, the determinants of these suburbanization rates, and the change in those rates and determinants from 2000 to 2016. Initial analysis demonstrates that although there are only slight differences among the MENA, South Asian, and East Asian populations' rates of suburban residence, the highest rates are those of MENA immigrants in 2000 and South Asian immigrants in 2016.

The chief aim of this study was to determine the effect of SES and acculturation (e.g. English language proficiency) on suburban residence and variation in the determinants of suburban residence across three minority groups. As is proposed by the spatial assimilation model, increased English language proficiency, income and educational attainments ought to raise the likelihood of living in the suburbs. However, my analyses showed that socioeconomic status and acculturation affected the group suburbanization rates in different ways. While household income increased the chance of living in suburbs for MENA and East Asian immigrants, the opposite was observed for South Asian immigrants. Increased educational attainment can be converted into suburban residence for MENA and South Asian immigrants, but not for East Asian immigrants. Overall, these group variations in the effect of SES and

acculturation on suburban residence signals that differences in group suburbanization might be related to factors other than group level characteristics. Thus, cross-group generalizations guided by the tenets of spatial assimilation theory on residential patterns should be avoided. The residential location may involve preferences for living with co-ethnic groups as suggested by the ethnic community model, or discrimination that occurs in the housing market as depicted by previous studies (e.g. Gaddis and Ghoshal 2015; Steve and Selod 2015).

I argued the residential patterns of the MENA population may be influenced by the social and political context of reception. The MENA population has been overwhelmingly racialized and stigmatized after the 9/11 terrorist attacks. They have been "represented as 'fanatical,' 'violent,' and 'terrorist'" (Joseph et al. 2008:275). Ethnic minorities who are "perceived to be "Arab/Middle Eastern/Muslim were targeted by harassment or violence," including surveillance, policing, and incarceration, "based on assumption that "they" embody a potential for terrorism and are thus threats to U.S. national security and deserving of discipline and punishment" (Naber 2008:279; Joseph et al. 2008). A striking example of the distrust and discrimination that MENA immigrants face is the story of Ahmed Mohamed, a 9th grader arrested in 2015 when a digital clock he made at home was thought to be a bomb.[63]

Such insidious linking of MENA/Muslim/Arab identities with terrorism and potential violence demonizes these populations and shapes their everyday interactions with society. Due to essentialized identities and constructed images (e.g., dark skin color, beard, names or scarf/abaye) in public perception, the MENA population has been subject to various forms of discrimination, particularly in the housing market. Indeed, many studies have identified bias and discrimination against Arabs and Muslims (Gaddis and Ghoshal 2015; Steve and Selod 2015; Selod 2014; Carpusor and Loges 2006; Ahmed, Andersson and Hammarstedt 2010, Hogan and

[63] https://www.nbcnews.com/news/us.

Berry 2011, Friedman et. al 2019) in the housing market. To reveal the consequences of these social and political contexts of reception on suburban residence, I analyzed the rates of suburban residence of the MENA population in 2000 (pre-911) and 2016 (post-9/11) and investigated the relationship between SES and acculturation and suburbanization as determinants of spatial assimilation.

As I presumed, the results demonstrate clearly that among South and East Asian and MENA immigrants, MENA immigrants have the lowest increase in suburban residence holding average group level and metropolitan area characteristics constant. The effect of SES and acculturation on suburban versus city residence differs across the three groups. While some spatial assimilation variables become stronger in determining suburban residence in 2016 for some groups, their determinative power decreases in 2016 compared to 2000. For instance, education became a stronger predictor for MENA and South Asian suburbanization rates in 2016, but the opposite was observed for East Asian immigrants. In addition, difference in difference findings show that group level attributes (English language proficiency, household income and the length of residence) have a greater effect on suburbanization for South and East Asian as compared to MENA immigrants. However, only the effect of income and nativity on suburbanization is larger for East Asian compared to South Asian immigrants. Since there are extensive differences across the three groups, we cannot draw a general conclusion. However, consistent with my assumption, MENA immigrants show the least growth in their suburbanization rate despite their high socioeconomic and acculturation attributes (Table 4.1). Also consistent with my expectation is that the effect of SES (except income) and acculturation on suburban residence was weaker for MENA immigrants compared to South Asian immigrants; yet, unexpectedly, the effect of SES (except income) and acculturation on suburban residence was stronger for MENA immigrants compared to East Asian immigrants. Overall, my findings

