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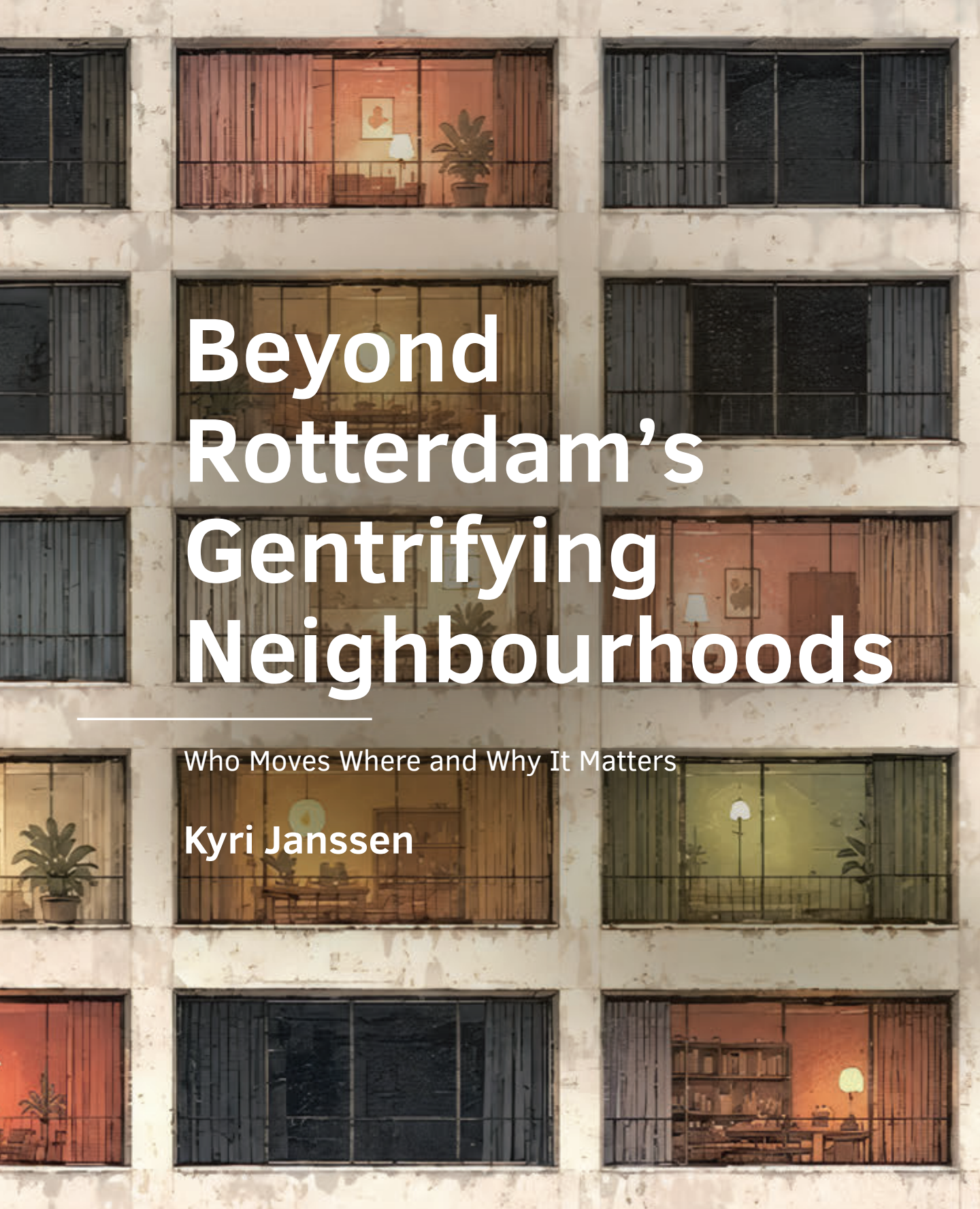
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Beyond Rotterdam's Gentrifying Neighbourhoods

Who Moves Where and Why It Matters

Kyri Janssen

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Who Moves Where and
Why It Matters

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Acknowledgements

There is a moment, just before starting a PhD, when people in your social circle begin to issue quiet warnings. They say things like “abandon mission”, and share stories of friends who burned out, clashed with supervisors, or simply ran out of time. The message is clear: think twice before committing. Such comments can leave you feeling confused and anxious, wondering: what exactly am I getting myself into? Maybe not every PhD candidate hears these kinds of warnings, but I certainly did. So, when I began, I was terrified. None of the people I had spoken to shared positive experiences, and I was convinced that doing a PhD must be some kind of personal purgatory.

After four years of pursuing a PhD, I cannot say those warnings were entirely unfounded, and yet, despite the difficulties, I loved most of it. Looking back now, the experience begins to make sense in a way it never did while I was living through it. There were difficult moments—at the university, within the faculty, the department, and even my research section—which I will leave unmentioned here. But there was also the joy of immersing myself in a topic I genuinely cared about and, above all, the privilege of sharing this journey with kind people. What follows is a heartfelt and, admittedly, rather elaborate acknowledgment of those who helped me, stood by me, and encouraged me over the past years. I could not have done it without them.

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As for Urban Studies as a whole, I must acknowledge there was a stark division between senior and junior staff. Yet there have been many instances in which I found myself a little distracted and wandered off to the offices of our fixed staff to have a chat about what was on my mind. I really enjoyed that. I want to especially thank Machiel for our chats about festivals, Ruigoord and PhD life. I would like to thank Geertje for our chats about social safety and the efforts she made therein, Thomas for our chats about life decisions and future steps, and Karin for her organization skills and our endless chats about holidays.

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Summary

This thesis examines residential moves to and from gentrifying neighbourhoods, focusing on the socio-economic profiles of movers, the origins and destinations of their relocations, and how they themselves interpret these moves in the context of gentrification. In recent years, the Netherlands has witnessed growing public concern over housing affordability and the consequences of urban restructuring. A key flashpoint was the demolition of the Tweebosbuurt, a working-class neighbourhood in Rotterdam where social housing was cleared to make way for mixed-tenure redevelopment. For critics, this event symbolised state-led gentrification: the deliberate reshaping of neighbourhoods by governments to attract wealthier residents, often at the expense of existing communities.

These developments are not unique to Rotterdam but reflect a wider international debate on the social costs of gentrification and the role of the state in producing urban inequality (Lees et al., 2016). Despite the rapid growth of gentrification research, two significant gaps remain. First, much of the literature has concentrated on neighbourhood-level transformations such as changes in housing stock, demographic composition, or the commercial landscape. Less attention has been given to the mobility trajectories of individuals and households that drive and are shaped by these transformations. Second, gentrification is often studied as if it were confined to the boundaries of a single city, even though contemporary labour and housing markets are increasingly interconnected at wider spatial scales.

Against this backdrop, this dissertation examines the relationship between state-led gentrification and residential mobility in Rotterdam. While gentrification is commonly associated with the displacement of low-income households and the influx of more affluent newcomers, less is known about the broader spatial trajectories of movers; where they come from, where they go, and how these flows reflect and reproduce wider housing market pressures. Rotterdam is a particularly interesting case. Long reliant on its port economy and lagging behind cities like Amsterdam and Utrecht, it has in recent decades sought to reinvent itself by attracting middle-class residents. Its close connections to other urban centres, supported by strong infrastructure and short distances imply that Rotterdam is embedded in regional housing dynamics. Understanding how these local and regional processes intersect is important for not only interpreting Rotterdam's urban transformation but also for advancing wider debates on housing policy and socio-spatial inequality.

Research aim and question

The aim of this thesis is to widen our understanding of gentrification by approaching it through the lens of residential mobility at various spatial scales. While much research has focused on neighbourhood-level transformations or the experiences of displacement, less attention has been given to the origins and destinations of movers and how these trajectories shift over time. Examining mobility patterns is key: it not only reveals how gentrification unfolds within specific neighbourhoods but also demonstrates how its effects are interconnected across urban spaces. I approach gentrification across regional, local, and individual scales, focusing on how people adjust their residential behaviour within the broader context of ongoing change. By tracing where people come from and where they go, and by examining how and why these patterns change over time, this study shows how gentrification unfolds in Rotterdam. It also highlights how developments in one location are shaped by socio-economic inequalities in another. I do this by answering the following research question:

How is state-led gentrification in Rotterdam (re)shaping residential mobility patterns across socio-economic groups, and what implications is this having for spatial inequality?

Data and methods

In order to answer this research question I employ a mixed-methods approach, combining a variety of data sources and analytical techniques. The thesis starts with a systematic literature review (Chapter 2), which identifies and examines the current state of knowledge on the spatial dynamics of gentrification-related residential moves. Following PRISMA guidelines, 48 studies were selected and reviewed to answer three sub-questions:

- 1 What conclusions have previous studies drawn regarding the spatial component of residential mobility patterns to and from gentrifying neighbourhoods?**
- 2 Which methodologies have been used to identify the origins and destinations of gentrification-induced moves?**
- 3 How are gentrification-induced residential moves related to socio-economic segregation according to prior research?**

This review not only maps the current state of the art on the literature regarding the origins and destinations of gentrification-related residential moves but also highlights research gaps. In particular, it shows that relatively little quantitative empirical work has been conducted on the origin locations of moves to gentrifying neighbourhoods.

This gap provided the foundation for Chapter 3, which uses data from the Statistics Netherlands Social Statistical Database (SSD) to conduct a quantitative analysis on the origin locations of residential moves. The chapter examines how the origins of movers to and within Rotterdam, and particularly to state-led gentrifying neighbourhoods, change over time. Focusing on aggregate mobility patterns between 2005 and 2019, it explores both inter-urban gentrification spillovers and exclusionary displacement. Through descriptive statistics and a multinomial logit model, the analysis traces how the socio-demographic profiles of movers and the spatial characteristics of their move evolve over time, addressing the questions:

- 1 **How do residential mobility patterns toward Rotterdam unfold in light of the state-led gentrification process and does this support the hypothesis of second-hand gentrification?**
- 2 **How does state-led gentrification modify the residential opportunities of the working class within Rotterdam and does this support the hypothesis of exclusionary displacement?**

Chapter 4 also builds on the SSD data with a quantitative study that adopts a more biographical perspective, tracing 10-year individual residential trajectories to, from, and within gentrifying neighbourhoods. Using multi-dimensional sequence analysis, it clusters individuals based on their residential locations during the 10-year sequence. The sequence analysis makes it possible to identify the diverse residential trajectories within Rotterdam's gentrifying neighbourhoods and trace how these evolve over time, while also linking them to other life-course developments. This approach reveals distinct gentrifier and displacee profiles, showing how residential mobility and life-course dynamics are interconnected to the process of gentrification. This chapter addresses the question:

How do the life-course trajectories of individuals moving into and out of gentrifying neighbourhoods align with academic conceptualisations of gentrifiers and displaced residents?

Building on the quantitative patterns of inter-urban gentrification identified in Chapter 3, Chapter 5 complements these findings with qualitative insights from semi-structured interviews with middle-class households who relocated to Rotterdam from Amsterdam or Utrecht. Using an abductive coding approach that combines deductive and inductive analysis, the chapter examines how these households simultaneously experience displacement pressures and act as drivers of gentrification. It asks:

How do middle-class households experience their dual role as both as those experiencing displacement pressure as well as drivers of gentrification, and how do they adapt to the challenges associated with gentrification?

By combining these methods, the thesis integrates literature review, quantitative register data, and qualitative interviews to connect theoretical insights, structural processes, and individual experiences. This approach enables a multi-scalar understanding of gentrification, linking regional, local, and individual dynamics, and capturing the interplay between residential mobility patterns, socio-economic inequalities, and the lived experiences of those navigating a transforming urban landscape.

Main findings

The dissertation presents three main findings that underscore the complex nature of gentrification-related residential mobility in Rotterdam. First, gentrification is shaped not only by local dynamics but also by processes occurring in other cities. As housing in Amsterdam and Utrecht has become increasingly unaffordable, middle- and high-income households have relocated to Rotterdam, often targeting neighbourhoods undergoing state-led urban restructuring. This dynamic, described as “second-hand gentrification” or “inter-urban gentrification spillovers” (Ocejo, 2019; Loumeau and Russo, 2023), occurs when affordability pressures push middle-class households from highly gentrified cities into less expensive urban areas. Analysis of register data reveals significant inflows from other Randstad cities to Rotterdam, and interviews show those who moved, although they often frame it as a necessity, take their gentrifier preferences and behaviour with them. Highlighting the inter-urban gentrification spillovers to Rotterdam.

Second, besides gentrifiers moving to gentrifying neighbourhoods from other core cities, gentrification is for a large part reinforced by internal upgrading within gentrifying neighbourhoods. Gentrifiers are not only newcomers but also for a large part movers within gentrifying environments. As gentrification evolves, gentrifiers are more likely to remain in the gentrified environment and move within it; thus, they gradually upgrade in their housing career without leaving the area. These trajectories intensify competition for housing and, over time, reduce access for low-income households. Thus, it is not simply the displacement of working-class residents by affluent newcomers, but a gradual restructuring process in which middle-class residents extend their housing careers locally, incrementally excluding others. On the other hand, low-income households become less mobile, especially toward gentrifying neighbourhoods, and when they do relocate, they often move to areas with high concentrations of poverty. Even when these moves do not constitute immediate or direct displacement, the departure of low-income residents creates openings that facilitate gentrification, gradually reshaping the socio-economic composition of neighbourhoods.

Finally, another key finding of this research is that, in today's context of widespread housing shortages, the concept of displacement extends beyond low-income households to include middle-class residents. Many middle- and high-income individuals who move from cities such as Amsterdam, Utrecht to Rotterdam do so in response to the unaffordability of housing in their original cities. Participants reported experiencing indirect displacement pressures in Amsterdam and Utrecht, driven by soaring housing costs and limited opportunities for stable or improved housing in desired neighbourhoods. While they acknowledged that these gentrified cities often matched their middle-class preferences, many felt that increasing homogeneity and declining urban vibrancy had diminished their sense of belonging. These factors ultimately influenced their decision to relocate to Rotterdam. In this sense, gentrification has reached a stage where middle-class households are also negatively affected. Yet, for the inter-urban movers in this study, their coping strategy, relocating to more affordable areas, ironically contributes to the spread of gentrification in Rotterdam, which in turn reinforces the exclusionary displacement of incumbent low-income residents.

Taken together, these findings highlight that gentrification is best understood as a relational and spatially interconnected process. It involves not only who moves in and out of a neighbourhood but also where they come from, where they go, and how their trajectories interact with both local restructuring policies and regional housing markets. This multi-scalar perspective emphasises that residential mobility is both a driver and a reflection of broader patterns of urban change and socio-spatial inequality.

Contribution and implications

This dissertation makes three key contributions to the study of gentrification and residential mobility. Theoretically, it bridges literatures on residential mobility and gentrification, which are often treated separately, by examining gentrification through the lens of spatial trajectories. This approach highlights how individual mobility decisions are embedded within broader structural contexts. Empirically, the study demonstrates that Rotterdam's gentrification cannot be understood solely at the neighbourhood level. Inter-urban flows from surrounding cities play a critical role in shaping who moves into restructuring areas and why, while short-distance moves within gentrifying neighbourhoods reveal how gradual upgrading contributes to exclusion. From a policy perspective, the dissertation underscores the unintended consequences of state-led gentrification. Policies designed to attract middle-class households may strengthen Rotterdam's position within the Randstad, but they also risk reproducing the housing pressures that have destabilised affordability elsewhere, affecting not only the working class but increasingly constraining middle-income groups and raising concerns about long-term socio-spatial inequality.

In conclusion, this dissertation shows that state-led gentrification in Rotterdam is simultaneously a local and regional process, shaped by mobility flows across multiple scales. It argues that adopting a spatial-demographic perspective is crucial for understanding gentrification as part of a wider system of urban change, in which policy interventions, inter-city pressures, and individual residential trajectories combine to transform housing opportunities and reinforce socio-economic inequalities.

Samenvatting

Dit proefschrift onderzoekt verhuizingen van en naar gentrificerende buurten, met een focus op de sociaaleconomische profielen van verhuizers, de herkomst en bestemming van hun verhuizingen, en hoe zij deze verhuizingen zelf interpreteren in de context van gentrificatie. In de afgelopen jaren is zijn de zorgen met betrekking tot de betaalbaarheid van wonen en de gevolgen van stedelijke herstructurering toegenomen. Een belangrijk knelpunt was de sloop van de Tweebosbuurt, een arbeiderswijk in Rotterdam waar sociale huurwoningen werden gesloopt om plaats te maken voor herontwikkeling met gemengd eigendom. Voor critici stond dit evenement symbool voor staatgestuurde gentrificatie: het bewust herstructureren van buurten en wijken door overheden om rijkere bewoners aan te trekken, vaak ten koste van de bestaande gemeenschappen.

Deze ontwikkelingen zijn niet uniek voor Rotterdam, maar weerspiegelen een bredere internationale discussie over de sociale kosten van gentrificatie en de rol van de staat bij het creëren van stedelijke ongelijkheid (Lees et al., 2016). Ondanks de snelle groei van gentrificatieonderzoek blijven twee belangrijke hiaten bestaan. Ten eerste heeft veel literatuur zich geconcentreerd op veranderingen op buurtniveau, zoals veranderingen in het woningaanbod, de demografische samenstelling of het commerciële landschap. Minder aandacht is besteed aan de verhuistrajecten van individuen en huishoudens die deze veranderingen aandrijven en erdoor worden beïnvloed. Ten tweede wordt gentrificatie vaak bestudeerd alsof het beperkt is tot de grenzen van één stad, terwijl hedendaagse arbeids- en woningmarkten steeds meer op bredere ruimtelijke schalen met elkaar verbonden zijn.

Tegen deze achtergrond onderzoek ik in dit proefschrift de relatie tussen staat-gestuurde gentrificatie en residentiële mobiliteit in Rotterdam. Hoewel gentrificatie vaak wordt geassocieerd met de verdringing van huishoudens met lage inkomens en de toestroom van meer welgestelde nieuwkomers, is er minder bekend over de bredere ruimtelijke trajecten van verhuizers: waar ze vandaan komen, waar ze naartoe gaan, en hoe deze stromen bredere woningmarktspanningen weerspiegelen en reproduceren. In dit opzicht is Rotterdam een interessante casus: de stad was lange tijd sterk afhankelijk van de haven economie en bleef achter bij steden als Amsterdam en Utrecht, maar heeft zich de afgelopen decennia zodanig ontwikkeld dat zij aantrekkelijker is geworden voor middenklassebewoners. De nauwe verbindingen met andere stedelijke centra, ondersteund door sterke infrastructuur

en relatief korte afstanden, impliceren dat Rotterdam ingebed is in regionale woningdynamieken. Inzicht in hoe deze lokale en regionale processen elkaar kruisen is belangrijk, niet alleen voor het interpreteren van de stedelijke transformatie van Rotterdam, maar ook voor het bevorderen van bredere debatten over woonbeleid en sociaal-ruimtelijke ongelijkheid.

Onderzoeksdoel en -vraag

Het doel van dit proefschrift is het begrip van gentrificatie te verbreden door het te benaderen vanuit het perspectief van residentiële mobiliteit op verschillende ruimtelijke schalen. Terwijl veel onderzoek zich heeft gericht op veranderingen op buurtniveau of de ervaringen van verdringing, is er minder aandacht besteed aan de herkomst en bestemmingen van verhuizers en hoe deze trajecten in de tijd verschuiven. Het bestuderen van mobiliteitspatronen is essentieel: het laat niet alleen zien hoe gentrificatie zich binnen specifieke buurten ontwikkelt, maar toont ook hoe de effecten met elkaar verbonden zijn over stedelijke gebieden. Ik benader gentrificatie op regionale, lokale en individuele schaal, met de nadruk op hoe mensen hun woongedrag aanpassen binnen de bredere context van voortdurende veranderingen. Door te traceren waar mensen vandaan komen en waar ze naartoe gaan, en door te onderzoeken hoe en waarom deze patronen in de tijd veranderen, laat ik in deze studie zien hoe gentrificatie zich in Rotterdam ontwikkelt. Het benadrukt ook hoe ontwikkelingen op de ene locatie worden beïnvloed door sociaaleconomische ongelijkheden elders. Ik beantwoord hierbij de volgende onderzoeksvraag:

Hoe (her)vormt door de staat geleide gentrificatie in Rotterdam de patronen van residentiële mobiliteit tussen sociaaleconomische groepen, en welke implicaties heeft dit voor ruimtelijke ongelijkheid?

Data en methoden

Om deze onderzoeksvraag te beantwoorden, gebruik ik een mixed-methods benadering, waarin verschillende databronnen en analysetechnieken worden gecombineerd. Het proefschrift begint met een systematische literatuurstudie (Hoofdstuk 2) die de huidige stand van kennis over de ruimtelijke dynamiek van gentrificatiegerelateerde verhuizingen in kaart brengt en onderzoekt. Volgens de PRISMA-richtlijnen werden 48 studies geselecteerd en beoordeeld om drie deelvragen te beantwoorden:

- 1 **Welke conclusies hebben eerdere studies getrokken over het ruimtelijke aspect van verhuizingspatronen van en naar gentrificerende buurten?**
- 2 **Welke methodologieën zijn gebruikt om de herkomst en bestemming van gentrificatiegerelateerde verhuizingen te identificeren?**
- 3 **Hoe zijn gentrificatiegerelateerde verhuizingen volgens eerder onderzoek gerelateerd aan sociaaleconomische segregatie?**

Deze review brengt niet alleen de huidige stand van zaken in kaart, maar benadrukt ook hiaten in het onderzoek. Met name blijkt dat er relatief weinig kwantitatief empirisch onderzoek is gedaan naar de herkomstlocaties van verhuizingen naar gentrificerende buurten.

Dit gat vormde de basis voor Hoofdstuk 3, dat gebruikmaakt van gegevens uit de Sociale Statistische Database (SSD) van het CBS om een kwantitatieve analyse uit te voeren van de herkomstlocaties van verhuizingen. Het hoofdstuk onderzoekt hoe de herkomst van verhuizers naar en binnen Rotterdam, en met name naar staatsgeleide gentrificerende buurten, in de loop van de tijd verandert. Met focus op geaggregeerde mobiliteitspatronen tussen 2005 en 2019, worden zowel tussenstedelijke gentrificatie-overvloeiingen als uitsluitende verdringing onderzocht. Door middel van beschrijvende statistieken en een multinomiaal logitmodel traceren we hoe de sociaal-demografische profielen van verhuizers en de ruimtelijke kenmerken van hun verhuizing in de tijd evolueren, waarbij de vragen worden beantwoord:

- 1 **Hoe ontwikkelen de residentiële mobiliteitspatronen naar Rotterdam zich in het licht van staatsgeleide gentrificatie en ondersteunt dit de hypothese van “tweedehands gentrificatie”?**
- 2 **Hoe beïnvloedt staatsgeleide gentrificatie de verhuismogelijkheden van de economisch kwetsbare binnen Rotterdam en ondersteunt dit de hypothese van uitsluitende verdringing?**

Hoofdstuk 4 bouwt voort op de SSD-gegevens met een kwantitatieve studie die een meer longitudinaal perspectief hanteert, door 10-jarige individuele woontrajecten naar, van en binnen gentrificerende buurten te volgen. Met behulp van multidimensionale sequentieanalyse worden individuen gegroepeerd op basis van hun woonlocaties gedurende de 10-jarige periode. Deze sequentieanalyse maakt het mogelijk om de diverse woontrajecten binnen Rotterdamse gentrificerende buurten te identificeren en hun evolutie in de tijd te volgen, terwijl ze ook worden gekoppeld aan andere levensloopontwikkelingen. Deze benadering onthult profielen

van gentrifiers en verdrongen bewoners, en laat zien hoe residentiële mobiliteit en levensloopdynamiek verbonden zijn met het gentrificatieproces. Het hoofdstuk beantwoordt de vraag:

Hoe sluiten de levenslooptrajecten van individuen die in- en uit gentrificerende buurten verhuizen aan bij academische conceptualisaties van gentrifiers en verdrongen bewoners?

Hoofdstuk 5 bouwt voort op de kwantitatieve patronen van tussen-stedelijke gentrificatie die in Hoofdstuk 3 zijn geïdentificeerd en vult deze aan met kwalitatieve inzichten uit semigestructureerd interviews met middenklasse huishoudens die van Amsterdam of Utrecht naar Rotterdam zijn verhuisd. Met een abductieve coderingsaanpak, die deductieve en inductieve analyse combineert, onderzoekt het hoofdstuk hoe deze huishoudens tegelijkertijd verdringing ervaren en een rol spelen als drijvers van gentrificatie. Het stelt de vraag:

Hoe ervaren middenklasse huishoudens hun dubbele rol, zowel als ontvangers van verdringingsdruk als drijvers van gentrificatie, en hoe passen ze zich aan de uitdagingen van gentrificatie aan?

Door deze methoden te combineren, integreert het proefschrift literatuuronderzoek, kwantitatieve registerdata en kwalitatieve interviews om theoretische inzichten, structurele processen en individuele ervaringen met elkaar te verbinden. Deze benadering maakt een breder begrip van gentrificatie mogelijk, waarbij regionale, lokale en individuele dynamieken worden gekoppeld en de wisselwerking tussen woonmobiliteit, sociaaleconomische ongelijkheid en de ervaringen van bewoners in een veranderend stedelijk landschap wordt vastgelegd.

Belangrijkste bevindingen

Het proefschrift presenteert drie hoofdbevindingen die de complexe aard van gentrificatie gerelateerde woonmobiliteit in Rotterdam benadrukken. Ten eerste wordt gentrificatie niet alleen bepaald door lokale dynamieken, maar ook door processen in andere steden. Naarmate woningen in Amsterdam en Utrecht steeds onbetaalbaarder zijn geworden, zijn midden- en hoge-inkomenshuishoudens naar Rotterdam verhuisd, vaak gericht op buurten die onder staatsgeleide stedelijke herstructurering vallen. Deze dynamiek, beschreven als “tweedehands gentrificatie” of “tussen-stedelijke gentrificatie-overvloeiingen” (Ocejo, 2019; Loumeau en Russo, 2023), doet zich voor wanneer betaalbaarheidsdruk middenklasse huishoudens uit sterk gegentrificeerde steden naar minder dure stedelijke

gebieden duwt. Analyse van registerdata toont significante instromen van andere Randstedelijke steden naar Rotterdam, en interviews laten zien dat degenen die verhuisden, hoewel ze het vaak als noodzaak framen, hun voorkeuren en gedrag als gentrifiers meenemen.

Ten tweede, naast gentrifiers die naar gentrificerende buurten uit andere kernsteden verhuizen, wordt gentrificatie voor een groot deel versterkt door interne opwaardering binnen gentrificerende buurten. Gentrifiers zijn niet alleen nieuwkomers, maar verhuizen vaak binnen gentrificerende omgevingen. Naarmate gentrificatie zich ontwikkelt, blijven gentrifiers vaker in de gegentrificeerde omgeving en verhuizen daarbinnen, waardoor zij hun woningcarrière lokaal geleidelijk upgraden zonder de buurt te verlaten. Deze trajecten vergroten de concurrentie op de woningmarkt en beperken op termijn de toegang voor huishoudens met lage inkomens. Zo is het niet slechts de verdringing van arbeidersklasse door welgestelde nieuwkomers, maar een geleidelijk herstructureringsproces waarin middenklasse bewoners hun woningcarrière lokaal uitbreiden en anderen stapsgewijs uitsluiten. Aan de andere kant worden huishoudens met lage inkomens minder mobiel, vooral richting gentrificerende buurten, en wanneer zij verhuizen, gaan zij vaak naar gebieden met hoge concentraties armoede. Zelfs wanneer deze verhuizingen geen directe of onmiddellijke verdringing vormen, creëert het vertrek van lage-inkomensbewoners ruimte voor gentrificatie, waardoor de sociaaleconomische samenstelling van buurten geleidelijk verandert.

Een andere belangrijke bevinding is dat in de huidige context van wijdverspreide woningtekorten het begrip verdringing verder reikt dan alleen huishoudens met lage inkomens en ook middenklassebewoners betreft. Veel midden- en hoge-inkomenshuishoudens die van steden zoals Amsterdam of Utrecht naar Rotterdam verhuizen, doen dit als reactie op de onbetaalbaarheid van woningen in hun oorspronkelijke steden. Deelnemers gaven aan indirecte verdringingsdruk te ervaren in Amsterdam en Utrecht, veroorzaakt door stijgende woningprijzen en beperkte mogelijkheden voor stabiel of verbeterd wonen in gewenste buurten. Hoewel zij erkenden dat deze gegentrificeerde steden vaak aansloten bij hun voorkeuren, gaven velen aan dat de toenemende homogeniteit en afnemende stedelijke levendigheid hun gevoel van verbondenheid hadden verzwakt. Deze factoren beïnvloedden uiteindelijk hun beslissing om naar Rotterdam te verhuizen. In dit opzicht heeft gentrificatie een stadium bereikt waarin ook middenklasse huishoudens negatief worden getroffen. Voor de tussen-stedelijke verhuizers in deze studie draagt hun copingstrategie, verhuizen naar betaalbare gebieden, ironisch genoeg bij aan de verspreiding van gentrificatie in Rotterdam, wat op zijn beurt de uitsluitende verdringing van oorspronkelijke lage-inkomensbewoners versterkt.

Gezamenlijk benadrukken deze bevindingen dat gentrificatie het beste kan worden begrepen als een relationeel en ruimtelijk onderling verbonden proces. Het omvat niet alleen wie een buurt in- en uitgaat, maar ook waar zij vandaan komen, waar zij naartoe gaan en hoe hun trajecten interageren met lokale herstructureringsbeleid en regionale woningmarkten. Dit meerschallige perspectief benadrukt dat residentiële mobiliteit zowel een drijfveer als een weerspiegeling is van bredere patronen van stedelijke verandering en sociaal-ruimtelijke ongelijkheid.

Bijdrage en implicaties

Dit proefschrift levert drie belangrijke bijdragen aan de studie van gentrificatie en residentiële mobiliteit. Theoretisch overbrugt het de literatuur over woonmobiliteit en gentrificatie, die vaak afzonderlijk worden behandeld, door gentrificatie te benaderen vanuit het perspectief van ruimtelijke trajecten. Deze benadering benadrukt hoe individuele mobiliteitsbeslissingen ingebed zijn in bredere structurele contexten. Empirisch toont de studie aan dat de gentrificatie van Rotterdam niet uitsluitend op buurniveau kan worden begrepen. Tussen-stedelijke stromen vanuit omliggende steden spelen een cruciale rol in wie zich vestigt in herstructureringsgebieden en waarom, terwijl korte-afstand verhuizingen binnen gentrificerende buurten laten zien hoe geleidelijke opwaardering bijdraagt aan uitsluiting. Vanuit beleidsmatig perspectief benadrukt het proefschrift de onbedoelde gevolgen van staatsgeleide gentrificatie. Beleid dat is ontworpen om middenklasse huishoudens aan te trekken, kan de positie van Rotterdam binnen de Randstad versterken, maar loopt ook het risico de woningdruk te reproduceren die elders de betaalbaarheid heeft verstoord, wat niet alleen de arbeidersklasse treft, maar ook steeds meer middeninkomensgroepen beperkt en zorgen oproept over langdurige sociaal-ruimtelijke ongelijkheid.

Kortom, dit proefschrift toont aan dat staatsgeleide gentrificatie in Rotterdam zowel een lokaal als regionaal proces is, gevormd door mobiliteitsstromen over meerdere schalen. Het betoogt dat het aannemen van een ruimtelijk-demografisch perspectief cruciaal is om gentrificatie te begrijpen als onderdeel van een breder systeem van stedelijke verandering, waarin beleidsinterventies, tussen-stedelijke druk en individuele woontrajecten samenkomen om woonmogelijkheden te transformeren en sociaaleconomische ongelijkheden te versterken.

Alles blijft verzachten keer op keer
Reflecties van de grachten lijken weer
Hetzelfde maar de stad die is gewond

De Stad Is Van Ons – Sophie Straat

1 Introduction

In the fall of 2021, the Netherlands saw a wave of protests across multiple cities in response to the worsening housing crisis. These demonstrations reflected growing social resistance to the government's neoliberal housing policies, along with concerns about income and wealth inequality and the declining availability of affordable housing. Earlier that same year, the social housing stock in the Tweebosbuurt, a working-class neighbourhood in the south of Rotterdam, was demolished as part of a policy aimed at promoting social mixing by changing the housing stock. This demolition faced widespread criticism and became one of the key issues raised during the housing protests that year (Custers and Willems, 2024).

During these protests, the demolition of the Tweebosbuurt was framed as part of a broader process of gentrification. Protesters argued that government policies contribute to and accelerate gentrification, making the city increasingly inaccessible not only for the working-class but also for parts of the middle-class. The Tweebosbuurt served as a clear example of what academic literature describes as state-led gentrification (cf. Davidson, 2008), where changes to the housing stock initiated by the government directly fuels gentrification. In the fall of 2021, as I began my PhD on intercity residential mobility and the built environment, these two events (the protest and the demolition) decided me to consider gentrification (and state-led gentrification) as a central topic. While the negative effects of gentrification on the working class have been widely studied (e.g., Freeman et al., 2016; Freeman, 2005; Newman and Wyly, 2006; Ding et al., 2016), I could not help but notice that many of the people attending the protests were middle-class. This raised a compelling question: why would middle-class individuals protest against policies that appear to be designed to attract households like themselves? As housing affordability becomes an increasingly pressing issue across much of society, and urban centres such as New York City, London, and Amsterdam continue to experience intensified gentrification, it is essential to examine how related policies affect residential opportunities across different socio-economic groups and across different cities, and therefore how they contribute to broader patterns of socio-spatial inequality.

While the demolition of the Tweebosbuurt was widely covered in the media, policies like these are not new in Rotterdam. Since the late 1990s and early 2000s, Rotterdam's local government has actively pursued urban restructuring strategies aimed at attracting middle-class households to the city (Custers and Willems, 2024;

Uitermark et al., 2023; van den Berg, 2012), and gentrification has been an explicitly mentioned as a policy goal by the Rotterdam Municipality (2003). These policies have often been justified by the local government with reference to Rotterdam's comparative position within the hierarchy of Dutch cities. For a long time, Rotterdam's economy depended heavily on its port and consequently, the city struggled to adapt to the needs of a post-industrial economy. While cities like Utrecht and Amsterdam experienced strong economic growth since the 1980's, Rotterdam's development stagnated (Custers and Willems, 2024; Noordegaaf and Vermeulen, 2010). This made the city less attractive to middle-class residents, many of whom moved to more suburban areas (Burger and Kloosterman, 1996; Custers and Willems, 2024).

