2 The Global Financial Crisis and neighborhood decline

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§ 2.1 Introduction

The Global Financial Crisis (GFC), which started in 2008, has had a major impact on many Western European and North American countries. In the years preceding the crisis, many countries in the Global North experienced rising house prices, accompanied by an expansion of mortgage financing (Wachter, 2015). As the financial market has become increasingly global, the collapse of the subprime mortgage market and house price bubble in the United States (US) has had repercussions on a global scale (Martin, 2011). While there were significant differences between impacted countries in the timing and macroeconomic processes underlying the GFC, the characteristics of the subsequent economic recession have been similar: stagnating economic growth, a sovereign debt crisis, and rising unemployment (Aalbers, 2015). Many governments have responded to the declining economy and growing unemployment levels with the implementation of major budget cuts for social provisions (Peck, 2012). This has contributed to both relative and absolute growth in the number of economically disadvantaged households and has exacerbated poverty on both sides of the Atlantic. While the average income of the top 10% of the populations of OECD countries was essentially unaffected by the crisis, the average income of households in the lowest income decile experienced an annual decline of 2% between 2007 and 2010 (OECD, 2013a). In many countries, the GFC has also had a major impact on the housing market, evidenced by a large drop in home prices and declining sales of both existing and new-build housing (Van Der Heijden et al., 2011).

Today, many countries are slowly recovering from the first shocks of the GFC and the economic recession that followed. However, in many Southern European countries, unemployment rates continue to be very high and, although unemployment is declining in places like the United States and Germany, long-term unemployment appears to

be a persistent problem in many countries (OECD, 2014; Shierholz, 2014). Similarly, despite graudual stock market recoveries and some modest increases in house prices, repercussions from the GFC and economic recession persist in all countries. In many countries, the GFC has had predictable effects on the supply side of the housing market - the willingness of banks to lend money to prospective owners has generally declined. In some countries, investors in real estate became more selective, avoiding projects with too much risk; in the United States, in contrast, investors of another ilk have bought large numbers of foreclosed, real estate owned (REO) properties with the main goal of making a profit (e.g. Mallach, 2010b). Regeneration and restructuring initiatives have been put on hold throughout Western Europe (Boelhouwer & Priemus, 2014; Raco & Tasan-Kok, 2009; Schwartz, 2011). While some governments, such as the United Kingdom and the Netherlands, implemented stimulus programs to generate more (affordable) housing in the years after the crisis, recent budget cuts have put an end to these programs (Scanlon & Elsinga, 2014; Schwartz, 2011).

The demand side of the housing market has also changed. Banks have tightened lending terms, making it more difficult for many households to obtain a mortgage (Goodman et al., 2015). As a result, there is more demand for private rentals and social or public housing. The GFC has affected employment on both sides of the Atlantic, in terms of either high unemployment levels or a shift toward more casualized labor contracts such as zero hour or temporary employment contracts (Aalbers, 2015; Puno & Thomas, 2010). This has led to financial strain and housing affordability problems for many households (JCHS, 2015). In the United States, households that are behind on their mortgage payments, and that are unable to obtain a mortgage modification with their lender, are faced with displacement due to foreclosure. This results in a large group of residents with badly damaged credit ratings who are in search of post-foreclosure housing in nearby areas (Martin, 2012). In other countries where the option of foreclosure is often not available, households that are unable to pay their rent or mortgage often have to move to cheaper dwellings and less attractive neighborhoods, while others have to stay put, because moving is too expensive or alternatives are not available, or because negative equity makes it impossible for them to move.

All of these developments have contributed to rising inequality in the Global North, particularly in terms of income and housing (e.g. Immervoll et al., 2011; Bellman & Gerner, 2011). The GFC therefore raises questions about the future development of neighborhoods, especially because inequality tends to have specific spatial outcomes including increased segregation, increased spatial concentrations of low-income groups, and negative neighborhood effects (e.g., European Commission, 2010; Glaeser et al., 2009; Van Eijk, 2010; Zwiers & Koster, 2015). While there has been little research on the effects of the GFC at the neighborhood level, the evidence described above suggests that the effects are distributed unevenly across urban areas (Foster & Kleit, 2015;

Batson & Monnat, 2015). As households in the bottom income decile have experienced the sharpest drop in income, the effects of the GFC are likely to be felt most acutely in the most disadvantaged neighborhoods (see also Rugh & Massey, 2010; Thomas, 2013).