suggest that SES and acculturation are not the only determinants of suburban residence and that the social and political context of reception influences residential patterns as well.

The ecologic context, suburban housing, the log of population and the percentage of each group account for disparities in group-level suburbanization across focused groups. As discussed previously, the size of cities and ethnic minorities tend to be positively correlated with segregation (Logan et al. 2004; Timberlake et al 2011). Similarly, the larger suburban rings cities have the more likely minority are suburbanized (Howell and Timberlake 2014). Consistent with existing literature the suburban housing supply positively associated with suburbanization of all three groups, albeit differences in magnitude. Opposite to what I expected both the log of population and the percent of minority group negatively associated with segregation of all the three groups excluding East Asians for the latter variable. These findings suggest that the ecologic context play an important role in explaining variations in the MENA, South and East Asian population's suburbanization rates.

In addition, this study has several limitations that are noteworthy here. Although I generated the MENA and South Asian categories using ethnic minorities who emigrated from majority Muslim (for the former group) and non-Muslim (for the latter group) countries to estimate the effect of religious status on suburban residence, religious status is not controlled directly. This is because the U.S. Census does not collect data on religion. For this reason, estimating the direct effect of religious status on the residential patterns of these minorities is not feasible at the national level. However, future research may overcome this shortcoming by utilizing data from local and state level datasets. Second, while this study provides national level findings on the suburbanization rates of MENA, South Asian, and East Asian immigrants, in order to provide meaningful and comparative results I limited the population size of the three groups to 500 in each metropolitan area of the United States. Thus, the analysis does not include

suburbanization experiences of MENA, South and East Asian immigrants in MAs where their number is less than 500. Lastly, in the current study the suburbanization of MENA, South and East Asians are described, yet their lived experiences (especially for MENA) in suburban is not explored in terms of quality of neighborhood. This require a further inquiry.

Despite these limitations, this study makes several contributions to the extant literature. This is the first study to examine the suburban residence of MENA immigrants in the United States at the national level. I provided the most recent suburbanization patterns of the MENA population in the U.S. and examined the change in their suburbanization rates over time. Different from previous studies, in addition to group level and metropolitan area characteristics, I assessed the effect of the social and political context on suburban residence using two comparison groups: South and East Asian immigrants—as they share similarities in socioeconomic status and origin continent and are also phenotypically distinguishable from the non-Hispanic white population. I also examined suburbanization rates for these groups at two time periods: 2000 (pre-9/11) and 2016 (post-9/11) because of a sharp negative shift in public perception of the MENA/Muslim/Arab population after the 9/11 terrorist attacks. In doing so, I showed that group level characteristics and the social and political context of reception should be considered together for a more comprehensive understanding of the spatial assimilation process in the United States. The residential patterns of each minority group differed in relation to structural factors in society. Certainly, their relation to structural factors is determined by their position in a racially stratified and hierarchical society. Thus, I showed that the argument of spatial assimilation theory that emerged from the experiences of European immigrants ignores important group differences and by focusing on only individual-level attributes (e.g. SES and acculturation) we have mischaracterized the complex spatial incorporation process, ultimately limiting our understanding of this process.