These differences in economic growth and prosperity between Rotterdam and other major cities make Rotterdam a particularly interesting case today. In recent years, housing has become increasingly unaffordable, especially in cities that have experienced strong growth over the past few decades (Arundel and Hochstenbach, 2020). Concurrently, policymakers have aimed to make Rotterdam appealing to the middle class, and the city's image has shifted accordingly (Custers and Engersen, 2022; Custers and Willem, 2024). While Rotterdam's policymakers may view the city's growing appeal as a sign of success, it is important to examine these demographic changes in spatial terms. Rotterdam is part of the highly connected urban core of the Netherlands, the Randstad, which allows for gentrification to spread not only within cities, but also between them (c.f. Booi, 2024; Loumeau and Russo, 2023; Ocejo, 2019; Paccoud and Mace, 2018). As gentrification has advanced in cities such as Amsterdam and Utrecht, housing opportunities for middle-income households have also become limited, positioning Rotterdam as a more affordable alternative. The increase in middle-class households in Rotterdam not only reflects that it has become a more attractive residential destination but may also contribute to rising pressure on its local housing market. This development may reduce access to housing for economically vulnerable groups and, over time, pose challenges for middle-income households themselves (Uitermark, 2023; Hochstenbach and Musterd, 2018; Custers and Engbersen, 2022). In this context, Rotterdam faces the risk of becoming a victim of its own success, potentially following the path of other cities where housing has become increasingly unaffordable for a broad spectrum of social groups (e.g., Uitermark, 2023; Hochstenbach and Musterd, 2018), explaining why even middle-class households have grown critical of state-led gentrification.

1.1 Research aim and research question

In this thesis, I aim to develop an understanding of gentrification by examining it across regional, local, and individual scales, focusing on how people adjust their residential behaviour within the broader context of ongoing gentrification. In 2002, D. Smith argued for the necessity to study gentrification through broader spatial and temporal perspectives than the gentrifying neighbourhood itself. He claims that gentrification should be understood through migration trends such as re-urbanisation, suburbanisation and counter-urbanisation, as well as positioning movers at their stage in the life course. In contemporary times, I would argue that it is key to position gentrification in light of spillovers, and understand how gentrification in one region, may impact another (cf. Booi, 2024; Loumeau and Russo, 2023; Ocejo, 2019; Martin et al., 2025). It is relevant to identify origin and destination locations of households moving in and out of gentrifying neighbourhoods, as these patterns draw a picture of the consequences of gentrification in specific locations (such as the Tweebosbuurt) as well as socio-spatial inequality at city and city system level. Tracking where low-income out-movers relocate can reveal whether gentrification reduces or reinforces income segregation (Banabak et al., 2024; Dragan et al., 2020; Freeman et al., 2024, Hochstenbach and Musterd, 2018) while examining the origins of incoming movers can deepen our understanding of how gentrification in one location may be connected to, or depend on, gentrification elsewhere (Ocejo, 2019; Booi, 2024; Paccoud & Mace, 2018).

While there is extensive literature capturing why people move house, and where they move to (e.g. Coulter and van Ham, 2013; Feijten and Mulder, 2002; Feijten et al., 2008; Mulder and Hooimeijer, 1999), as well as literature capturing changing residential moves within gentrifying neighbourhoods (e.g. Ding et al., 2016; Freeman, 2016; Freeman et al., 2016), these two fields of literature do not often overlap (D. Smith, 2002). Yet the two are inherently connected. Housing careers are shaped not only by individual-level factors but also by broader structural conditions, such as housing market dynamics. The same applies to gentrification, which is likewise influenced by individual preferences and circumstances, as well as macro-level factors and their consequences. Bringing these perspectives together allows for a more complete understanding of how residential mobility interacts with gentrification, where personal preferences and constraints intersect with macro-level opportunities and limitations (Mulder & Hooimeijer, 1999). By adopting a spatial demographic perspective on the changing residential mobility patterns in gentrifying neighbourhoods, I will highlight not only how gentrification proceeds within the gentrifying neighbourhood, but also how this is affected by and has implications on other places through the lives and movements of individuals and households.

In this thesis I capture how residential mobility patterns of different socio-economic groups shift across space and time and examine these changes in the context of state-led gentrification in Rotterdam. The following research question is addressed:

How is state-led gentrification in Rotterdam (re)shaping residential mobility patterns across socio-economic groups, and what implications is this having for spatial inequality?

To answer this question, I adopt a mixed methods approach that combines theoretical, quantitative, and qualitative methods and combines theoretical, quantitative and qualitative methods to unravel the changing patterns of gentrification-related residential mobility. In order to fully understand why we see spatial shifts in residential moves, we should not only capture these shifts but understand why they occur. This can only be done by combining patterns and trends, with experiences and narratives. The remainder of this introductory chapter is structured as follows: I begin with a discussion of residential mobility and its relationship to gentrification, followed by a reflection on both displacement and gentrifiers. Then I elaborate on the force behind contemporary gentrification and subsequently position gentrification in the context of Rotterdam. I conclude with an outline of the methodology used in this research.

1.2 Theoretical Framework

1.2.1 Gentrification and Residential Mobility

Gentrification, first defined by Ruth Glass in 1964, has been the subject of research for more than half a century. Initially regarded as a relatively isolated process involving the socio-economic upgrading of select inner-city neighbourhoods in major Western cities, it has since expanded both geographically and in public visibility. Scholars have documented a wide variety of gentrification processes (e.g. Ascensão, 2018; Davidson, 2018; Hackworth and Smith, 2001; Hochstenbach, 2017; Hubbard, 2018; Smith, 2004; Paton and Cooper, 2016;) and examined the roles of key actors, such as gentrifiers, displacees as well as the state or other institutions.

On the other hand, research on residential mobility has focused on understanding when, where, and why people move. It has long been recognised that there is a dynamic relationship between households' situation and housing situation (Rossi, 1955). Changes in the housing career are closely connected with changes in other careers, such as changes in employment or education (professional career) or family formation or dissolution (household career) and it has been extensively studied how residential trajectories unfold over a person's life-course (Mulder and Hooimeijer 1999, Clark & Dieleman, 1996; Feijten & Mulder, 2002). At the same time, a residential move depends not only on the micro context of individuals but is also linked to macro-level opportunities and constraints such as housing and labour markets (Mulder & Hooimeijer, 1999). These micro and macro characteristics of a residential move also assist us in understanding how residential mobility theory should be linked to gentrification, as individual preferences and restrictions meet macro level opportunities and constraints. D. Smith (2002) explains that by virtue of its nature, gentrification has been understood through demographic trends such as a 'back to the city' movement of particular social groups, as well as demographic transitions (e.g. postponement of marriage and childbearing, partnership dissolution) and societal and cultural transformation associated with the post-industrial city (Ley, 1997). The process of gentrification relates to shifts in a society's population, both socially and spatially. Therefore, it remains key to understand how the population moves over space and time and understand this in light of the gentrification process.

The relationship between gentrification and residential mobility is interdependent. This can be seen in the way large-scale urban changes shape individual decisions, which then accumulate to produce new patterns of transformation. In contemporary cities, where gentrification is already well established rather than just beginning as described by Ruth Glass in 1964, these interactions between the macro and micro levels are especially visible. Gentrification has generally evolved in central, established neighbourhoods. As housing prices rise, new amenities such as cafés and boutiques appear, and the social and economic composition of the area shifts. These changes influence individuals by reshaping both their housing opportunities and their sense of what is desirable or attainable. Middle-income households and young professionals, for instance, may find themselves priced out of the gentrifying core and begin to view neighbouring previously less sought-after areas as more practical and affordable places to live. These adjustments often coincide with life course events, such as couples moving in together or family formation, that prompt households to reassess their housing needs in light of affordability and accessibility. When many individuals make similar decisions, their movements collectively form recognizable patterns of residential mobility. As new residents settle in the surrounding neighbourhoods, their arrival brings gradual shifts in property values, local businesses, and the socio-economic character of those communities. Over time, these changes alter the urban landscape yet again, influencing how others perceive and move through the city. This continuous interplay between personal choices and structural forces shows how gentrification and residential mobility are mutually constitutive, each reinforcing and reshaping the other.

Yet this cycle on its own cannot explain the spread of gentrification in urban cores (Smith, 1987). Housing restructuring and new financial systems in many Western contexts have led to a significant rise in housing prices and investment. Investors and developers speculate on gentrification, with profit emerging as a major driving force behind the phenomenon. At the same time, the transition towards the post-industrial society has changed the occupational class in many metropolitan cities around the world, in which it is argued that such societies have become more middle-class enhancing gentrification (Hamnett, 2000; 2003; 2015; 2024). Still, the core of the debate on spatial inequality and gentrification is rooted in how gentrification reshapes who chooses to move in, who is able to stay and who must leave. In today's context, where gentrification is often seen as an inevitable feature of urban development, it is key to critically examine its implications for socio-spatial inequalities, and shed a more complex light on individual trajectories, since those who leave gentrified neighbourhoods may become agents of gentrification elsewhere. At the centre of this discussion is displacement and the way it shapes social and spatial divides.

1.2.2 Displacement

Displacement in a gentrifying context refers to the negative effects residents face as their environment changes. Although often linked to gentrification, displacement is not confined to these areas alone. Hirsh et al. (2020) provide a broad overview of various urban displacement processes occurring in both the Global South and North, including development-induced displacement, slum clearance, eviction, and gentrification. As this thesis focuses specifically on gentrification, references to displacement will concern displacement driven by gentrification processes.

The dominant view on gentrification-induced displacement is that while gentrifiers are drawn to transforming neighbourhoods, incumbent low-income households face growing challenges due to rising prices. Displacement can occur directly through, for instance, stark increases in rent prices or housing demolition, forcing households to move out of the neighbourhood (Grier and Grier, 1978). In this respect, several studies find little evidence that low-income households are displaced from gentrifying neighbourhoods (e.g. Freeman et al., 2016; 2024) and proponents of the professionalization theory argue that gentrification is less about displacing the lower class and more about an overall class replacement (Butler and Hamnett, 2009). However, displacement can also occur in more indirect ways.

In my thesis, I consider both direct and indirect displacement. As explained by Easton et al. (2020), the work by Marcuse (1985) distinguishes between four primary types of displacement: (1) direct last resident displacement, (2) direct chain displacement, (3) exclusionary displacement, and (4) displacement pressure. Direct last resident displacement refers specifically to the final household living in a unit or building who is forcibly removed due to, for instance, rent increases or housing demolition. Direct chain displacement refers to a broader category of displacement that includes not only the final household forced to leave but also earlier residents who were displaced in preceding stages of the process. Exclusionary displacement is a form of indirect displacement and occurs when households are unable to move into a neighbourhood they could previously afford due to rising housing costs or reduced availability of affordable units (cf. Slater, 2009; Millard-Ball, 2002). Indirect displacement can also manifest in more subtle ways, as displacement pressure describes the lived experience of dispossession among incumbent residents who remain in a neighbourhood as it undergoes gentrification. These residents may not move immediately, but they experience increasing social, cultural, or financial pressures that erode their ability to stay over time. The loss of sense of belonging that arises due to, for instance, new amenities opening up, the loss of social ties (Davidson, 2010), changes in neighbourhood appropriation (Pinkster and Boterman, 2017), and shifts in the political structure of a community, neighbourhood, or even city (Twigge-Molecey, 2014; Boterman and van Gent, 2017).

Notably, most quantitative studies aiming to estimate displacement in gentrifying neighbourhoods tend to focus on direct displacement (Easton et al., 2020). However, in a context such as the Netherlands, where tenant protections are relatively strong (van Kempen & Murie, 2009), yet the availability of social housing is decreasing, direct displacement alone does not fully capture the negative effects of gentrification. Therefore, in this thesis, I do not view displacement solely as someone being removed from their home. Instead, I approach it as a question of spatial inequality. This includes experiences of exclusion or growing disconnection from a neighbourhood that was previously familiar or attainable, as well as constraints on residents' ability to progress within their neighbourhood career. These more indirect forms of displacement are key for understanding the broader social consequences of gentrification.

1.2.3 Gentrifiers

Besides displacees, the gentrifiers are another key actor associated with the gentrification process. Gentrifiers are commonly identified by their reproduction of cultural capital and their preference for an urban habitus. A substantial body of literature conceptualises the gentrifier, discussing either their profession (Ley, 1997), attitudes (Brown-Saracino, 2019), or socio-demographic characteristics (Blasius et al. 2016; Huse, 2018; Smith & Holt, 2007). Blasius et al., (2016) explain that the type of gentrifier can vary through the different phases of gentrification, ranging from low-income high-educated pioneers at the beginning of the process to affluent super-gentrifiers at the final stage.

Studies that empirically assess the socio-economic characteristics of incoming movers to gentrifying neighbourhoods find numerous characteristics. For instance, McKinnish et al., (2010) captured that gentrification is associated with the in-movement of childless households with high-end education. Freeman & Braconi (2004) and Freeman (2005) found that white, high-educated and high-income individuals are more likely to move into gentrifying neighbourhoods compared to non-gentrifying neighbourhoods. This is coherent with the studies by Rérat (2012), van Criekingen (2009) and Lutzeler (2008) who all identified that young single person households or childless couples are over-represented moving into the gentrifying area.

Studies have also examined gentrifiers through the lens of their residential trajectories over the life-course (e.g. Bridge, 2003; Cain, 2020; Schlichtman et al., 2018), highlighting how their housing decisions are shaped by changing needs and circumstances. This perspective is valuable as it connects the figure. of the gentrifier to broader theories of residential mobility. For instance, Cain (2020)

identified the domestic-migration of fledglings coming back to the gentrified neighbourhood later in their life-course, witnessing that contemporary gentrification is subject to the cultural reproduction of the existing resident group. Other work is that by Bridge (2003) who explains that the residential trajectories of gentrifiers are affected by household composition, and when gentrifiers reach the childbearing stage, they are likely to trade the gentrifying neighbourhood for the suburbs. However, Frank (2018) finds that cities increasingly accommodate for the housing needs of middle-income families, suggesting that such households have a smaller incentive to move to the suburbs, which aligns with the work by Karsten (2003) and van den Berg (2012) who explain that young urban professionals often remain in the city as they transition into parenthood. Nevertheless, recent research by Booi (2023) finds an increase in such households moving to suburban areas, describing this as spillover gentrification. This suggests that rising housing pressures in central urban areas may once again be pushing families outward.

The work of Schlichtman et al. (2018) offers a useful typology for understanding how gentrifiers evolve throughout their life-course while continuing to play a role in gentrification. They identify three main types of gentrifiers. The first group consists of early gentrifiers, individuals at the beginning of their professional and housing careers who are drawn to neighbourhoods in the early stages of gentrification. The second group are the late gentrifiers, who are more advanced in their careers, typically have higher incomes, and often live with a partner in dual-earner households. With greater financial resources, they tend to move into areas that are further along in the gentrification process. The third group comprises family gentrifiers, who choose to stay in a gentrifying neighbourhood when they start raising children. These households often prioritise convenience and look for amenities such as parks and playgrounds that support family life. Expanding on this typology, Hochstenbach and Boterman (2018) add a fourth category: the empty-nest gentrifier, those who relocate to a gentrifying neighbourhood later in life, often after their children have moved out.

Such a typology is valuable for understanding the relationship between gentrification and residential mobility, as it helps connect insights from both areas of research. While gentrifiers are often seen as individuals at the beginning of their housing journeys, careers, and family lives, this view is too limited. Also, moving out of a gentrifying neighbourhood does not automatically mean that someone stops being a gentrifier. Gentrification is fundamentally about relative purchasing power. Even as gentrifiers age, start families, or relocate to more suburban or peri-urban areas, they may continue to exercise a form of residential dominance. The mere fact that they are able to buy into neighbourhoods that are still unaffordable to many incumbent or lower-income residents reinforces their gentrifier status (Schlichtman et al., 2018). Their

presence contributes to the transformation of these new destinations, just as it did in earlier stages of their residential trajectory. Therefore, it is key to understand the gentrifier through different phases in the life-course, as it captures the evolving roles gentrifiers play across different life-course stages and residential moves, helping us to understand how gentrification unfolds not just in place, but across time and space.

This thesis deepens the understanding of gentrifiers by examining where they move from and the broader effects of these movements. As middle-income households increasingly struggle with housing affordability in competitive markets, contemporary gentrification may involve the displacement of the (initial) gentrifiers themselves, contributing to the spread of gentrification beyond city limits. Therefore, it is important to examine how these households move over space and how their mobility relates to the broader dynamics of gentrification, shedding light on how housing pressures reshape urban landscapes beyond the immediate neighbourhoods.

1.2.4 **Gentrification**

While gentrification revolves around residential mobility, mobility alone does not fully explain the persistence of gentrification. The growing reach of gentrification can be understood through demographic shifts and changes in the institutional context and capital flows.

The rise of the knowledge economy in post-industrial societies has driven gentrification in many cities around the world. Globalization and growing competition between cities have increased the share of highly skilled workers, leading to a larger number of affluent professionals in urban areas (Glaeser and Maré, 2001). As education levels and incomes have risen, the occupational structure concurrently has shifted towards a more professional and affluent middle class, creating the conditions for gentrification to expand. At the same time, the diversification of households, such as the rise of single person households through partnership dissolution and the growth of dual earner households, associated with the second demographic transition, has also increased demand for housing (Buzar et al., 2005). Smaller households require more housing units per capita, while dual earners often have greater combined incomes, enabling them to compete for and secure homes in desirable areas. Both demographic trends have made cities in advanced economies increasingly populated by highly skilled affluent workers, contributing to the ongoing spread of gentrification (Arundel & Doling, 2017).

In addition to demographic shifts, the nature of gentrification is also changing due to changes in the institutional context. Hackworth and Smith (2001) highlight that over time, national and local governments have become more involved in the gentrification process. Policies promoting tenure and social mixing are often linked to state-led gentrification, where low-income tenants are typically displaced to make room for more expensive owner-occupied housing and higher-income residents (Lees, 2008). The active role of local governments in promoting gentrification is a defining characteristic of what Hackworth and Smith (2001) describe as third-wave gentrification. In this phase, the state plays an increasingly direct role in driving the process and facilitating its geographical expansion. In later waves of gentrification, the state not only stimulates gentrification through social mixing policies and tenure conversions in profitable neighbourhoods (Uitermark et al., 2024), but, as Aalbers (2019) explains, also through the enhanced financialization of housing and promotion of homeownership. Thus, gentrification should be understood in light of investment and global capital flows as well as the changing role of the state in driving the gentrification process. Housing has become a commodity, at a time when welfare states experience a gradual erosion of collective security systems and global capital flows continue to grow (Hochstenbach 2017; Arundel, 2017). Housing is increasingly treated as a means to build wealth and ensure future financial security. At the same time, rent gaps create opportunities for profit, which attract investment. As middle-class demand for housing grows, it converges with rising flows of global and institutional capital, further accelerating gentrification. Thus, as a result of these demographic and institutional shifts, gentrification is no longer confined to a handful of inner-city neighbourhoods in major cities; it now extends across and beyond urban regions (e.g., Booi, 2023; Markley, 2018).

Besides the scholarship interested in understanding gentrification's causes and expansion, research has also focussed on the conceptualisation of gentrification. The original definition by Ruth Glass (1964) refers mostly to the socio-economic upgrading of inner-city neighbourhoods, yet the concept of gentrification has evolved conceptually over time. A wide variety of gentrification processes have been identified in the literature, ranging from marginal gentrification (Ley, 1997; Blasius et al., 2016) and super-gentrification (Lees, 2003) to more specific forms such as tourism-gentrification (Cocola-Gant, 2019), retail-gentrification (Hubbard, 2018), new-build gentrification (Davidson, 2018), and state-led gentrification (Davidson, 2008; Paton and Cooper, 2016). More conservative perspectives favour a definition closer to Ruth Glass's (1964) original formulation, arguing that applying the term to a wide range of processes risks losing analytical precision. While I recognise that neighbourhood upgrading can take many forms, I do not agree that gentrification should be seen only as the specific phenomenon described by Glass. I take a broader view, focusing on the shared outcome: neighbourhood improvement that directly or indirectly displaces households with lower purchasing power.

This broader approach allows for a clearer understanding of how gentrification has expanded and of the negative impacts it has on affected households. In this dissertation, I adopt the definition provided by Smith: “*the transformation of inner-city working-class and other neighbourhoods to middle-and upper-middle-class residential recreational, and other uses*” (Smith, 1987, p. 462). This definition includes gentrification driven by government interventions in the housing stock, known as state-led gentrification, as well as new-build gentrification, where no demolition or direct displacement occurs, but indirect displacement still takes place.

While I adopt a broad definition of gentrification, this dissertation specifically focuses on state-led gentrification. Stateled gentrification differs from general forms of gentrification in that the driving force behind neighbourhood transformation is not primarily the cumulative effect of individual middleclass households moving in, nor privatemarket investment responding to rent gaps. Instead, the state itself actively initiates, enables, or accelerates the process. This can occur through policy tools such as demolition of social housing, tenure conversions, selective investment in public space, restructuring of housing stock, and regulations that reshape who can access neighbourhoods (cf. Hackworth and Smith, 2001; Hochstenbach, 2017). My focus on state-led gentrification stems from the structure of the Dutch housing market, where a large share of social housing gives policymakers considerable power to influence, accelerate, and direct gentrification processes. Many scholars have noted that policymaking in Rotterdam reflects a distinct state-led approach to gentrification (Custers and Willems, 2024; Uitermark et al., 2023; Van den Berg, 2012; Van Eijk 2010). I will explore this further in the next section, highlighting how state interventions have shaped the city’s changing landscape.

1.2.5 Gentrification in Rotterdam

Rotterdam, once perceived as a high-risk, crime-prone and low-income city, has reinvented itself into what travel guidebooks now describe as “the new capital of cool” (Custers & Willems, 2024; Nieuwland & Lavanga, 2020). FIG. 1.1 provides a spatial orientation to the municipality. Rotterdam extends over a long east–west axis, shaped by the New Meuse and the extensive port and harbour areas that occupy much of its western territory. These port-industrial areas are generally characterised by low population densities. The inner city and the main residential urban districts are located further east, where population densities are considerably higher. This spatial contrast between the expansive harbour landscape and the more compact, densely populated urban area is a defining characteristic of Rotterdam.

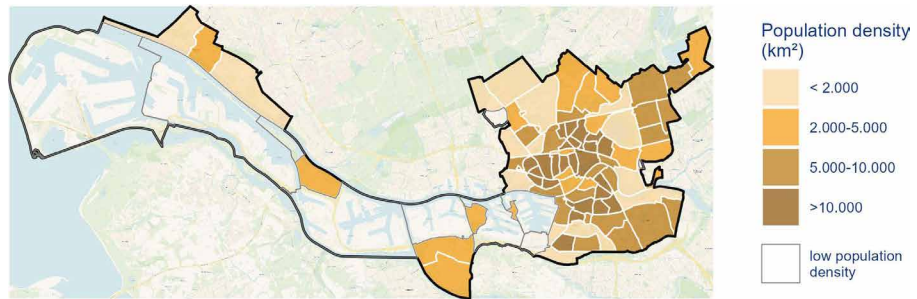


FIG. 1.1 Population density and the spatial structure of Rotterdam. Source: Author's own calculations based on CBS Wijk- en buurtkaart (Centraal Bureau voor de statistiek, 2025)

The city houses around 670.000 residents (CBS, 2025), making it the second largest city of the Netherlands, with its character and political identity shaped by decades of migration. Rotterdam is a superdiverse city, with diversity extending beyond ethnicity to social class, gender, and religion (Custers and Willems, 2024). Postwar labour migration to Rotterdam brought workers primarily from Turkey, Morocco, and Cape Verde, followed by migrants from Surinam and the Antilles. These groups, who mostly arrived between the 1960s and 1980s, now represent the city's largest ethnic minority communities, with Rotterdam hosting the largest Cape Verdean population outside the Cape Verdean Islands. Migration from Suriname was closely linked to decolonisation and independence in 1975, while migration from the Dutch Caribbean must be understood in relation to the Kingdom of the Netherlands' ongoing constitutional arrangements. In recent decades, European migrants including those from post-Soviet and Eastern European countries have grown in number, along with migrants from Sub Saharan Africa, the Middle East, and southern Europe after the financial crisis. Since 2015, Rotterdam has been a majority minority city, with people of Dutch descent, meaning those born in the Netherlands to two Dutch born parents, now in the numerical minority (Crul et al., 2019).

The city's superdiverse population has contributed to a populist emphasis on safety, a defining feature of Rotterdam politics since the rise of Leefbaar Rotterdam and Pim Fortuyn in the late 1990s (Van Ostaaijen, 2018). This focus on safety has also influenced housing policy, leading to deliberate interventions aimed at triggering gentrification in low-income neighbourhoods with high concentrations of minority residents. Municipal strategies have centred on promoting social mixing and enforcing regulations designed to limit the arrival of so-called opportunity poor residents (Custers and Willems, 2024; Doucet et al., 2011;

Doucet and Koenders, 2018). Custers and Willems (2024) note that Rotterdam's local government justifies these policies by claiming that the city, especially its disadvantaged neighbourhoods, houses too many opportunity-poor residents. At the same time, middle-class households are said to have too few options to stay, as the high proportion of social housing is reserved for low-income groups.

The out-relocation of middle-class households to surrounding municipalities has been a central concern in Rotterdam's housing policy (van Eijk, 2010). Hochstenbach (2025) notes that this focus has become more common in Dutch political discourse. The idea that governments must cater to the middle-class during the current housing crisis is clearly reflected in Rotterdam's approach. The municipality has actively sought to attract and retain middle-class residents by reshaping the housing stock to better match their needs as well as neighbourhood preferences (Custers and Willems, 2024; Doucet et al., 2011; Van den Berg, 2012). As such policies reinforce the upgrading of formerly working-class neighbourhoods, they should be understood as state-led gentrification. There are several housing policies that stand out: 1. The Promising Neighbourhoods policy, 2. The National Programme Rotterdam South, and 3. The Rotterdam Act (Law on Special Measures for Major Urban Problems).

A clear example of Rotterdam's state-led gentrification strategy is the Promising Neighbourhoods policy, introduced in 2014 (Rotterdam Municipality, 2016). This policy focused on upgrading neighbourhoods adjacent to the city centre, which were seen as areas with potential for gentrification. The main objective was to renovate and diversify the housing stock to attract highly educated middle-class families. These neighbourhoods typically have a pre-war housing stock, which research suggests aligns with the preferences of this target group (Bolt, 2022). Scholars have identified gentrification trends in many of these areas (Custers and Engbersen, 2022; Permentier, 2018), and policy documents also acknowledge gentrification in these neighbourhoods (Rotterdam Municipality, 2016). Although this dissertation does not focus solely on the Promising Neighbourhoods policy, the areas it targeted are often the very ones where gentrification is taking place, making the policy relevant to the broader discussion of state-led gentrification in Rotterdam.

Another prominent programme in Rotterdam is the National Programme Rotterdam South. While national housing policies were largely abandoned following the 2008 economic crisis, Rotterdam has continued to secure national funding to transform the housing supply in neighbourhoods located south of the New Meuse River. The primary aim of the programme is to reduce and spatially decentralise poverty, which remains heavily concentrated in many southern neighbourhoods. Although the programme targets the housing stock, it also includes initiatives in education and employment for incumbent residents. However, Custers (2025) finds

little evidence supporting the effectiveness of its educational interventions. Notably, the National Programme Rotterdam South exhibits clear characteristics of state-led gentrification, particularly through its plans to restructure the housing stock in several targeted neighbourhoods. The programme has been widely criticised for its displacement effects, particularly during the controversial demolition of social housing in the Tweebosbuurt. Although the programme spans from 2011 to 2031, the housing interventions have only recently been implemented. As such, this thesis does not examine the social mixing outcomes associated with the programme in the context of state-led gentrification, as the temporal scope of the empirical analysis does not yet allow for a full assessment of the policy's neighbourhood effects.

Finally, one of the most controversial housing policies in the Netherlands is the Rotterdam Act. This policy allows local governments to restrict access to housing in designated neighbourhoods for households without employment or those with a criminal record, unless they have lived in the region for more than six years. The aim is to promote social mixing (Custers and Willems, 2024). First implemented in Rotterdam in 2006, the policy has since been adopted by other cities. The Rotterdam Act has sparked considerable debate. Critics argue that it fosters discrimination in the housing market, while supporters see it as a necessary measure to improve neighbourhood quality and reduce segregation based on employment status. It is important to note, however, that the implementation of the Act was not accompanied by significant investments in the affected areas, nor by improvements in the availability or condition of public housing (Koster and van Ommeren, 2023). Research by Koster and Van Ommeren (2023) finds no evidence that the Act has improved the socio-economic conditions of these neighbourhoods, and van Gent et al. (2018) argue that the liveability in the designated areas have worsened. For this reason, this thesis does not focus on the Rotterdam Act as part of state-led gentrification. While the policy restricts access for some low-income groups, there is little indication that it has attracted high-income households and set off gentrification in these areas.

1.3 Methodology

To understand how residential mobility and gentrification unfold both spatially and socially, this thesis employs a mixed methods approach, combining a variety of data and analyses. I start with a systematic literature review, examining the current state of knowledge on the spatial dynamics of gentrification-related residential moves. Following this, three distinct empirical studies are presented: two involve analyses of large-scale register data provided by Statistics Netherlands, while the third is based on in-depth interviews and qualitative analysis. This mixed-method approach enables me to move between theoretical understanding, macro-level structural processes, and individual-level experiences, something I deem important to fully understand patterns, trends, experiences and narratives. Where the systematic review sets the stage by outlining the broader context of the thesis, the quantitative empirical analysis reveals key patterns and forms the core of this story. The qualitative analysis then enriches this by deepening our understanding of underlying processes and bringing in the lived experiences behind the numbers.¹

The systematic literature review is conducted in Chapter 2 and was used to identify and assess existing studies that examine the spatial components of residential mobility in relation to gentrification. By applying the PRISMA guidelines and searching for literature on Scopus, JSTOR and Web of Science, 48 academic articles were selected and reviewed. The outcome of this analysis provided an overview of what we know regarding the spatial dynamics of gentrification-related mobility, how these topics are frequently studied and what scholars generally conclude regarding the effects on socio-spatial inequality and gentrification. By identifying and examining existing knowledge, this first step identified important knowledge gaps and thus provided a foundation for the empirical chapters that follow.

In Chapter 3 and Chapter 4 I use Dutch register data. This data offer insights into residential mobility at both the household and individual level. The sub-research question in Chapter 3 focuses on residential mobility in the context of state-led gentrification in Rotterdam and examines how these patterns reflect processes of second-hand gentrification and exclusionary displacement. In short, Chapter 3 discusses aggregate moving patterns of households and how they change between 2005 and 2019, with particular attention to the origin locations of movers.

¹ During the preparation of this manuscript ChatGPT was used to improve the grammar, clarity and readability of the text. After the use of this tool, all texts were carefully reviewed and edited.

The analysis combines a broad range of descriptive statistics with a multinomial logit model to examine not only how these origin dynamics shift, but also who the movers are and how their characteristics change over time. In contrast, the third research question, addressed in Chapter 4, explores residential trajectories of individuals alongside other developments in their life course, providing a more temporal and biographical understanding of mobility. This analysis is conducted by applying a multi-dimensional sequence analysis of all individuals who moved into or out of gentrifying neighbourhoods between 2005 and 2022. These residential trajectories were clustered based on both neighbourhood characteristics and neighbourhood income situations and matched to changes in other life-course domains to identify and describe typical mover profiles throughout the gentrification process. The analyses in Chapter 3 and 4 enabled better understanding on how residential mobility patterns change throughout the gentrification process.

The final research question, discussed in Chapter 5, focuses on the role of middle-class households through in-depth interviews. This qualitative analysis is based on semi-structured interviews with individuals who relocated from Amsterdam or Utrecht to Rotterdam. The interviews explored participants' perceptions of gentrification in both their origin and destination cities, and how these influenced their decision to move. An abductive approach was used, combining deductive and inductive coding of the transcripts, to construct a narrative highlighting the dual roles that contemporary middle-class households often play in the gentrification process. This qualitative approach makes it possible to explore how individuals perceive and respond to housing pressures, affordability concerns, and their position within broader urban changes. It allowed me to investigate how middle-class households who have experienced feelings of displacement adapt by relocating to places like Rotterdam, and how their residential strategies might unintentionally contribute to further gentrification. The interviews offer a more nuanced understanding of residential decision-making and reveal narratives that cannot be captured through quantitative data. This approach adds colour to the patterns and trends identified throughout this thesis.

By combining these methodological approaches, I examine gentrification and residential mobility from different angles. The literature review maps out conceptual and methodological developments in the field. The register data provide evidence of regional and local shifts in residential mobility. The interviews offer a closer look at the agency of individuals navigating a housing market under pressure. Together, they allow for a more comprehensive understanding of how gentrification reshapes residential mobility patterns and how this affects the lives of those moving through it. An overview of the chapters, methods and aims can be found in FIG.1.2. The data corresponding to this dissertation is stored on the 4TU repository (Janssen et al., 2025)

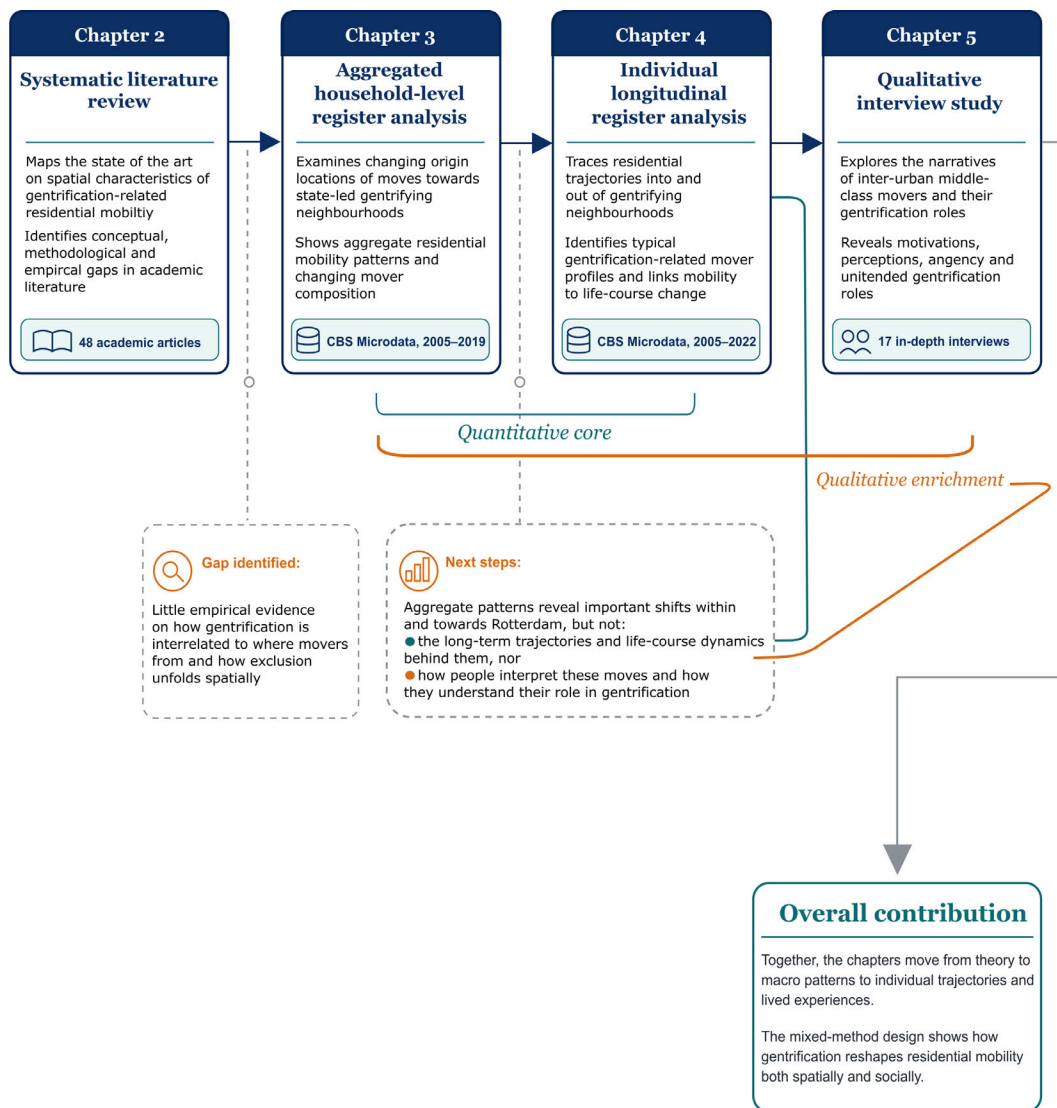


FIG. 1.2 Overview of research chapters

Further, in this study I empirically analyse differences between households on the basis of income, because income is the most consistently available, comparable and measurable indicator in the datasets I use. Income allows me to distinguish groups in a transparent and replicable way and aligns with how institutions such as statistical bureaus and housing organisations typically define target groups. For these reasons, income serves as the empirical backbone of the analysis. At the same time, I also use terms such as working class and middle class. These concepts are more sociological than strictly economic and refer to broader social positions that extend beyond income alone (cf. Bridge, 1995). Initially, I used these terms somewhat interchangeably as stylistic variation. However, it is important to acknowledge that they are not equivalent to income groups. In the gentrification literature, class is understood as a multidimensional construct that is better understood as a relational, situational and ongoing process. Class includes not only income and employment but also cultural resources, educational trajectories, social networks and long-term life chances (cf. Benson and Jackson, 2018). My empirical approach does not capture this full complexity; by relying on income alone, I operationalise only one dimension of class. Nevertheless, I use the terms working class and middle class to connect the analysis to broader theoretical debates on gentrification, in which these categories better reflect the cultural and social dynamics at play. In doing so, I aim to interpret income-based findings within a richer conceptual understanding of class, while remaining transparent that the empirical measures themselves capture only a limited part of this broader construct.