In view of these concerns, this article sets out to identify factors that affect neighborhood decline in the aftermath of the GFC. Many economists have pointed to structural changes in national housing markets and to the changing role of states as important consequences of the GFC (e.g. Wachter, 2015), yet, few researchers analyze how these changes play out at the neighborhood level. Similarly, housing researchers have identified multiple drivers behind neighborhood decline, but many of them focus on within-neighborhood processes at the expense of developments at higher scale levels (Van Beckhoven et al., 2009). In this paper, we aim to bridge this gap by presenting 10 hypotheses on how changes at different geographical scales affect neighborhood decline. Our goal is not to create the next ideal-type model of neighborhood decline processes; rather, we seek to further the intellectual debate on neighborhood decline call for more research on the spatial consequences of the GFC, specifically on neighborhoods as an important territorial dimension of increasing inequality.

Our hypotheses mainly pertain to the Global North. Although these countries have very different political, economic, and social structures, research on neighborhood change in different contexts in the Global North has often led to broadly similar findings. This suggests that many of the underlying processes of neighborhood change are comparable across countries. In the same vein, the increasingly global nature of financial and housing markets (Aalbers, 2015) yields similarities in the effects of the GFC and the economic recession between countries. However, the effects of the GFC are mediated by national policies, local (housing market) circumstances, and intra-neighborhood processes, meaning that the GFC has different outcomes in different places.

The next section of this article presents a short discussion of definitions of neighborhoods and neighborhood decline. We then highlight important elements from existing studies to formulate 10 hypotheses about the effects of the GFC and the economic recession on neighborhood decline. These hypotheses are divided over three sections, each with a different geographical focus. The conclusion brings our arguments together and calls for more contextualized longitudinal research.

§ 2.2 Defining neighborhoods and neighborhood decline

Neighborhoods are defined in various ways. Some definitions are related to distance: the neighborhood covers the area within which one can reach important destinations (schools, shops, and friends) within walking distance (e.g. Morris & Hess, 1976). Other definitions are based on social networks and refer explicitly to the existence of social bonds in the area (e.g. Warren, 1981). However, these definitions imply that 'the neighborhood' is different for each individual, which makes research on neighborhood outcomes extremely complicated. Galster (2001) defines neighborhoods as "*... bundles of spatially based attributes associated with clusters of residences, sometimes in conjunction with other land uses*" (p. 2112). The 'spatially based attributes' refer to, for example, the characteristics of buildings, and infrastructural, demographic, class, status, social interactive, and sentimental characteristics. Defining neighborhoods based on spatial similarities (such as housing type or population composition) is difficult, especially in mixed-housing areas.

All definitions of neighborhoods have their advantages and disadvantages and there is no ideal neighborhood definition. The choice of definition depends on the type of research and should be substantiated by the researcher, bearing in mind that different definitions of neighborhoods may lead to different outcomes. For our purposes, it is sufficient to use a rather general and pragmatic definition of neighborhood: *a neighborhood is a relatively small spatial subdivision of a city or town for which a number of physical, demographic, and socioeconomic characteristics can be measured. The size of a neighborhood may vary by city*.

Neighborhoods play an important role in shaping the lives of individuals and households, in relation to their social contacts, identity, health, and happiness (see also Martin, 2003). Moreover, neighborhoods have become increasingly important as local political and economic entities, with many governments focusing on neighborhoods to solve a wide array of social and economic problems (Martin, 2003). This highlights the importance of neighborhoods in a post-crisis society: with declining national government involvement in many countries, there may be an even stronger need to deal with many problems locally, on, for example, the level of cities or neighborhoods.

Neighborhoods can develop in different directions: a neighborhood can be demographically stable for years or even decades. Neighborhoods can experience gentrification, indicated by, for example, rising house prices, an outflow of low-income households and an inflow of more affluent households. The extensive literature on this topic documents such processes in great detail (e.g. Doucet, 2014; Lees, 2008).

Neighborhoods can also show a process of decline, indicated by falling house prices, an inflow of low-income households and an outflow of more affluent households.

In this article, we assume that the long-lasting effects of the GFC and the economic recession will fuel neighborhood decline. We use a broad definition of neighborhood decline: *any negative development in the physical, demographic, or socioeconomic conditions of a neighborhood as experienced by its residents or other stakeholders*.

§ 2.3 Ten hypotheses on the GFC and neighborhoods

The remainder of this article consists of ten hypotheses about the ways in which the GFC might influence neighborhood decline. They are intended as a challenge to researchers to test whether these hypotheses can be confirmed or rejected in different national and urban contexts. The hypotheses are divided into three sections. The first part focuses on how the GFC plays out in different national housing and welfare systems. The next part zooms in on the local context as a mediating variable in processes of neighborhood decline, while the final part concentrates on residents as drivers of neighborhood change.