Appendix Tables

Table 4.A1. Coefficient and Standard Error Estimates from Linear Regressions of the Suburbanization Rate on Spatial Assimilation, Other Demographic, and Metropolitan Area Characteristics, 2000-2016: Consistent Set of MSAs for All Groups in Both Years

	MENA						South Asian						East Asian					
	2000		2016		Difference		2000		2016		Difference		2000		2016		Difference	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables																		
% speaking English well or only	0.075	0.218	-0.048	0.279	-0.123	0.354	0.116	0.191	0.376	0.257	0.260	0.320	-0.032	0.291	0.151	0.314	0.184	0.429
Average education (in years)	1.985	2.586	2.766	2.998	0.781	3.959	-0.131	2.685	-1.230	3.934	-1.098	4.763	-1.071	3.374	-4.128	4.571	-3.057	5.681
Average household income (in $000s)	0.249	0.074 ***	0.101	0.077	-0.148	0.107	-0.005	0.060	-0.072	0.088	-0.067	0.106	0.149	0.094	0.327	0.132 *	0.179	0.162
Average years in U.S. (in years)	0.472	0.409	0.142	0.435	-0.330	0.597	-0.601	0.770	-0.039	0.911	0.562	1.193	0.166	0.743	0.029	0.739	-0.137	1.048
% native-born	-0.105	0.135	0.156	0.158	0.261	0.208	0.048	0.270	-0.324	0.336	-0.372	0.432	0.064	0.225	-0.274	0.245	-0.338	0.332
Other demographics																		
Average age (in years)	0.378	0.461	0.486	0.492	0.109	0.674	1.690	0.748 *	0.737	0.936	-0.953	1.198	0.456	0.657	0.749	0.834	0.293	1.062
% married	-0.151	0.166	0.216	0.218	0.367	0.274	0.237	0.182	0.219	0.263	-0.019	0.320	0.108	0.228	-0.365	0.289	-0.473	0.368
% with children present	0.195	0.173	0.080	0.186	-0.115	0.254	-0.251	0.205	0.287	0.188	0.538	0.278	0.124	0.231	-0.147	0.297	-0.271	0.377
Metropolitan area characteristics	1.083	0.094																
Percent suburban housing		***	1.012	0.098 ***	1.012	0.098	1.072	0.108 ***	1.005	0.121 ***	-0.067	0.162	0.958	0.106 ***	0.903	0.106 ***	-0.055	0.150
Log of CBSA population	6.380	1.634 ***	4.867	1.649 **	-1.514	2.321	7.855	1.717 ***	6.372	1.973 **	-1.482	2.616	6.097	1.810 ***	4.742	1.776 **	-1.355	2.536
% minority group in CBSA	5.270	5.547	6.395	3.476	1.126	6.546	7.401	3.569 *	3.864	1.980	-3.537	4.082	-1.011	1.423	-0.903	1.142	0.107	1.825
Midwest	-2.540	4.847	-0.538	4.861	2.002	6.865	0.458	5.272	3.084	5.732	2.626	7.788	3.572	5.366	4.755	5.189	1.184	7.464
South	-3.799	4.409	-1.941	4.494	1.858	6.295	-3.964	4.766	-5.171	5.253	-1.207	7.093	-4.313	4.781	-2.136	4.805	2.177	6.778
West	3.941	5.210	3.432	5.030	-0.509	7.242	3.915	5.735	-5.730	6.214	-9.644	8.456	-2.958	6.573	-5.670	6.954	-2.712	9.569
Intercept	57.20	1.410 ***	59.67	1.551 ***	2.472	2.096	59.36	1.540 ***	61.06	1.752 ***	1.694	2.333	56.49	1.716 ***	59.48	1.744 ***	2.992	2.447
R^2	0.67		0.63				0.65		0.61				0.59		0.57			
Model df	118		118		118		118		118		118		118		118		118	

Notes : Data for the suburbanization rate and metropolitan area-level characteristics come from 2012-2016 ACS. All other independent variables come from 2016 IPUMS data.
*** p < .001; ** p < .01; * p < .05, two-tailed tests.