1.4 Thesis outline

The remainder of this dissertation consists of five additional chapters.

Chapter 2 presents the systematic literature review that addresses the following three research questions:

- 1 **What conclusions have been drawn in studies regarding the spatial component of residential mobility patterns to and from gentrifying neighbourhoods?**
- 2 **Which methodologies have been used to identify origins and destinations of gentrification-induced residential moves in these studies? And**
- 3 **Which conclusions have been drawn regarding the relationship between gentrification-induced residential moves and segregation in these studies?**

Chapter 3 shifts focus to an empirical analysis of how origin locations of residential moves have changed over time. It addresses two questions.

First: **How do residential mobility patterns toward Rotterdam unfold in light of the state-led gentrification process and does this support the hypothesis of second-hand gentrification?** In this part, I identify patterns of inter-urban gentrification spillovers.

The second question is: **How does state-led gentrification modify the residential opportunities of the working class within Rotterdam and does this support the hypothesis of exclusionary displacement?** This part explores changes in intra-urban residential mobility towards neighbourhoods targeted by state-led gentrification.

Chapter 4 explores individual-level trajectories by addressing the question: **How do the life-course trajectories of individuals moving into and out of gentrifying neighbourhoods align with academic conceptualisations of gentrifiers and displaced residents?** Here, I examine how residential patterns over time align with profiles of gentrifiers and displacees as identified in the literature.

Chapter 5 builds further on the notion of inter-urban gentrification spillovers. Through interviews with inter-urban gentrifiers, I address the following research question: **How do middle-class households experience their dual role as both experiencing displacement pressure and being drivers of gentrification. How do they adapt to the challenges associated with gentrification?**

Finally, **Chapter 6** presents the conclusion and discussion. It summarises the key findings, reflects on the limitations of this study, and offers directions for future research.

References

- Aalbers, M. B. (2019). Introduction to the forum: From third to fifth-wave gentrification. *Tijdschrift voor economische en sociale geografie*, 110(1), 1–11.
- Arundel, R. (2017). Equity inequity: Housing wealth inequality, inter and intra-generational divergences, and the rise of private landlordism. *Housing, Theory and Society*, 34(2), 176–200.
- Arundel, R., & Doling, J. (2017). The end of mass homeownership? Changes in labour markets and housing tenure opportunities across Europe. *Journal of Housing and the Built Environment*, 32(4), 649–672.
- Arundel, R., & Hochstenbach, C. (2020). Divided access and the spatial polarization of housing wealth. *Urban Geography*, 41(4), 497–523.
- Ascensão, E. (2018). Slum gentrification. In L. Lees & Phillips, M. (Eds.), *Handbook of gentrification studies* (pp. 225–246). Edward Elgar.
- Banabak, S., Kadi J., & Scheider, A. E. (2024). Gentrification and the suburbanization of poverty: Evidence from a highly regulated housing system. *Urban Geography*, 45(9), 1596–1618.
- Benson, M., & Jackson, E. (2018). From class to gentrification and back again. In L. Lees & Phillips, M. (Eds.), *Handbook of gentrification studies* (pp. 63–80). Edward Elgar.
- Blasius, J., Friedrichs, J., & Ruhl, H. (2016). Pioneers and gentrifiers in the process of gentrification. *International Journal of Housing Policy*, 16(1), 50–69.
- Bolt, G. (2022). Gentrification en leefbaarheid in Rotterdam. In E. Snel, R. Geurs, & M. Permentier (Eds.), *Zicht op leefbaarheid: Tien essays over leefbaarheid in Rotterdamse wijken* (pp. 34–49). Kenniswerkplaats Leefbare Wijken.
- Booi, H. (2024). Spillover of urban gentrification and changing suburban poverty in the Amsterdam metropolis. *Urban Studies*, 61(3), 495–512.
- Boterman, W., & Van Gent, W. (2023). *Making the middle-class city*. Palgrave Macmillan.
- Bridge, G. (1995). The Space for Class? On Class Analysis in the Study of Gentrification. *Transaction of the Institute of British Geographers*, 20(2), 236–247.
- Bridge, G. (2003). Time-space trajectories in provincial gentrification. *Urban Studies*, 40(12), 2545–2556.
- Brown-Saracino, J. (2019). *A neighbourhood that never changes: Gentrification, social preservation, and the search for authenticity*. University of Chicago Press.
- Burgers, J., & Kloosterman, R. (1996). Dutch comfort: Postindustrial transition and social exclusion in Spangen, Rotterdam. *Area*, 28(4), 433–445.
- Butler, T., & Hamnett, C. (2009). Walking backwards to the future—Waking up to class and gentrification in London. *Urban Policy and Research*, 27(3), 217–228.
- Buzar, S., Ogden, P. E., & Hall, R. (2005). Households matter: The quiet demography of urban transformation. *Progress in Human Geography*, 29(4), 413–436.
- Cain, T. (2020). Keeping the family home: Reproducing gentrifiers in two Boston neighbourhoods. *Journal of Urban Affairs*, 42(8), 1222–1241.
- Clark, W. A. V., & Dieleman, F. M. (1996). *Households and housing: Choice and outcomes in the housing market*. Transaction Publishers.
- CBS. (2025). *Inwoners per gemeente* [Dashboard]. CBS. <https://www.cbs.nl/nl-nl/visualisaties/dashboard-bevolking/regionaal/inwoners>
- Cocola-Gant, A. (2018). Tourism gentrification. In L. Lees & Phillips, M. (Eds.), *Handbook of gentrification studies* (pp. 281–293). Edward Elgar.
- Coulter, R., & Van Ham, M. (2013). Following people through time: An analysis of individual residential mobility biographies. *Housing Studies*, 28(7), 1037–1055.
- Crul, M., Lelie, F., & Keskiner, E. (2019). The second and third generation in Rotterdam: Increasing diversity within diversity. In P. Scholten, M. Crul, & P. van de Laar (Eds.), *Coming to terms with superdiversity: The case of Rotterdam* (pp. 57–71). Springer.
- Custers, G. (2025). Implementation barriers and program effectiveness: A quasi-experimental study on an extended school week. *Educational Policy*. Advance online publication.
- Custers, G., & Engbersen, G. (2022). The urban class structure: Class change and spatial divisions from a multidimensional class perspective. *Urban Geography*, 43(6), 917–943.
- Custers, G., & Willems, J. J. (2024). Rotterdam in the 21st century: From 'sick man' to 'capital of cool'. *Cities*, 150, 105009.

- Davidson, M. (2008). Spoiled mixture: Where does state-led 'positive' gentrification end? *Urban Studies*, 45(12), 2385–2405.
- Davidson, M. (2010). Love thy neighbour? Social mixing in London's gentrification frontiers. *Environment and Planning A*, 42(3), 524–544.
- Davidson, M. (2018). New-build gentrification. In L. Lees & M. Phillips (Eds.), *Handbook of gentrification studies* (pp. 247–261). Edward Elgar.
- Deener, A. (2007). Commerce as the structure and symbol of neighbourhood life: Reshaping the meaning of community in Venice, California. *City & Community*, 6(4), 291–314.
- Ding, L., Hwang, J., & Divringi, E. (2016). Gentrification and residential mobility in Philadelphia. *Regional Science and Urban Economics*, 61, 38–51.
- Doucet, B., & Koenders, D. (2018). 'At least it's not a ghetto anymore': Experiencing gentrification and 'false choice urbanism' in Rotterdam's Afrikaanderwijk. *Urban Studies*, 55(16), 3631–3649.
- Doucet, B., Van Kempen, R., & Van Weesep, J. (2011). 'We're a rich city with poor people': Municipal strategies of new-build gentrification in Rotterdam and Glasgow. *Environment and Planning A*, 43(6), 1438–1454.
- Dragan, K., Ellen, I.G., & Glied, S. (2020). Does gentrification displace poor children and their families? New evidence from Medicaid data in New York City. *Regional Science and Urban Economics*, 83, 103481.
- Easton, S., Lees, L., Hubbard, P., Tate, N. (2020). Measuring and mapping displacement: The problem of quantification in the battle against gentrification. *Urban Studies*, 57(2), 286–306.
- Engelen, E., Froud, J., Johal, S., Salento, A., & Williams, K. (2017). The grounded city: From competitiveness to the foundational economy. *Cambridge Journal of Regions, Economy and Society*, 10(3), 407–423.
- Feijten, P., Hooimeijer, P., & Mulder, C.H. (2008). Residential experience and residential environment choice over the life course. *Urban Studies*, 45(1), 141–162.
- Feijten, P., & Mulder, C. H. (2002). The timing of household events and housing events in the Netherlands: A longitudinal perspective. *Housing Studies*, 17(5), 773–792.
- Florida, R. (2002). *The rise of the creative class: And how it's transforming work, leisure, community and everyday life*. Basic Books.
- Frank, S. (2018). Inner-city suburbanization—no contradiction in terms: Middle-class family enclaves are spreading in the cities. *Raumforschung und Raumordnung | Spatial Research and Planning*, 76(2), 123–132.
- Freeman, L. (2005). Displacement or succession? Residential mobility in gentrifying neighbourhoods. *Urban Affairs Review*, 40(4), 463–491.
- Freeman, L., & Braconi, F. (2004). Gentrification and displacement: New York City in the 1990s. *Journal of the American Planning Association*, 70(1), 39–52.
- Freeman, L., Cassola, A., & Cai, T. (2016). Displacement and gentrification in England and Wales: A quasi-experimental approach. *Urban Studies*, 53(13), 2797–2814.
- Freeman, L., Huang, J., Hauptert, T., Zhang, I. (2024). Where do they go? The destinations of residents moving from gentrifying neighbourhoods. *Urban Affairs Review*, 60(1), 304–348.
- Glaeser, E. L., & Maré, D. C. (2001). Cities and skills. *Journal of Labor Economics*, 19(2), 316–342.
- Glass, R. (1964). *London: Aspects of change*. MacGibbon & Kee.
- Grier, W. G., & Grier, E. S. (1978). Urban displacement: A reconnaissance. In D. Spain & S. B. Laska (Eds.), *Back to the city: Issues in neighbourhood renovation* (pp. 252–268). Pergamon Press.
- Hackworth, J., & Smith, N. (2001). The changing state of gentrification. *Tijdschrift voor economische en sociale geografie*, 92(4), 464–477.
- Hamnett, C. (2000). Gentrification, postindustrialism, and industrial and occupational restructuring in global cities. In G. Bridge & S. Watson (Eds.), *A companion to the city* (pp. 331–341). (If you want, I can add full editor/publisher details.)
- Hamnett, C. (2003). Gentrification and the middle-class remaking of inner London, 1961–2001. *Urban Studies*, 40(12), 2401–2426.
- Hamnett, C. (2015). The changing occupational class composition of London. *City*, 19(2–3), 239–246.
- Hamnett, C. (2024). The changing social class structure of London, 2001–2021: Continued professionalisation or asymmetric polarisation? *Urban Studies*, 61(9), 1666–1685.
- Hirsh, H., Eisenberg, E., & Jabareen, Y. (2020). A new conceptual framework for understanding displacement: Bridging the gaps in displacement literature between the Global South and the Global North. *Journal of Planning Literature*, 35(4), 391–407.

- Hochstenbach, C. (2017). *Inequality in the gentrifying European city* (Doctoral dissertation). Universiteit van Amsterdam.
- Hochstenbach, C. (2017). State-led gentrification and the changing geography of market-oriented housing policies. *Housing, Theory and Society*, 34(4), 399–419.
- Hochstenbach, C. (2025). Framing the housing crisis: Politicization and depoliticization of the Dutch housing debate. *Housing Studies*, 40(5), 1226–1251.
- Hochstenbach, C., & Boterman, W. (2018). Age, life course and generations in gentrification processes. In L. Lees & M. Phillips (Eds.), *Handbook of gentrification studies* (pp. 170–185). Edward Elgar.
- Hochstenbach, C., & Musterd, S. (2018). Gentrification and the suburbanization of poverty: Changing urban geographies through boom and bust periods. *Urban Geography*, 39(1), 26–53.
- Hubbard, P. (2018). Retail gentrification. In L. Lees & M. Phillips (Eds.), *Handbook of gentrification studies* (pp. 294–309). Edward Elgar.
- Huse, T. (2018). Gentrification and ethnicity. In L. Lees & M. Phillips (Eds.), *Handbook of gentrification studies* (pp. 186–204). Edward Elgar.
- Jager, M. (1986). Class definition and the esthetics of gentrification: Victoriana in Melbourne. In N. Smith & P. Williams (Eds.), *Gentrification of the city* (pp. 78–91). Allen & Unwin.
- Janssen, K. M. J., Cotteneau-Mugadza, C., Kleinhans, R., & Bueren, E. van. (2025). Data underlying the PhD dissertation: Beyond Rotterdam's Gentrifying Neighbourhoods: Who Moves Where and Why It Matters (Version 1) [Data set]. 4TU.ResearchData. <https://doi.org/10.4121/A2D08A65-4F92-4A66-BD5D-FD790DDF7D56.V1>
- Janssen, L., van Ham, M., & Van Gent, W. P. C. (2024). Gentrification spillover: Relocating displacement from Amsterdam to Rotterdam. *Urban Studies*. Advance online publication.
- Karsten, L. (2003). Family gentrifiers: Challenging the city as a place simultaneously to build a career and to raise children. *Urban Studies*, 40(12), 2573–2584.
- Koster, H. R., & van Ommeren, J. (2023). Neighbourhood stigma and place-based policies. *Economic Policy*, 38(114), 289–339.
- Lees, L. (2003). Super-gentrification: The case of Brooklyn Heights, New York City. *Urban Studies*, 40(12), 2487–2509.
- Lees, L. (2008). Gentrification and social mixing: Towards an inclusive urban renaissance? *Urban Studies*, 45(12), 2449–2470.
- Ley, D. (1997). *The new middle class and the remaking of the central city*. Oxford University Press.
- Loumeau, G., & Russo, A. (2023). Second-hand gentrification: Theory and evidence from high-speed rail extensions. *Sheffield Economic Research Paper Series* (SERPS 2023011).
- Lützel, R. (2008). Population increase and “new-build gentrification” in central Tōkyō. *Erdkunde*, 287–299.
- Marcuse, P. (1985). Gentrification, abandonment, and displacement: Connections, causes, and policy responses in New York City. *Wash. U. J. Urb. & Contemp. L.*, 28, 195.
- Maloutas, T. (2012). Contextual diversity in gentrification research. *Critical Sociology*, 38(1), 33–48.
- Markley, S. (2018). Suburban gentrification? Examining the geographies of New Urbanism in Atlanta's inner suburbs. *Urban Geography*, 39(4), 606–630.
- Martin, N., Shipman, G., & Ting, V. (2025). Moving from “superstar” cities to “ordinary” cities to reclaim middle-class status: Gentrification-induced inter-metropolitan migration. *Urban Geography*, 46(1), 87–111.
- McKinnish, T., Walsh, R., & White, T.K. (2010). Who gentrifies low-income neighbourhoods? *Journal of Urban Economics*, 67(2), 180–193.
- Millard-Ball, A. (2002). Gentrification in a residential mobility framework: Social change, tenure change and chains of moves in Stockholm. *Housing Studies*, 17(6), 833–856.
- Mulder, C. H., & Hooimeijer, P. (1999). Residential relocations in the life course. In *Population issues: An interdisciplinary focus* (pp. 159–186). Springer.
- Newman, K., & Wylie, E. K. (2006). The right to stay put, revisited: Gentrification and resistance to displacement in New York City. *Urban Studies*, 43(1), 23–57.
- Nieuwland, S., & Lavagna, M. (2020). The consequences of being ‘the Capital of Cool’: Creative entrepreneurs and the sustainable development of creative tourism in the urban context of Rotterdam. *Journal of Sustainable Tourism*, 29(6), 926–943.
- Noordegraaf, M., & Vermeulen, J. (2010). Culture in action: The ‘Rotterdam approach’ as modernization through tradition. *Public Administration*, 88(2), 513–527.

- Ocejo, R. E. (2019). The creative class gets political: Gentrifier politics in small city America. *Journal of Urban Affairs*, 41(8), 1167–1182.
- Paccoud, A., & Mace, A. (2018). Tenure change in London's suburbs: Spreading gentrification or suburban upscaling? *Urban Studies*, 55(6), 1313–1328.
- Paton, K., & Cooper, V. (2016). It's the state, stupid: 21st-century gentrification and state-led evictions. *Sociological Research Online*, 21(3), 134–140.
- Permentier, M. (2018). Dynamiek in de kansrijke wijken. *Kenniswerkplaats Leefbare Wijken* (Nr. 4181). Gemeente Rotterdam.
- Pinkster, F. M., & Boterman, W. R. (2017). When the spell is broken: Gentrification, urban tourism and privileged discontent in the Amsterdam canal district. *Cultural Geographies*, 24(3), 457–472.
- Rérat, P. (2012). Gentrifiers and their choice of housing: Characteristics of the households living in new developments in Swiss cities. *Environment and Planning A*, 44(1), 221–236.
- Rossi, P. H. (1955). *Why families move: A study in the social psychology of urban residential mobility*. Free Press.
- Rotterdam Municipality. (2003). *Rotterdam zet door: op weg naar een stad in balans*.
- Rotterdam Municipality. (2016). *Woonvisie Rotterdam: Koers naar 2030, agenda tot 2020*.
- Schlichtman, J. J., Patch, J., & Hill, M.L. (2018). *Gentrifier*. University of Toronto Press.
- Slater, T. (2009). Missing Marcuse: On gentrification and displacement. *City*, 13(2–3), 292–311.
- Smith, D. P. (2002). Extending the temporal and spatial limits of gentrification: A research agenda for population geographers. *International Journal of Population Geography*, 8(6), 385–394.
- Smith, D. P. (2004). 'Studentification': The gentrification factory? In *Gentrification in a global context* (pp. 73–90). Routledge.
- Smith, D. P., & Holt, L. (2007). Studentification and 'apprentice' gentrifiers within Britain's provincial towns and cities: Extending the meaning of gentrification. *Environment and Planning A*, 39(1), 142–161.
- Smith, N. (1987). Gentrification and the rent gap. *Annals of the Association of American Geographers*, 77(3), 462–465.
- Twigge-Molecey, A. (2014). Exploring resident experiences of indirect displacement in a neighbourhood undergoing gentrification: The case of Saint-Henri in Montreal. *Canadian Journal of Urban Research*, 23(1), 1–22.
- Uitermark, J., Hochstenbach, C., & Groot, J. (2024). Neoliberalization and urban redevelopment: The impact of public policy on multiple dimensions of spatial inequality. *Urban Geography*, 45(4), 541–564.
- Van Crielingen, M. (2009). Moving in/out of Brussels' historical core in the early 2000s: Migration and the effects of gentrification. *Urban Studies*, 46(4), 825–848.
- Van den Berg, M. (2012). Femininity as a city marketing strategy: Gender bending Rotterdam. *Urban Studies*, 49(1), 153–168.
- Van Eijk, G. (2010). Exclusionary policies are not just about the 'neoliberal city': A critique of theories of urban revanchism and the case of Rotterdam. *International Journal of Urban and Regional Research*, 34(4), 820–834.
- Van Gent, W., et al. (2018). Exclusion as urban policy: The Dutch 'act on extraordinary measures for urban problems'. *Urban Studies*, 55(11), 2337–2353.
- Van Kempen, R., & Murie, A. (2009). The new divided city: Changing patterns in European cities. *Tijdschrift voor economische en sociale geografie*, 100(4), 377–398.
- Van Ostaaijen, J. (2018). Local politics, populism and Pim Fortuyn in Rotterdam. In P. Scholten, M. Crul, & P. van de Laar (Eds.), *Coming to terms with superdiversity: The case of Rotterdam* (pp. 87–106). Springer.

The gray-haired anointed prophet preached
To the garden of the gainly employed
Singing, “Buy this remaster, praise the past ever after”
Pack your bags and move to Detroit
Oh, pack your bags and move to Detroit

City Is Taken – Bodega

2 Gentrification and the Origin and Destination of Movers

A Systematic Review

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ABSTRACT Gentrification is a process whereby neighbourhoods and their socio-economic composition upgrade through residential moves and social mobility. Relatively little attention has been paid to the spatial aspect of gentrification-induced residential moves. This systematic literature review focuses on the origin and destination of moves to and from gentrifying neighbourhoods, by gentrifiers (movers in) and displacees (movers out). It identifies where, when, and how such research has been conducted and highlights gaps in the literature. Our results suggest that the destination of displaced households has been studied extensively, while an understanding of the spatial origins of gentrifiers is lacking. The few studies dedicated to gentrifiers' origins mostly focus on intra-urban environments, overlooking potential mobility dynamics from outside the city-region. We highlight that capturing both origins and destinations of movers at different spatial scales is necessary to demonstrate how residential mobility creates interactions and demographic interdependencies between neighbourhoods and cities.

2.1 Introduction

Over the past decades, the number and proportion of middle-income households has increased in cities (Hamnett, 2003; Rose, 1984; van Ham et al., 2020), and many of their neighbourhoods have upgraded, both physically and socio-economically. On a local level this process is known as gentrification, originally defined as: “the transformation of inner-city working-class and other neighbourhoods to middle- and upper-middle-class residential, recreational, and other uses” (Smith, 1987, p.462). Initially, gentrification was mostly understood as a market-driven process, whereby investors sought to close the rent gap in impoverished neighbourhoods, i.e., the difference between the rent extracted from the current use of land and its potential level if redeveloped as middle-class housing or recreational uses. Today, the concept of gentrification encompasses broader processes and reflects broader realities worldwide (Lees et al., 2016). In particular, it is acknowledged that policy interventions can contribute to drive or amplify gentrification, then referred to as “state-led gentrification” (Bridge et al., 2012, p.261; Hackworth and Smith 2001, p.468; Lees 2008, p.179;).

Although gentrification usually goes hand in hand with an improvement of the quality of a neighbourhood’s built environment as wealthier households move in, this transformation also leads to the direct or indirect displacement of working-class residents (Marcuse, 1985, p.205). There has been significant research towards understanding these changing residential patterns in gentrifying neighbourhoods, for instance by estimating the extent of direct chain displacement (e.g., Freeman, 2005; Freeman and Braconi, 2004). Something often overlooked is the spatial component of gentrification-induced residential moves, that is: where movers move to and from. By contrast, studies identifying spatial residential trajectories over time often do not reflect on gentrification (e.g., Clark and Morrison, 2012; Feijten et al., 2008).

Bridging these literatures is important because considering the spatial component of gentrification-induced residential moves acknowledges the extent to which gentrification can affect the linkages and interdependencies between places. For instance, the recent work by Hochstenbach and Musterd (2018; 2021) finds that gentrification enhances income segregation at wider spatial scales, as displaced households increasingly move to the edges of metropolitan areas, resulting in the suburbanization of poverty. However, the relationship goes both ways because gentrification is itself a phenomenon shaped by spatial structures and residential movements. The study by Loumeau and Russo (2022) highlights this, as they find that, as a consequence of improved transit systems, high-income households have

moved out of Paris to newly accessible secondary cities (Rennes and Bordeaux), gentrifying them in the process. Such findings position gentrification within broader residential mobility trends, as residential movements induced by gentrification create linkages between places over time, constraining future directions of gentrification and impoverishment.

Although some scholars examined residential moves beyond gentrifying neighbourhoods (e.g., Dragan et al., 2020; Sturtevant, 2014), a systematic overview of the spatial extent and dynamics of these patterns is missing. Our review fills this gap by systematically analyzing 48 peer-reviewed articles that empirically identify the origins of gentrifiers and/or destinations of displacees. Identifying and comparing the publications which capture the spatial component of these gentrification-induced moves should shed light on the extent of our existing knowledge regarding the relationship between gentrification and residential mobility at varying spatial scales. We aim to create a better understanding of: 1. The spatial extent of gentrification-related moves; 2. The various methodologies used for measuring gentrification-related mobility; and 3. The nature of the relationship between gentrification-related mobility and segregation. The systematic approach allows for a reliable and reproducible overview of the existing literature, as well as a quantified summary of how authors have studied and described residential mobility patterns in varying spatial and temporal contexts.

This article addresses the three following research questions:

- 1 What conclusions have been drawn in studies regarding the spatial component of residential mobility patterns to and from gentrifying neighbourhoods?**
- 2 Which methodologies have been used to identify origins and destinations of gentrification-induced residential moves in these studies?**
- 3 Which conclusions have been drawn regarding the relationship between gentrification-induced residential moves and segregation in these studies?**

Section 2 introduces the theoretical framework on residential mobility and gentrification, while section 3 outlines the methodology of the systematic review. In section 4, we present the results, discussing key characteristics of the corpus and providing a quantitative summary. We delve into origin and destination locations at varying spatial scales, examine the implications of these residential outcomes on segregation, and conclude with a multiple correspondence analysis of the articles included in this review.

2.2 Theoretical Framework

2.2.1 Gentrification

Gentrification is defined as a phenomenon whereby neighbourhoods experience social and physical upgrading as a consequence of economic capital and residential movements. Scholars have approached gentrification from various perspectives, with some emphasizing capital flows and housing investment (e.g., Lees et al., 2016, p.69; Smith, 1979), while others have been more interested in population dynamics and consumption patterns (e.g., Butler, 2007; Karsten, 2003). This distinction, where the former perspective primarily focused on housing demand and gentrification, and the latter emphasised the role of supply, led scholars to analyse gentrification in terms of demand and supply.

Housing supply potentially drives gentrification through availability of affordable housing, housing policies, and urban development initiatives. During early waves of gentrification private investors, backed by state support, mostly drove the sporadic process in inner-city areas (Hackworth and Smith, 2001). More recently, housing prices and housing investment significantly increased. Investors and developers started speculating on gentrification, and profit has become a major motivating force for gentrification (Hamnett, 2021, p.20). In this sense, gentrification has become commodified, spreading beyond inner-city areas (Aalbers, 2019; Hamnett, 2021; Lees et al., 2008). Housing demand is another key driver of gentrification. Early scholars explained that in the post-industrial era, the professionalization of the labor force contributed to the production of gentrifiers (e.g., Ley, 1980; Rose, 1984). Additionally, the expansion of higher education has attracted students to urban areas, who have often maintained an urban lifestyle after graduation (Smith, 2005). Nowadays, this process exhibits intergenerational dynamics, as previous gentrifiers pass on their urban preferences along with their capital to their children, who themselves represent a new wave of gentrifiers (Cain, 2020).

Scholars also increasingly identify governments as important drivers of neighbourhood upgrading (Teernstra and van Gent, 2012, p.114-115) and gentrification (e.g., Aalbers, 2019; Lees, 2008). Policymakers often perceive gentrification as a desired route and outcome of neighbourhood upgrading. They enact housing policies that promote the upgrading of working-class neighbourhoods by attracting affluent households to the city (Hackworth and

Smith, 2001, p.468). Local and national governments can apply various policy tools to trigger gentrification. For instance, Hochstenbach (2017) explained how the sale of social housing, contributing to the government-stimulated privatization of the social housing stock, accelerated gentrification in popular inner-city areas. Another predominant form of state-led gentrification is social mixing, which targets impoverished neighbourhoods and transforms the housing stock to attract middle-income residents (Lees, 2008, p.2450-2452). However, state-led gentrification is not always recognised in academic debates. In the book by Bridge et al. (2012), a link is made between social mixing policies and gentrification, arguing that social mixing and urban restructuring policies are often “rhetorically and discursively disguised as social mixing” to avoid the negative connotation of gentrification. The authors explain that although the social and physical upgrading is achieved through state-led urban restructuring programs, the outcome is similar to that of self-organised gentrification: higher socio-economic classes moving into formerly impoverished neighbourhoods, displacing or replacing working-class residents (Lees, 2008, p.2451-2452). We therefore think that acknowledging the similarities between urban restructuring and gentrification and bridging these fields is necessary to capture the overall extent of gentrification in the 21st century.

2.2.2 Residential mobility and gentrification

Scholars studying residential mobility often examine how households are matched to locations and houses, capturing how household composition, life course, education, and employment affect the residential trajectories of individuals, couples, and families (e.g., Clark and Dieleman, 1996; Feijten et al., 2008). Those considering residential moves in gentrifying neighbourhoods tend to classify movers by either gentrifiers (movers-in) or displacees (movers-out). While the “gentrifiers” are attracted to gentrifying neighbourhoods, the incumbent low-income households may increasingly struggle with the price increase, leading to displacement. In this review, we conceptualise gentrifiers and displacees based on their moving direction and how the authors of the reviewed articles have defined the socio-economic status of these movers. Therefore, in-moving households with relatively high education, income, or cultural capital are characterised as gentrifiers, while out-moving households with relatively low education, economic, or cultural capital are considered as displacees.

Much of the research on gentrification-related residential mobility focuses on the changing residential composition in the gentrified neighbourhood itself, measuring displacement or identifying the socio-economic characteristics of in- and out-movers (e.g., McKinnish et al., 2010). Several quantitative studies identify the

extent of direct displacement and find little evidence for displacement of low-income households in gentrifying neighbourhoods (e.g., Ellen and O'Regan, 2011; Freeman, 2005; Freeman and Braconi, 2004). In addition, there has been a substantial academic debate about the extent of displacement. Proponents of the professionalization theory argue that gentrification is less about the displacement of the lower class and more about overall class replacement (Butler et al., 2008; Butler and Hamnett, 2009; Hamnett, 2003). However, such work is often criticised for focusing solely on directly measurable displacement (Easton et al., 2020, p.294-296) and for not incorporating Marcuse's work (1986), which considers as indirect displacement the fact that gentrification excludes low-income households not only from neighbourhoods but increasingly from cities altogether (Newman and Wyly, 2006, p.41-57; Slater, 2009). The study by Ding et al. (2016, p.46-48) emphasised the importance of identifying the destinations of displaced households. While they did not find higher rates of vulnerable residents moving out of gentrifying areas, they did find that these vulnerable residents are more likely to move to less affluent neighbourhoods.

When considering gentrifiers, there seems to be an underlying assumption that gentrification is associated with higher-income residents moving in. Although some quantitative studies find that gentrifying tracts receive a relatively higher proportion of high-income in-movers (e.g., Freeman, 2005; Freeman and Braconi, 2004), others highlight marginal gentrifiers where gentrification is driven by the incumbent upgrading of in-movers (Hochstenbach et al., 2015; Teernstra, 2014). In this sense, van Criekingen and Decroly (2003, p.2455) explain that gentrifiers can also be highly educated individuals with low economic capital, and their residential strategy is merely a temporary response to unsettled familial and professional positions. Consequently, a substantial body of literature discusses other relevant characteristics that define a gentrifier, including ethnicity (e.g., Huse 2018), age (Hochstenbach and Boterman, 2018), household composition (Bridge, 2003), gender (Smith and Holt, 2005), and cultural capital (Ley, 2003). However, the focus on where gentrifiers move from has received less attention.

2.3 Method

This literature review follows the Preferred Reporting Items for Systematic Reviews and Meta-analysis (PRISMA) statement (Moher et al., 2009). This review focuses on the origin locations of gentrifiers and the destinations of displacees. Gentrifiers and displacees are conceptualised as contrasting types of residents. Gentrifiers are individuals who move into a neighbourhood with a higher socio-economic position compared to the existing population, while displacees are moving-out residents with a lower socio-economic position compared to the population moving in. Not all incomers are therefore gentrifiers and not all out-movers displacees. The identification of people moving in and out as gentrifiers and displacees is left to the reviewed articles' authors themselves.

2.3.1 Search strategy and data sources

To identify all relevant articles related to residential mobility and gentrification, regardless of disciplines, our search terms had to include synonyms and equivalent concepts from, among others, geography, housing studies, economics and sociology. The resulting search expression can be found in TABLE 2.1, where the lines represent union ('OR') combinations of keywords and the columns intersection ('AND') combinations. In this review, we consider neighbourhoods that experience socio-economic upgrading as a result of housing policies as gentrifying neighbourhoods. Therefore, keywords such as 'urban restructuring' are included. To acknowledge marginal gentrification, incumbent upgrading is included. Each query contains a residential mobility term and a gentrification term combined through the 'AND' Boolean operator (cf. Appendix A.1 for the exact query used).