§ 2.3.1 The role of national housing and welfare systems

Differences in welfare state regimes are an important explanatory factor in the wide range of national differences in housing systems (Priemus & Whitehead, 2014). In countries where the government has historically been strongly involved in the development of affordable (social) housing, such as Denmark, Sweden, and the Netherlands, the quality and the size of the social housing stock was originally very high (Van Kempen & Priemus, 2002; Tsenkova & Turner, 2004). This high initial quality has mitigated processes of neighborhood decline and has led to relatively low levels of income segregation in these countries. However, over the past few decades, severe cuts in housing subsidies took place in these countries, and they have moved toward a more market-based housing system, where the responsibility for social housing shifted from public authorities to housing associations or NGO landlords. Housing associations are now increasingly dependent on their own revenue to construct new social housing (Van Kempen & Priemus, 2002; Schwartz, 2011). To generate revenue, many housing associations have been selling off the better parts of their social housing stock over the past decade, significantly reducing

the share and average quality of the social housing stock (Kleinhans & Van Ham, 2013; Schwartz, 2011).

In many countries, the GFC has led to the implementation of budget cuts and austerity programs. In combination with cuts in (social) housing subsidies before the GFC, these austerity programs have had an important impact on the opportunities for households on the housing market. Firstly, especially in times of economic recession, austerity programs and budget cuts directly affect the financial resources of households (cf. Lindbeck, 2006; Swank, 1998). Secondly, austerity programs and budget cuts have restricted the resources available for the maintenance and construction of affordable social housing, although these processes have been more dramatic in some countries than in others (Van der Heijden et al., 2011; Priemus & Whitehead, 2014). In the United States, for example, Low-Income Housing Tax Credit (LIHTC) programs were implemented in the 1980s and these programs were extended during the mortgage crisis and the years after to stimulate the development of low-income housing (Schwartz, 2011). However, because of the unstable market for tax credits, the LIHTC program tends to be more successful in the more robust housing markets in major metropolitan areas where banks are still dependent on the Community Reinvestment Act (Schwartz, 2011; Belsky & Nipson, 2010). Next to showing geographical differences in the effectiveness of tax credit programs, it is unlikely that they will generate as much equity for housing as it did before the GFC (Schwartz, 2011).

We can thus see that the GFC has affected the production of affordable housing in many countries in different ways. In countries where housing associations are dependent on private investors, we can expect to see the production of social housing to increase in those areas where there is a more robust housing market and where there is potential for financial gain. In other countries, we can generally expect a declining production of affordable housing. Together with more financial restrictions for households as a direct effect of the crisis, these processes can reduce residential mobility and force low-income groups to concentrate in neighborhoods where affordable housing options are still available. This can easily lead to increasing concentrations of low-income groups in the most deprived areas.

Hypothesis 1

Austerity programs and budget cuts lead to a smaller social safety net for vulnerable groups on the one hand, and to more limited options on the social housing market on the other, leading to increasing concentrations of low-income groups in particular neighborhoods.

The extent of the impact of the GFC on the housing market depends on the volatility and structure of local and regional housing markets in different countries (Van der Heijden et

al., 2011). In countries with highly regulated housing finance systems, such as Germany, Switzerland, and Austria, the housing market was barely affected by the crisis (Whitehead et al., 2014). The most important explanations for housing market stability in these countries are the well-developed rental markets and the low homeownership rates, together with conservative lending policies (Schneider and Wagner, 2015; Whitehead et al., 2014). In countries with more open finance markets, of which Ireland and Iceland are the main examples, house prices fell considerably due to the rapid expansion of mortgage debt in the years before the crisis (Whitehead et al., 2014).

In countries with high mortgage indebtedness, states and financial institutions deliberately stimulated homeownership over the past few decades. First, many low- to middle-income groups and first-time buyers were allowed to obtain a mortgage by engaging in high loan-to-value lending (Schelke, 2012). Second, direct subsidies or tax allowances were implemented to support low- to middle-income groups' entry into homeownership (though in some countries, subsidies such as mortgage interested deductions tend to benefit high-income groups the most) (Hanson et al., 2014; Schelkle, 2012). Low- to middle-income groups have generally been hit the hardest by the GFC and the subsequent economic recession in terms of underwater mortgages, unemployment, and declining incomes (Dreier et al., 2014).

In the United States, subprime and predatory lending practices have disproportionally targeted disadvantaged groups in disadvantaged neighborhoods (Aalbers, 2009; Martin, 2011; Mayer & Pence, 2008). Subprime and predatory lending generally refer to high loan-to-value lending, compensating for higher credit risks with unfavorable terms such as higher fees and interest rates that are not beneficial to the borrower (Crossney, 2010; Aalbers, 2013). These practices increase the debt of the borrower beyond the collateral property and reduce the value of the underlying asset and accumulated equity (Crossney, 2010; Schloemer et al., 2006). Subprime and predatory lending tended to be spatially clustered in particular disadvantaged and segregated parts of US cities, resulting in high numbers of foreclosures in these areas (e.g., Anacker & Carr, 2011; Batson & Monnat, 2015; Crossney, 2010; Hyra & Rugh, 2016; Immergluck, 2008; Mallach, 2010a; Rugh & Massey, 2010). Concentrations of foreclosures and vacancies in particular areas may lead to declining housing values of nearby properties (Immergluck, 2009; Immergluck & Smith, 2006) and fuel neighborhood decline through vandalism and increasing crime rates (Aalbers, 2013; Jones & Pridemore, 2016; Martin, 2011; Newman, 2009; Ojeda, 2009).