Table 4.A2. Coefficient and Standard Error Estimates from Difference in Differences Analysis of Change Over Time in Suburbanization and its Determinants, 2000-2016: Consistent Set of MSAs for All Groups in Both Years

	2000 to 2016 Differences (from Table 3)						Difference in Differences					
	MENA		South Asian		East Asian		MENA-South		MENA-East		South-East	
	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE	Coeff.	SE
Spatial assimilation variables												
% speaking English well or only	-0.123	0.354	0.260	0.320	0.184	0.429	-0.383	0.337	-0.307	0.393	0.077	0.378
Average education (in years)	0.781	3.959	-1.098	4.763	-3.057	5.681	1.879	4.380	3.838	4.896	1.959	5.242
Average household income (in $000s)	-0.148	0.107	-0.067	0.106	0.179	0.162	-0.081	0.106	-0.326	0.137 *	-0.245	0.137
Average years in U.S. (in years)	-0.330	0.597	0.562	1.193	-0.137	1.048	-0.892	0.944	-0.193	0.853	0.699	1.123
% native-born	0.261	0.208	-0.372	0.432	-0.338	0.332	0.633	0.339	0.599	0.277 *	-0.034	0.385
Other demographics												
Average age (in years)	0.109	0.674	-0.953	1.198	0.293	1.062	1.062	0.972	-0.184	0.889	-1.246	1.132
% married	0.367	0.274	-0.019	0.320	-0.473	0.368	0.386	0.298	0.840	0.325 *	0.454	0.345
% with children present	-0.115	0.254	0.538	0.278	-0.271	0.377	-0.653	0.266 *	0.156	0.321	0.810	0.331 *
Metropolitan area characteristics												
Percent suburban housing	1.012	0.098 ***	-0.067	0.162 ***	-0.055	0.150 ***	1.079	0.134 ***	1.067	0.127 ***	-0.012	0.156 ***
Log of CBSA population	-1.514	2.321	-1.482	2.616	-1.355	2.536	-0.031	2.473	-0.158	2.431	-0.127	2.576
% minority group in CBSA	1.126	6.546	-3.537	4.082	0.107	1.825	4.662	5.455	1.018	4.805	-3.644	3.162
Midwest	2.002	6.865	2.626	7.788	1.184	7.464	-0.624	7.341	0.818	7.171	1.442	7.628
South	1.858	6.295	-1.207	7.093	2.177	6.778	3.064	6.706	-0.320	6.541	-3.384	6.937
West	-0.509	7.242	-9.64	8.456	-2.712	9.569	9.135	7.872	2.203	8.485	-6.932	9.029
Intercept	2.472	2.096	1.694	2.333	2.992	2.447	0.778	2.218	-0.520	2.278	-1.298	2.391
Model df	118		118		118							

Notes: Data for the suburbanization rate and metropolitan area-level characteristics come from 2000 Census and 2012-2016 ACS. All other independent variables come from 2000 and 2016 IPUMS data.

*** p < .001; ** p < .01; * p < .05, two-tailed tests.

CHAPTER 5: CONCLUSION

In this dissertation I explored the spatial assimilation of Middle Eastern and North African (MENA) immigrants, a group that has largely been overlooked by previous research. Spatial assimilation is seen as a necessary condition for the full incorporation of immigrants, meaning that immigrants and the host population share the same residential spaces (Massey and Mullan 1984). Spatial assimilation theory dominates the residential research literature and emphasizes the significance of individual level characteristics—acculturation (the adoption of the language and customs of the host society) and socioeconomic status—in achieving residential proximity with non-Hispanic whites (Massey and Denton 1985; Alba and Logan 1991; Alba et al. 1997; Timberlake and Iceland 2007; Iceland and Scopilliti 2008; Iceland and Nelson 2008; Lichter et al. 2015). Yet this approach neglects the influence of structural factors, captured by a recent focus on the "context of reception."