TABLE 2.1 Search term overview

OR ↓	Gentrification	AND →	Residential Mobility
	"Gentrification"		"Residential mobility"
	"State-led gentrification"		"Residential movements"
	"Urban Renewal"		"Residential circulations"
	"Urban Restructuring"		"Migration"
	"Urban revitalization"		"Mobility rate"
	"Urban regeneration"		"Residential turnover"
	"Housing developments"		"Residential trajectories"
	"New construction"		"Housing trajectories"
	"Residential development"		"Trajectories"
	"Incumbent upgrading"		"Life course"
			"Neighborhood trajectories"
			"Residential choice"
	Gentrifier		
	"Gentrifier"		
	"Middle class"		
	"Affluent migrant"		
	"Affluent household"		
	"Incoming migrant"		
	"Incoming household"		
			Displacement
			"Displacement"
			"Forced relocations"
			"Relocation"
			Location
			"Origin"
			"Destination"
			"Neighborhood Destination"
			"Neighborhood of origin"
			"Residential destination"

2.3.2 Study selection

All articles in this review identify either the origins of gentrifiers, the destinations of displacees, or both. Articles which specify the socio-economic composition of the origin or destination neighbourhood are also included, as these shed light on the relationship between gentrification-related residential moves and spatial inequality, as well as on the linkages and interdependency created by gentrification-related residential moves between places. The selection process for this systematic search is summarised in FIG. 2.1

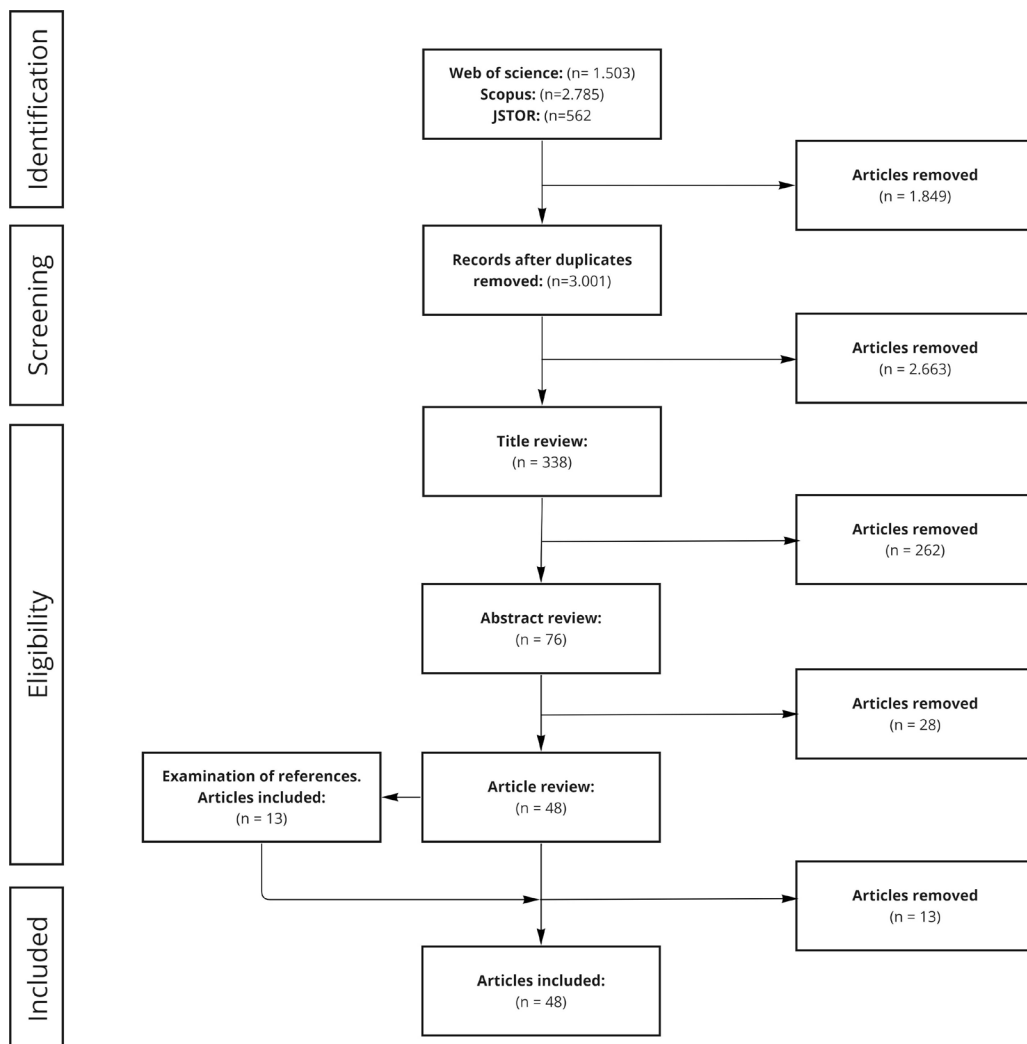


FIG. 2.1 PRISMA Flowchart of the systematic literature search

In the first phase (identification), queries of all keyword combinations presented in TABLE 2.1 were run on three comprehensive academic search engines between January and March 2022: Web of Science, Scopus, and JSTOR. Only peer-reviewed academic articles written in English were included. After removing duplicates, 3001 articles remained.

During the screening phase, articles were selected if their title addressed one of the following topics: residential mobility, gentrification, urban restructuring, displacement, or segregation. Segregation was also included as a proxy to identify articles examining post-gentrification residential outcomes. In the cases where we could not tell from the title alone, abstracts were examined.

The abstract review, as part of the eligibility phase, aimed at keeping articles which focused explicitly on the relationship between residential movements and gentrification, thus excluding articles on retail gentrification or solely re-urbanization. In order to be considered relevant, articles in this study must address the residential preferences, characteristics, or trajectories of gentrifiers or displacees, or discuss mobility rates within gentrifying neighbourhoods. The inclusion of residential trajectories as a selection criterion is important as this is expected to provide information on either the origin or destination locations, which aligns with the focus of this review. Studies examining residential preferences were also included as they might shed light on life-course trajectories and potentially reveal previous or subsequent residential locations. Articles discussing the characteristics of gentrifiers and displacees were included because of the possibility that the previous or future address may be part of the characterization of the mover. Finally, articles examining mobility rates in gentrifying neighbourhoods were selected to include articles studying in situ residential mobility. 262 articles did not meet these criteria.

The remaining 76 articles were read throughout and included if they addressed one of the following topics: 1. the destination location of displaced residents; 2. the type of spatial environment displaced residents move to; 3. the origin location of incoming gentrifiers; 4. the residential trajectories of gentrifiers. Consequently, 28 were excluded.

The systematic review was conducted on the remaining 48 articles, and led to the further elimination of another 13 articles which failed to meet the gentrification criteria (for example, studies estimating the outcomes of the Moving To Opportunity program in the US). In parallel, by examining the references cited by the selected articles, 13 articles not yet included but relevant were added.² In total, this systematic review contains 48 academic articles (cf. Appendix A.2).

2.3.3 Data extraction

All 48 identified articles were independently reviewed by answering a set of questions relating to their research topic, methodologies, spatial classifications, and overall findings. The precise wording and coding scheme used can be found in Appendix A.3, whereas TABLE 2.2 and 2.3 contain descriptive statistics of each variable and its corresponding categories.

First, to classify the type of gentrification studied, we sorted articles by gentrification type. Articles that studied neighbourhood upgrading through the restructuring of the housing stock for higher income residents (e.g., social mixing) were classified as urban restructuring. Articles that studied neighbourhood upgrading through the changing socio-economic composition of the neighbourhood or rent levels, without specified governmental interventions on the housing stock were labelled as “Gentrification”. Articles studying the conversion of social housing to privatised housing were labelled “State-led gentrification” if they used the term themselves.

Second, to characterise the methodological characteristics of each article, we defined three variables related to their research methods. The methodology variable identifies whether the article was quantitative, qualitative, or both. The data-ownership variable identifies whether the data is collected by the researchers themselves (primary data), or by another institution (secondary data), or both. To capture the temporal component of data, we differentiated articles based on how they handled time; e.g., if the empirical analysis relied on cross-sectional analysis, time trends or longitudinal data. Only studies that were able to follow individuals over time were classified as longitudinal.

² Noteworthy articles that were not included are those by Reades et al., (2022), Lee and Perkins (2022), and Freeman et al., (2023). These studies meet the inclusion criteria but were published after the initial literature search.

Third, to accommodate for different stages of gentrification, we recorded, where possible, which stage of gentrification was studied. “Prior” corresponds to the period before socio-economic upgrading. “During” refers to the period when gentrification is ongoing and upgrading is predominant. “Post” refers to the later stage of gentrification when neighbourhoods have been significantly upgraded. This stage is reached when urban restructuring has been finalised, or when the economic composition of the neighbourhood has reached a level above city average. The post stage of gentrification are always specified as such by the authors.

Fourth, to identify the spatial scales considered in the studies reviewed, we defined four variables. The research scope variable indicates the level at which the research is focused and/or claims were made. Thus, articles interested in specific neighbourhoods in a city are classified as “neighbourhood”, while those examining the gentrification-induced movements for various metropolitan regions in a country are classified as “sub-national”. Articles interested in specific inner-cities or specific metropolitan areas were classified as “inner-city” and “metropolitan area” respectively. The movement variable identifies the furthest residential moves studied of each article, classified with a scale of either intra- or inter-urban, metropolitan, national or international. The analytical focus variable distinguishes between articles interested in individual outcomes or in the spatial consequences on, for example, a city overall. We also included a variable that identifies the spatial precision of each article, classified in different administrative categories, because different countries have different administrative boundaries and datasets. The smallest category is “residential units”, which relates to specific houses or apartment complexes. The next category is “statistical areas”, which are areas smaller than an administrative boundary such as neighbourhood or census tract, but where still some sort of aggregation has taken place; e.g., 100m x 100m areas. Subsequently, “neighbourhood”, “census tract”, “district”, and “municipality” relate to the definitions provided by authors, with “district” corresponding to an intermediate level between a neighbourhood and a municipality.

Finally, three variables capture claims made regarding the consequences of gentrification-induced residential moves on segregation or residential mobility patterns. Only articles that made a claim based on empirical findings were coded. The segregation variable identifies the consequences of residential moves on segregation levels outside of the gentrifying neighbourhood. The origin and destination variables identify predominant origin and destination locations of gentrifiers and displacees respectively, categorised based on the distance from the gentrified neighbourhood people either move to or from.

2.3.4 Data analysis

The outcome of the data-extraction allows for a quantitative summary of the corpus articles by type of gentrification, methodology, spatial extent, and overall findings. Additionally, to examine these outcomes jointly, a multiple correspondence analysis (MCA) is conducted on all the variables generated from this systematic review. A MCA is a technique to explore interdependencies among a set of categorical variables, similar to a principal component analysis (CPA), but relying on nominal data. A MCA allows the researcher to explore and analyse multi-way tables in order to detect structure in the relationships between categorical variables (Hoffman et al., 1994). In this review, the MCA examines the interdependencies between study design, data granularity and the conclusions reached in the articles reviewed on gentrification. We use this technique to unveil groups of publications following similar approaches and reaching similar conclusions and, by contrast, to highlight unexplored zones of the research space (i.e. gaps for future inquiry, such as the longitudinal analysis of gentrifiers at the metropolitan scale and beyond).

2.4 Results

2.4.1 Descriptive results

TABLE 2.2 displays the distribution of every variable category, providing several noteworthy insights. Out of the 48 relevant articles, 11 focused solely on the origin locations of gentrifiers, revealing a relative lack of scholarship dedicated to these trajectories. There is a high frequency of studies focusing on urban restructuring (n=29), mostly associated with the study of residential trajectories of displaced households (n=26). This is not an unexpected result, as a forced move out of a neighbourhood is easier to detect in the context of urban restructuring (e.g., social tenants evicted from estates under demolition) compared with the private uncoordinated arrival of middle-class families and individuals. Another interesting result is the low frequency of articles studying state-led gentrification (n=2), which suggests a still weak recognition of policy and gentrification-induced moves. Finally, there is a high frequency of studies conducted in the Global North (n=46), which likely reflects the later conceptualization of gentrification in the Global South (Lees et al., 2016). That the vast majority of studies were conducted in the Global North does not mean that gentrification-induced residential moves are a Northern phenomenon only. Robinson (2006) showed that urban studies defaulted to a developmental lens when analysing cities of the Global South, preferring concepts such as “slum-clearance” or “downward raiding” (Lemanski, 2022) to qualify neighbourhood upgrading, thus creating a lexical distinction between processes which could otherwise be considered as gentrification (Lopez-Morales, 2015). Keywords such as “slum-clearance” and “downward raiding” were not part of the search terms for this review, which might somewhat bias the results towards a predominantly Northern context.

TABLE 2.2 Frequency of studies by variable category

Variable	Category	Count
Residential movers	Gentrifiers	11
	Displacees	36
	Both	1
Gentrification type	Gentrification	17
	State-led gentrification	2
	Urban restructuring	29
Context	Western Europe	20
	US	25
	Australia	1
	East Asia	2
Research scope	Neighborhood	5
	Inner-city	28
	Metropolitan	10
	Sub-national	3
	National	0
Administrative category	Residential units	6
	Statistical areas	4
	Neighborhood	16
	Census tract	12
	District	6
	Municipality	1
Stage of gentrification	Prior to Post	5
	During	14
	During to Post	5
	Post	22
Movements	Intra-urban	17
	Metropolitan	14
	Inter-urban	3
	National	9
	International	2
Analytical focus	Individual outcome	41
	Spatial outcome	7
Segregation	Desegregation	5
	Ethnic and income segregation	5
	Ethnic segregation	7
	Income segregation	5
Destination	Within the city	12
	Agglomeration	5
	Functional region	3
	Out of the city	1
Origin	Within the city	6
	Agglomeration	0
	Functional region	2
	International	1

2.4.2 Comparative analysis of methodologies used in the literature

TABLE 2.3 displays the frequency of use of different methodologies in the corpus. Overall, the majority of studies capturing the destination of displaced households apply quantitative research methods. These studies are mainly interested in the socio-economic composition of destination neighbourhoods, and a majority (n=25) also estimated the spatial location of the destination neighbourhood. This is done either by locating the new area of residence (e.g., van Criekingen 2006; 2008; Ding et al., 2016, Mah 2021), estimating the distance travelled during the move (e.g., Kingsley et al., 2003), or by identifying if moves occurred inside or outside the city (e.g., Sturtevant, 2014). Early studies often rely on self-collected survey data (Goetz, 2002; Oakley et al., 2009; Bolt and van Kempen, 2010; Goetz, 2010), while later studies apply large scale longitudinal analysis (Hochstenbach and Musterd, 2018; Dragan et al., 2020). A common strategy (n= 11) is a comparative analysis between different types of movers. Goetz (2002), Boston (2005), Bolt and van Kempen (2010), Bolt et al. (2009), Evans (2021), Ding et al. (2016), Hwang and Ding (2020) and Dragan et al. (2020) all examined the destination neighbourhoods of displaced households and compared these to non-displaced movers. Evans (2021) is the only study that applied a propensity score matching technique, which is a quasi-experimental method to identify relevant control households to compare movers. This study matched households that were displaced and those that were not, based on various socio-economic characteristics. This approach mitigates selection issues and enables the researchers to make a more robust claim regarding displacement (Dehejia and Sadek, 2002). The other comparative studies perform no such matching techniques and rely on descriptive statistics only.

TABLE 2.3 Frequencies of studies by methodological characteristics over time

Variable	Category	Displacees	Gentrifiers
Methodology	Quantitative	25	9
	Qualitative	6	3
	Mixed methods	6	0
Data ownership	Primary	11	6
	Secondary	19	5
	Both	7	1
Temporal component of data	Cross-sectional	16	7
	Time trend	6	5
	Longitudinal	14	0

The study by Hochstenbach and Musterd (2018) has access to large scale longitudinal geo-coded administrative data, containing information on a broad set of socio-economic, demographic, and residential characteristics for all registered adults in the Netherlands. The authors track the moving patterns of low-income households over a period of approximately 10 years. This data enables them to make claims about how the spatial distribution of income in cities and their surrounding regions change over time. Similarly, Dragan et al. (2020) have access to geo-coded longitudinal data based from New York City medical records. Their analysis involves tracking the residential trajectories and mobility behaviour of a cohort of low-income children from 2009 to 2015. They specifically examine the differences between children from gentrifying and non-gentrifying census tracts. This work not only identifies the destination neighbourhood after relocation but also examines their subsequent residential locations after the first move out of the gentrifying neighbourhood.

Articles using qualitative methods provide important insights into understanding the residential behaviour of displaced households, as well as how they experience the displacement process. Interesting examples are Egan et al. (2015) and Lawson et al. (2015) who both follow respondents before and after relocation. This enables them not only to reflect on neighbourhood satisfaction after relocation but also on prior attitudes and personal factors and how these influence experiences and outcomes. Another insightful study is that by Newman and Wyly (2006) who complement their quantitative analysis with on-site visits to gentrifying neighbourhoods. The qualitative analysis sheds light on residential behaviours which are not captured by quantitative data.

Studies identifying the origins of gentrifiers are also three times more often quantitative than qualitative. Qualitative studies in this area typically aim to understand the moving behaviour of gentrifiers. For instance, Cain (2020) traces how children of gentrifiers move out of the gentrifying neighbourhood and return when they are older. Whereas existing work usually focusses on movers moving into a gentrified neighbourhood, Cain stresses that the most advanced stage of gentrification is also subject to the cultural reproduction of the existing resident group; e.g., when the adult children of gentrifiers return to the gentrifying neighbourhood in which they grew up.

Studies applying quantitative research methods to identify movers' origins mostly conceptualise the socio-economic characteristics of incoming movers, where the former residential location mostly serves as a control variable. Such studies rely on descriptive statistics, with the exception of Hochstenbach and Boterman (2017). Papers by Rérat (2012), Friedrichs (1987), Sturtevant (2014) and Lützelers (2008) rely on survey data – self-collected in the case of Rérat (2012) and Friedrichs (1987). Indeed, compared with the displacee studies, there seems to be less readily available datasets, hence the lower proportion of studies using administrative data.

The studies by van Crieelingen (2009) and Hochstenbach and Boterman (2017) do rely on register data which includes a much larger fraction of the research population compared with the survey data discussed above, allowing authors to make more robust claims. Noteworthy is that none of the identified studies reflect on changes in the socio-economic characteristics of individuals after the move.

Despite extensive work on life course trajectories and longitudinal studies (Feijten, 2008; Clark and Morrison, 2012), the profile of gentrifiers has not been analysed with the same level of details as that of displacees. This systematic review has not identified articles studying the residential locations of gentrifiers prior to their move to the gentrifying neighbourhood longitudinally. This difference is not surprising, as it is methodologically more complex to retrace trajectories of those moving in. While institutions might hold administrative records for households displaced by policy programs, gentrifiers move on their own through private routes, making them more difficult to trace. However, microdata emerging in various European countries should enable scholars to study the trajectories of those moving into gentrifying neighbourhoods.

2.4.3 Origin and destination locations

FIG. 2.2 shows the spatial patterns identified in the articles from this review. Note that only articles that identify residential mobility patterns are included here. This corresponds to 9 articles identifying the origin locations of gentrifiers, and 19 articles identifying the destination locations of displaced households. Other articles make no claim regarding predominant residential mobility patterns between places.

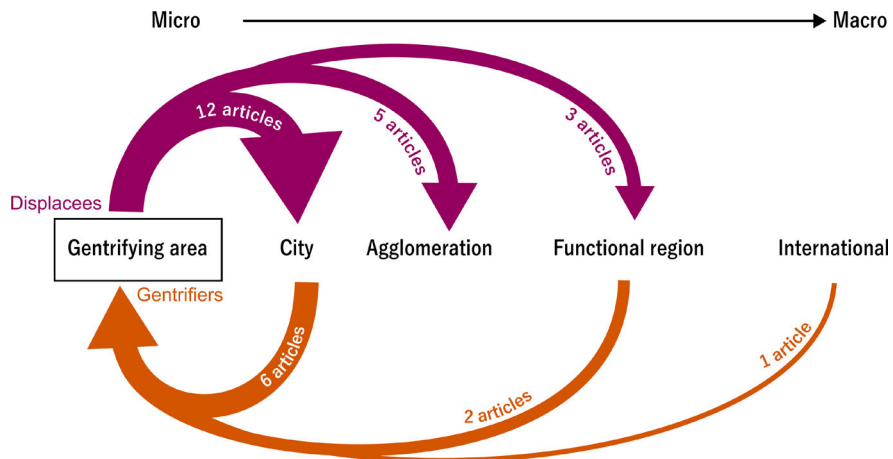


FIG. 2.2 Residential mobility patterns to and from gentrifying neighbourhoods

12 articles find that displaced households move to surrounding areas. Out of these, 9 studied displacement following urban restructuring (Bolt and van Kempen, 2010; Clampet-Lundquist, 2004; Doff and Kleinhans, 2011; Dragan et al., 2020; Goetz, 2002; Kleit and Galvez, 2011; ; Lawson et al., 2015; Oakley and Burchfield, 2009; Oakley et al., 2013; Tieskens and Musterd, 2013), of which 3 suggested that these destination outcomes are spatially clustered in disadvantaged neighbourhoods (Goetz, 2002; Oakley and Burchfield, 2009; Oakley et al., 2013). The 3 remaining articles studied displacement following gentrification, emphasizing that low-status households generally make short distance moves (Dragan et al., 2020, p.6; Lyons, 1996, p.55-57; van Criekingen, 2008, p.210.). Yet, by considering destinations beyond the metropolitan boundaries, van Criekingen (2006, p.14; 2008, p.206-210) identifies that a significant proportion of low-income households leaves the city and relocates to cities with weaker economies and a more affordable housing stock.

This finding by van Criekingen is consistent with more recent studies which stress that displaced households relocate out of the city, to the suburbs (Huang and Liu, 2021; Mah, 2021; Sink and Ceh, 2011; Sturtevant, 2014; Weller and van Hulten, 2012), and satellite towns in the metropolitan region (Hochstenbach and Musterd, 2018; 2021). It is apparent that claims regarding the suburbanization of poverty generally correspond to more recent research compared with those claiming that displacees move within the surrounding area. The study by Hochstenbach and Musterd (2018) on Amsterdam illustrate this trend. They find that for the period 2004-2013 the share of unemployed households moving within the central city decreased by 3.8 percent point, while their share of moves from the central city to the surrounding region increased by 3.5 percent point (Hochstenbach and Musterd, 2018, p.45).

In general, evidence from our systematic review suggests that displaced households often move within the metropolitan region, which is consistent with studies on residential mobility that suggest that long-distance moves are mostly triggered by changes in employment or education (Clark and Dieleman, 1996).

Out of the articles studying origins of gentrifiers, a majority finds that gentrifiers move within the city. Friedrichs (1987) was the first to identify this pattern, by examining the effects of urban renewal on migratory patterns in inner-city areas. He found that only 5% of the respondents had moved from the suburbs to the restructured neighbourhoods, while almost half of the respondents came from the inner-city itself. Subsequent quantitative studies by Lützel (2008), Millard-Ball (2020), Rérat (2012), and van Criekingen (2009) yielded similar results. As most residential moves (irrespective of gentrification dynamics) tend to be short distance

(Clark and Dieleman, p.164), it becomes particularly interesting when authors discover that gentrifiers predominantly move from outside the city. For instance, Brown and Wyly (2000) concluded that revitalization of the neighbourhoods in Brighton Beach, New York was driven by international immigration. Additionally, van Criekingen (2009, p.834-835) estimated that about one fifth of the incoming migrants to gentrifying neighbourhoods in Brussels was international and labelled them 'expatriate professionals'.

A study by Sturtevant (2014) claims that the population influx of white residents has sparked gentrification in the inner-city of Washington DC. Out of those moving to the city, 79 percent of white residents came from outside the metropolitan area, whereas only 21 percent moved from the suburbs. A limitation of the study by Sturtevant is that there is no specification of locations outside the metropolitan area. Therefore, one cannot tell if moves were rural-to-urban or inter-urban. A recent study that sheds light on the importance of identifying beyond city boundaries is that by Ocejo (2019), who examines the narratives of gentrifiers moving from New York City to Newburgh. The article shows that the advanced stages of gentrification in New York has set off gentrification in Newburg. These incoming migrants are considered gentrifiers in Newburgh, but displacees in relation to New York City where they were out-priced. This finding possibly suggests that advanced gentrification also generates residential movements between cities, and that gentrification can spread from one city to another.

2.4.4 Displacement and segregation

As gentrification corresponds to a shift of residential moves both from upper-middle and working-class residents, it is often discussed in terms of its consequences on segregation. 22 articles studying the destination locations of displaced households make claims regarding the consequences of gentrification-induced residential moves on segregation. Articles finding that displacement reduces income segregation all studied relocation following urban restructuring (Bolt and van Kempen, 2010; Bolt et al., 2009; Boston, 2005; Goetz, 2010; Kingsley et al., 2003; Lopez and Greenlee 2016; Popkin et al., 2009; Sink and Ceh, 2011; Tieskens and Musterd, 2013). Interestingly, 4 of these studies argue that the effects of poverty de-concentration is limited due to the impoverished state of the origin neighbourhood (Goetz, 2010; Kingsley et al., 2003; Sink and Ceh, 2011; Tieskens and Musterd, 2013).

Others find that the displacement outcomes enhance income segregation, as displacees are forced to move to affordable tracts with high poverty rates (Ding et al., 2016; Hochstenbach and Musterd, 2018;2021; Hwang and Ding, 2020; Oakley and Burchfield, 2009, Oakley et al., 2013; van Crieking, 2006;2008; Varady et al., 2010; Weller and van Hulten, 2012). Interestingly, the study on Philadelphia by Ding et al. (2016) found that displacees moving from rapidly gentrifying neighbourhoods generally move to neighbourhoods more economically deprived compared with individuals displaced from marginally gentrifying neighbourhoods. This suggests that later stages of gentrification increasingly restrict the residential choices of displaced households. However, the study by Dragan et al. (2020) on New York City contradicts this conclusion, as they also compare destinations from rapidly and moderately gentrifying tracts and find no significant difference regarding displacement patterns. These contradicting findings are interesting given the similarity in geographical location between Philadelphia and NYC, suggesting that the socio-economic outcomes can depend heavily on the context studied.

17 articles examine the consequences of displacement on ethnic segregation, of which 12 argue that relocation enhances ethnic segregation (Bolt and van Kempen, 2010; Bolt et al, 2009; Doff and Kleinhans, 2011; Hwang and Ding, 2020; Oakley and Burchfield, 2009; Oakley et al., 2013; Popkin et al., 2009; Posthumus et al., 2014; Sink and Ceh, 2011; Sturtevant, 2014; Tieskens and Musterd, 2013; Varady et al., 2010). Out of these, 7 explain that ethnic segregation is a consequence of the increased difficulties ethnic minorities experience in their residential relocation compared to non-minority relocatees. (Bolt and van Kempen, 2010; Bolt et al., 2009; Doff and Kleinhans, 2011; Hwang and Ding, 2020; Posthumus et al., 2014; Sturtevant, 2014; Tieskens and Musterd, 2013). Doff and Kleinhans (2011) try to make sense of this phenomenon by suggesting that minority households possibly sort themselves over space in order to live near households that are similar. However, they also find that moving to concentrated neighbourhoods significantly decreases the likelihood of reporting neighbourhood improvement.

Finally, there are 5 articles that find that relocation enhances the dispersal of both poverty and ethnic groups (Boston, 2005; Goetz et al., 2010; Kingsley et al., 2003; Lopez and Greenlee, 2016; Tieskens and Musterd, 2013).

2.4.5 Multivariate analysis of the corpus

To understand the combined distribution of characteristics of reviewed articles, a MCA was conducted on the 14 variables coded in the systematic review (cf. TABLE 2.2 and TABLE 2.3). The MCA results suggest that analysing the first two dimensions covers 19% of the variance of the original variables (see Appendix A.4 and A.5). FIG. 2.3A represents the projection of the variable categories in this space and FIG. 2.3B the observations (i.e. the 48 articles). In both graphs, only variables or observations with contributions greater than 0.2 were labelled.

The first dimension of opposition is linked to the type of methodology and gentrification analysed (FIG. 2.3A horizontal axis). On the right side of dimension 1 we find articles typically studying state-led gentrification using quantitative research methods applied to secondary data with high spatial precision, and which find that gentrification enhances income segregation. We interpret this combination as the large-scale gentrification research side of the literature. Representative articles of this pole of the literature include Hochstenbach and Musterd (2018) and van Criekingen (2006). On the left-hand side we find articles studying urban restructuring with more qualitative research methods. These articles rely on primary data. Representative articles of this pole of the literature include Kleinhans (2003) and Huang and Liu (2021). The second dimension (vertical axis FIG. 2.3A) of the MCA opposes articles focusing on gentrifiers and their residential trajectories to articles focusing on the trajectories of displacees. These categories are not associated strongly with methodology types, but rather with administrative categories (gentrifiers with district levels and displacees with statistical areas and neighbourhoods) and gentrification types (state-led for displacees and general gentrification for gentrifiers).

We performed a k-nearest neighbor clustering analysis on the coordinates of articles on the first two dimensions in order to create literature sets. A partition in 3 groups (FIG. 2.3B) shows two coherent blocks (clusters 1 and 2) and a looser set (cluster 3) of articles. Cluster 1 identifies articles which employ large scale quantitative analysis, relying on register data with fine spatial precision locating the destination of displaced households. Cluster 2 includes articles following the residential trajectories of displacees moving from urban restructuring neighbourhoods, which apply either quantitative or qualitative analyses and mostly rely on self-collected data. Cluster 3 corresponds to articles identifying origins of gentrifiers, and has an overall higher variance compared with Cluster 1 and 2.

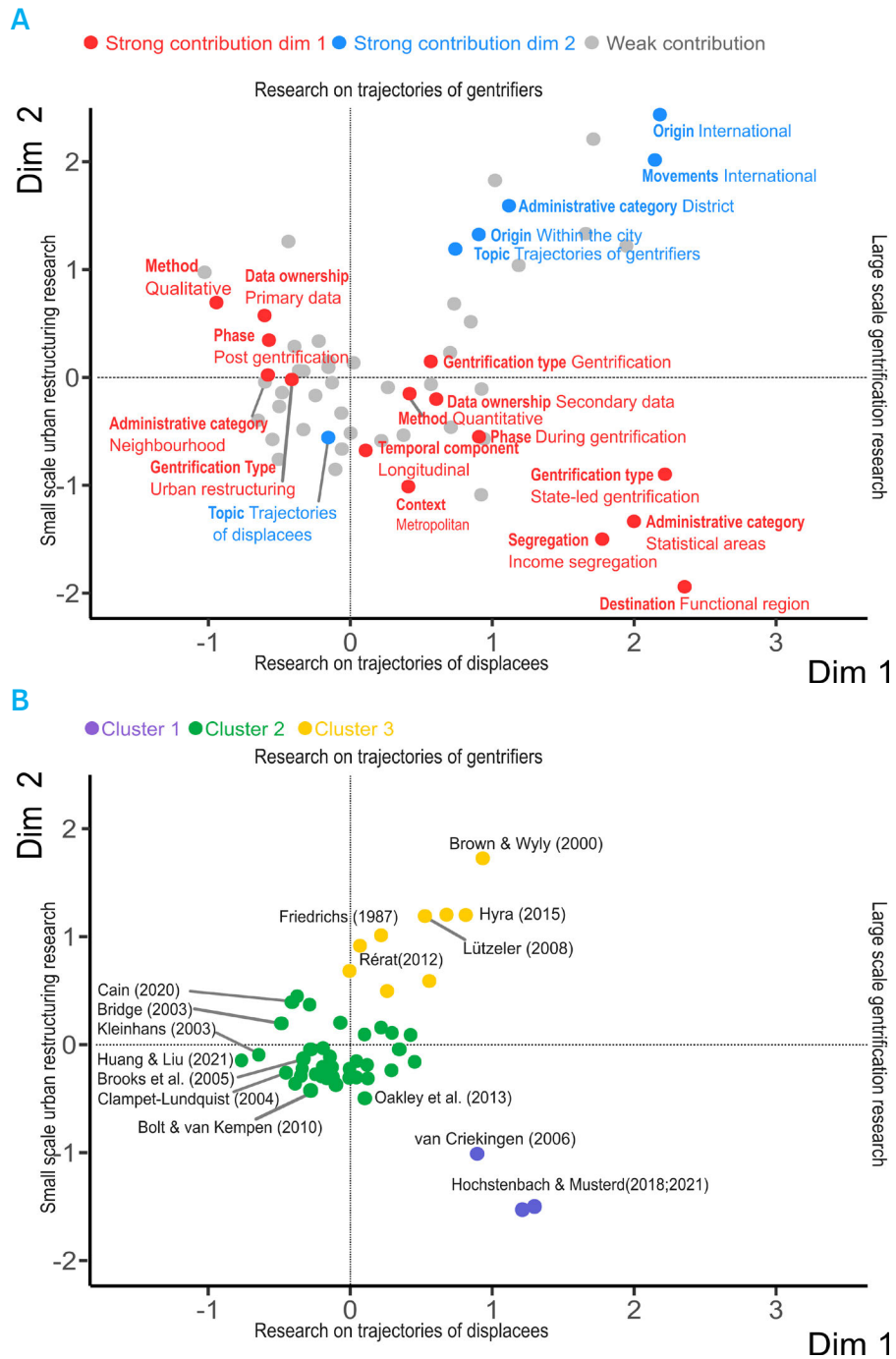


FIG. 2.3 A: variable coordinate plot by contribution / B: observation coordinate plot by clusters

2.5 Conclusion

The literature on residential mobility and gentrification has predominantly focused on movements within the gentrifying neighbourhood itself, and not so much on the origin and destination locations of movers. Capturing both the socio-economic characteristics of movers and the spatial features of their moves re-contextualises these movements within wider population dynamics and residential mobility trends, generating a fuller conceptualization of how gentrification relates to inequality at a wider spatial scale. This systematic literature review analysed articles considering the spatial aspect of gentrification-induced residential moves and examined: 1. The spatial scales at which these analyses were conducted; 2. The methodologies applied; and 3. The conclusions drawn regarding gentrification-induced residential mobility patterns and segregation.

In general, we found limited information on the origin of people moving into gentrifying neighbourhoods. There were no quantitative longitudinal analyses capturing where gentrifiers move from in the literature reviewed, and information about the long-run residential trajectories of gentrifiers was absent. Additionally, none of the identified studies reflect on changes in the socio-economic characteristics of individuals after their move to the gentrified neighbourhood, which is also a limitation of this review, as this overlooks the potential occurrence of incumbent upgrading and thus marginal gentrification. Those interested in the origin-locations of gentrifiers largely find no evidence of suburb-to-city residential migration within a metropolitan region; a majority rather finds that gentrifiers move within the inner-city. However, the quantitative research does not specify or classify origin locations beyond the metropolitan region, which suggests that there is no complete overview of where gentrifiers move from. This finding is striking considering the demand theories on drivers of gentrification (Ley, 1980; Rose, 1984), and the replacement vs displacement debate (Hamnett, 2003; Slater, 2009). Given the central role of the gentrifier in academic debates over the years, a valuable contribution would require identifying the origin locations of these individuals. Capturing the full extent of origin locations might identify that increasingly tight housing markets alter linkages and demographic interdependencies between cities and regions. The unaffordability of housing in one city could set off gentrification in another or create a form of segregation at the scale of the system of cities, whereby some cities specialise in providing residence to the privileged while more affordable cities and towns house displaced residents.

The literature capturing the destination locations of displaced households highlights several reoccurring claims. Whereas most studies find that displacees make rather short distance moves and remain within the surrounding area, more recent studies suggest that in the geographical context studied, displacees are increasingly moving out of the inner-city towards peripheral areas. A majority of articles finds that the socio-economic status of destination neighbourhoods of displaced households is low, reinforcing segregation. Disadvantaged residents experience more constraints in their residential choice, which in turn affects the spatial socio-economic composition of cities. This suggests that gentrification does not, for the most part, reduce issues of socio-economic segregation.

We recommend future research to re-evaluate the spatial scale of movements to and from gentrifying areas to identify who moves into the city and who moves out. To date, there is no clear understanding of how contemporary gentrification relates to residential mobility patterns at different spatial scales, at a time when cities are becoming increasingly unaffordable, and gentrification is spreading beyond the urban cores. Scholars should acknowledge that the increased unaffordability which prevails in cities today not only affects the residential movements of the low-income households, but also increasingly restricts the residential choice of the middle-class. Unaffordability is not only a consequence of gentrification, it possibly sets off a chain reaction of gentrification elsewhere in the city, metropolitan area, region, or country. Future research should capture predominant patterns of gentrification-related residential moves at different spatial scales, and understand these in light of spatial inequality and larger demographic trends.