In general, declining house prices have disproportionally affected low- to middle-income groups, often leaving them with a very unstable financial situation and negative equity (e.g., Crossney, 2010; Dreier et al., 2014; Thomas, 2013). In the United States, this has resulted in high concentrations of foreclosures in disadvantaged neighborhoods,

displacing large numbers of people who are in need of (affordable) housing and have lost the ability to obtain a mortgage due to badly damaged credit (Goodman et al., 2015; Martin, 2012). These post-foreclosure households tend to relocate in other hard-hit foreclosure areas, contributing to declining average household income and neighborhood instability (Martin, 2012).

Hypothesis 2

The neighborhood effects of the GFC on neighborhoods are stronger in countries that have actively stimulated homeownership at high loan-to-value rates. Vulnerable groups such as racial or ethnic minorities, low- to middle-income households, and first-time buyers are especially affected by the GFC. When these groups are overrepresented in particular neighborhoods, these neighborhoods are often affected by rapid processes of decline.

In countries where there has been a deliberate policy to expand homeownership over the past few decades, it has become more difficult for low- to middle-income groups and first-time buyers to obtain a mortgage than in the years preceding the crisis (Boelhouwer & Priemus, 2014; Clark, 2013; Goodman et al., 2015). The mortgage systems that have emerged from the crisis generally favor higher income groups, leading to increasing disparities between financially stable and financially unstable households (Forrest & Hirayama, 2015). This ultimately means that particular groups and areas are excluded from the mortgage housing market (Clark, 2013; Forrest & Hirayama, 2015; Martin, 2011; Watson, 2009). When it is more difficult for low- to middle-income groups to obtain a mortgage, they are forced to turn to the rental sector. Because renters spend a significantly higher share of their income on housing costs than homeowners (e.g. Haffner & Boumeester, 2014) and because they are not able to accumulate housing equity, this will ultimately contribute to increasing inequality between renters and owners.

Hypothesis 3

After the GFC, low- to middle-income groups and first-time buyers are increasingly excluded from the mortgage market, which creates a large group in need of affordable rental housing. At the same time, these changes will lead to a declining homeownership rate in particular areas, creating a spatial divide based on different tenures, and ultimately leading to increasing inequality.

Housing opportunities typically differ between generations. The GFC and subsequent recession is likely to further increase intra-generational differences in terms of housing opportunities (e.g., Forrest & Hirayama, 2015). There is already a clear difference between older generations and younger generations - the former have been more able to transform their housing investments into assets over time. High student debts,

long-term unemployment, a shift towards a more casualized workforce, and stricter mortgage eligibility criteria make it more difficult for the millennial generation to pursue homeownership (JCHS, 2015). The older members of this cohort are just entering the housing market and studies have shown that only a small percentage has been able to become homeowners; this is even more difficult for minority groups (Clark, 2013; JCHS, 2015). In many countries, there has been a decline in homeownership rates among younger households as they postpone marriage and childbirth and tend to prolong their stay in the parental home (Aalbers, 2015; JCHS, 2015; Lennartz et al., 2016).

Although many young people might have always been dependent on family financial support to some extent (in the sense of receiving down payments), in recent times, the dependence on family resources to achieve homeownership is becoming more pronounced (Forrest & Hirayama, 2015). However, as many parents have also been subjected to the effects of the GFC and the recession (in terms of unemployment, declining incomes, foreclosures, and negative equity), parents are not equally able to transfer wealth to their children. This is especially true for the younger, lower educated, and minority groups that have accumulated only modest equity (Clark, 2013). In the long run, children from more privileged families will be able to maintain their relatively privileged status by investing in homeownership and accumulate wealth through mortgage amortization and housing appreciation (Forrest & Hirayama, 2015; Rohe et al., 2002). Children from more economically deprived backgrounds, however, will be more dependent on the rental market, thereby increasing their housing costs and reducing their ability to use homeownership as a way to accumulate wealth. These developments will ultimately lead to strong inter- and intra-generational disparities on the housing market (see also Clark, 2013; Forrest & Hirayama, 2015).

Hypothesis 4

The GFC has fueled intra-generational differences in terms of housing opportunities. This will increase the influence of social class and the inter-generational transmission of resources as stratifying factors.