The primary goal of this dissertation was to address the influence of contextual factors by indirectly estimating the influence of a changing context of reception on the spatial assimilation of MENA immigrants in the United States (Alba and Nee 2004; Portes and Rumbaut 2014). I focused theoretical attention on the ways in which the sociopolitical structures of the host country and the presence of preexisting ethnic communities might shape the effects of acculturation and socioeconomic advancement on the spatial incorporation of immigrant groups. I compared the experiences of MENA immigrants with South and East Asian immigrants because: 1) all three groups score similarly high on measures of education and income; 2) all three groups are, on average, phenotypically distinguishable from non-Hispanic whites; and 3) South and East Asian immigrants may not have experienced the same kinds or degree of hostilities in the post-9/11 period as did MENA immigrants. I reveal the effects of this changing

context of reception by comparing the levels and determinants of spatial assimilation for the three groups from the pre- to the post-9/11 period. Although MENA immigrants in America faced discrimination prior to 9/11, the pervasiveness and severity of discrimination against them intensified after the terrorist attacks (Naber 2008; Tehranian 2009; Zarrugh 2016; Khoshneviss 2019); hence, I anticipated that the spatial patterns of MENA immigrants would differ significantly from those of Asian immigrants as a result of this backlash.

I posed the following questions: what is the current state of spatial assimilation of MENA immigrants compared to South and East Asian populations? How much variation is there across these groups in the predictors of spatial assimilation? How much change has each group experienced from the pre- to the post-9/11 period, both in levels of spatial assimilation and in its predictors? Accordingly, I examined the spatial assimilation of the MENA population compared to the other two groups, measuring their segregation, isolation, concentration, clustering, and suburbanization in the United States from 2000 to 2016.

Summary of Findings

Chapter 2 examined the residential segregation of the MENA population from 2000 to 2016 using dissimilarity and isolation indexes (Massey and Denton 1988). I hypothesized that the MENA population's dissimilarity and isolation indexes would be higher and would rise more from 2000 to 2016 compared to the South and East Asian populations due to the 9/11 backlash. The results only provide support for this hypothesis in the South Asian group comparison. In other words, the MENA population has a higher dissimilarity index and a larger increase compared to the East Asian population, but the reverse is true when compared to the South Asian population, at least regarding increase over time. As previously discussed, there is evidence that the South Asian population may sometimes be mistaken as MENA/Muslim and to some extent subjected to anti-Muslim/Arab/MENA sentiments following 9/11 (Love 2017). Thus, in both

groups I expected to see similarity in disadvantage of residential patterns, and a rise in their residential segregation. However, with a figure of 66 in 2016 the South Asian population exceeds even the commonly used threshold of 60 for a high level of residential segregation (Massey and Denton 1993), which suggests the need for further empirical inquiry (perhaps qualitative) to reveal the driving factors of their segregation. In terms of the isolation measure, while there is an increase in the isolation of the MENA population as presumed, the increase is larger both for South and East Asians. This may be explained by the population size of each group, as the isolation index is influenced by group size in a positive manner (Rugh and Massey 2014).

Similarly, I argued that the negative correlation between the dissimilarity and isolation indexes and predictors of spatial assimilations such as English language proficiency, educational attainment, income, length of residence, and nativity status would be weaker for the MENA population compared to the South and East Asian populations in 2016. However, the results only support this prediction for nativity with the dissimilarity index. The relationship between predictors of spatial assimilation and segregation for the MENA population was consistent with previous research (Massey and Denton 1985; Frey and Farley 1996; South and Crowder 1998; Alba and Logan 1991; Logan et al. 1996; Freeman 2002; Timberlake and Iceland 2007; Pais et al. 2012; South et al. 2008). The findings that South and East Asian populations have a stronger negative relationship between spatial assimilation indicators and segregation suggest that the effects of discrimination may be more severe than for other groups. Alternatively, these findings may reflect immigrant preferences for living with co-ethnic groups and an increase in their population size as previous research has indicated (Li 1998; Logan, Zhang and Alba 2002, Logan et al. 2004).