References

- Aalbers, M. B. (2019). Introduction to the forum: From third to fifth-wave gentrification. *Tijdschrift voor economische en sociale geografie*, 110(1), 1–11.
- Bolt, G., & Van Kempen, R. (2010). Dispersal patterns of households who are forced to move: Desegregation by demolition: A case study of Dutch cities. *Housing Studies*, 25(2), 159–180.
- Bolt, G., Van Kempen, R., & Van Weesep, J. (2009). After urban restructuring: Relocations and segregation in Dutch cities. *Tijdschrift voor economische en sociale geografie*, 100(4), 502–518.
- Boston, T. D. (2005). The effects of revitalization on public housing residents: A case study of the Atlanta Housing Authority. *Journal of the American Planning Association*, 71(4), 393–407.
- Bridge, G. (2003). Time-space trajectories in provincial gentrification. *Urban Studies*, 40(12), 2545–2556.
- Brown, K., & Wyly, E. (2000). The new gentrification? A case study of the Russification of Brighton Beach, New York. *The Geographical Bulletin*, 42(2), 94–105.
- Butler, T. (2007). For gentrification? *Environment and Planning A*, 39(1), 162–181.
- Butler, T., & Hamnett, C. (2009). Walking backwards to the future—Waking up to class and gentrification in London. *Urban Policy and Research*, 27(3), 217–228.
- Butler, T., Hamnett, C., & Ramsden, M. (2008). Inward and upward: Marking out social class change in London, 1981–2001. *Urban Studies*, 45(1), 67–88.
- Cain, T. (2020). Keeping the family home: Reproducing gentrifiers in two Boston neighbourhoods. *Journal of Urban Affairs*, 42(8), 1222–1241.
- Clampet-Lundquist, S. (2004). HOPE VI relocation: Moving to new neighbourhoods and building new ties. *Housing Policy Debate*, 15(2), 415–447.
- Clark, W. A. V., & Dieleman, F. M. (1996). *Households and housing: Choice and outcomes in the housing market*. Transaction Publishers.
- Clark, W. A. V., & Morrison, P. S. (2012). Socio-spatial mobility and residential sorting: Evidence from a large-scale survey. *Urban Studies*, 49(15), 3253–3270.
- Dehejia, R. H., & Wahba, S. (2002). Propensity score-matching methods for nonexperimental causal studies. *Review of Economics and Statistics*, 84(1), 151–161.
- Ding, L., Hwang, J., & Divringi, E. (2016). Gentrification and residential mobility in Philadelphia. *Regional Science and Urban Economics*, 61, 38–51.
- Doff, W., & Kleinhans, R. (2011). Residential outcomes of forced relocation: Lifting a corner of the veil on neighbourhood selection. *Urban Studies*, 48(4), 661–680.
- Dragan, K., Ellen, I. G., & Glied, S. (2020). Does gentrification displace poor children and their families? New evidence from Medicaid data in New York City. *Regional Science and Urban Economics*, 83, 103481.
- Easton, S., Lees, L., Hubbard, P., & Tate, N. (2020). Measuring and mapping displacement: The problem of quantification in the battle against gentrification. *Urban Studies*, 57(2), 286–306.
- Egan, M., Lawson, L., Kearns, A., Conway, E., & Neary, J. (2015). Neighbourhood demolition, relocation and health: A qualitative longitudinal study of housing-led urban regeneration in Glasgow, UK. *Health & Place*, 33, 101–108.
- Ellen, I. G., & O'Regan, K. M. (2011). How low income neighbourhoods change: Entry, exit, and enhancement. *Regional Science and Urban Economics*, 41(2), 89–97.
- Evans, M. (2021). The unequal housing and neighbourhood outcomes of displaced movers. *Journal of Urban Affairs*, 43(8), 1214–1234.
- Feijten, P., Hooimeijer, P., & Mulder, C. H. (2008). Residential experience and residential environment choice over the life course. *Urban Studies*, 45(1), 141–162.
- Freeman, L. (2005). Displacement or succession? Residential mobility in gentrifying neighbourhoods. *Urban Affairs Review*, 40(4), 463–491.
- Freeman, L., & Braconi, F. (2004). Gentrification and displacement: New York City in the 1990s. *Journal of the American Planning Association*, 70(1), 39–52.
- Freeman, L., Hwang, J., Hauptert, T., & Zhang, I. (2023). Where do they go? The destinations of residents moving from gentrifying neighbourhoods. *Urban Affairs Review*. Advance online publication. <https://doi.org/10.1177/10780874231169921>
- Friedrichs, J. (1987). Urban renewal policies and back-to-the-city migration: The case of West Germany. *Journal of the American Planning Association*, 53(1), 70–79.

- Goetz, E. G. (2002). Forced relocation vs. voluntary mobility: The effects of dispersal programmes on households. *Housing Studies*, 17(1), 107–123.
- Goetz, E. G. (2010). Better neighbourhoods, better outcomes? Explaining relocation outcomes in HOPE VI. *Cityscape*, 12(1), 5–31.
- Hackworth, J., & Smith, N. (2001). The changing state of gentrification. *Tijdschrift voor economische en sociale geografie*, 92(4), 464–477.
- Hamnett, C. (2003). Gentrification and the middle-class remaking of inner London, 1961–2001. *Urban Studies*, 40(12), 2401–2426.
- Hamnett, C. (2021). *Advanced introduction to gentrification*. Edward Elgar Publishing.
- Hochstenbach, C. (2017). State-led gentrification and the changing geography of market-oriented housing policies. *Housing, Theory and Society*, 34(4), 399–419.
- Hochstenbach, C., & Boterman, W. R. (2017). Intergenerational support shaping residential trajectories: Young people leaving home in a gentrifying city. *Urban Studies*, 54(2), 399–420.
- Hochstenbach, C., & Musterd, S. (2018). Gentrification and the suburbanization of poverty: Changing urban geographies through boom and bust periods. *Urban Geography*, 39(1), 26–53.
- Hochstenbach, C., & Musterd, S. (2021). A regional geography of gentrification, displacement, and the suburbanisation of poverty: Towards an extended research agenda. *Area*, 53(3), 481–491.
- Hochstenbach, C., Musterd, S., & Teernstra, A. (2015). Gentrification in Amsterdam: Assessing the importance of context. *Population, Space and Place*, 21(8), 754–770.
- Hoffman, D. J., de Leeuw, J., & Arjunji, R. V. (1994). Multiple correspondence analysis. In R. P. Bagozzi (Ed.), *Advanced methods of marketing research* (pp. 255–272). Blackwell.
- Huang, X., & Liu, Y. (2022). Worse life, psychological suffering, but 'better' housing: The post-gentrification experiences of displaced residents from Xuanwumen, Beijing. *Population, Space and Place*, 28(6), e2523.
- Huse, T. (2018). Gentrification and ethnicity. In L. Lees & M. Phillips (Eds.), *Handbook of gentrification studies* (pp. 186–204). Edward Elgar Publishing.
- Hwang, J., & Ding, L. (2020). Unequal displacement: Gentrification, racial stratification, and residential destinations in Philadelphia. *American Journal of Sociology*, 126(2), 354–406.
- Karsten, L. (2003). Family gentrifiers: Challenging the city as a place simultaneously to build a career and to raise children. *Urban Studies*, 40(12), 2573–2584.
- Kingsley, T. G., Johnson, J., & Pettit, K. L. (2003). Patterns of Section 8 relocation in the HOPE VI program. *Journal of Urban Affairs*, 25(4), 427–447.
- Kleinhans, R. (2003). Displaced but still moving upwards in the housing career? Implications of forced residential relocation in the Netherlands. *Housing Studies*, 18(4), 473–499.
- Kleit, R. G., & Galvez, M. (2011). The location choices of public housing residents displaced by redevelopment: Market constraints, personal preferences, or social information? *Journal of Urban Affairs*, 33(4), 375–407.
- Lawson, L., Kearns, A., Egan, M., & Conway, E. (2015). "You can't always get what you want..."? Prior attitudes and post-experiences of relocation from restructured neighbourhoods. *Housing Studies*, 30(6), 942–966.
- Lee, H., & Perkins, K. L. (2023). The geography of gentrification and residential mobility. *Social Forces*, 101(5), 1856–1887.
- Lees, L. (2008). Gentrification and social mixing: Towards an inclusive urban renaissance? *Urban Studies*, 45(12), 2449–2470.
- Lees, L., Shin, H. B., & López-Morales, E. (2016). *Planetary gentrification*. John Wiley & Sons.
- Lemanski, C. (2022). Hybrid gentrification in South Africa. In L. Lees, T. Slater, & E. Wylie (Eds.), *The planetary gentrification reader* (pp. xx–xx). Routledge. <https://doi.org/10.4324/9781003341239-16>
- Ley, D. (1980). Liberal ideology and the postindustrial city. *Annals of the Association of American Geographers*, 70(2), 238–258.
- Ley, D. (2003). Artists, aestheticisation and the field of gentrification. *Urban Studies*, 40(12), 2527–2544.
- Lopez, E., & Greenlee, A. (2016). An ex-ante analysis of housing location choices due to housing displacement: The case of Bristol Place. *Applied Geography*, 75, 156–175.
- López-Morales, E. (2015). Gentrification in the global South. *City*, 19(4), 564–573.
- Loumeau, G., & Russo, A. (2022). Second-hand gentrification: Theory and evidence from high-speed rail extensions. *Sheffield Economic Research Paper Series*.

- Lützel, R. (2008). Population increase and “new-build gentrification” in central Tōkyō. *Erdkunde*, 62(4), 287–299.
- Lyons, M. (1996). Gentrification, socioeconomic change, and the geography of displacement. *Journal of Urban Affairs*, 18(1), 39–62.
- Mah, J. (2021). Gentrification-induced displacement in Detroit, Michigan: An analysis of evictions. *Housing Policy Debate*, 31(3–5), 446–468.
- Marcuse, P. (1985). Gentrification, abandonment, and displacement: Connections, causes, and policy responses in New York City. *Washington University Journal of Urban and Contemporary Law*, 28, 195–240.
- McKinnish, T., Walsh, R., & White, T. K. (2010). Who gentrifies low-income neighbourhoods? *Journal of Urban Economics*, 67(2), 180–193.
- Millard-Ball, A. (2002). Gentrification in a residential mobility framework: Social change, tenure change and chains of moves in Stockholm. *Housing Studies*, 17(6), 833–856.
- Moher, D., Liberati, A., Tetzlaff, J., Altman, D. G., & PRISMA Group. (2009). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *Annals of Internal Medicine*, 151(4), 264–269.
- Newman, K., & Wyly, E. K. (2006). The right to stay put, revisited: Gentrification and resistance to displacement in New York City. *Urban Studies*, 43(1), 23–57.
- Oakley, D., & Burchfield, K. (2009). Out of the projects, still in the hood: The spatial constraints on public-housing residents' relocation in Chicago. *Journal of Urban Affairs*, 31(5), 589–614.
- Oakley, D., Ruel, E., & Reid, L. (2013). Atlanta's last demolitions and relocations: The relationship between neighbourhood characteristics and resident satisfaction. *Housing Studies*, 28(2), 205–234.
- Ocejo, R. E. (2019). From apple to orange: Narratives of small city migration and settlement among the urban middle class. *Sociological Perspectives*, 62(3), 402–425.
- Popkin, S. J., Levy, D. K., & Buron, L. (2009). Has HOPE VI transformed residents' lives? New evidence from the HOPE VI panel study. *Housing Studies*, 24(4), 477–502.
- Posthumus, H., Bolt, G., & Van Kempen, R. (2014). Victims or victors? The effects of forced relocations on housing satisfaction in Dutch cities. *Journal of Urban Affairs*, 36(1), 13–32.
- Reades, J., Lees, L., Hubbard, P., & Lansley, G. (2022). Quantifying state-led gentrification in London: Using linked consumer and administrative records to trace displacement from council estates. *Environment and Planning A: Economy and Space*. Advance online publication. <https://doi.org/10.1177/0308518X221135610>
- Rérat, P. (2012). Gentrifiers and their choice of housing: Characteristics of the households living in new developments in Swiss cities. *Environment and Planning A*, 44(1), 221–236.
- Robinson, J. (2006). *Ordinary cities: Between modernity and development*. Psychology Press.
- Rose, D. (1984). Rethinking gentrification: Beyond the uneven development of Marxist urban theory. *Environment and Planning D: Society and Space*, 2(1), 47–74.
- Sink, T., & Ceh, B. (2011). Relocation of urban poor in Chicago: HOPE VI policy outcomes. *Geoforum*, 42(1), 71–82.
- Slater, T. (2009). Missing Marcuse: On gentrification and displacement. *City*, 13(2–3), 292–311.
- Smith, N. (1979). Toward a theory of gentrification: A back to the city movement by capital, not people. *Journal of the American Planning Association*, 45(4), 538–548.
- Smith, N. (1987). Gentrification and the rent gap. *Annals of the Association of American Geographers*, 77(3), 462–465.
- Smith, D. P., & Holt, L. (2005). ‘Lesbian migrants in the gentrified valley’ and ‘other’ geographies of rural gentrification. *Journal of Rural Studies*, 21(3), 313–322.
- Smith, N. (2005). *The new urban frontier: Gentrification and the revanchist city*. Routledge.
- Sturtevant, L. (2014). The new District of Columbia: What population growth and demographic change mean for the city. *Journal of Urban Affairs*, 36(2), 276–299.
- Teernstra, A. (2014). Neighbourhood change, mobility and incumbent processes: Exploring income developments of in-migrants, out-migrants and non-migrants of neighbourhoods. *Urban Studies*, 51(5), 978–999.
- Teernstra, A., & Van Gent, W. P. (2012). Puzzling patterns in neighbourhood change: Upgrading and downgrading in highly regulated urban housing markets. *Urban Geography*, 33(1), 91–119.

- Tieskens, K. F., & Musterd, S. (2013). Displacement and urban restructuring in Amsterdam: Following relocatees after demolition of social housing. *Urban Research & Practice*, 6(2), 194–210.
- Van Crieelingen, M. (2006). What is happening to Brussels' inner-city neighbourhoods? Selective migration from areas undergoing gentrification. *Brussels Studies*
- Van Crieelingen, M. (2008). Towards a geography of displacement: Moving out of Brussels' gentrifying neighbourhoods. *Journal of Housing and the Built Environment*, 23(3), 199–213. <https://doi.org/10.1007/s10901-008-9110-3>
- Van Crieelingen, M. (2009). Moving in/out of Brussels' historical core in the early 2000s: Migration and the effects of gentrification. *Urban Studies*, 46(4), 825–848. <https://doi.org/10.1177/0042098009102130>
- Van Crieelingen, M., & Decroly, J.-M. (2003). Revisiting the diversity of gentrification: Neighbourhood renewal processes in Brussels and Montreal. *Urban Studies*, 40(12), 2451–2468. <https://doi.org/10.1080/0042098032000136151>
- Van Ham, M., Uesugi, M., Tammaru, T., Manley, D., & Janssen, H. (2020). Changing occupational structures and residential segregation in New York, London and Tokyo. *Nature Human Behaviour*, 4(11), 1124–1134. <https://doi.org/10.1038/s41562-020-0926-6>
- Varady, D. P., Wang, X., Wang, Y., & Duhaney, P. (2010). The geographic concentration of housing vouchers, Blacks, and poverty over time: A study of Cincinnati, Ohio, USA. *Urban Research & Practice*, 3(1), 39–62. <https://doi.org/10.1080/17535060903529714>
- Weller, S., & Van Hulten, A. (2012). Gentrification and displacement: The effects of a housing crisis on Melbourne's low-income residents. *Urban Policy and Research*, 30(1), 25–42. <https://doi.org/10.1080/08111146.2011.639179>

Ik zie m'n vrienden elke dag
Zie dat ik niet zeiken mag
Weet dat ik niet alles weet
Maar
Amsterdam is in de war
Ik wil niet dat ik verstar
Dus ik besluit ik zwaai het uit

Ik zwaai het uit – Noor

3 Spatial dynamics of incoming movers and the state-led gentrification process

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ABSTRACT Although gentrification and its associated changes in residential mobility have been widely studied, surprisingly little attention has been paid to the changing origin locations of gentrification-related residential moves. In this study, we use fine-grained register data from the Dutch Central Bureau of Statistics (CBS) to uncover changing residential mobility patterns to and within the city of Rotterdam, the Netherlands. We identify that the state-led gentrification process goes hand in hand with the changing socioeconomic characteristics of in-movers and the changing origin locations of residential moves. The city of Rotterdam increasingly attracts middle- to high-income households from other core cities in the Netherlands, a process that we understand as inter-urban gentrification spillover. In parallel, intra-urban moves by economically vulnerable residents are declining, especially toward and within gentrifying neighbourhoods. This represents evidence of exclusionary displacement. We conclude that the spillover effects of contemporary gentrification should be understood beyond an intra-urban metropolitan perspective since gentrification in one city can enhance gentrification in another.

3.1 Introduction

In the 21st century, post-industrial cities in the Global North are experiencing population growth and economic prosperity (Glaeser & Maré, 2011). The class transition of the post-industrial era has enabled the rise of middle-class households, subsequently fueling the demand for urban living and driving up housing prices (Rose, 1984; van Ham et al., 2020). A process that is associated with these city transformations is gentrification, defined by Smith as ‘the transformation of inner-city working-class and other neighbourhoods to middle- and upper-middle-class residential, recreational, and other uses’ (Smith, 1987, p. 462). Over time, scholars have found that gentrification spreads beyond the city centre toward city suburbs, metropolitan areas, and even rural environments (Booi, 2023; Charles, 2013). The increasingly expensive core cities push both working-class (van Crieelingen, 2008; Hochstenbach & Musterd, 2018) and middle-class households (Booi, 2023; Mazanti, 2007; Paccoud & Mace, 2018) to seek residence beyond the urban core. This reorientation of households not only extends gentrification beyond the inner city but also amplifies the reconfiguration of spatial inequalities, thereby expanding their impact to broader geographic scales.

The processes of class transformation and displacement have been the foundation of a large body of literature interested in the socioeconomic characteristics of households moving in and out of gentrifying neighbourhoods (e.g., Ding et al., 2016; Freeman & Braconi, 2004; McKinnish et al., 2010). As gentrification spreads within and beyond cities, the implications for households, in terms of both how they are impacted by and contribute to gentrification, take on a spatial dimension. For instance, Hochstenbach and Musterd (2018) determined that gentrification is linked to the suburbanization of poverty since low-income residents are increasingly excluded from inner-city neighbourhoods. Simultaneously, scholars have found that the increasingly expensive inner-city areas also drive affluent households into the region surrounding the urban core, enhancing suburban and rural gentrification (e.g., Booi, 2023; Mazanti, 2007; Paccoud & Mace, 2018), or, as Loumeau and Russo (2022) refer to it, ‘second-hand’ gentrification in neighboring cities.

Although scholars have examined gentrification-related moves beyond gentrifying neighbourhoods, most studies capture how the *destinations* of outgoing residents change within metropolitan regions subject to advanced stages of gentrification (e.g., Dragan et al., 2020; Ding et al., 2016). As such, the impact of inter-urban gentrification spillover on relatively affordable cities (i.e., the *origins* of gentrifiers) remains an understudied phenomenon in the academic literature (Janssen et

al., 2023). Hence, this research delves into the evolving origin patterns of residential mobility for a city prone to second-hand gentrification, namely Rotterdam. By relying on large-scale longitudinal register data from the Central Bureau of Statistics (CBS), we finely mapped both intra- and inter-urban residential mobility patterns over time and examined these in light of gentrification. By doing so, we not only unveil the changing socioeconomic characteristics of movers but also examine patterns of who moves from where and how these dynamics change over time.

Rotterdam provides an interesting case to study second-hand gentrification since it has adjusted at a slower pace to the demands of the service economy when compared to other core cities in the Netherlands (i.e., Amsterdam, Utrecht, or The Hague), resulting in relatively low real estate prices (Arundel & Hochstenbach, 2019). At the same time, the municipality of Rotterdam actively engages in attracting middle-class individuals and families to the city, aiming to create high-class neighbourhoods. These policy implementations by the Rotterdam municipality should be understood as state-led gentrification (Uitermark et al., 2023; van den Berg, 2012), as they lead to the socio-economic upgrading of neighbourhoods. Together with the fact that Rotterdam is well-connected to other major cities in the Netherlands through a dense and efficient infrastructure network, this suggests that Rotterdam is vulnerable to inter-urban gentrification spill-overs from cities in more advanced stages of gentrification.

Thus, in this paper we are interested in identifying changing residential mobility patterns toward and within Rotterdam in light of state-led gentrification. We empirically assess: 1. 'Second-hand gentrification', which refers to the phenomenon of increased inter-urban migration driven by middle-class residents from more gentrified urban areas; 2. 'Exclusionary displacement', which addresses the diminishing intra-urban residential choice of economically vulnerable residents in Rotterdam itself. Notably, we will elaborate on these in the theoretical framework. The central research questions state:

How do residential mobility patterns toward Rotterdam unfold in light of the state-led gentrification process and does this support the hypothesis of second-hand gentrification?

And:

How does state-led gentrification modify the residential opportunities of the working class within Rotterdam and does this support the hypothesis of exclusionary displacement?

Overall, we found that residential moves associated with gentrification operate on multiple scales, such as incoming residents increasingly moving in from other urban cores at the regional level, while residents within Rotterdam are increasingly restricted in their residential choices of different units in the same neighbourhood, district, or city altogether. These findings highlight the interdependencies of places and require us to consider gentrification as a process that affects neighbourhoods and cities in relation to one another.

The remainder of this paper begins with the theoretical framework, highlighting important characteristics of contemporary gentrification and how gentrification is interconnected to residential mobility patterns. Next, we elaborate on the context of Rotterdam, as well as two hypotheses regarding residential mobility and gentrification in this city. Third, the methodology section provides an outline and explanation of the different origin, mover, and neighbourhood categories on which this paper relies. Fourth, the empirical evidence is presented. Finally, we conclude and discuss our findings in light of our two key hypotheses.

3.2 Theoretical framework

3.2.1 Trends in gentrification and inequality

Originally, gentrification was perceived as a primarily market-driven process, where investors aimed to close the rent gap in impoverished inner-city neighbourhoods. Presently, it is acknowledged that gentrification and the economic transformation of cities can also be closely tied to policy interventions, which are often referred to as ‘state-led gentrification’ (Hackworth & Smith, 2001; Lees, 2008). In contemporary Dutch cities, gentrification is a process fueled both by the traditional elements of rent gaps, ‘back-to-the-city’ movements, and the policies of local and regional authorities, which aim to restructure the housing stock to attract solvent and active middle-class households in previously deprived neighbourhoods (Uitermark et al., 2007). In this paper, we define gentrification as *“the transformation of inner-city working-class and other neighbourhoods to middle-and upper-middle-class residential recreational, and other uses”* (Smith, 1987, p. 462). This definition encompasses gentrification driven by governmental interventions in the housing stock, commonly referred to as state-led gentrification. State-led gentrifying policies, such as social mixing, provoke socio-economic change in neighbourhoods, which aligns with the broader process of gentrification as described by Smith. Given the predominant role of housing policies in gentrification in the Netherlands, this paper focuses specifically on state-led gentrification.

Alongside the emergence of state-led gentrification, contemporary gentrification has transcended from a small, concentrated process toward a dominant force of urban change. Gentrification is no longer restricted to a handful of inner-city neighbourhoods in major cities; it now prevails in urban regions (e.g., Booi, 2023; Charles, 2013; Markley, 2018). This expansion is correlated with two noteworthy demographic trends. First, the rise of the knowledge economy, spurred by globalization and increasing competitiveness in cities, is linked to the growing number of high-class workers in globalised urban areas (Glaeser & Maré, 2001). Second, the diversification of households as part of the second demographic transition—marked by delayed marriage and family formation or partnership dissolution—has heightened the demand for city living (Buzar et al., 2005). As a result, many contemporary cities in advanced economies have become increasingly unaffordable for middle-class households (Arundel & Doling, 2017), prompting these households to relocate away from inner-city areas, and thereby spreading gentrification (e.g., Booi, 2023; Paccoud & Mace, 2018).

3.2.2 Residential mobility and gentrification

According to the life course perspective, moving behaviours are dependent on changes in one's household, education, and/or employment situations. Factors such as fertility and fertility plans, partnership formation and dissolution, and professional career changes (Clark & Davies Withers, 1999; Clark & Dieleman, 1996; Feijten & van Ham, 2007) are all important triggers for residential moves. The likelihood of an move depends on the micro context of an individual, such as their financial resources and personal preferences. However, relocation is also linked with macro-level opportunities and constraints in areas such as the housing and labor markets (Mulder & Hooimeijer, 1999). Therefore, residential behaviour arises from the interplay between individual motives, resources, and constraints on the one hand, and the particular array of options available in the macro context on the other hand (Hooimeijer & Oskamp, 1996).

In the context of gentrification, residential mobility is often examined in light of gentrifiers and displacees. While 'gentrifiers' are drawn to transforming neighbourhoods, the incumbent low-income households face growing challenges due to rising prices, potentially resulting in displacement. Whereas studies generally find that gentrification goes hand in hand with the in-movement of households with higher income or education when compared to incumbent residents (Hochstenbach et al., 2015; Rérat, 2012), several quantitative studies found little evidence that low-income households are increasingly displaced from gentrifying neighbourhoods (Freeman & Braconi, 2004; McKinnish et al., 2010). Proponents of the professionalization theory argue that gentrification is less about displacing the lower class and more about an overall class replacement (Butler et al., 2008). However, aligning with Marcuse (1985), Slater (2009) suggests that low-income households are not necessarily directly displaced from their neighbourhoods and cities. Instead, increasing housing prices restrict working-class households from moving into neighbourhoods that were once affordable but are now undergoing gentrification. The notion of indirect displacement, proposed by Marcuse (1985) in the form of exclusionary displacement, emphasises that only estimating the likelihood of low-income households relocating from a gentrifying neighbourhood offers limited insights into the true impacts of gentrification on low-income communities.

Interestingly, little is known about the origins of those moving into gentrifying neighbourhoods and how these change over time (Janssen et al., 2023). Identifying departure locations sheds light on the roles of spatial interactions in the evolving patterns of residential moves and, consequently, who (no longer) moves into gentrifying neighbourhoods. Although scholars are increasingly acknowledging how gentrification spreads beyond core cities, most research on gentrification-

induced moves focuses on the destination locations of households moving toward metropolitan regions (e.g., Booi, 2023; Mazanti, 2007; Paccoud & Mace, 2018). Exceptions include studies identifying second-hand gentrification in cities, such as the work of Ocejo (2019), which examines the narratives of gentrifiers moving from New York City to Newburgh, gentrifying the receiving city in the process. Another example is a study by Loumeau and Russo (2022), which identifies a similar pattern of second-hand gentrification in Rennes and Bordeaux, resulting from the improved accessibility of these areas to Paris. These studies stress the need to capture the origins of gentrifiers since they identify that gentrification in one city is related to gentrification in another. This highlights the significance of capturing the spillover effects of gentrification, not solely from a destination-based metropolitan standpoint, but also from an origin-oriented perspective beyond the metropolitan scale.

3.2.3 Case study: Rotterdam's housing and gentrification context

This paper specifically focuses on gentrification in Rotterdam. In terms of population, Rotterdam is the second-largest city in the Netherlands. Positioned within the Randstad, Rotterdam forms an integral part of the polycentric core of the Netherlands. The Randstad is composed of cities that are intertwined but distinct in their administrative, political, and economic terms, with Rotterdam serving a pivotal role alongside other key cities such as Amsterdam, The Hague, and Utrecht. However, due to the industrial heritage of Rotterdam, the city has struggled to meet the demands of post-industrial society (van den Berg, 2017) resulting in greater difficulties related to unemployment compared to other cities in the Netherlands. Additionally, Rotterdam has been known for its large share of ethnic minorities and urban poor, who have for a large part been held responsible for the crime and disorganization of the city (van Swaaningen, 2005). This view has resulted in the justification of rigorous policies that aim to mix ethnically concentrated and poor neighbourhoods (Uitermark & Duyvendak, 2008). At present, Rotterdam is widely recognised as an appealing destination for residence and tourism. A surge in real estate prices and an influx of affluent households, particularly in and around the city centre, reflect the growing popularity and positive perception of this city (Custers & Engbersen, 2022; Permentier, 2018).

The growing popularity of Rotterdam is partly due to policies implemented by the national and local governments (Permentier, 2018). Rotterdam Municipality actively seeks to attract middle-class households, especially families, to the city (van den Berg, 2012; 2017). The focus of the city's policies revolves around housing, including the privatization and restructuring of the social housing stock

(Hochstenbach & Musterd, 2018;), the building of family friendly housing (van den Berg, 2012; 2017), and—more extraordinarily—the exclusion of unemployed households from specific parts of the city (van Gent et al., 2018; Uitermark & Duyvendak, 2008). The state-led gentrification of inner-city neighbourhoods has been explicit policy goal to attract affluent households and ‘re-balance’ the city’s diverse population (Arkins & French, 2023; Uitermark & Duyvendak, 2008; Uitermark et al., 2023). Consequently, the reduction in social housing combined with significant price increases in the private housing market has led to long waiting lists and fewer new allocations in the social rental sector, increasingly restricting the residential options available to low-income households (Hochstenbach, 2017). Custers and Engbersen (2022) caution that Rotterdam might become a victim of its own success since the sharp rise in housing prices poses a greater challenge not only for lower-income households but also for emerging middle-class families to enter the Rotterdam housing market. A phenomenon already occurring in other major cities in the Netherlands (Arundel & Hochstenbach, 2020; Booi, 2023). For this reason, it is important to investigate whether Rotterdam has drawn gentrifiers from other major cities, particularly those already experiencing significant gentrification, where increasing housing costs have become too high even for them.

Hypotheses

In this research paper, we tested two hypotheses regarding changes in residential mobility associated with the state-led gentrification process in Rotterdam.

1 **‘State-led gentrifying neighbourhoods in Rotterdam will experience heightened residential mobility flows of middle- and high-income households from other core Randstad cities in the Netherlands’ – *Second-hand gentrification hypothesis***

Following the work of Loumeau and Russo (2022) in Paris and Ocejo (2018) in New York City, we hypothesise that state-led gentrification in Rotterdam will attract households from more gentrified urban areas in the Netherlands. Studies on the Dutch housing stock (Arundel & Hochstenbach, 2020) and the socio-economic composition of Dutch cities (Musterd et al., 2020) identify that Rotterdam is in a relatively early stage of gentrification. In contrast, cities like Amsterdam and Utrecht exhibit the highest income and housing value growth, reflecting more advanced levels of gentrification. Relatedly, middle-income households increasingly struggle to find housing in these advanced gentrified cities, while households endowed with ample financial resources benefit from the rapidly rising housing prices in high-cost urban cores and can significantly improve their housing conditions by moving to Rotterdam. The relatively short distance between cities in the Netherlands—

and especially the Randstad—allows for individuals to reside in Rotterdam while commuting daily to another city. In other words, we expect that the different temporalities of gentrification that exist in Dutch cities, results in changing residential mobility patterns between them.

However, the elevated pressure on the housing market, as well as gentrification overall, also affects intra-urban residential opportunities for incumbent residents—especially those with low incomes.

2 ‘The intra-urban residential mobility flows of economically vulnerable households toward and within state-led gentrifying neighbourhoods will decline over time’
– *Exclusionary displacement hypothesis*

Building upon the framework presented by Newman and Wyly (2006) and Marcuse (1985), we expect that in the Dutch context, which is characterised by strong tenant rights, households will usually not be subject to direct displacement unless their social rented dwelling is demolished (Kleinhans, 2019). Instead, they primarily face exclusionary displacement. Together with a reduction in social housing, rising housing prices increasingly reduce their residential mobility opportunities. As housing associations and other landlords face rent price regulations, households often do not directly face unaffordability in their current dwelling. Nevertheless, once a new tenant takes occupancy, landlords have the liberty to establish a new rental price (Haffner & Boumeester, 2010). Since short-distance moves are generally triggered by housing and family matters (Clark & Dieleman, 1996), we expect that gentrification proportionally reduces the extent to which low-income households can move upwards in their housing situation. State-led gentrification policies, such as those executed in Rotterdam, accelerate the process of tenure conversion from social housing toward privatised rental units and owner-occupied housing. Thus, households that once had access to affordable housing in the inner city would now find it increasingly out of reach.

3.3 Data and methods

This paper draws on individual-level longitudinal register data from the CBS Netherlands for the 2005–2019 period³. In this paper, we identify all residential moves to and within Rotterdam, where a residential move is defined as a change in residential location from one year to the next. The residential location of each household was determined on the 31st of December each year, and only observations where households have resided at a location for more than 182 days were considered as a residential location. Furthermore, this analysis focused exclusively on independent moves, excluding relocations such as those into elderly homes. After applying these criteria, our dataset comprises 446,990 residential moves.

In this analysis, we compared two periods: pre-gentrification (2005–2010) and gentrification (2014–2019). We acknowledge that this is a simplification of reality since gentrification is an ongoing process. However, we have reason to believe that comparing these two time periods provides valuable insights into the state-led gentrification process in Rotterdam. Although the 2005–2010 period can be characterised by high economic growth, there was limited population growth (Rotterdam Municipality, 2023) and relatively low real estate values in Rotterdam (Arundel & Hochstenbach, 2019). The abundance of social housing (Hochstenbach & Musterd, 2018) and the scarcity of family housing made Rotterdam less appealing to middle-class households (van den Berg, 2012). In fact, Hochstenbach and van Gent (2015) found that during this period, low-income neighbourhoods surrounding the city centre experienced economic decline rather than gentrification.

In the latter period (2014–2019), after the economic crisis, the Rotterdam Municipality implemented several effective housing policies in neighbourhoods surrounding the city centre (Rotterdam Municipality, 2016), and housing prices increased (Arundel & Hochstenbach, 2019). Arguably these policy implementations should be understood as state-led gentrification, as they were designed to attract highly educated affluent households to neighbourhoods that were already prone to gentrification due to their environment and location (Rotterdam Municipality, 2016). The empirical findings by Permentier (2018) show that these policies effectively attracted affluent households to the surrounding inner-city neighbourhoods. Consequently, housing prices and transactions in these

³ See Bakker et al. (2014) for more information on the Dutch register data

areas have risen more rapidly than in the rest of Rotterdam. These findings are supported by Custers and Engbersen (2022), who also observed socio-economic upgrading of the neighbourhood composition in and around the city centre of Rotterdam in 2017 compared to 2008. As this opposes the economic downgrading of these low-income surrounding inner-city neighbourhoods that was identified by Hochstenbach and van Gent (2015) in the pre-gentrification time period, we argue that in 2014 – 2019, state-led gentrification of low-income neighbourhoods was more predominant in Rotterdam compared to 2005–2010.

Notably, we do not include the 2010–2013 period in our gentrification classification. This decision was driven by the notable impact of the economic crisis on the Dutch housing market during this period (Ronald & Doll, 2011). Our analysis of the data reveals a substantial decrease in the number of residential relocations both to and within Rotterdam. Consequently, we have chosen to exclude this period from consideration since it does not align with our focus on (pre) gentrification timeframe.

3.3.1 Moving directions

The second-hand gentrification hypothesis concerns changes in inter-urban residential mobility, where it is expected that gentrifying neighbourhoods attract movers from other core cities in the Netherlands. The exclusionary displacement hypothesis focuses on intra-urban moves, where it is expected that gentrification reduces the intra-urban mobility of lower-class households. We distinguish three types of inter-urban origin locations and four types of intra-urban origin locations.