Countries like Japan, England, the United States, and Australia witness an increase in the proportion of households (often young people) who enter the private rental sector (Forrest & Hirayama, 2015). There is much concern amongst scholars that the rise of the private rental sector has negative consequences for both the renters and the neighborhoods in which these houses are concentrated. In the United States, for example, the number of foreclosed properties owned by banks and other mortgage lenders has spiked the post-crisis period. These REO properties are often acquired by private investors with the main goal of making their investment profitable (Mallach, 2010b). Scholars and activists fear that investors in private housing have little interest

in maintaining these dwellings and that practices of 'milking' and speculation will spur the process of neighborhood decline (Aalbers, 2013; Ellen et al., 2014; Fields & Uffer, 2016; Forrest & Hirayama, 2015).

Although the US federal government has invested billions into the Neighborhood Stabilization Program targeting REO and other vacant properties, the majority of these properties are purchased by private investors rather than owner-occupiers (Ellen et al., 2014). Researchers have argued that private investors play an important role in reducing concentrations of REO properties in particular neighborhoods and that they have been successful in reducing vacancy periods (Ellen et al., 2014; Immergluck, 2010; Pfeiffer & Molina, 2013). Despite the widespread assumption that the sales of REO properties to private investors accelerates neighborhood decline in the most hard-hit neighborhoods due to a lack of maintenance (e.g. Mallach, 2010a), recent studies show that not all private investors adopt business models that negatively affect neighborhoods, (Ellen et al. 2014; Immergluck & Law, 2014; Mallach, 2010b).

Though corporate investment does not necessarily harm neighborhoods, the conversion of REO properties into rental units might still fuel processes of neighborhood decline. First of all, renting out properties can contribute to neighborhood instability because of high turnover rates (Kleinhans & Van Ham, 2013; Mallach, 2010a). Second, research has shown that properties sold to private investors and converted into rental units negatively affect the value of surrounding properties (Ihlanfeldt & Mayock, 2016).

Hypothesis 5

The crisis has led to an increase of corporate investment in the private rental sector. Converting properties into rental units might lead to neighborhood instability and might negatively impact surrounding property values. These effects will be the strongest in the most hard-hit neighborhoods and are likely to have negative spillover effects on surrounding areas.

§ 2.3.2 The mediating role of the local context

The effects of the GFC and recession, and the austerity programs and budget cuts that followed, are unevenly distributed within countries (cf. Peck, 2012). Cities have been hit hardest, because housing markets are essentially localized and public services and social housing generally tend to be concentrated in city areas (Blank, 1988; Borjas, 1999; Peck, 2012). Yet, the effects of the crisis differ between cities. Although most scholars

have focused mainly on neighborhood-level characteristics to explain neighborhood decline, Jun (2013) argues that metropolitan and municipal factors significantly affect neighborhood change. Jun (2013) finds that the neighborhood economic status trends in a positive direction in smaller and more homogeneous cities (in terms of race/ethnicity), while the reverse applies to larger heterogeneous cities. Her explanation is that smaller cities are less bureaucratic, that there is more room for citizen participation, and that the spending on public goods is lower in ethnically and racially diverse cities, possibly because there are more dissenting views than in homogeneous cities (Jun, 2013).

At the metropolitan level, economic strength is obviously an important factor associated with neighborhood change. Lauria and Baxter (1999) showed how the economic shock in New Orleans in the 1980s (caused by falling oil prices) led to the racial transition of neighborhoods, through the mechanisms of foreclosures. It intensified White flight from neighborhoods with relatively small but increasing Black populations. While Lauria and Baxter (1999) focused on the effect of a regional economic downturn, Hyra and Rugh (2016, this issue) look at the effects of the Great Recession that followed the GFC. They compare three gentrifying African American neighborhoods in Chicago, New York, and Washington, DC. The Chicago neighborhood suffered more than the other two from foreclosure and house price decline, whereas the home values in the other two neighborhoods recovered to pre-recession levels. This may be related to the fact that the recession hit Chicago relatively hard, which led to a higher unemployment and vacancy rate than in the other two cities.

Hypothesis 6

The crisis has the strongest negative effect on neighborhoods in metropolitan areas with a weak economy and their recovery (if any) will also take longer than in neighborhoods that are situated in a strong regional economy.

In addition to exogenous factors that can set off processes of neighborhood decline, some of which we have identified above, characteristics of the neighborhood itself may fuel or mitigate these processes. The initial economic status of a neighborhood is a very strong predictor of its course of development in the long run. Meen and colleagues (2013) have shown how some areas have always had a natural advantage over others because of their location and/or access to particular resources, such as a proximity to ports or transportation centers, and that they maintain their high-quality status and position in the neighborhood hierarchy over longer periods of time.