In addition, the MENA population's segregation score increased between 2000 and 2016, controlling for spatial assimilation and metropolitan area-level predictors as well as group-level

characteristics. However, of the three groups, the MENA population's segregation increased the least. The differences in the relationship between acculturation, SES, and segregation in the post-9/11 compared to the pre-9/11 period was not consistent with my prediction across two pairwise comparisons. In difference in difference estimates, to some extent the MENA population aligns with what I presumed—educational attainment was stronger for South Asian and East Asian groups compared to MENA immigrants in the post-9/11 period. Nevertheless, income shows the opposite outcome. The results do not provide consistency among variables, across comparisons groups, or other measures (dissimilarity and isolation), which impedes my ability to make a general statement about the effect of the context of reception, or to state whether these findings support or reject the hypotheses of the spatial assimilation model, which warrants further research.

Following the same logic with regard to the effect of the context reception on residential patterns of the MENA population compared to South and East Asian populations, Chapter 3 measured the spatial dispersion of the MENA population using the relative concentration index (concentration)and the spatial proximity index (clustering). The MENA population was expected to have higher concentration and clustering over time and group level attributes were presumed to have a weak effect on their spatial incorporation due to the stigma and negative rhetoric that reinforced their racialized status post- 9/11. Documenting a rise only in the concentration of the MENA population and a decline in concentration for South and East Asian populations, the findings align with my expectation. Considering clustering patterns, however, all three groups demonstrate increased clustering, particularly the South Asian group. I frequently found a negative relationship between spatial assimilation variables and the concentration and clustering for all three groups, with the exception of educational attainment, such that there is a lack of evidence to support the context of reception argument. Educational attainment does not decrease

concentration or clustering of groups and its effect becomes weaker over time. As expected, the effect of nativity grows weaker in decreasing the MENA population's concentration over time, but the decrease is not greater than it is for South and East Asian populations as I presumed. Nevertheless, compared to South and East Asians, the negative relationship between clustering for MENA groups and English language competency and length of residence grows stronger, supporting to some extent the context of reception hypotheses. Similar variations were observed in difference in difference findings, preventing a general conclusion. For instance, while English language proficiency leads to more segregation for MENA immigrants in both pairwise comparison of both measures, educational attainment leads to less segregation in the MENA-South comparison, but more segregation in the MENA-South comparison concentration measure. Yet educational attainment leads to less segregation for the MENA population in both comparisons of the clustering measure.

The last measure of spatial assimilation is suburbanization—the subject of Chapter 4. Previous studies have shown that locational attainment is highly influenced by racial/ethnic status in ways that racialized group (e.g., Black, dark-skinned Hispanic and Muslim minorities) are less likely to suburbanize than other minority groups (e.g. Asian, Hispanic) in the U.S. (Freeman 2002; Massey and Denton 1988; Friedman 2019). Accordingly, I expected to observe low levels, declines, or a lesser increase in the suburbanization of the MENA population compared to the South and East Asian populations, given the hostile context of reception MENA immigrants have encountered since the 9/11 tragedy. As predicted, the suburbanization of the MENA population was lower in 2000 relative to the other two groups and decreased from 2000 to 2016. However, a decline in suburbanization was observed for South and East Asian populations as well. I observed declines in suburbanization for all three groups, with the MENA group having the lowest rate, controlling for spatial assimilation variables, demographic

attributes, and metropolitan area characteristics. These patterns suggest that the spatial assimilation model remains limited in accounting for such decreases, supporting the effect of the context of reception in determining immigrant groups' locational attainment.

Regarding the findings on the relationship between markers of spatial assimilation and suburbanization, I found variations across groups in a way that shows support simultaneously for the context of reception and spatial assimilation hypotheses. The negative effect of education and native status on suburbanization support the context of reception hypothesis; the positive effect of income and length of residence on suburbanization support the spatial assimilation hypothesis. Differences in this relationship over time and difference in difference findings also show disparities across groups. The effects of income and length of residence become weaker for the MENA population over time, as presumed. However, this pattern is not unique to the MENA population, as a similar pattern is observed for South and East Asian populations for income, which contradicts spatial assimilation theory. Differences in such effects across groups is also well-documented in further variations—in each pairwise comparison, the effect of income and length of residence have stronger effects on the suburbanization of the MENA population, contradicting the context of reception argument. The inverse is observed for the effect of educational attainment, which partially supports the context of reception argument.