Inter-urban origin locations were categorised based on their municipal boundaries in 2019. We highlight the importance of the Randstad since these cities are interconnected by a well-developed infrastructure network, making daily commuting between Randstad cities feasible (Goes et al., 2016). Although various definitions of the Randstad exist, we largely rely on the definition of the Randstad from the CBS (CBS, 2024), with the exception that we acknowledge Alkmaar to be part of the Randstad due to its close proximity to Amsterdam. Besides Rotterdam, the other major cities of the Randstad include Amsterdam, The Hague, and Utrecht. In this paper, we categorise these municipalities as core Randstad cities. Other municipalities within the Randstad region with populations exceeding 100,000 and classified as urban by the CBS are categorised as secondary Randstad cities. The remaining cities with populations above 100,000 and classified as urban, but not belonging to the Randstad, are classified as non-Randstad cities. The core-Randstad cities are the focus of the second-hand gentrification hypothesis, as we expect

that the later stages of gentrification in these other primary cities will result in the increasing number of households moving to Rotterdam. It is important to note that Amsterdam and Utrecht are in a more advanced stage of gentrification compared to Rotterdam, while the differences between Rotterdam and The Hague are less striking (Arundel & Hochstenbach, 2020; Musterd et al., 2020). Nevertheless, we still include The Hague in our classification of core-Randstad cities, not only because it qualifies as one, but also due to its higher average housing prices and income levels compared to Rotterdam (Arundel & Hochstenbach, 2020; Modai-Snir & van Ham, 2020), as well as its lower proportion of social housing (Hochstenbach, 2022).

Regarding *intra-urban* moves, we identify four different types of origin locations, of which three are categories within the administrative boundaries of Rotterdam and one is the Rotterdam agglomeration. The first category is in-situ residential moves, which are moves that occur within the administrative boundaries of a neighbourhood. The second category, district, is intra-urban relocations that occur within the same administrative urban district but not within the same administrative neighbourhood. The third category is all moves that occurred within the boundaries of Rotterdam Municipality but outside the administrative neighbourhood or district, which we defined as Rotterdam moves for simplicity. Finally, moves from the agglomeration of Rotterdam to Rotterdam central Municipality are classified as Rotterdam agglomeration. FIG. 3.1 contains a map of the municipalities of the Netherlands and their corresponding assigned categories. An overview of the total number of moves by origin location can be found in Appendix B.1.

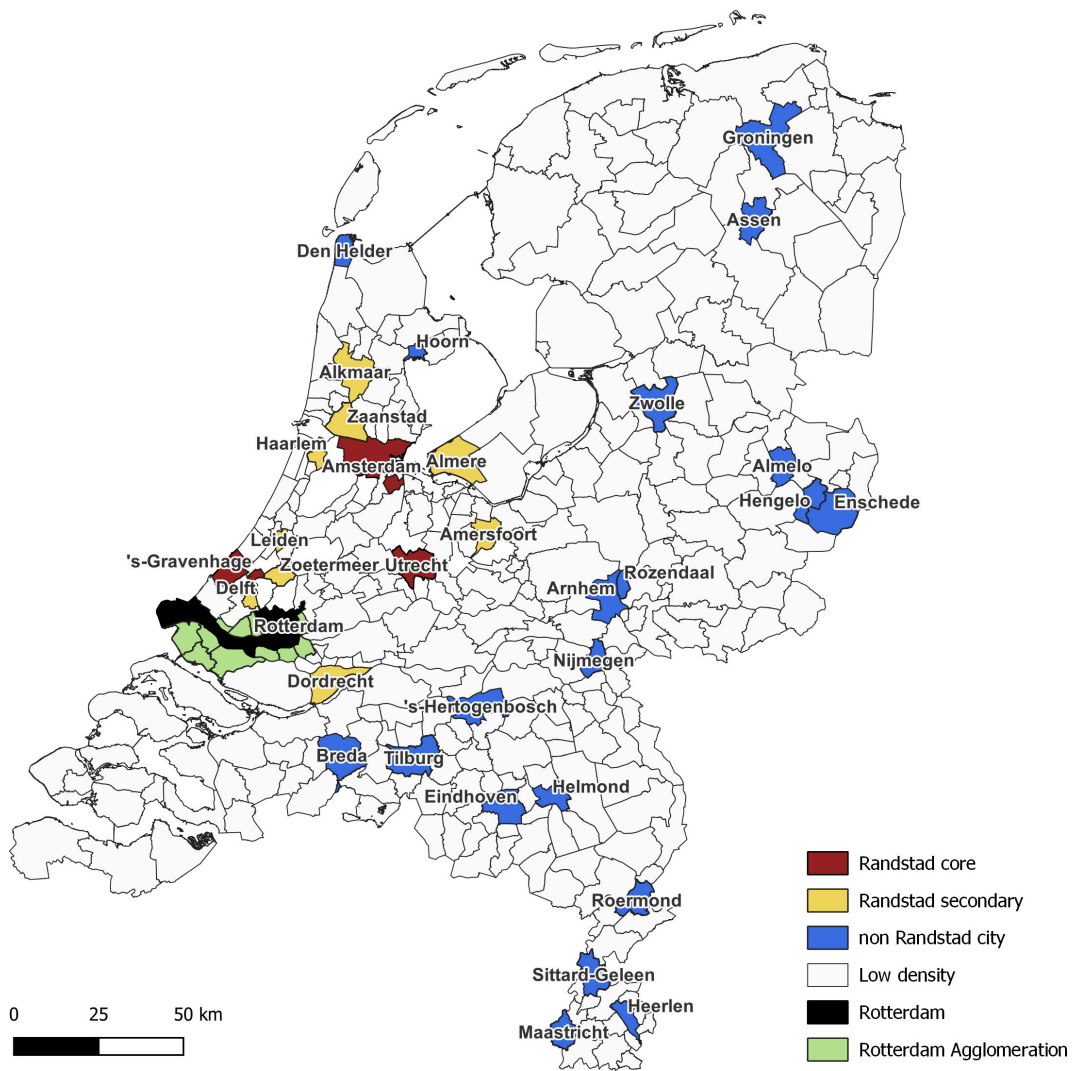


FIG. 3.1 Municipal categories in the Netherlands.

3.3.2 Socioeconomic indicators of households

In this analysis, we distinguished our key mover categories based on household income and employment status. Household income is defined by total household income, corrected for household size. The standardised household income is equal to the disposable household income divided by the household's equivalency factor, as provided by the CBS. A household is considered to have a low income if its standardised income falls below the 30th percentile of the Dutch income distribution for that specific year. High incomes are classified as those at or above the 71st percentile of the Dutch income distribution. Middle incomes encompass those falling between the 31st and 70th percentiles. Employment status reflects whether the household relies on government benefits (classified as unemployed) or generates their own income (classified as employed). If the head of the household receives student benefits, their employment status is classified as student. Since a household may consist of employed and unemployed members, we define household employment status based on the primary source of income of the household.

Our two key hypotheses revolve around income and housing affordability, where we are interested in the moving patterns of middle-income, high-income, and economically vulnerable households. We define middle-income households as those whose primary income is not dependent on government social benefits, and whose overall income is classified within the middle-income level. The same holds for high-income households. Economically vulnerable households are those with a low income, where we make a distinction between employed and unemployed households. Notably, due to the high availability of subsidised student housing, we did not consider students in our hypotheses.

Although not the focus of our hypotheses, we also examined the tenure situation and household composition of movers. We argue that both tenure and household composition are indicators of a household's financial means; therefore, these assist us in understanding changing residential mobility patterns toward gentrifying neighbourhoods. For instance, previous homeownership can serve as a facilitator for future homeownership, while tenants encounter growing limitations within the housing market. Additionally, living in a cohabitation arrangement with a partner can enhance the financial circumstances in comparison to single people and single parents due to the potential for dual-earnership. As a consequence of the limitations of the CBS data, one indicator not included in our analysis was the household education level.

3.3.3 Mapping gentrification

For this study, we rely on Smith (1987)'s definition of gentrification, and conceptualise state-led gentrification as the economic upgrading of low-income neighbourhoods that occurs alongside policy interventions implemented by national and local governments. This operationalization does not encompass the gentrification of middle to high income neighbourhoods, nor neighbourhood upgrading without governmental interventions in the housing stock. Although we acknowledge that high-income neighbourhoods can also gentrify (i.e. super-gentrification), we exclude these from our classification of state-led gentrification. Our focus is on understanding how the residential mobility patterns of former working-class neighbourhoods change, rather than how already affluent neighbourhoods advance.

In this analysis, a neighbourhood is considered to be gentrifying if: 1. In 2005 and 2014, it had an income below 0.5 standard deviations of the median income in Rotterdam; 2. The average income increased by more than 0.5 standard deviations of the median for the 2014–2019 period; 3. These neighbourhoods were part of the housing policies that aimed to attract highly educated and affluent residents to the city (Rotterdam Municipality, 2016)⁴. In total, we identified 13 state-led gentrifying neighbourhoods (see FIG. 3.2).



FIG. 3.2 Rotterdam's gentrifying neighbourhoods – Afrikaanderwijk; Bergpolder; Delfshaven; Dijkzigt; Katendrecht; Kop van Zuid; Kralingen West; Middelland; Nieuw-Crooswijk; Nieuwe Werk; Nieuwe Westen; Oude Noorden; Oude Westen.

⁴ Appendix B.2 contains an overview of various housing interventions by neighbourhood.

Notably, on average, gentrifying neighbourhoods witnessed a 90% increase in the total amount of newly built, demolished, and renovated dwellings for the 2014–2019 period when compared to the 2005–2010 period. This signifies a substantial increase in the number of altered dwellings when compared to Rotterdam as a whole, with the overall number of altered experiencing only a 20% increase during the same period.

Furthermore, neighbourhoods that were not classified as gentrifying but had an income lower than 0.5 standard deviations of the Rotterdam median income in 2005 and 2014 were classified as ‘non-gentrifying’. These neighbourhoods are considered low-income neighbourhoods with potential for gentrification, but where gentrification did not occur during our study period. Neighbourhoods with a median income higher than 0.5 standard deviations of the median of Rotterdam in 2005 or 2014 were classified as affluent neighbourhoods. Neighbourhoods that do not fit into any of these categories—predominantly business and industrial areas characterised by low population density—were excluded.

3.4 Results

3.4.1 Trends in residential mobility

FIG. 3.3 visualises the evolving patterns of residential mobility toward and within Rotterdam over time. Since each inter- or intra-urban origin location is indexed by the total number of movers in 2005, the lines represent the percentage change in movers annually. Part of the changing number of moves can be attributed to the changing number of people in origin and destination locations. To control for this, Appendix B.3 includes results from our gravity model estimation, which contains information on predicted changes in the number of relocations based on changing population sizes and distances. We found that the changing number of moves toward and within Rotterdam differs substantially from the gravity model predictions; therefore, we argue that the changing number of moves toward and within Rotterdam cannot be explained by changes in population size. Additionally, Appendix B.3 also includes the percentage changes in the number of households moving away from Rotterdam to other cities and the surrounding agglomeration. It was found that the percentage change in households leaving Rotterdam is not as substantial as those moving to Rotterdam. Further details and reflections on this are provided in the Appendix.

Examining the moves by their origins reveals that the most substantial increase in moves occurred among households relocating from core Randstad cities to Rotterdam over time. FIG. 3.3 further illustrates that households relocating from secondary Randstad cities also increasingly moved to Rotterdam. Additionally, there was an uptick in the number of moves from non-Randstad cities to Rotterdam. However, this increase is less pronounced and does not differ substantially from our gravity model predictions. On the other hand, short-distance intra-urban moves, such as those occurring within districts and neighbourhoods, generally decrease over time. Intra-urban moves within Rotterdam, beyond the neighbourhood and district scale, remained stable but showed lower growth than predicted by the gravity model. These diminishing short-distance moves contrast the increasing inter-urban residential mobility patterns, suggesting that residential mobility toward and within Rotterdam is reorientating toward increasingly inter-urban flows. This may indicate that intra-urban residential choice might become more restricted over time due to increasing demand from inter-urban movers, among other factors. These findings support both the second-hand gentrification hypothesis and the exclusionary displacement hypothesis.

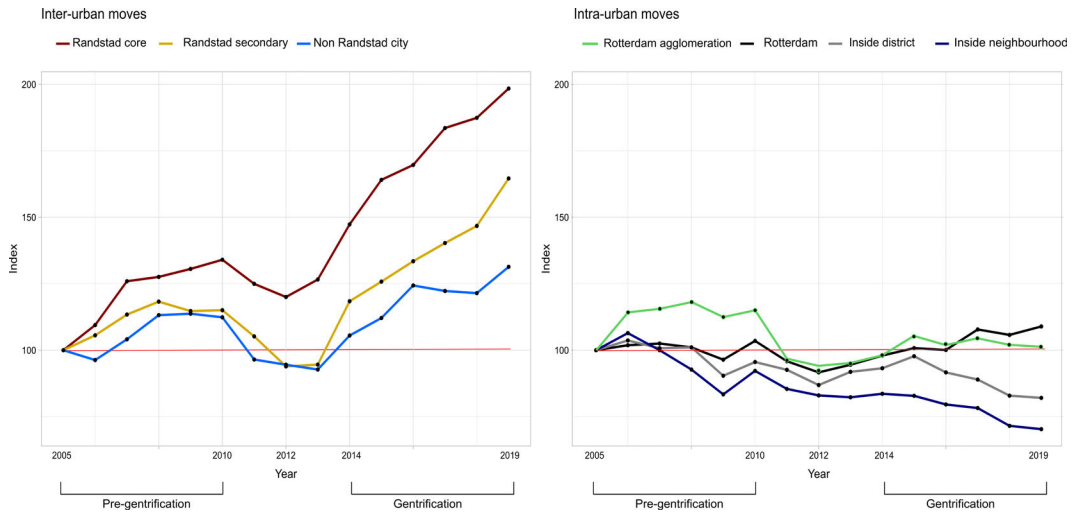


FIG. 3.3 Percentage change in the number of moves for each origin location between 2005 and 2019, indexed by the total number of moves in 2005.

To visualise the location patterns of these changing inter- and intra-urban patterns, FIG. 3.4 maps changes in the proportion of intra-urban and inter-urban moves for all neighbourhoods in Rotterdam. These maps illustrate proportional changes in the counts of inter- and intra-urban in-movers relative to the overall number of in-movers for each neighbourhood. Notably, these maps indicate that an increasing proportion of inter-urban moves is largely concentrated in the inner city and state-led gentrifying neighbourhoods, which suggests that incoming inter-urban households are less likely to relocate to the northern and southern parts of Rotterdam. On the other hand, the proportion of intra-urban moves seems to decrease in the city centre and within certain neighbourhoods around the edges of the city, painting a less concentrated pattern compared to the changes in inter-urban moves. Some inner-city neighbourhoods even experience a slight increase in the proportion of intra-urban moves. Important to note here is that the composition of households making intra-urban moves can change over time, potentially resulting in a shift that comes at a cost for low-income households. We will elaborate on this in the following sections.



FIG. 3.4 Proportional neighbourhood change in inter- and intra-urban moves for 2014–2019 compared to 2005–2010 in relation to the total number of moves.

3.4.2 Second-hand gentrification

Concerning the second-hand gentrification hypothesis, we anticipate that recent state-led gentrification in the neighbourhoods of Rotterdam will attract middle- to high-income households from other core Randstad cities. FIG. 3.5 shows the percentage point change in the share of different household types among movers between pre-gentrification (2005–2010), and gentrification (2014–2019), while differentiating according to movers' areas of origin. To discern the distinctions between core Randstad origins and other inter-urban origins, we also included both secondary Randstad city and non-Randstad city origins. To enhance our understanding of how inter-urban residential mobility patterns unfold in state-led gentrifying neighbourhoods, we distinguished these proportional changes for each type of destination neighbourhood (e.g., gentrifying, non-gentrifying, and affluent).

As expected, there was a proportional increase in middle-income working households moving from core Randstad cities to Rotterdam, which was prevalent in all destination neighbourhoods. This proportional increase is most predominant in state-led gentrifying neighbourhoods when compared to non-gentrifying neighbourhoods and affluent neighbourhoods. Gentrifying neighbourhoods are also experiencing a proportional increase in high-income working households from Randstad core cities, which is less prevalent in non-gentrifying neighbourhoods and decreasing in affluent neighbourhoods.

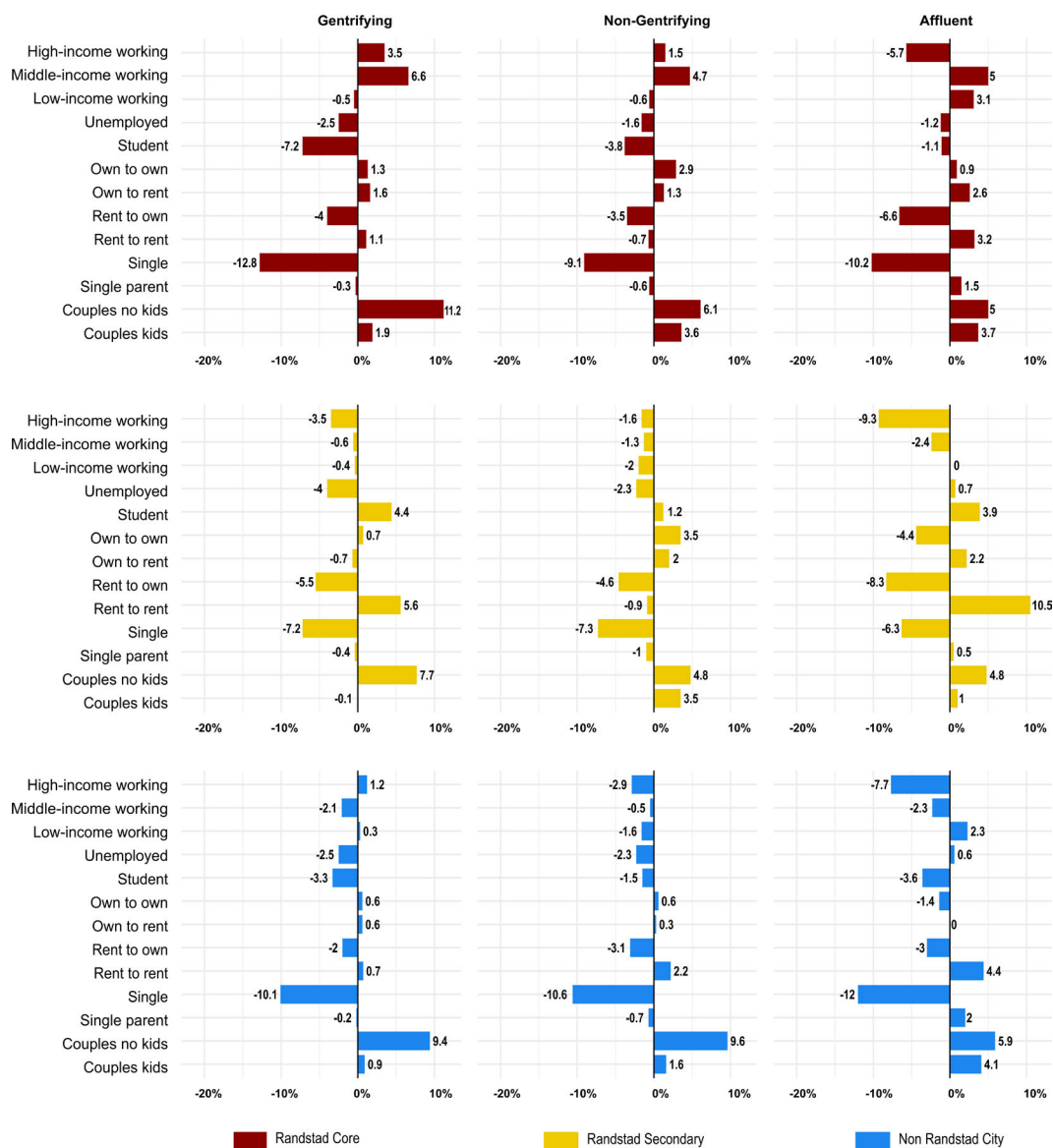


FIG. 3.5 Percentage point change between the 2005–2010 and 2014–2019 periods in terms of the share of inter-urban in-movers, segmented by economic status, tenure transition, and household composition. Proportions are divided by area of origin.

We argue that these findings are in line with the second-hand gentrification hypothesis since this growing proportion of middle- and high-income working households is non-existent for the other inter-urban categories. The increase in the number of movers from secondary Randstad cities can mostly be attributed to students. For non-Randstad cities, we observe minimal changes when compared to the other inter-urban origins.⁵

Furthermore, there has been a decrease in the proportion of households moving from rentals to owner-occupied housing over time, which is prevalent for all inter-urban origins. This mirrors the progressively competitive housing market during the later period, indicating that tenants are facing greater challenges in affording to purchase a house. In contrast, there is an increase in the proportion of households moving to Rotterdam who were homeowners in their previous location. This suggests that these households have capitalised on higher housing prices in their former areas, giving them greater opportunities to find owner-occupied housing in Rotterdam. Since these proportional increases are observed across all destination neighbourhoods, there is no distinctive pattern specific to state-led gentrifying neighbourhoods regarding the changing tenure of inter-urban movers. Considering the household composition of movers, it becomes evident that for all inter-urban origins, there has been a proportional decrease in the number of single-person households moving to the city, while the number of couples without children has increased proportionally.

In general, we observe that middle- to high-income working households play a pivotal role in the increasing number of relocations from Randstad core cities to Rotterdam—a trend not mirrored in the case of other inter-urban origins. Since this pattern is heightened in the state-led gentrifying neighbourhoods, we argue that these findings allow us to corroborate the second-hand gentrification hypothesis. However, it is important to note that although most prevalent in gentrifying neighbourhoods, non-gentrifying and affluent neighbourhoods are also experiencing a proportional increase in the number of middle-income working households from core Randstad cities, suggesting that gentrification spillovers by middle-income households are not solely restricted to gentrifying neighbourhoods.

⁵ Following a closer examination of the data, we identified that this increase is largely due to students moving from Delft to Rotterdam.

3.4.3 Exclusionary displacement

In light of the exclusionary displacement hypothesis, we expect that over time, economically vulnerable households are less likely to make intra-urban moves toward and within the state-led gentrifying neighbourhoods of Rotterdam. FIG. 3.6 presents the percentage point changes for different household types among intra-urban movers between the 2005–2010 and 2014–2019 periods. We did not identify any substantial patterns regarding moves from Rotterdam agglomeration toward Rotterdam and thus decided to not incorporate this origin category in this section.

The analysis reveals two striking counter intra-urban patterns. First, low-income working households have experienced the largest proportional decrease in inbound relocations within neighbourhoods, districts, and Rotterdam for all neighbourhood categories. Unemployed poor households also experienced a widespread proportional decrease in moves within neighbourhoods, districts, and Rotterdam. This suggests that intra-urban residential choice is becoming particularly restricted for low-income households, which likely stems from diminishing social housing and the sharp rise in housing prices within the privatised housing sector. For unemployed poor households, this decrease in in-movements is most pronounced for gentrifying neighbourhoods, while for low-income working households, this pattern is prevalent in all neighbourhood types.⁶ Second, the proportion of high-income working households moving from intra-urban origins toward gentrifying neighbourhoods has increased. Interestingly, this pattern is limited or nonexistent for the other destination categories. This implies that state-led gentrifying neighbourhoods, as opposed to non-gentrifying neighbourhoods, have become more attractive for high-income households over time.

⁶ To acknowledge the replacement versus displacement debate, we examined whether or not the decreasing number of relocations by economically vulnerable households is due to fewer low-income households residing in Rotterdam overall. We found no evidence for this since the number of low-income households residing in Rotterdam has remained stable over time.

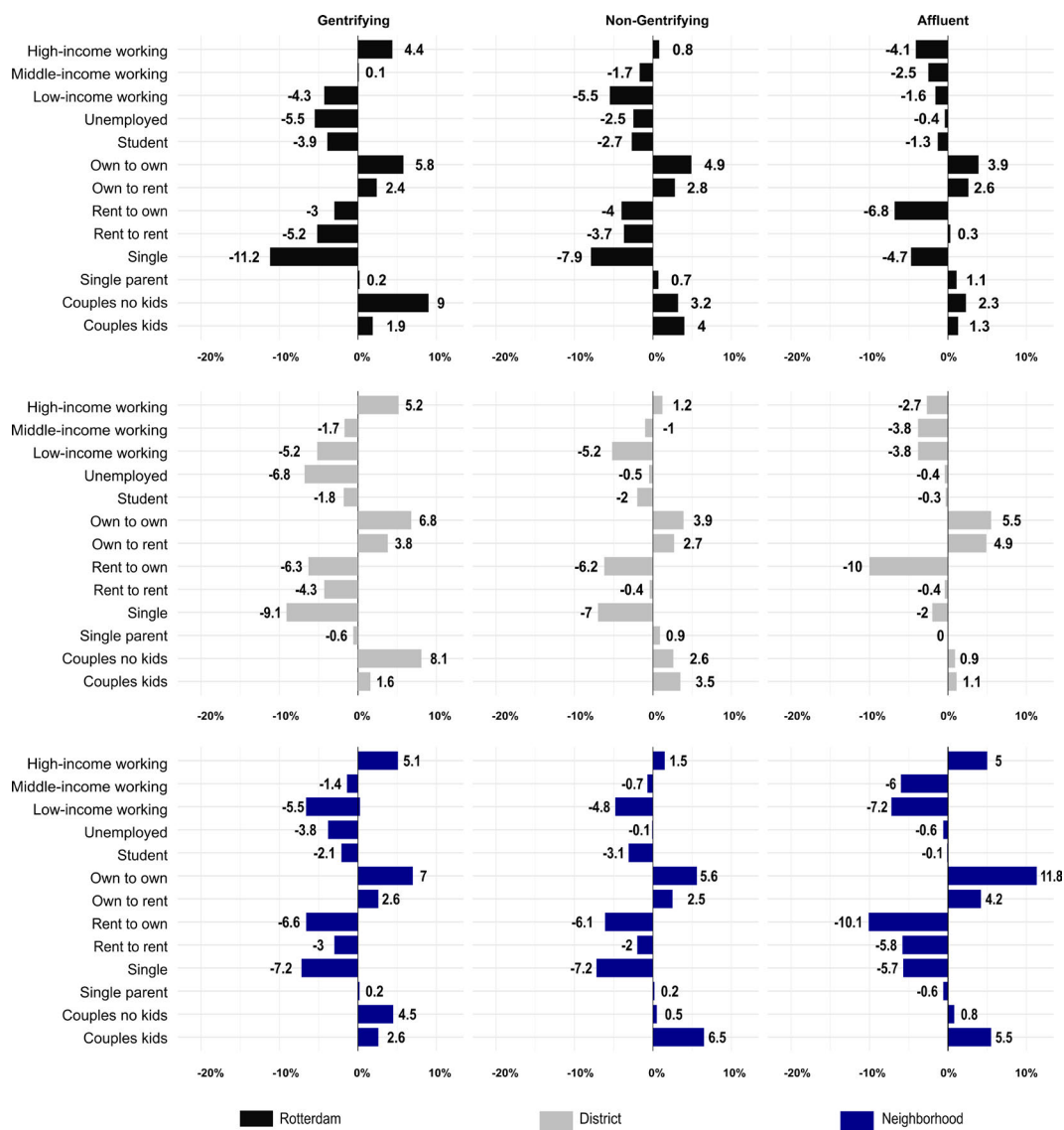


FIG. 3.6 The percentage point change between the 2005–2010 and 2014–2019 periods in terms of the share of intra-urban in-movers, segmented by economic status, tenure transition, and household composition. Proportions are divided by area of origin.

Regarding the tenure characteristics of moves, all destination neighbourhoods have experienced a substantial increase in the number of in-movers moving within the owner-occupied sector. Concurrently, moves within the rental sector, as well as moves from the rental to the owner-occupied sector, decreased. Since these patterns are prevalent for all intra-urban origins, this suggests that the lack of homeownership, and thus wealth, has become a limiting factor for intra-urban residential choice. In other words, when compared to homeowners, tenants face greater challenges in advancing their housing situation within Rotterdam. Regarding the household composition of movers, intra-urban patterns follow a similar trend to inter-urban patterns, where destination neighbourhoods have experienced a decrease in the number of single-person households moving in, while the proportion of in-movers that are couples without children increased.

To conclude, the diminishing intra-urban residential moves observed here can mostly be attributed to low-income households, single-person households, and households without prior homeownership. Given the limited financial assets of these mover categories, these findings indicate that economically vulnerable residents relocate less within Rotterdam over time. Although this diminishing proportion of low-income in-movers prevails in all neighbourhood types, it is most predominant in state-led gentrifying neighbourhoods. This leads us to conclude that economically vulnerable households have become increasingly excluded from gentrifying neighbourhoods. Thus, we corroborate the exclusionary displacement hypothesis.

3.4.4 Regression analysis

Next, this analysis examines movers' profiles in greater detail by shifting the scale of analysis from the neighbourhood to the household level. We employed two multinomial logit models, distinguishing between pre-gentrification and gentrification periods, to identify key indicators that influence the likelihood of moving into gentrifying neighbourhoods. The dependent variable represents the likelihood of a household moving to a state-led gentrifying neighbourhood or an affluent neighbourhood, with non-gentrifying neighbourhoods included as the reference category. Control variables included household characteristics, prior tenure situation, and the year of the move. In this analysis, we also included the possession of a college degree by the household head as a control variable in the model. Since this variable contains a substantial number of missing values, we included a control for households without education information.

TABLE 3.1 includes the model results. In general, both models predict that households with higher education, those born in the Netherlands, and single-person households exhibit a higher probability of moving to a state-led gentrifying neighbourhood when compared to a non-gentrifying one, all things being equal. More interesting is that in the 2014–2019 model, high-income households are significantly more likely to move to state-led gentrifying neighbourhoods compared to low-income households, while in the 2005–2010 model, low-income households are significantly more likely to move to state-led gentrifying neighbourhoods when compared to middle-income households. This indicates that over time, low-income households are less likely to move to the state-led gentrifying neighbourhoods of Rotterdam compared to the non-gentrifying neighbourhoods. This aligns with the exclusionary displacement hypothesis, indicating that low-income households are increasingly excluded from the gentrifying neighbourhoods that were formerly accessible to them.

Continuing with the varying origin locations, the output of the 2014–2019 model identifies that when moving to a state-led gentrifying neighbourhood compared to a non-gentrifying neighbourhood, holding all other variables constant, one is significantly more likely to have moved from a core Randstad city as opposed to Rotterdam itself (Odds Ratio = 1.26). Interestingly, this relationship is not significant for the 2005–2010 model, implying that the gentrification in Rotterdam is subject to core Randstad moves. This pattern also prevails in affluent neighbourhoods, yet with a lower marginal effect in the second period. During the 2014–2019 period, households relocating from secondary cities within the Randstad also exhibited a significantly higher likelihood of moving to state-led gentrifying neighbourhoods when compared to non-gentrifying ones, in contrast to the 2005–2010 period. Overall, these changing ratios are in line with earlier findings suggesting that residential mobility patterns re-orientate from an intra-urban to an inter-urban scale during the gentrification process, with low-income households being less likely to move to state-led gentrifying neighbourhoods over time.

TABLE 3.1 Multinomial logit regression analysis for different periods.

Predictors	Ref = Non-gentrifying	Y = Gentrifying		Y = Affluent		Y = Gentrifying		Y = Affluent	
		Phase 1 (2005–2010)		Phase 1 (2005–2010)		Phase 2 (2014–2019)		Phase 2 (2014–2019)	
		Odds ratios	CI	Odds ratios	CI	Odds ratios	CI	Odds ratios	CI
	(Intercept)	0.47***	0.36 – 0.61	0.55***	0.42 – 0.73	0.61***	0.54 – 0.71	0.56***	0.50 – 0.64
	Age	1.00	0.99 – 1.00	1.00	1.00 – 1.00	0.99***	0.98 – 0.99	1.00	1.00 – 1.00
Length of last residence Ref = More than 3 years	Less than 1 year	1.01	0.93 – 1.11	0.86**	0.79 – 0.94	0.98	0.93 – 1.04	0.92*	0.87 – 0.97
	Between 1 and 3 years	1.01	0.93 – 1.09	0.91	0.85 – 0.99	1.01	0.97 – 1.06	0.93**	0.90 – 0.97
Tenure of last residence Ref = Owner occupancy	Rent	1.43***	1.29 – 1.57	0.84***	0.77 – 0.91	1.08	1.01 – 1.15	0.82***	0.78 – 0.86
Income Ref = Low income	Middle income	0.89*	0.83 – 0.96	1.26***	1.17 – 1.35	0.93	0.88 – 0.98	1.13***	1.08 – 1.19
	High income	1.03	0.93 – 1.13	2.37***	2.16 – 2.60	1.33***	1.25 – 1.43	1.93***	1.81 – 2.05
Household composition Ref = Single-person household	Couples with no children	0.82***	0.77 – 0.87	0.95	0.89 – 1.01	0.88***	0.84 – 0.92	1.02	0.98 – 1.07
	Couples with children	0.53***	0.47 – 0.59	1.13*	1.03 – 1.25	0.48***	0.45 – 0.51	0.90***	0.86 – 0.95
	Single parents	0.58***	0.52 – 0.65	0.88*	0.78 – 0.98	0.51***	0.48 – 0.56	0.84***	0.79 – 0.90
Higher education Ref = No	Yes	2.76***	2.60 – 2.93	2.40***	2.26 – 2.55	2.86***	2.72 – 3.00	2.02***	1.93 – 2.11
Country of birth Ref = The Netherlands	Dutch Antilles and Aruba	0.69***	0.62 – 0.76	0.43	0.38 – 0.48	0.62***	0.56 – 0.68	0.53***	0.49 – 0.59
	Morocco	1.00	0.85 – 1.17	0.55***	0.46 – 0.67	1.06	0.93 – 1.20	0.44***	0.38 – 0.50
	Suriname	0.73***	0.65 – 0.83	0.51***	0.45 – 0.58	0.81***	0.73 – 0.90	0.61***	0.55 – 0.67
	Turkey	0.76***	0.64 – 0.90	0.40***	0.33 – 0.48	0.92	0.80 – 1.05	0.46***	0.40 – 0.52
	Other non-Western country	0.75***	0.69 – 0.81	0.60***	0.55 – 0.66	0.76***	0.71 – 0.81	0.75***	0.70 – 0.80
	Other Western country	0.90***	0.81 – 1.00	0.77***	0.69 – 0.86	0.90	0.81 – 1.00	0.83***	0.77 – 0.89
Employment Ref = Employed	Social benefit recipient	0.91	0.79 – 1.05	1.17	1.02 – 1.35	0.92	0.84 – 1.01	1.01	0.93 – 1.09
	Student	1.15***	1.07 – 1.24	1.19***	1.10 – 1.29	1.17***	1.10 – 1.26	1.15***	1.07 – 1.23
	Retired	0.90	0.65 – 1.25	1.26	0.93 – 1.69	1.02	0.86 – 1.22	1.28***	1.12 – 1.47
Origin Ref = Within Rotterdam (beyond neighborhood and district)	District	0.88**	0.81 – 0.94	0.71***	0.66 – 0.77	0.90**	0.85 – 0.96	0.77***	0.72 – 0.81
	Neighborhood	1.23***	1.13 – 1.34	0.96	0.87 – 1.05	1.07	1.00 – 1.15	1.18***	1.11 – 1.26
	Non-Randstad city	0.92	0.82 – 1.03	0.78***	0.69 – 0.88	1.08	0.99 – 1.18	1.00	0.91 – 1.09
	Randstad core	0.96	0.86 – 1.07	0.90	0.81 – 1.01	1.26***	1.17 – 1.36	1.17***	1.09 – 1.26
	Randstad secondary	0.85*	0.74 – 0.97	0.93	0.81 – 1.07	1.37***	1.26 – 1.49	1.12	1.03 – 1.22
	Rotterdam agglomeration	0.71***	0.64 – 0.79	0.86*	0.77 – 0.95	0.62***	0.57 – 0.68	0.88***	0.82 – 0.94
	Low-density area	0.89*	0.81 – 0.98	0.93	0.85 – 1.03	0.88**	0.81 – 0.95	1.11*	1.03 – 1.19
Observations		116082				209949			
McFadden's R ²		0.065				0.063			

Source: CBS, calculations by authors

3.5 Conclusion and Discussion

Through an examination of detailed longitudinal register data for the Netherlands, our analyses identified how residential mobility patterns toward and within Rotterdam have changed over time in relation to state-led gentrification. Rather than solely focusing on the demographic shifts inside neighbourhoods, as commonly studied in the literature, our focus was on understanding how the different geographical origins of in-movers and households' socioeconomic characteristics shape residential mobility patterns toward and within Rotterdam over time. Two central hypotheses have been presented: 1. Second-hand gentrification; 2. Exclusionary displacement.