The importance of the relative 'starting position' of a neighborhood also relates to the physical quality of the dwellings. Some authors take an almost deterministic stance

regarding the relevance of this 'hard' variable (e.g. Newman, 1972; Coleman, 1985; and to a lesser extent Power, 1997). In the European context, there is much research on neighborhoods with a high share of post-war, high-rise residential buildings which are prone to processes of neighborhood decline due to the low quality of, and technical problems with, these buildings (e.g., Dekker & Van Kempen, 2004; Kearns et al., 2012; Kleinhans, 2004; Prak & Priemus, 1986; Van Beckhoven et al., 2009). But also in the US context, high foreclosure rates and predatory lending practices cannot only be attributed to the socioeconomic profile of residents (Strom & Reader, 2013). Neighborhoods characterized by a marginal housing stock and poor residents are often explicitly targeted by investors looking to make a profit (Aalbers, 2006; Strom & Reader, 2013).

However, the position of neighborhoods in the neighborhood hierarchy is not only a question of location or physical quality, but also a consequence of social processes. Similar types of housing (in physical terms) can acquire a vastly different social status dependent on the identity of a neighborhood. This identity can be very long-lasting (see also Tunstall, 2016, this issue). Comparing three neighborhoods in Stirling, Scotland, Robertson and colleagues (2010) show that the social positioning in terms of class (poor, 'respectable' working-class, and middle-class) did not significantly change since the time they were built (1920s and 1930s). This reveals that neighborhood reputations are sticky, which is partly due to the one-sided way in which neighborhoods are covered in the local media (Kearns et al., 2013; see also Tunstall, 2016). Similarly, Wacquant (2008) has shown how political and academic debates on the American ghetto reinforce divisions in society based on race and class, thereby contributing to collective processes of stigmatization and exclusion. The stigmatizing perception of neighborhoods with concentrations of poor and/or racial/ethnic minorities as disordered environments leads to a reinforcement of segregation as middle-class residents and especially Whites are moving (or staying) away from these kinds of neighborhoods (Sampson, 2009).

Hypothesis 7

Areas that are characterized by a low-quality housing stock and a negative reputation are particularly prone to processes of neighborhood decline.

Over the past decades, many countries have implemented neighborhood regeneration programs. The general goal of these programs was to reduce relative inequality between the most disadvantaged neighborhoods and the city or the national average (Jivraj, 2012). The ways in which these urban restructuring programs are pursued in practice differs between countries (Skifter Andersen, 1999). However, in general, policies were implemented to stimulate a socioeconomic residential mix in deprived neighborhoods. Examples are the HOPE VI program in the United States, the Urban Restructuring

Program in the Netherlands and the New Deal for Communities in the United Kingdom (e.g. Bolt & Van Kempen, 2011; Goetz, 2010; Phillips & Harrison, 2010).

Many policymakers believe that the mixing of different socioeconomic groups in disadvantaged areas will lead to neighborhood upgrading (Andersson & Musterd, 2005; Van Gent et al., 2009). In many cases, urban restructuring meant the demolition of low-quality rental dwellings, replacing them with more upmarket owner-occupied and luxury rental dwellings (Kleinhans, 2004). In this way, spatial concentrations of low-cost rental dwellings were reduced and the residents of the demolished dwellings were forced to relocate to other (often nearby, often also disadvantaged) neighborhoods where affordable housing was still available (Bolt et al., 2008; Crump, 2002; Posthumus et al., 2013; Van Kempen & Priemus, 2002). Most of these residents did not have the means to move back to the more expensive, newly created housing in the regeneration area (Kleinhans & Varady, 2011). It has thus been argued that restructuring programs may lead to the downgrading of other (surrounding) neighborhoods, because the previous spatially concentrated deprivation becomes dispersed over a larger geographical area (Andersson et al., 2010; Bråmå, 2013; Posthumus et al., 2013).

While these mixing policies can be successful in improving the economic statistics of a neighborhood, most of these policies have, however, been heavily criticized for failing to really improve the lives of the original residents (Doff & Kleinhans, 2011; Goetz, 2010; Van Ham & Manley, 2012). Nevertheless, policymakers often frame such programs as successful, and these programs have contributed to some extent of segregation decrease (Feins & Shroder, 2005; Frey, 2010; Musterd & Ostendorf, 2005b). A well-known argument is that countries such as the Netherlands and Sweden do not have ghetto-like neighborhoods *because* of a strong government involvement and mixing policies. This raises the question whether the retreat of governments from deprived neighborhoods as a result of the crisis will fuel processes of socioeconomic segregation and neighborhood decline. On the basis of Tunstall's (2016) conclusion that neighborhood renewal policies have not made a significant change in the neighborhood hierarchy, one might speculate that government retreat does not make much of a difference. On the other hand, it can be argued that whether a neighborhood is at the bottom rung of the ladder is not the only important factor; stratification between neighborhoods also contributes to their various fates.