Overall, the spatial assimilation (or lack thereof) of the MENA population in the United States is examined using five difference measures—evenness (dissimilarity index), exposure (isolation index), concentration (relative concentration index), clustering (spatial proximity index) and locational attainment (suburbanization). These measures constitute separate dimensions of segregation (Massey and Denton 1988) and are important to assess because each measure captures a separate dimension of residential segregation. Given that residential segregation is a multidimensional social phenomena that forms and organizes individuals' lives

(Massey and Denton 1988), each measure reveals different outcomes of spatial segregation on groups' lives—from (not) having access to socioeconomic resources to being separated from metropolitan areas where groups become more identifiable and perceived as a "threat" by the host society.

The evidence obtained from this set of five analyses permits us to evaluate how well the spatial assimilation theory and context of reception hypothesis explain MENA, South, and East Asian immigrants' segregation from non-Hispanic whites. The traditional spatial assimilation model predicts that as immigrants become more acculturated to American society and move up the socioeconomic ladder, they will gain spatial proximity to neighborhoods of non-Hispanic whites. The context of reception hypothesis underlines structural factors affecting the spatial assimilation process, drawing attention to the differences in experiences of immigrants in different contexts of reception (welcome/unwelcome or positive/negative) based on their social identities and pre-defined stigmatized and racialized statuses. Considering these two models along with the existent literature, I argue that the stigmatized and racialized status of the MENA population will trump other attributes that spatial assimilation theory emphasizes in determining their spatial assimilation outcomes. Taken together, all the spatial assimilation measures—the indices of dissimilarity, isolation, concentration, clustering, and rate of suburbanization indicated that the MENA population's segregation increased from 2000 (pre-9/11) to 2016 (post-9/11), as predicted by the context of reception framework. However, except for the relative concentration index, the same results were observed for South and East Asian populations as well. Although my research is limited in its ability to suggest the reason behind this trend, the increased segregation of Asian immigrants documented by earlier work argues that co-ethnic settlement preferences as well as continuing high rates of immigration have had a strong effect on their segregation (Logan et al. 2004; Li 2009).

To summarize, the findings compiled from calculated indices and spatial assimilation variables neither confirm nor reject spatial assimilation theory and the context of reception model. Educational attainment is, across measures, associated with higher desegregation of MENA compared to South and East Asian populations, the opposite of my expectation. Income, contradicting spatial assimilation theory and confirming the context of reception theory, has a very small or no effect (close to 0) on decreasing the segregation of groups across all measures, particularly for the MENA population. The relationship between English language profiency and calculated indices supports the spatial assimilation theory, although in some cases the effect is very small. However, its effect in declining segregation is larger for South and East Asian populations compared to the MENA population, supporting the context of reception model.

Lastly, the impact of ecological factors such as metropolitan population size, group size, and region are thought to be associated with segregation and are included in the analysis (Logan et al. 2004; Wilkes and Iceland 2004). Results vary across groups and measures of spatial assimilation. The rise in metropolitan population size increases the isolation and relative concentration index of all groups. A rise in suburbanization and a decrease or very small effect (for the MENA group) of the dissimilarity index for all minorities reflects more segregation for the former measure, yet less segregation for the later measures. The increase in the proportion of ethnic minorities has an effect on desegregation of all three groups only in evenness and locational attainment measures (excluding South Asian for later). For the remaining measures, group size either increases or has no effect on segregation of groups, both contradicting and confirming previous studies (Logan et al. 2004). Compared to the Northeast region, MENA and South Asian populations tend to be more segregated in the Midwest, South, and West in almost all measures, contrary to previous research that documented “newer metropolitan regions in the West and South were less segregated than were those in the Northeast and Midwest” (Logan et al

2004: 2). Ultimately, the results confirm that it is certainly challenging to explain the segregation patterns of all three minority groups based on a single theoretical model.