For the second-hand gentrification hypothesis, we expected to see an increase in the proportion of middle- to high-income households moving from other core Randstad cities to Rotterdam over time, especially to state-led gentrifying neighbourhoods. This hypothesis stems from earlier work by Loumeau and Russo (2022) and Ocejó (2018) who found that the advanced gentrification in core cities enhances gentrification in neighboring secondary cities. In this study, we observed that inter-urban gentrification spillovers are also predominant in Rotterdam, a primary city, due to its relatively early stage of gentrification compared to other major cities in the Netherlands. The recent state-led gentrifying policies of Rotterdam Municipality have set off gentrification in several inner-city neighbourhoods, making these neighbourhoods—but also Rotterdam overall—more attractive for affluent households. We observed that over time, there was a substantial increase in the number of movers moving from core Randstad cities to Rotterdam, of which the majority is attributed to middle- to high-income households. By distinguishing between destination neighbourhoods, we found that this pattern is intensified in state-led gentrifying neighbourhoods, implying that these neighbourhoods experience the most pronounced impacts of inter-urban gentrification spillover effects from other core Randstad cities. Thus, to answer our first research question—**How do residential mobility patterns toward Rotterdam unfold in light of the state-led gentrification process and does this support the hypothesis of second-hand gentrification?**—we find that state-led gentrification in Rotterdam attracts middle and upper-class households from more advanced gentrified core cities, thereby supporting the second-hand gentrification hypothesis. Our findings align with existing theories on gentrification spill-overs (e.g., Booi, 2023; Ocejó, 2019), and further complement them by highlighting that gentrification spill-overs also prevail between core cities due to variegating temporalities of gentrification.

Regarding our second hypothesis, we expected that economically vulnerable residents in Rotterdam have becoming increasingly excluded from moving to and within gentrifying neighbourhoods. The financialization of the housing stock and decrease in social housing due to urban restructuring policies implies that economically vulnerable residents become stuck in their contemporary residential homes, unable to move toward another residential environment. Our results indicate that predominantly low-income employed and unemployed households, as well as households without a history of homeownership, move less frequently within the city, with this decrease being most pronounced in state-led gentrifying neighbourhoods. Thus, to answer our second research question—**How does state-led gentrification modify the residential opportunities of the working class within Rotterdam, and does this support the hypothesis of exclusionary displacement?**—we find that state-led gentrification in Rotterdam neighbourhoods increasingly restricts economically disadvantaged households from moving in to the gentrifying neighbourhood, corroborating the exclusionary displacement hypothesis. The increased unaffordability of Rotterdam was also identified by Custers and Engbersen (2022), who cautioned that contemporary Rotterdam has also become unaffordable for the emerging middle-class. In line with this, we find that middle-income households move less within Rotterdam over time. Among those already residing in Rotterdam, high-income households and homeowners more frequently move toward and within state-led gentrifying neighbourhoods, reflecting that these households utilise their capital and mortgage credit to buy housing in upcoming neighbourhoods (Aalbers, 2007; Wyly & Hammel, 1999).

In sum, we found that short-distance intra-urban moves declined over time, while inter-urban moves increased substantially. Therefore, we conclude that state-led gentrification in Rotterdam reorientates moves from an intra-urban to an inter-urban scale, where short-distance moves by working-class households are increasingly replaced by long-distance moves by higher socioeconomic classes. Although we are not the first to acknowledge inter-urban gentrification spill-overs, we are, to our knowledge, the first to map changing residential mobility patterns beyond the metropolitan scale with such detail. As our research relies on large-scale detailed longitudinal register data, which is not a given in gentrification research, we build a comprehensive picture of urban transformations in Rotterdam. Additionally, our analysis focuses on the movement of people between core cities, differing from the work of Ocejo (2019) and Loumeau & Russo (2022), who emphasise spill-overs to secondary cities. Thus, our findings reveal that the variegating temporalities of gentrification in Dutch cities matter in light of second-hand gentrification, which in the Dutch context has evolved into gentrification-induced displacement on an inter-urban scale. Noteworthy is that the planetary rent gap literature has long recognised the flows of capital between places on a global level (e.g. Smith, 1979; Slater, 2018).

However, those involved in such global spatial fixes represent an elite minority, comprising only a small fraction of society. This research shifts the focus to the movement of people by examining the impact of gentrification on ordinary life-course flows at the national level. This approach aligns with Robinson's (2013) call for recognizing the contributions of ordinary cities to urban theory. Our findings on an "ordinary city" provide valuable insights into global urban processes by highlighting experiences and strategies that challenge dominant narratives, thereby contributing to the scholarship on gentrification.

To further advance our understanding of the spillover effects of gentrification, we propose two avenues for future research. First, since our research has primarily focused on capturing how aggregated moving patterns have changed over time, we provide little insight into how past experiences and life course events affect residential mobility behaviour. We propose that future research should capture the sequence of moves used by individuals to identify the varying neighbourhood residence pathways of different socioeconomic groups. By implementing an individual-level analysis, one can gain a much deeper understanding of why a household moves between or within cities, thereby capturing aspects such as whether a move should be understood as return migration or the result of housing insecurity. Second, our analysis focused on state-led gentrification in low-income neighbourhoods, overlooking the gentrification of non-working class neighbourhoods and super-gentrification. Future research should consider more advanced stages of gentrification when studying second-hand gentrification. This in turn will provide a more comprehensive understanding of how the variegated temporalities of gentrification between cities impact inter-urban gentrification spill-overs.

References

- Aalbers, M. B. (2007). Geographies of housing finance: The mortgage market in Milan, Italy. *Growth and Change*, 38(2), 174–199. <https://doi.org/10.1111/j.1468-2257.2007.00361.x>
- Arkins, M. C., & French, B. E. (2023). Demolition, division and displacement: Examining the preservation of whiteness in Rotterdam municipal housing policy. *Critical Sociology*. Advance online publication. <https://doi.org/10.1177/08969205231176837>
- Arundel, R., & Doling, J. (2017). The end of mass homeownership? Changes in labour markets and housing tenure opportunities across Europe. *Journal of Housing and the Built Environment*, 32(4), 649–672. <https://doi.org/10.1007/s10901-016-9523-0>
- Arundel, R., & Hochstenbach, C. (2020). Divided access and the spatial polarization of housing wealth. *Urban Geography*, 41(4), 497–523. <https://doi.org/10.1080/02723638.2019.1671571>
- Bakker, B. F. M., Van Rooijen, J., & Van Toor, L. (2014). The system of social statistical datasets of Statistics Netherlands: An integral approach to the production of register-based social statistics. *Statistical Journal of the IAOS*, 30(4), 411–424. <https://doi.org/10.3233/SJI-140803>
- Booi, H. (2023). Spillover of urban gentrification and changing suburban poverty in the Amsterdam metropolis. *Urban Studies*. Advance online publication. <https://doi.org/10.1177/00420980231192232>
- Butler, T., Hamnett, C., & Ramsden, M. (2008). Inward and upward: Marking out social class change in London, 1981–2001. *Urban Studies*, 45(1), 67–88. <https://doi.org/10.1177/0042098007085100>
- Buzar, S., Ogden, P. E., & Hall, R. (2005). Households matter: The quiet demography of urban transformation. *Progress in Human Geography*, 29(4), 413–436. <https://doi.org/10.1191/0309132505ph559oa>
- CBS. (2024). *Randstad*. Statistics Netherlands. <https://www.cbs.nl/nl-nl/nieuws/2008/15/de-randstad-behoort-tot-grootste-economische-regio-s-van-europa/randstad>
- Charles, S. L. (2013). Understanding the determinants of single-family residential redevelopment in the inner-ring suburbs of Chicago. *Urban Studies*, 50(8), 1505–1522. <https://doi.org/10.1177/0042098012465909>
- Clark, W. A. V., & Davies Withers, S. (1999). Changing jobs and changing houses: Mobility outcomes of employment transitions. *Journal of Regional Science*, 39(4), 653–673. <https://doi.org/10.1111/0022-4146.00152>
- Clark, W. A. V., & Dieleman, F. M. (1996). *Households and housing: Choice and outcomes in the housing market*. Transaction Publishers.
- Custers, G., & Engbersen, G. (2022). The urban class structure: Class change and spatial divisions from a multidimensional class perspective. *Urban Geography*, 43(6), 917–943. <https://doi.org/10.1080/02723638.2021.1970266>
- Ding, L., Hwang, J., & Divringi, E. (2016). Gentrification and residential mobility in Philadelphia. *Regional Science and Urban Economics*, 61, 38–51. <https://doi.org/10.1016/j.regsciurbeco.2016.09.004>
- Dragan, K., Ellen, I. G., & Glied, S. (2020). Does gentrification displace poor children and their families? New evidence from Medicaid data in New York City. *Regional Science and Urban Economics*, 83, 103481. <https://doi.org/10.1016/j.regsciurbeco.2020.103481>
- Feijten, P., & Van Ham, M. (2007). Residential mobility and migration of the divorced and separated. *Demographic Research*, 17, 623–654. <https://doi.org/10.4054/DemRes.2007.17.21>
- Freeman, L., & Braconi, F. (2004). Gentrification and displacement: New York City in the 1990s. *Journal of the American Planning Association*, 70(1), 39–52. <https://doi.org/10.1080/01944360408976337>
- Glaeser, E. L., & Maré, D. C. (2001). Cities and skills. *Journal of Labor Economics*, 19(2), 316–342. <https://doi.org/10.1086/319563>
- Hackworth, J., & Smith, N. (2001). The changing state of gentrification. *Tijdschrift voor Economische en Sociale Geografie*, 92(4), 464–477. <https://doi.org/10.1111/1467-9663.00172>
- Haffner, M. E., & Boumeester, H. J. F. M. (2010). The affordability of housing in the Netherlands: An increasing income gap between renting and owning? *Housing Studies*, 25(6), 799–820. <https://doi.org/10.1080/02673037.2010.511154>
- Hochstenbach, C. (2017). State-led gentrification and the changing geography of market-oriented housing policies. *Housing, Theory and Society*, 34(4), 399–419. <https://doi.org/10.1080/14036096.2016.1271825>

- Hochstenbach, C. (2022). Landlord elites on the Dutch housing market: Private landlordism, class, and social inequality. *Economic Geography*, 98(4), 327–354. <https://doi.org/10.1080/00130095.2022.2063390>
- Hochstenbach, C., & Musterd, S. (2018). Gentrification and the suburbanization of poverty: Changing urban geographies through boom and bust periods. *Urban Geography*, 39(1), 26–53. <https://doi.org/10.1080/02723638.2016.1276718>
- Hochstenbach, C., Musterd, S., & Teernstra, A. B. (2015). Gentrification in Amsterdam: Assessing the importance of context. *Population, Space and Place*, 21(8), 754–770. <https://doi.org/10.1002/psp.1862>
- Hochstenbach, C., & Van Gent, W. P. C. (2015). An anatomy of gentrification processes: Variegating causes of neighbourhood change. *Environment and Planning A: Economy and Space*, 47(7), 1480–1501. <https://doi.org/10.1177/0308518X15595771>
- Hooimeijer, P., & Oskamp, A. (1996). A simulation model of residential mobility and housing choice. *Netherlands Journal of Housing and the Built Environment*, 11(3), 313–336. <https://doi.org/10.1007/BF02496534>
- Janssen, K. M. J., Cottineau, C., Kleinhans, R., & van Bueren, E. (2023). Gentrification and the origin and destination of movers: A systematic review. *Tijdschrift voor Economische en Sociale Geografie*, 114(4), 300–318. <https://doi.org/10.1111/tesg.12568>
- Kleinhans, R. (2019). Uncovering the Janus head of forced residential relocation. In K. Scanlon (Ed.), *The Routledge handbook of housing policy and planning* (pp. 317–329). Routledge.
- Lees, L. (2008). Gentrification and social mixing: Towards an inclusive urban renaissance? *Urban Studies*, 45(12), 2449–2470. <https://doi.org/10.1177/0042098008097099>
- Loumeau, G., & Russo, A. (2022). Second-hand gentrification: Theory and evidence from high-speed rail extensions. *Urban Studies*. Advance online publication. <https://doi.org/10.1177/00420980221126888>
- Marcuse, P. (1985). Gentrification, abandonment, and displacement: Connections, causes, and policy responses in New York City. *Washington University Journal of Urban and Contemporary Law*, 28, 195–240.
- Markley, S. (2018). Suburban gentrification? Examining the geographies of New Urbanism in Atlanta's inner suburbs. *Urban Geography*, 39(4), 606–630. <https://doi.org/10.1080/02723638.2017.1354781>
- Mazanti, B. (2007). Choosing residence, community and neighbours: Theorizing families' motives for moving. *Geografiska Annaler: Series B, Human Geography*, 89(1), 53–68. <https://doi.org/10.1111/j.1468-0467.2007.00239.x>
- McKinnish, T., Walsh, R., & White, T. K. (2010). Who gentrifies low-income neighbourhoods? *Journal of Urban Economics*, 67(2), 180–193. <https://doi.org/10.1016/j.jue.2009.07.006>
- Modai-Snir, T., & Van Ham, M. (2020). Reordering, inequality and divergent growth: Processes of neighbourhood change in Dutch cities. *Regional Studies*, 54(12), 1668–1679. <https://doi.org/10.1080/00343404.2019.1707797>
- Mulder, C. H., & Hooimeijer, P. (1999). Residential relocations in the life course. In L. van Wissen & P. Dykstra (Eds.), *Population issues: An interdisciplinary focus* (pp. 159–186). Springer. https://doi.org/10.1007/978-94-011-4389-9_7
- Musterd, S., Hochstenbach, C., & Boterman, W. (2020). Ripples of structural economic transformation: The changing social geographies of Dutch metropolitan regions. *Applied Geography*, 116, 102151. <https://doi.org/10.1016/j.apgeog.2020.102151>
- Newman, K., & Wyly, E. K. (2006). The right to stay put, revisited: Gentrification and resistance to displacement in New York City. *Urban Studies*, 43(1), 23–57. <https://doi.org/10.1080/00420980500388710>
- Ocejo, R. E. (2019). From apple to orange: Narratives of small city migration and settlement among the urban middle class. *Sociological Perspectives*, 62(3), 402–425. <https://doi.org/10.1177/0731121418821547>
- Paccoud, A., & Mace, A. (2018). Tenure change in London's suburbs: Spreading gentrification or suburban upscaling? *Urban Studies*, 55(6), 1313–1328. <https://doi.org/10.1177/0042098016684317>
- Permentier, M. (2018). *Dynamiek in de kansrijke wijken* (Nr. 4181). Gemeente Rotterdam.
- Rérat, P. (2012). Gentrifiers and their choice of housing: Characteristics of the households living in new developments in Swiss cities. *Environment and Planning A*, 44(1), 221–236. <https://doi.org/10.1068/a44185>
- Robinson, J. (2013). *Ordinary cities: Between modernity and development*. Routledge.

- Ronald, R., & Dol, K. (2011). Housing in the Netherlands before and after the global financial crisis. In R. Forrest & N. M. Yip (Eds.), *Housing markets and the global financial crisis: The uneven impact on households* (pp. 177–193). Edward Elgar. <https://doi.org/10.4337/9780857936389.00020>
- Rose, D. (1984). Rethinking gentrification: Beyond the uneven development of Marxist urban theory. *Environment and Planning D: Society and Space*, 2(1), 47–74. <https://doi.org/10.1068/d020047>
- Rotterdam Municipality. (2016). *Woonvisie Rotterdam: Koers naar 2030, agenda tot 2020*. <https://www.rotterdam.nl/wonen-leven/woon%20visie/DEFINITIEF-WoonvisieRotterdam-2030-dd-raad-15-december-2016.pdf>
- Rotterdam Municipality. (2023). *Woonvisie: Een koers tot 2040 en acties voor de komende 5 jaar*. <https://www.woneninrotterdam.nl/wp-content/uploads/2023/10/Rotterdamse-Woonvisie-102023.pdf>
- Slater, T. (2009). Missing Marcuse: On gentrification and displacement. *City*, 13(2–3), 292–311. <https://doi.org/10.1080/13604810902982250>
- Slater, T. (2018). Rent gaps. In L. Lees & M. Phillips (Eds.), *Handbook of gentrification studies* (pp. 119–133). Edward Elgar. <https://doi.org/10.4337/9781785361739.00015>
- Smith, N. (1979). Toward a theory of gentrification: A back to the city movement by capital, not people. *Journal of the American Planning Association*, 45(4), 538–548. <https://doi.org/10.1080/01944367908977002>
- Smith, N. (1987). Gentrification and the rent gap. *Annals of the Association of American Geographers*, 77(3), 462–465. <https://doi.org/10.1111/j.1467-8306.1987.tb00171.x>
- Uitermark, J., & Duyvendak, J. W. (2008). Civilising the city: Populism and revanchist urbanism in Rotterdam. *Urban Studies*, 45(7), 1485–1503. <https://doi.org/10.1177/0042098008090685>
- Uitermark, J., Duyvendak, J. W., & Kleinhans, R. (2007). Gentrification as a governmental strategy: Social control and social cohesion in Hoogvliet, Rotterdam. *Environment and Planning A*, 39(1), 125–141. <https://doi.org/10.1068/a39136>
- Uitermark, J., Hochstenbach, C., & Groot, J. (2023). Neoliberalization and urban redevelopment: The impact of public policy on multiple dimensions of spatial inequality. *Urban Geography*, 1–24. <https://doi.org/10.1080/02723638.2023.2235959>
- Van Criekingen, M. (2008). Towards a geography of displacement: Moving out of Brussels' gentrifying neighbourhoods. *Journal of Housing and the Built Environment*, 23(3), 199–213. <https://doi.org/10.1007/s10901-008-9110-3>
- Van den Berg, M. (2012). Femininity as a city marketing strategy: Gender bending Rotterdam. *Urban Studies*, 49(1), 153–168. <https://doi.org/10.1177/0042098010397392>
- Van den Berg, M. (2017). *Gender in the post-Fordist urban*. In *The gender revolution in planning and policy* (pp. 105–122). Palgrave Macmillan. https://doi.org/10.1057/978-1-137-59074-9_6
- Van Gent, W., Hochstenbach, C., & Uitermark, J. (2018). Exclusion as urban policy: The Dutch 'Act on extraordinary measures for urban problems'. *Urban Studies*, 55(11), 2337–2353. <https://doi.org/10.1177/0042098017736259>
- Van Ham, M., Uesugi, M., Tammaru, T., Manley, D., & Janssen, H. (2020). Changing occupational structures and residential segregation in New York, London and Tokyo. *Nature Human Behaviour*, 4(11), 1124–1134. <https://doi.org/10.1038/s41562-020-0926-6>
- Van Swaaningen, R. (2005). Public safety and the management of fear. *Theoretical Criminology*, 9(3), 289–305. <https://doi.org/10.1177/1362480605054810>
- Wyly, E. K., & Hammel, D. J. (1999). Islands of decay in seas of renewal: Housing policy and the resurgence of gentrification. *Housing Policy Debate*, 10(4), 711–771. <https://doi.org/10.1080/10511482.1999.9521348>

This city's made for the doers
The movers
Shakers
Health food reviewers

Doers – Bodega

4 Residential Pathways

Understanding Moving Dynamics in Gentrifying Neighbourhoods through a Multi-Dimensional Sequence Analysis

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ABSTRACT Gentrification and its effects on residential mobility have been widely studied, yet little attention has been given to the diverse socio-spatial trajectories of individuals moving into or out of gentrifying neighbourhoods. This study addresses this gap by using detailed register data to examine longitudinal residential mobility patterns within a gentrifying city. We employ a multi-channel sequence analysis to track the movement trajectories of individuals within the Rotterdam region, focusing specifically on those who relocated to or from neighbourhoods identified as gentrifying by policymakers. Consequently, we examine how these trajectories intersect with other life-course characteristics of individuals to construct a typology of the diverse residential profiles emerging within the gentrification process. Our findings showcase that residential mobility in gentrifying neighbourhoods does not follow a straightforward vacancy chain of low-income households moving out and gentrifiers moving in. Instead, gentrifiers increasingly move within these neighbourhoods, gradually limiting the housing opportunities of low-income individuals.

4.1 Introduction

The transformation of inner-city, working-class neighbourhoods into middle- and upper-middle-class residential areas is widely described as gentrification. Over time, scholars from various disciplines have explored the complex and multifaceted nature of this process. As gentrification involves the influx of relatively affluent newcomers and the displacement of low-income households, it is closely tied to the study of residential mobility and population dynamics (Rérat et al., 2010). While extensive research efforts have been dedicated to understanding the evolving residential dynamics within gentrifying neighbourhoods, the gentrification literature often limits itself to two distinct types of movers, namely, the 'gentrifiers' and 'displacees' (Janssen et al., 2023). Although this characterisation aligns with the conceptual framework of gentrification, it provides little insight into the different types of movers and how the moves to and from gentrifying neighbourhoods fit within the life-course trajectory of an individual. Indeed, we have an extensive understanding of wealth accumulation through housing and residential moves over the life course at the individual level (Modigliani, 1988) and an understanding of gentrification as a process of wealth accumulation through the lens of rent gap theory at the neighbourhood level (Smith, 1979). Unfortunately, these two streams of literature rarely intersect, and we lack scholarship on how individual life-course trajectories, relocation, and social mobility contribute to and coalesce into the collective phenomenon of gentrification. In other words, by focusing solely on these two distinct and cross-sectional categories of movers, the complexity and diversity of residential mobility patterns within gentrifying neighbourhoods – and the gentrification process itself – are often overlooked. Recognising the heterogeneity of residential mobility patterns that exist in a gentrifying neighbourhood and understanding how they fit within individual life-course trajectories is crucial for a more nuanced understanding of gentrification dynamics.

In 2002, D. Smith argued that gentrification-related relocations should be understood in light of a migration framework, acknowledging how residential moves relate to various transitions in one's life course. In this respect, we aim to contribute to the field of gentrification studies by applying a longitudinal approach, focusing on the residential trajectories of individuals moving to and from gentrifying neighbourhoods. Thus, instead of relying on static snapshots in time and categorising movers solely as gentrifiers or displacees, we take a broader approach by examining individual residential pathways over time. This approach allows us to explore how these trajectories align with shifts in individual social and demographic characteristics, as well as personal transitions, i.e. how the spatio-temporal aspects

of their life course interact with the situated context of gentrification. Our goal is to unravel the diverse but also co-existing types of residential movers entering and leaving gentrifying neighbourhoods. Subsequently, we examine how residential pathways, operationalised as deceda; sequences of neighbourhood residence, fit within a gentrification framework and look for evidence of diversity among typical gentrifier and displacee trajectories.

We address the following research question: **How do the life-course trajectories of individuals moving into and out of gentrifying neighbourhoods align with academic conceptualisations of gentrifiers and displaced residents?**

In this study, we use multi-channel sequence analysis to track individuals from the Rotterdam metropolitan region who moved to or from neighbourhoods designated as gentrifying in Rotterdam housing policy documents (Rotterdam Municipality, 2003, 2007, 2016). By relying on the detailed longitudinal register data provided by the Central Bureau of Statics (CBS) of the Netherlands, we can characterise the yearly residential location of each individual for a period of ten years. We examine how these trajectories intersect with individual economic, social, and demographic features and their evolution to construct an overview of the diverse residential profiles emerging within the gentrification process. By providing a thorough theoretical framework on typologies of movers related to the gentrification process in our literature review, we assess whether residential trajectories from the gentrifying neighbourhoods in Rotterdam match the mover typologies proposed in the gentrification literature.

4.2 Literature framework

4.2.1 Gentrification

Scholars have examined gentrification from diverse angles: some focus on the role of capital flows and housing investments (Lees et al., 2016; Smith, 1979), while others explore shifts in population dynamics and consumption patterns (Karsten, 2003). Recently, housing restructuring and new financial systems in many Western contexts have led to a significant rise in housing prices and investment. Investors and developers speculate on gentrification, with profit emerging as a major driving force behind the phenomenon (Hamnett, 2021).

Early accounts of gentrification, most notably Clay's (1979) staged model, described neighbourhood change as a linear sequence moving from marginal pioneers to full-scale reinvestment and eventual transformation. While this framework remains influential for highlighting the visible progression of gentrification, it has been criticised for presenting the process as too predictable and neighbourhood-bound. More recent work offers a more dynamic interpretation that situates gentrification within the broader context of fundamental class transformations at the city-wide level (Hamnett, 2021). From this perspective, gentrification is not an isolated event but a spatial manifestation of the transition from an industrial to a post-industrial economy. The decline of manufacturing and the traditional manual working class, alongside the expansion of a highly educated professional and managerial middle class, has reshaped the urban labour market and generated the supply of "potential gentrifiers." Hamnett's framework also provides a more nuanced account of neighbourhood change by moving beyond a simple focus on direct displacement. While forced displacement is a significant and damaging outcome, Hamnett stresses the importance of distinguishing it from long-term replacement. Over the course of decades, the workforce of a city naturally turns over through retirement and labour market entry. If the new entrants have a markedly different class profile from those leaving, neighbourhoods can be transformed "imperceptibly" through gradual replacement. Complementing this is what Marcuse defines "exclusionary displacement," in which rising housing costs and shifting amenities effectively prevent lower-income groups or their successors from accessing areas they once inhabited (Slater, 2009). In this sense, gentrification is less about linear stages of development and more about the deep, city-wide restructuring of class relations that gradually reshapes the urban housing market.

In contemporary Dutch cities, strong tenant protection laws make direct displacement less common, while exclusionary forms of gentrification have become the most prevalent manifestation of displacement. Moreover, the substantial share of social housing in the Netherlands allows policymakers and housing associations to actively shape the pace and direction of gentrification, either stimulating or constraining it through targeted interventions. In this context, gentrification emerges not only as a consequence of class transformation and traditional economic dynamics such as rent gaps, but also as a process deeply influenced by local and regional policies that restructure the housing stock to attract financially stable, middle-class households to formerly disadvantaged neighbourhoods (Uitermark et al., 2007).

4.2.2 Residential mobility

Research on residential mobility generally concludes that households tend to relocate when their current housing no longer satisfies their needs, signalling a state of housing disequilibrium (Clark & Ledwith, 2006). Earlier models of life-course theory, most notably Mulder and Hooimeijer (1999), conceptualised mobility as a largely standardized process: life events (e.g. partnership formation, childbirth, or job change) trigger mismatches between household needs and housing, which in turn motivate a move to restore balance. Their framework usefully distinguished between resources and restrictions at the individual level and opportunities and constraints at the structural level, but it has been criticised for treating these influences as relatively one-directional and event-driven.

More recent work reframes this relationship in a more dynamic and relational way. Coulter et al. (2016) argue that mobility and immobility should be understood as “relational practices” that unfold over the life-course. Rather than viewing moves as discrete responses to life events, they propose a recursive process in which mobility itself reshapes family relationships, neighborhood trajectories, and social inequalities over time. A complementary review of life-course trajectories in housing studies (Coulter et al., 2020) similarly stress that moves are part of ongoing biographies rather than isolated events. A person’s decision to move is not made in a vacuum; it is deeply connected to other people and to society. A central dimension of this relational approach is the role of social support. In increasingly expensive housing markets, young adults frequently depend on intergenerational financial support to access homeownership, a process that reproduces social inequalities by dividing those who can rely on family wealth from those who cannot. In addition, the traditional definition of a move as a one-off transition from one dwelling to another is no longer adequate to capture contemporary mobility patterns. Increasingly,

scholars point to practices such as residential itinerancy, where individuals regularly divide their time between multiple homes (e.g., children in joint custody or adults in “living apart together” relationships), and residential transience, marked by repeated shortterm moves often seen among young adults navigating higher education, unstable job markets, or returning intermittently to the parental home as a safety net.

It has been argued that researchers have overemphasised the residential preferences and aspirations of households at the expense of their financial restrictions (Galster, 2019). This issue is of particular concern as the increased popularity of cities in the post-industrial era has occurred alongside a housing affordability crisis. Initially affecting low-income and migrant households, this crisis has since extended to middle-income families (Booi, 2024) and young individuals without prior homeownership (Hochstenbach & Boterman, 2015). Simultaneously, the growth of affordable and social housing on the city outskirts has contributed to a concentration of poverty in those areas (Hochstenbach & Musterd, 2018). The next sections outline the diverse types of gentrifiers and displaced residents commonly discussed in academic literature, supporting our empirical search for such residential profiles during the gentrification process.

4.2.3 The gentrifiers

Gentrifiers are commonly identified by their reproduction of cultural capital and their preference for an urban habitus. A substantial body of literature conceptualises the gentrifier, discussing either their profession (Ley, 1997), attitudes (Brown-Saracino, 2019), or socio-demographic characteristics (Blasius et al., 2016; Huse, 2018; Smith & Holt, 2005). In the residential domain, understanding the conditions for households to move into or out of a gentrifying neighbourhood also requires considering the current phase and corresponding life-course transitions of an individual or household (Hochstenbach & Boterman, 2018). Therefore, following Schlichtman et al. (2018) and Hochstenbach and Boterman (2018), we conceptualise a fourfold life-course typology of the gentrifier: the early gentrifier, the late gentrifier, the family gentrifier, and the empty-nest gentrifier.

The *early gentrifiers*, or marginal gentrifiers, can be characterised by their limited financial resources yet strong desire for the social and cultural offerings of city centres (Schlichtman et al., 2018). Students, artists, and recent college graduates are often considered early gentrifiers (Blasius et al., 2016). Due to their limited financial resources, the affordability of housing is a crucial factor in their residential

choice. Consequently, these early gentrifiers seek affordable rental housing in neighbourhoods that are still in the early stages of gentrification (Hochstenbach & Boterman, 2018; Hochstenbach et al., 2015). Besides affordability, Schlichtman et al. (2018) describe early gentrifiers as having a strong preference for central neighbourhoods to maximise accessibility, coupled with a desire to live in aesthetically pleasing neighbourhoods and buildings.

The *late gentrifiers*, often referred to as yuppies (young urban professionals) or DINKs (dual-income, no kids), have greater financial means and are thus typically attracted to neighbourhoods in the later stages of gentrification. Compared to early gentrifiers, late gentrifiers are in a later life phase (Ocejo, 2011), often characterised by dual incomes and stable employment. Households then typically have improved financial means and apply a more risk-averse strategy to housing compared to early gentrifiers (Hochstenbach & Boterman, 2018). They see housing as an asset, and as a result, the affordability of cheap rental housing is no longer a primary factor in residential choices. Instead, late gentrifiers seek to own property that is relatively inexpensive compared to other options and is spacious enough to accommodate potential household expansion, with the added expectation that its value will appreciate over time. While centrality remains important, late gentrifiers have the means to reside in higher-quality neighbourhoods with aesthetic appeal (Schlichtman et al., 2018).

Family gentrifiers, usually older and more established in their careers than late gentrifiers, have children – a distinctive trait. Although their income is similar to that of late gentrifiers, they face higher financial constraints due to the size of their household. The urban habitus of gentrifiers is challenged by childbirth, a phenomenon well-established in the demographic literature. As a result, priorities shift towards seeking larger, family-friendly housing (Rossi, 1955), and thus, gentrifiers may leave the city for a more traditional suburban environment (Bridge, 2006). The family gentrifiers, by contrast, trade housing perks and square-meterage to remain in the city (Karsten, 2003). The literature outlines several reasons for this, which include the proximity to employment and family amenities such as schooling, daycare, and parks (Butler & Robinson, 2001), as well as the appeal of the left-wing climate in cities (Bridge, 2006). Karsten (2003) explains that dual-earner households with children are drawn to central locations as their centrality revolves around the employment of two household members, as well as amenities such as daycare and education facilities. Moreover, van den Berg (2013) notes that family gentrifiers have been the subject of gentrification policy in Rotterdam, highlighting that policymakers specifically construct housing in order to attract high-income ‘nuclear’ families.

Finally, *empty-nest gentrifiers* are individuals in a life stage where their children have left home, resulting in increased financial resources. Due to the decrease in household members, the relative income and wealth of these households increases. Eventually, this life phase coincides with retirement, resulting in a more flexible time-space trajectory (Hochstenbach & Boterman, 2018). This type of gentrifier has been studied less in academic literature; therefore, there is little consensus on their motives and characteristics. Nevertheless, articles describing empty-nest gentrifiers generally portray them as affluent households with substantial economic capital: these households are able to move into mature gentrifying neighbourhoods. In one study, Bounds and Morris (2005) write that luxurious apartment complexes are developed in the inner-city neighbourhoods of Sydney to cater specifically for the residential needs of elderly couples. These newly built apartments provide empty-nest gentrifiers with an age-proof and rather homogeneous environment within the city centre. TABLE 4.1 summarises the academic knowledge on the different gentrifier profiles and their characteristics.

TABLE 4.1 The gentrifier framework

	The early gentrifier	The late gentrifier	The family gentrifier	The empty-nest gentrifier
Proximity	City centre	Public amenities (parks)	Employment and family facilities	Ø
Housing trajectory	Student / Private rental	Private rental / Buying house	Buying house / Homeowner	Steady homeowner
Professional trajectory	Student/start working	Start working / Stable employed	Stable employed	Entering retirement
Financial resources	Low income	Middle income	Middle income	High income
Cohabitation	Single	Couples	Couples	Couples
Children	No children	No children	Expecting/having children	Children leaving/no children

Ø – No information in the literature

4.2.4 The displaced

On the flip side of the gentrification process are those negatively affected by it – the displaced. Displacement can occur directly through, for instance, stark increases in rent prices or housing demolition, forcing households to move out of the neighbourhood. The scholarly literature finds little evidence of elevated numbers of low-income households moving out of gentrifying tracts relative to non-gentrifying tracts (e.g. Freeman et al., 2016, 2024). However, displacement can also occur indirectly through exclusionary mechanisms such as a reduction in affordable

housing stock, which limits low-income households from moving in (Marcuse, 1985). Rising housing prices restrict the choices of economically vulnerable residents, enhancing socio-spatial inequalities (Millard-Ball, 2002). In this paper, we conceptualise displacement as both forced relocation due to housing demolition and indirect effects, such as restricted residential opportunities for low-income households facing residential triggers.