Hypothesis 8

The crisis will have the largest effect on processes of neighborhood decline in neighborhoods where there has been a strong government involvement in urban regeneration and other neighborhood policies.

§ 2.3.3 Behavioral responses: Exit and voice

The dynamics of a neighborhood are highly affected by the decisions of its residents. Following Hirschman's (1970) 'Exit, voice and loyalty' framework, Permentier and colleagues (2007) argue that residents who are dissatisfied with their neighborhood can either choose to move out (exit) or adopt problem-solving strategies (voice). Loyalty (the attachment to neighborhood and its residents) increases the likelihood of the voice option and reduces the probability of residential mobility (Permentier et al., 2007)

Residential mobility is the central explanatory variable in the neighborhood decline model of Grigsby and others (1987). Neighborhoods can change rapidly as a result of selective mobility where the demographic and socioeconomic characteristics of those households leaving are different from the characteristics of the newly arriving households. Declining housing and neighborhood quality can spur residential mobility: middle- and high-income groups move away from declining neighborhoods as a result of the decreasing attraction of dwellings and neighborhoods and the creation of new dwellings elsewhere - a process also known as relative depreciation (Grigsby et al., 1987; Hoyt, 1939). The likelihood of a household moving depends on whether household preferences can be realized by the resources available to the household within the opportunities (available dwellings) and restrictions (ability to obtain a mortgage) of the desired housing market (Clark & Dieleman, 1996; Mulder & Hooimeijer, 1999). Generally speaking, more affluent households have a larger choice set of dwellings and neighborhoods.

The GFC and subsequent recession is likely to have major impacts on residential mobility. On the one hand, we have argued that people tend to be more limited in their options due to financial restrictions and stricter mortgage eligibility criteria. Households might *want* to move, but *are not able* to move because they cannot obtain a mortgage or do not find a suitable rental dwelling. In the European context, many low-income households are dependent on the availability of social or public housing and waiting lists are long, making it difficult for these households to move from one to another rented dwelling. Similarly, many homeowners in Western Europe might be forced to stay in a particular dwelling and neighborhood, because they cannot sell their current home without taking a large financial loss.

In the US context, foreclosures force people to move and thus lead to a wave of residential moves at first. However, the unstable financial situation of many foreclosed households, together with tight credit standards, make it nearly impossible for these households to obtain a mortgage in the future (Goodman et al., 2015; Martin, 2012). Residential mobility can therefore also be expected to decrease in the United States, although a recent study by Pfeiffer and Molina (2013) shows how the foreclosure crisis offers an

opportunity for Latino households in terms of socioeconomic mobility; however, they also argue that Latino households are more likely to purchase properties in Latino-concentrated areas, thereby exacerbating existing patterns of spatial segregation (Pfeiffer & Molina, 2013). Similarly, research has shown how many foreclosed households tend to end up in other hard-hit foreclosure areas (Martin, 2012), after which they are more or less stuck in these neighborhoods because they are unable to obtain a mortgage and move to a different area.

The unstable financial situation of many households, combined with stricter mortgage eligibility, complicates residential mobility on both sides of the Atlantic. Even though residential mobility has decreased on both continents, the outcomes may be very different. In the United States, we can expect that limited residential mobility has further contributed to existing socioeconomic and racial segregation, while in Europe, it can be expected that the process of segregation has slowed down.

Hypothesis 9

Decreases in residential mobility rates can have different outcomes in different contexts. In many Western European countries, we expect a lower likelihood of an increase in residential segregation, while in the United States, foreclosures have led to a small short-term upsurge in residential mobility patterns, exacerbating existing segregation.

If residents are not satisfied with their neighborhood, they can (instead of moving out) also opt to organize themselves to address neighborhood problems. Whether that is a feasible strategy depends on the level of social cohesion in the neighborhood. It is often assumed that disadvantaged neighborhoods suffer from the lack of strong social ties and the advantages these ties bring along (Forrest and Kearns, 2001). Without a strong social fabric, neighborhoods are more prone to disorder in terms of vandalism, nuisance, and crime (Kleinhans & Bolt, 2014). Social disorganization theory, which originated from the Chicago School of Sociology, stated that disorganization in neighborhoods is caused by incapability of the local community in terms of a lack of (access) to resources, residential instability, or a weak social network (Shaw & McKay, 1942). Physical and social problems arise because residents are not able to enforce certain norms and to maintain social control. As a result, governments tend to retreat from public space and residents lose their trust in each other and 'hunker down' (Putnam, 2007; Ross et al., 2001). Some researchers have argued that small levels of disorder (such as graffiti or broken windows) give rise to more serious crime offenses. The broken windows theory states that potential criminals interpret these levels of disorder as a sign of a lack of social control or involvement of the residents, and as such, feel free to engage in criminal behavior (Wilson & Kelling, 1982).