Limitations and Further Research

This research has several limitations worth mentioning, primarily associated with data. First, the primary focus of this dissertation is to estimate the impact of the context of reception on spatial assimilation, yet the available data only permits an indirect measure. In order to observe it more directly, it would be ideal to identify the metropolitan areas where discrimination, harassment, and hate crimes (e.g. obtained by accessing local ordinances and state law measures of harassment) transpire toward members of the MENA population following the 9/11 tragedy that simultaneously lead to segregation of these groups. Although it might not be feasible now to conduct a direct estimate of the context of reception on residential patterns of the MENA population at the national level, my research provides a new avenue for future research—suggesting that spatial assimilation theory is limited in explaining residential patterns of these groups and it is conceivable that the MENA population's increased segregation is due to a hostile of context of reception. Future research thus can conduct qualitative research aimed at a purposive sample to interview MENA immigrants who lived in the U.S. before and after the 9/11 terrorist attacks to investigate the consequences of this tragedy through their narratives. Additionally, this study aims to estimate the effect of anti-Muslim sentiment on the MENA population's residential segregation, yet religious status is not controlled directly because the U.S. Census does not collect data on immigrants' religious characteristics. I generated MENA and South Asian categories specifically to include ethnic groups emigrating from majority Muslim countries for the former group, and by excluding ethnic groups emigrating from majority Muslim countries for the latter group. However, future research may overcome this shortcoming by utilizing data from local and state level datasets. Lastly, while this study provides national

level findings on the spatial assimilation of MENA, South Asian, and East Asian immigrants, in order to provide meaningful and comparative results I limited the population size of the three groups to 500 in each metropolitan area of the United States. Thus, the analysis does not include the spatial assimilation patterns of MENA, South, and East Asian immigrants in MAs where their number is less than 500. Lastly, in the current study the segregation of MENA, South and East Asians are described, yet their lived experiences (especially for MENA) is not explored in terms of quality of (suburban) neighborhood. This requires a further inquiry.

Contributions of Research

Ultimately, this dissertation provides a more nuanced understanding of how residential patterns of minority groups are determined and identifies the extent to which the context of reception, along with group level characteristics, affect their spatial assimilation. Consequently, it makes several contributions to the extant literature. This is the first study to examine the spatial assimilation of MENA immigrants in the United States at the national level. I provided the most recent residential patterns of the MENA population in the U.S. and examined changes in their segregation over time. Different from previous studies, in addition to group level and metropolitan area characteristics, I assessed the effect of the social and political context on spatial assimilation using South and East Asian immigrants as comparison groups. Further, I examined spatial assimilation at two time periods: 2000 (pre-9/11) and 2016 (post-9/11) because of a sharp negative shift in public perception of the MENA/Muslim/Arab population after the 9/11 terrorist attacks. In doing so, I showed that group level characteristics and the social and political context of reception should be considered together for a more comprehensive understanding of the spatial assimilation process in the United States. The residential patterns of each minority group differed in relation to structural factors in society. Certainly, their relation to structural factors is determined by their position in a racially stratified and hierarchical society.

Thus, I showed that the argument of spatial assimilation theory that emerged from the experiences of European immigrants ignores important group differences and by focusing on only individual-level attributes (e.g. SES and acculturation) we have underestimated the complexity of spatial incorporation, ultimately limiting our understanding of this process. Lastly, the variations in my results across groups and measures of spatial assimilation as well as providing simultaneous support for the tenets of spatial assimilation and the context of reception models challenge the practice of using a single theory to understand group segregation (Logan et al. 2004). My findings suggest an advantage to using multiple frameworks in accounting for the residential patterns of immigrants in the United States.

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