Recent research by Jones & Pridemore (2016) on the effect of vacancies on crime rates after the GFC concludes that population loss and vacant homes complicate neighborhood social organization. In line with social disorganization theory and the broken windows theory, they argue that the lack of collective efficacy as a result of low levels of population density makes those areas more attractive to criminals (Jones & Pridemore, 2016). In times of crisis, social cohesion in (disadvantaged) neighborhoods can develop in different directions. With many governments retreating, an increasing level of responsibility for the neighborhood has shifted to its residents. In these neighborhoods, where many residents are unable to move, people may feel close to each other because of a common fate, actually increasing social cohesion. This can lead to a strengthening of solidarity networks and a deepening attachment to place, even in very stigmatized areas like the French banlieues (Kirkness, 2014). However, it is also possible that neighborhoods experiencing an inflow of lower-income groups are prone to increasing social disorganization. A change of population composition might lead to residential stress as people tend to prefer a neighborhood population that matches their own characteristics (Feijten & Van Ham, 2009; McPherson et al., 2001).

Hypothesis 10

In times of crisis, social cohesion may be reinforced in areas where there has been a reasonable level of social interaction in the past, while it is likely to crumble in areas that experience increasing tensions because of a diversification of the population, or in areas that are experiencing significant declines in population density.

§ 2.4 Conclusions

In this article, we have argued that contemporary neighborhood decline is a multidimensional process fuelled by several macroeconomic processes related to the GFC and the recession that followed. However, we have also argued that there are several local and internal factors that might function as a mediating factor in processes of neighborhood decline. The interaction of micro-, meso- and macro-level factors heavily depends on the context in space and time.

There is a lack of empirical studies that focuses on the effects of the GFC on neighborhoods and their residents. In an attempt to push the debate forward, we have formulated 10 hypotheses on how the GFC might interplay with processes of neighborhood decline. We submit these hypotheses as a guide for future empirical research. Research is necessary

because differences in the local effects of the GFC are likely to lead to a widening of the gap between wealthy and disadvantaged neighborhoods, between high-income mortgage borrowers and low-income borrowers, between privileged and less privileged households, and between renters and homeowners (Forrest & Hirayama, 2015). In combination with severe budget cuts and the implementation of austerity programs, this raises concerns about increasing spatial segregation based on social class (see also Tammaru et al., 2016).

We have identified several factors from the literature that influence neighborhood change. However, little is actually known about the ways in which these factors interact in different contexts. We therefore call for more longitudinal research of neighborhoods *and* households that focuses on the drivers of neighborhood decline and disinvestment, and more generally, neighborhood change. Without longitudinal data on the residential and social mobility of households, it is difficult to disentangle the relative weight of residential sorting and incumbent processes in explaining neighborhood change. Incumbent upgrading and downgrading refers to the changing socioeconomic profile of the resident population within an area (e.g. Teernstra, 2014). It is an empirical question regarding how important external forces and internal developments are to neighborhoods; this can differ by country, city, or even by neighborhood.

This question is crucial, especially because in countries where the crisis has reduced residential mobility, incumbent processes may become relatively more important in explaining neighborhood decline through processes of rising unemployment and declining incomes (Andersson & Hedman, 2016, this issue). Individual-level data over long periods of time are needed to address this question. Such data are not available in all countries; however, as better data becomes available, researchers should aim to take a richer array of longitudinal individual and spatial variables into account (Van Ham & Manley, 2012). This is not only an academic question, but also relevant in the evaluation of neighborhood restructuring programs. Is there, for instance, an improvement in the livability and social status of neighborhoods due to the empowerment of the sitting population or due to the replacement of vulnerable groups by middle-class households?

Most studies that focus on neighborhood change tend to concentrate on case studies of specific cities, or specific gentrifying or declining neighborhoods. This focus can be largely attributed to the complexity of the subject, a lack of detailed (comparable) longitudinal data, and a bulk of statistical problems with which researchers are confronted; it nevertheless constitutes a large gap in research on neighborhood dynamics. Neighborhoods do not operate in a vacuum and while a particular neighborhood may experience absolute change, the picture may be completely different when we look at the relative change in a city or a country. Moreover, in a globalizing world, with growing

internationally connected economies and housing markets, it will become increasingly important to understand neighborhood change from a more global perspective.

The GFC has had different economic, physical, social, and health-related outcomes, most of which we are only now beginning to grasp. Researchers have argued that the GFC has had different local outcomes between *and* within countries (Aalbers, 2009), but we have little insight in the long-term effects of the GFC on neighborhoods and its residents. It is important to understand how the crisis has affected spatial patterns of increasing inequality, and neighborhood trajectories. A deeper understanding of the drivers behind neighborhood decline can contribute to the development of effective policymaking in the aftermath of the GFC and the economic recession.