While the literature generally considers gentrifiers' residential choices as driven by a wide array of preferences that align with their socio-economic and demographic needs, displaced individuals are mostly described in terms of their limited financial means and the fact that they are forced to relocate (Banabak et al., 2023). Yet, the lack of choice among the displaced means they may share fewer characteristics as they find themselves in the same situation not by choice but by circumstance. While studies have examined household characteristics related to the likelihood of eviction (Desmond & Gershenson, 2017), less is known about the life-course factors that accompany the out-migration of low-income households from gentrifying neighbourhoods or how these factors influence their destination choices. Instead, scholars have described the neighbourhood outcomes after displacement as well as the housing strategies that displaced households adopt (Freeman et al., 2024; Newman & Wyly, 2006). Therefore, we conceptualise displaced individuals through their spatial mobility patterns and subsequently describe how these patterns relate to their life-course trajectory. We distinguish the following three displacement typologies: excluded displaced, remaining displaced, and suburbanised displaced.

The *excluded displaced* are working-class households that have moved from a gentrifying neighbourhood to a low-income, non-gentrifying area near the city centre. Rosenblatt and DeLuca (2012) explain that low-income households often relocate to poverty-concentrated areas due to changing housing needs and affordability issues in their former, more expensive neighbourhoods. These low-income households may prefer an inner-city environment, but with limited space in gentrifying or middle-income to affluent areas, they are compelled to seek the next affordable alternative, effectively excluding them from their desired neighbourhoods. Hochstenbach and Musterd (2018) suggest that low-income households that maintain residence in the central parts of the city are more likely to be employed, highlighting their dependence on the city for their employment. This finding aligns with Bocarejo et al. (2017), who argue that low-income households prefer living within the inner city to reduce travel costs. Another factor influencing displaced households' decision to stay within the city is their preference to remain near their former homes due to close ties to their social networks and daily routines, especially for households with children (Clampet-Lundquist, 2004).

The next displacement pattern identified in the literature is the *remaining displaced*. These households are those who maintain residency in their current gentrifying neighbourhood, often facing higher rents, insecure or illegal living conditions, and overcrowding (Zhang & He, 2018). Much of the literature emphasises how gentrification increases displacement pressures on incumbent residents (cf. Twigg-Molecey, 2014). However, other studies highlight that the picture is more complex: Brummet and Reed (2019), for instance, argue that gentrification can also generate opportunities for original residents and their children, suggesting that its effects are not uniformly harmful. To continue, research shows that especially vulnerable groups, such as minorities and single parents, often find ways to stay in place, for example by moving in with family or friends to remain within their social networks (Newman & Wyly, 2006). Similarly, Guibard and Le Goix (2024) find that in the Paris region, single parents, as well as households receiving disability allowances, are less likely to move out.

Similar to the excluded group, displaced households moving within the same neighbourhood are more likely to have children and want to preserve their daily routines and social networks. Winke (2021) finds that substantial rental price increases and the subsequent excessive cost burdens on low-income households reduce their probability of relocating out of the neighbourhood: the fewer affordable alternatives combined with a desire to remain within the city reduces the overall mobility rates of low-income households. To adjust for the Dutch context, where rent regulations protect tenants but economic liberalisation reduces affordable housing in gentrifying areas, we define the 'remaining displaced' trajectory as movers relocating within a gentrifying environment.

Finally, an increasing body of literature on the suburbanisation of poverty indicates that low-income households, often driven out by gentrification, are relocating to the urban periphery (Hochstenbach & Musterd, 2018). For instance, a comparative empirical study by Winke (2021) reveals that low-income households moved longer distances if they relocated from neighbourhoods experiencing sharp price increases compared to more price-stable neighbourhoods. Additionally, the study by Ding et al. (2016) shows that economically vulnerable residents were more likely to relocate to low-income neighbourhoods when moving from gentrifying areas. However, Freeman et al. (2024) challenge these findings, identifying no significant relationship between neighbourhood disadvantage or relocation distance for low-income households leaving gentrifying neighbourhoods. In light of this, it is important to note that both the housing context and the household context matter in the destination outcome. For instance, Hochstenbach and Musterd (2021) explain that there is a relationship between unemployment and low-income households moving to the suburbs. This finding is in line with Clampet-Lundquist (2004), who suggests that households are less inclined to move longer distances if this disrupts their daily routines, and

thus unemployed households face fewer difficulties when moving longer distances. Bocarejo et al. (2017) add that it is also a matter of income, as the poorest households have the most limited choice and are thus more likely to move to the most peripheral areas of the city. Our displacement framework is summarised in TABLE 4.2.

TABLE 4.2 The displacement framework

	The excluded	The remaining	The suburbanised
Proximity	Employment centres	Social networks	Ø
Housing trajectory	Rental housing	Rental housing	Rental housing
Professional trajectory	Employment	Employed / Retired	Unemployed
Financial resources	Low-income	Low-income	Low-income
Cohabitation	Ø	Single / Couples	Ø
Children	Children	Children	Ø

Ø – No information in the literature

4.2.5

Context

Our study focuses on Rotterdam, the Netherlands’ second-largest metropolitan area, with a population exceeding 650,000. As previously mentioned, the Dutch housing market features a relatively high proportion of social housing and robust tenant rights, reducing the risk of direct displacement. Rents in social housing are significantly lower than those in privatised rental units. This system is intended for low-income households who struggle to find affordable options in the private market. It produces a strong correlation between neighbourhood poverty levels and the proportion of social housing (Elsinga & Wessenberg, 2014). While the extensive social housing stock and strong tenant protections make forced direct displacement relatively uncommon, it can still occur in cases of social housing demolition or temporary housing contracts. More importantly, the availability of social housing is declining. In response to concerns about the vulnerability of the Dutch housing market during the global financial crisis of 2008, policies have increasingly shifted toward privatisation. The lack of a clear housing policy following the global financial crisis led to a stagnation in housing supply while demand increased (Boelhouwer, 2020). This shift caused rapid rises in private-sector housing prices and lengthy waiting lists for social housing (Hochstenbach, 2017). As both working- and middle-class households face growing challenges in securing affordable housing, gentrification continues to spread within and across cities (Booi, 2024; Janssen et al., 2024).

Rotterdam has the highest proportion of social housing among Dutch cities, which has been a persistent concern for policymakers. Rotterdam's industrial heritage has hindered its transition to a post-industrial economy, resulting in higher unemployment, poverty, and outward middle-class mobility (Custers & Willems, 2024). Rotterdam's diverse population is often seen as a challenge by political parties and policymakers. In response, state-led gentrification, framed as social mixing, is promoted to attract wealthier households and disperse concentrations of minority groups (Arkins & French, 2024; Uitermark & Duyvendak, 2008). These efforts frequently involve demolishing or privatising social housing (Custers & Willems, 2024). While such policies have been a goal since the 1990s (Doucet et al., 2011), recent measures targeting affluent families and a tighter housing market have accelerated gentrification in Rotterdam (Custers & Engbersen, 2022).

4.3 Data and Methods

The use of sequence analysis in residential mobility studies is not new and has increasingly been applied in housing and urban studies to capture long-term residential trajectories as structured biographies rather than isolated moves. For example, Coulter and Van Ham (2013) examined individual mobility biographies over 17 years, distinguishing between “desired movers,” “undesired movers,” and various forms of staying, thereby highlighting the importance of unmet moving desires in shaping housing careers. Additionally, van Ham et al. (2014) used neighbourhood histories to demonstrate the intergenerational transmission of poverty, showing how parental neighbourhoods continue to influence residential outcomes decades later. Furthermore, Lee et al., (2017) applied sequence analysis in two ways: first, to classify the neighbourhood trajectories of low-income U.S. households over two decades, identifying pathways of persistence, upward mobility, and cycling between neighbourhood types; and second, to assess how subsidised housing shapes long-term residential opportunities when compared to carefully matched households. Collectively, these studies demonstrate that sequence analysis allows researchers to move beyond single-event approaches by visualising, comparing, and clustering complex residential histories.

This paper draws on individual-level longitudinal register data provided by CBS Netherlands for the 2005–2022 period. Residential locations of individuals are determined on the 1st of January each year. We identify 10-year residential trajectories within Rotterdam and the Rotterdam region of individuals who moved at least once during this 10-year time frame and who, at the start or at the end of the sequence, resided in a neighbourhood defined by policymakers as gentrifying. Trajectories of individuals under 18, those living with parents, and those in institutional households are excluded from the analysis. Additionally, we omit trajectories that start or end outside the Rotterdam agglomeration to maintain clarity in the analysis. Longer-distance moves often involve different push and pull factors, such as employment opportunities or lifestyle changes, which are not directly comparable to the processes influencing shorter moves within a city.

The start of the sequence can vary from 2005 to 2013, and the end of the sequence can vary from 2014 to 2022. For individuals living in Rotterdam or its agglomeration for over ten years, a random year is chosen to start the sequence, ensuring a 10-year trajectory. This study employs multi-channel sequence analysis, a statistical method for describing and classifying data composed of consecutive discrete states. It assigns these sequences to clusters, each representing an idealised trajectory

based on order, duration, and timing. Specifically, we conduct two separate multi-channel sequence analyses. One is for those trajectories of individuals moving into gentrifying neighbourhoods, and another is for those moving out or within a gentrifying neighbourhood.

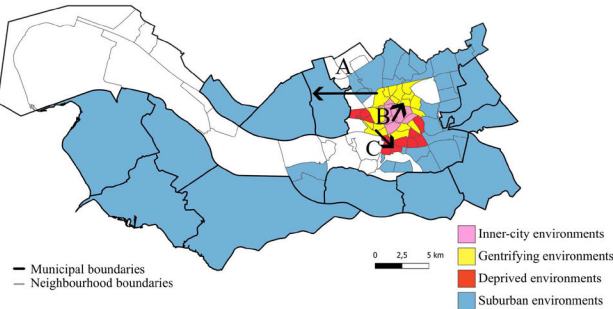
Our sequence analysis examines two key dimensions of residential location relevant to gentrification: the type of urban environment, and local income level and distribution. The first channel categorises residential environments into four types: inner-city, gentrifying, deprived, and suburban. This classification is derived from Rotterdam municipal policy documents (Rotterdam Municipality, 2003, 2007, 2016) and remains static over time. FIG. 4.1A visualises these environments in the Rotterdam region. Only neighbourhoods specified by the Rotterdam municipality are considered in this analysis.

The second channel examines the income levels and income distribution within a residential location. The income level of a residential location is calculated within a 500x500-metre grid cell (i.e. 500m square) using standardised household income data provided by CBS. Only squares with a population exceeding 20 are included. FIG. 4.1B maps the income and income distribution in 2013. We classify 500m squares into low, middle, and high-income categories based on the EUROSTAT definition of at-risk-of-poverty, which includes households earning up to 60% of the national median equivalised income. Squares in the top third of the poverty risk distribution are labelled low-income, those in the bottom third are high-income, and the remaining are middle-income. Additionally, we analyse income distribution within low-income areas to assess gentrification using the Gini index. Low-income squares with a Gini coefficient above the top third of Rotterdam's Gini coefficients are classified as low-income and high inequality. This distinction helps differentiate areas with high inequality experiencing early-stage gentrification from those with low inequality, indicating a stronger concentration of low-income households and fewer signs of gentrification.

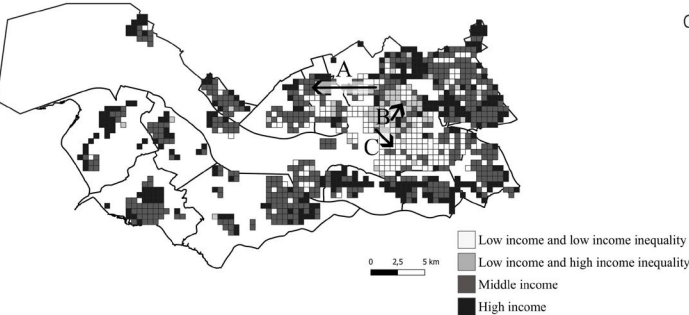
It is important to note that the residential environments in the first channel do not change over time, while the income situation within the squares (i.e. the second channel) can fluctuate annually. This situation implies that the income dynamics of their neighbourhood can change without an individual relocating, while the residential environment cannot. In the context of gentrification, a neighbourhood may be identified as gentrifying by policymakers, yet the income situation might not immediately reflect this process due to a time lag. Therefore, we combine the policy dimension with the temporal income dimensions in our analysis. The changing income levels within a residential area can signal a(n early) stage of gentrification in a neighbourhood.

To summarise our empirical strategy for defining residential trajectories, FIG. 4.1C illustrates three hypothetical trajectories for individuals A, B, and C. The maps in figures 4.1A and 4.1B show the spatial movement of the individuals in light of the two dimensions, whereas FIG. 4.1C visualises their residential trajectory. Individual A begins their sequence in 2007, residing in a gentrifying neighbourhood marked by low income and high inequality. By year five of the sequence, the income level in that area rises to middle income. In the seventh year, 2013, this individual relocates to a high-income suburban environment, where they remain until year ten. Individual B starts their sequence in 2011, residing in an inner-city neighbourhood with low income and high inequality. Two years into the sequence, they move to a gentrifying neighbourhood with a middle-income level. Individual C begins their sequence in a gentrifying neighbourhood in 2009, experiencing an increase in square income between years two and three. In year five (2013), they relocate to a deprived neighbourhood marked by low income and low inequality.

1.1 Dimension 1 - Policy environments



1.2 Dimension 2 - Income environments



1.3 Hypothetical trajectories

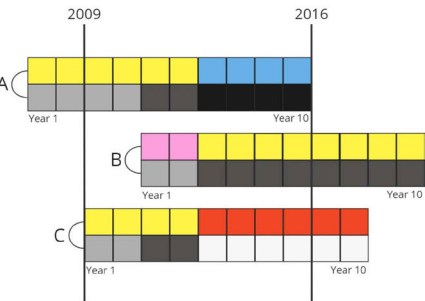


FIG. 4.1 Spatial and temporal patterns in residential trajectories

4.3.1 Clustering

To create a typology of trajectories, we first calculate pairwise dissimilarities between all individual sequences across both dimensions using the TraMineR package in R (Gabadinho et al., 2011). We use the Longest Common Subsequence (LCS), a dissimilarity that explores all subsequences and returns the longest ones. Since we track individuals across various life stages and moves can occur at any time within the 10-year span, we prefer the LCS for its reduced sensitivity to sequence timing and its stronger focus on state distribution and sequencing differences (Studer & Ritschard, 2016). Using these dissimilarities, the sequences have been clustered based on the partitioning around medoids algorithm (PAM), which classifies data into a predefined number of groups based on the most representative observation, or medoid. The PAM algorithm minimises the weighted sum of distances from the medoid to other observations within the same group (Studer, 2013). The optimal number of clusters was determined by evaluating ASW, PBC, and HC indices, aiming for theoretically meaningful clusters. The average silhouette width (ASW) measures an observation's average distance to others in its group versus its weighted distance to the closest group. The point biserial correlation (PBC) evaluates how well a data partition aligns with the original distance matrix. Hubert's C (HC) index compares the partition obtained to the best possible partition for the same number of groups and distance matrix (Studer, 2013). An overview of the metric scores for the different cluster solutions is provided in Appendix C.1.

4.3.2 Socio-demographic characteristics

To differentiate the various types of individuals within each cluster, we compare a range of socio-economic and demographic characteristics. Since our analysis spans a 10-year time frame rather than focusing on a specific point in time, an individual in our analysis can experience employment, unemployment, and retirement all within one sequence. To simplify our results, we focus on key socio-economic and demographic trajectories commonly discussed in gentrification research, aligning with TABLE 4.1 in the theoretical framework.

For professional trajectories, we categorise individuals' employment sequences into: 1) stable employment throughout the ten years, 2) experiencing at least one unemployment period, 3) transitioning from student to non-student status, and 4) retired (either entering retirement or being retired for the entire period). All additional trajectories are labelled 'other'. For housing transitions, we focus on three types: owner-occupied, rental, and subsidised rental housing (a proxy for social housing).

Housing trajectories are classified as: 1) stable tenant, 2) transition to homeownership, 3) stable homeownership, and 4) stable subsidised housing (rent subsidies throughout the ten years). All other housing patterns, including those with frequent changes, are categorised as 'other'. The remaining characteristics include partnership status, children, income, and place of birth within and outside the Netherlands. Partnership and children are tracked by transitions, with individuals experiencing more than two transitions in the 10-year period classified as 'fluctuation'. Income is measured as the average equivalised household income over ten years, segmented into quantiles based on the Netherlands' overall income distribution. Country of birth is categorised as follows: 1) Netherlands; 2) countries with historical migration waves to the Netherlands (Suriname, Morocco, Türkiye, Dutch Antilles); 3) European Union countries; and 4) other non-European Union (EU) countries. Place of birth is classified into 1) Rotterdam, 2) the Rotterdam region, 3) other municipalities in the Netherlands, and 4) locations outside the Netherlands.

4.4 Results

In the results sections, we start by identifying and describing the residential trajectories clustered together in terms of the type of origin and destination neighbourhoods which characterise them. We identify ten clusters, four of which contain trajectories of individuals moving out of gentrifying neighbourhoods, three of which capture individuals mostly moving within gentrifying neighbourhoods, and three of which include those moving into gentrifying neighbourhoods. We then relate these types of neighbourhood trajectories to individual characteristics such as income, migration background, and life-course transitions related to housing, employment, and family. Finally, we synthesise these findings to identify typical profiles of gentrifiers and displacees expected from the literature on gentrification, as well as untypical categories of movers who also participated in neighbourhood change in Rotterdam at the time of gentrification.

4.4.1 Descriptive analysis of residential trajectory clusters

The clusters are visualised in FIG. 4.2, showing the proportion of individuals in each cluster compared to the entire sample, which is displayed across the two dimensions – policy-defined and socio-economic environment – for each year of the 10-year sequence. The horizontal axis represents time in years, while the vertical axis shows the proportion of individuals within each cluster. The top panels illustrate trajectories based on residential environment classifications from policy documents, whereas the bottom panels display the income states of residential locations throughout the sequences. For example, in Cluster 1, the majority of individuals move from gentrifying areas to suburban environments at some point in the 10-year sequence (top panel), a move that coincides with a change in socio-economic environment from low-income, high-inequality neighbourhoods to middle-income neighbourhoods (bottom panel). In short, these Cluster 1 individuals experience neighbourhood upgrades while moving to the suburbs.

Of the four clusters in which individuals move away from gentrifying neighbourhoods, the majority (Clusters 1, 3, and 4 representing 73% of moves out of gentrifying neighbourhoods) involve individuals moving from low-income, high-inequality gentrifying neighbourhoods (e.g. early gentrifying) towards suburban environments. Two of them correspond to a neighbourhood upgrade: Cluster 1 contains individuals moving to middle-income suburbs, and Cluster 4 consists of those moving to high-income suburbs.

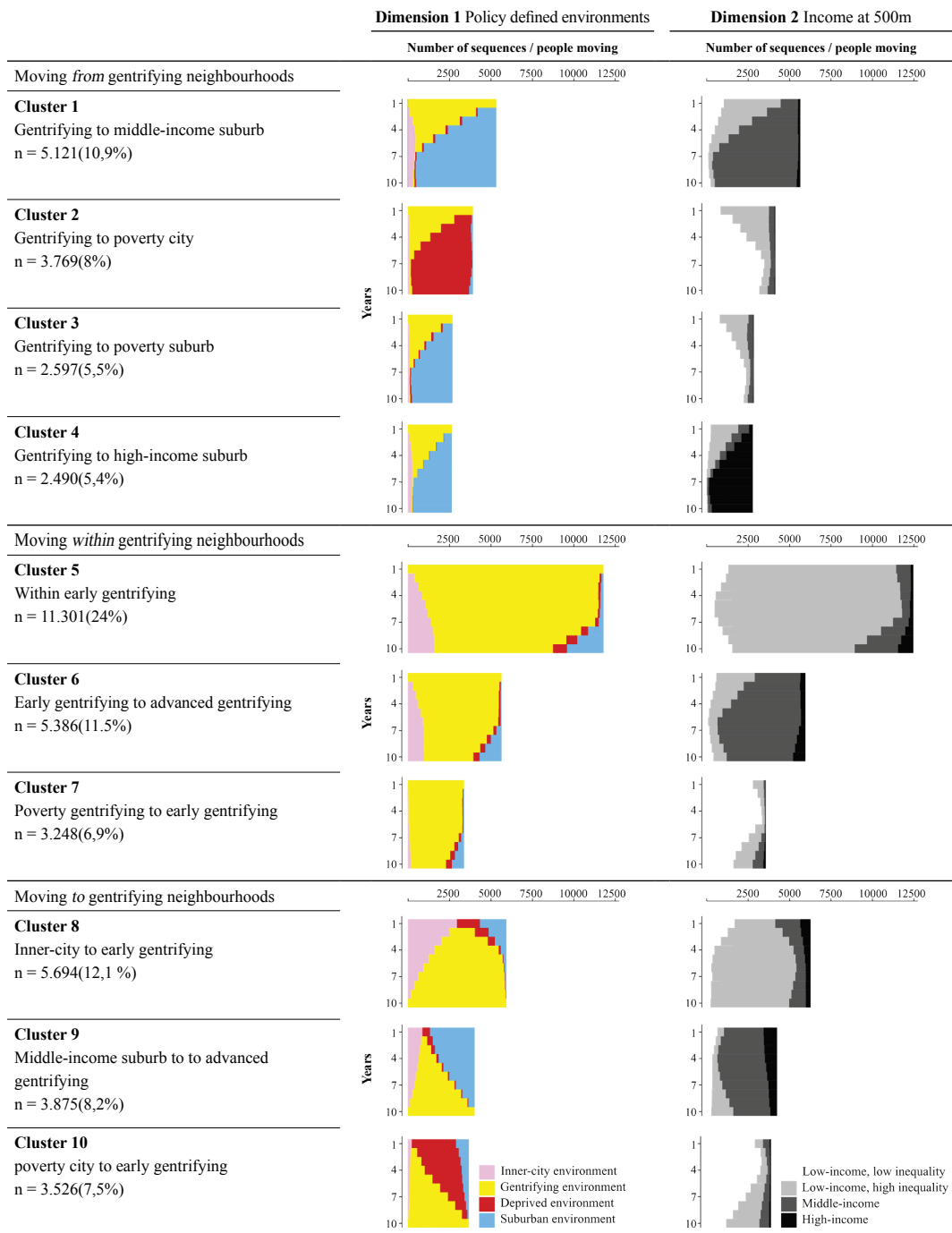


FIG. 4.2 State distribution plots of residential trajectories to or from gentrifying neighbourhoods

By contrast, Cluster 3 comprises those moving to low-income, low-inequality (e.g. poverty-concentrated) suburbs. In Cluster 2 (27% of trajectories leaving gentrifying neighbourhoods), individuals move out of early gentrifying towards poverty-concentrated deprived city neighbourhoods. Therefore, only Clusters 2 and 3 (together 46% of out-going movers) correspond to a neighbourhood downgrade consistent with the displacement narrative.

Clusters 5, 6, and 7 represent individuals predominantly relocating within gentrifying areas. Specifically, individuals in Cluster 5 (57% of 'within' trajectories and the largest cluster of all trajectories studied here) move within early gentrifying neighbourhoods, while those in Cluster 6 (27% of 'within' trajectories) transition from early gentrifying to middle-income gentrifying environments, implying a move to a more advanced gentrifying neighbourhood. These two types of within moves (together 84% of 'within' trajectories) are consistent with the gentrifier narrative. Individuals in Cluster 7 (26% of 'within' trajectories) move from poverty-concentrated gentrifying neighbourhoods to early gentrifying neighbourhoods.

Finally, Clusters 8, 9 and 10 represent individuals moving towards gentrifying neighbourhoods. Cluster 8 contains trajectories moving from the poverty-concentrated inner-city neighbourhoods towards early gentrifying ones, while Cluster 9 moves from middle-income suburban environments towards the more middle-income gentrifying neighbourhoods. These two types of upward moves (together, 73% of incoming residential trajectories) are consistent with the gentrifier narrative. However, Cluster 10 (27% of movers into gentrifying neighbourhoods) depicts individuals who moved from deprived, poverty-concentrated neighbourhoods towards early gentrifying neighbourhoods.

4.4.2 Matching individual income with residential trajectories

FIG. 4.3 depicts the average 10-year income distribution of each cluster (in blue) compared to the income distribution of all movers included in the analysis. TABLE 4.3 shows the socio-economic and demographic profile of individuals in the clusters. A Chi-square test was performed on all variables to determine if the clusters contained above or below expected distributions for each variable category.

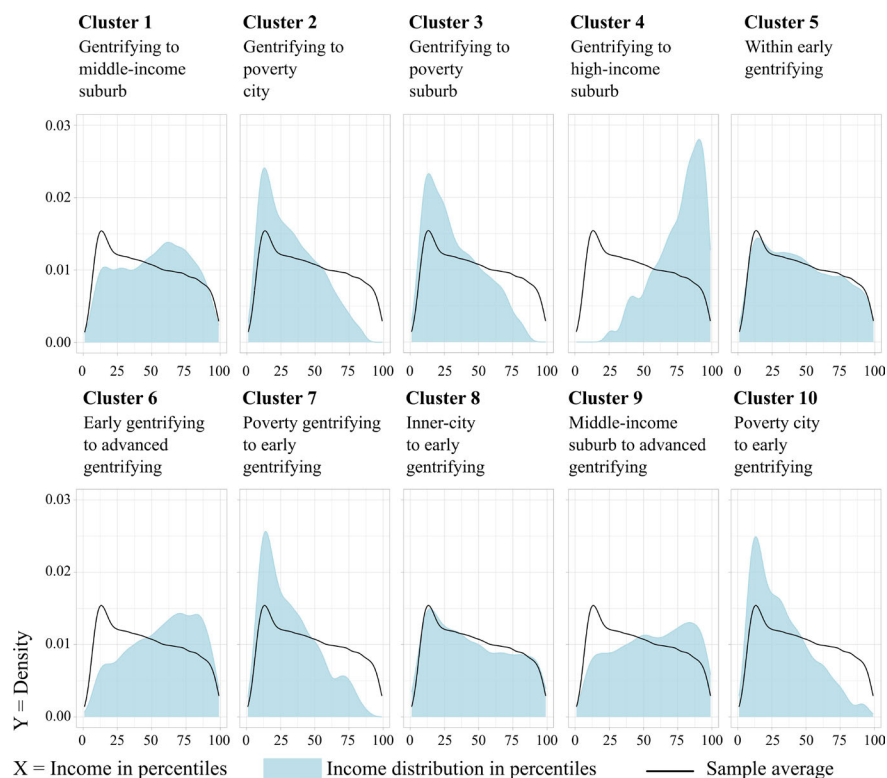


FIG. 4.3 Income distribution density across clusters

Among individuals leaving gentrifying neighbourhoods in the period under study, we find a strong alignment between personal income and the socio-economic environment of destination: those with the lowest income move to poor neighbourhoods in the city (Cluster 2) or the suburbs (Cluster 3) in a downward trajectory. Individuals from historical migration waves (i.e. from Türkiye, Morocco, and Suriname) and renters of social housing (cf. TABLE 4.3) are overrepresented in these trajectories. They seem unable to accumulate the necessary capital to stay or move upwards as the neighbourhood changes and are thus pushed towards poorer neighbourhoods in the process of gentrification. By contrast, those with higher incomes move to wealthier suburbs (middle-income in the case of Cluster 1 and high-income in the case of Cluster 4), revealing a jointly ascending personal and neighbourhood trajectory. Stable homeowners and new families are overrepresented in these clusters (TABLE 4.3), offering a picture of young urban couples accumulating wealth and power in the context of gentrification through homeownership and ‘cashing-in’ to pursue their life-course trajectories in wealthier suburbs.

TABLE 4.3 Chi-square analysis of cluster socio-economic and demographic characteristics

Variable	Category	Total	
Career trajectory	Stable employed	44%	
	Experiencing unemployment	19,7%	
	Finished studying	7%	
	Retired	7,4%	
	Other	21.9%	
Housing tenure trajectory	Stable tenant	13%	
	Enter homeownership	35,8%	
	Stable homeowner	21,6%	
	Stable subsidised housing	6%	
	Other	23,6%	
Cohabitation trajectory	Stable single	18,2%	
	Enter partnership	20,5%	
	Dissolution partnership	10,4%	
	Stable couple	27,1%	
	Fluctuations	23,8%	
Family trajectory	Stable no children	44,4%	
	No children – children	26,1%	
	Children – no children	5,7%	
	Stable children	15,9%	
	Fluctuations	7,7%	
Country of origin	Netherlands	63,4%	
	Migrants of historical waves	18,4%	
	EU country	5,6%	
	Other	12,6%	
Place of birth	Rotterdam	28,4%	
	Rotterdam region	4,7%	
	Other NL	30,2%	
	Outside NL	36,6%	
Start of sequence	Start in 2005/2006/2007	28%	
	Start in 2008/2009/2010	29%	
	Start in 2011/2012/2013	43%	

$\alpha < 0.01^{***}$, $< 0.05^{**}$, $< 0.1^*$ / $\emptyset$ – No information / In blue: underrepresentation. In orange: overrepresentation.

Moving from gentrifying neighbourhoods				Moving within gentrifying neighbourhoods			Moving to gentrifying neighbourhoods		
Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6	Cluster 7	Cluster 8	Cluster 9	Cluster 10
gentrifying to middle-income suburb	gentrifying to poverty city	gentrifying to poverty suburb	gentrifying to high-income suburb	within early gentrifying	early gentrifying to advanced gentrifying	poverty gentrifying to early gentrifying	inner-city to early gentrifying	middle-income to advanced gentrifying	poverty city to early gentrifying
50,5%*	34,3%***	32,3%***	64,9%***	42,8%	56,1%***	31,3%***	42,5%	51,4%*	30,7%***
15,4%*	29,6%***	30,4%***	5,5%***	18,6%	10,6%***	28,9%***	19,2%	14,9%	33,1%***
4,0%***	6,8%	4,7%	2,5%***	9,7%***	8,0%	4,4%	9,5%*	6%	5,5%
6,6%***	5,8%***	10,6%***	4,3%***	7,8%***	6,2%***	11,3%***	5,8%***	8,9%***	8,5%***
23,5%	21,5%	22%	22,5%	21,1%	19%	24,1%	23%	18,1%	22,1%
8,5%**	18,4%	14,4%	4,7%***	15%	11,2%	19%	18,8%	9%	19%
41,7%	34,7%	32%	34,6%	36,9%	39,9%	34,3%	37,7%	29%	24,3%***
26, 7%	10,8%***	12,2%*	43,2%***	20,8%	24,8%	12,6%*	18%	25,3%	9,6%***
4,3%	11,6%***	14,8%***	∅	5,74%	2,6%***	9,6%	7,9%	2,8%	10,7%**
18,7%	24,5%	26,5%	17,4%	21,5%	21,3%	24,2%	21,5%	34%**	36,3%**
13,1%***	21,2%	23,8%	6,5%***	18,8%	14,8%	24,7%***	20,3%	15,8%	23,7%**
22,9%	17,6%	17,1%	23,7%	21,3%	24,8%*	15,2%	21,9%	18,8%	15,3%
7,9%	11,7%	10,4%	5,4%***	10,1%	8,5%	12,9%	10,1%	15,2%**	13,3%
36,2%***	20,5%***	24,9%	51,3%***	25,4%	27,6%	27,3%	21,8%**	24,6%	21,6%
19,9%	28%	23,7%	13%***	24,4%	24,3%	19,6%	25,8%	25,7%	26,1%
33,5%***	41%	40,4%	25,2%***	50,8%***	52,7%***	41,2%	52,3%***	51%	42,2%
38,3%***	23,3%	25,1%	47,5%***	23,7%	29,5%	18,2%***	24,4%	17,8%***	19,8%**
3,3%**	6,3%	6,2%	3%	5,2%	3,4%	8,7%**	4,6%	10,8%***	8,1%
18,6%	18,8%	18,5%	20,6%	14,9%	10%***	22%***	13,1%	11,4%*	20%
6,1%	10,6%**	9,7%	3,6%	5,5%	4,4%*	9,1%	6,7%	9,1%	9,6%*
70,2%*	43,3%***	55%	80%***	63,3%	78%***	51,4%***	63,4%	73,8%***	46,7%***
12,4%***	30,4%***	24,8%***	6,3%***	18,8%	7,4%***	30,8%***	17,3%	10,9%***	31,6%***
5,6%	8,1%**	5,7%	4,8%	6%	5,4%	3,8%	5,6%	5%	5,2%
11,7%	18,2%***	14,4%	8,9%	11,8%	9,2%***	13,9%	13,6%	10,3%	16,5%**
34,3%***	24,1%	35,5%**	28,5%	25,6%	27,5%	31,9%	24,7%	32,6%	28,1%
6,6%	1,9***	3,8%	6,9%	4,0%	6,2%	2,7%	4,8%	8,3%***	2,3%**
29,3%	17,3%***	15,7%***	44,6%***	33,7%**	44,3%***	16,8%***	24,7%	32,9%	16,2%***
29,8%***	56,7%***	45%***	20%***	36,7%	22%	48,6%***	36,6%	26,2%***	53,4%***
28,3%	27,1%	28,7	28,7%	27,1%	21,8%***	38,7%***	26,3	27,6	32,3%
26,9%	26,6%	28,9%	28,7%	30,8%	29,6	29,6%	28%	29,1%	29,6%
44,8%	46,4%	42,4%	42,6%	42,1	48,5***	31,7%***	45,7%	43,2%	38,1%

Among individuals moving within gentrifying neighbourhoods in the period under study, we find three very different income distributions. When moving within early gentrifying neighbourhoods (Cluster 5), individuals resemble the general population of movers in terms of income, housing, and personal characteristics, with the exception of stable couples, who are overrepresented. Being the largest clusters of all, it makes sense to find an 'average' profile of individuals composing it. It is interesting, however, to note that although neighbourhood change is the main event happening in gentrifying neighbourhoods, there is a large amount of permanence in the process as well, as illustrated by the movers of Cluster 5. Perhaps unsurprisingly, those in Cluster 6 (moving from early gentrifying to advanced gentrifying neighbourhoods) earn more income than the population of reference. Their ascending trajectory in terms of neighbourhood attainment coincides with an ascending individual trajectory of early life (as people entering a partnership and entering homeownership are overrepresented in these clusters). Finally, individuals moving from poverty-concentrated gentrifying neighbourhoods to early gentrifying neighbourhoods (Cluster 7) are characterised by lower incomes, more dissolutions of partnership, and households including children at some point of their trajectories, which suggests a more precarious set of residential trajectories within gentrifying neighbourhoods.

Among individuals moving to gentrifying neighbourhoods in the period under study, those in Cluster 8 (moving from the inner city to early gentrifying neighbourhoods) strongly resemble the individuals moving within early gentrifying neighbourhoods of Cluster 5. In Cluster 9, where people move from middle-income suburban environments towards the more middle-income gentrifying neighbourhoods, incomes are higher than the overall distribution, and people are more advanced in their life course. Retired individuals are overrepresented, along with empty-nest households, while households with children are underrepresented. There is also a higher rate of partnership dissolution, aligning with the narrative of single parents and older couples leaving the suburbs for a more intense social life in an urban environment. Finally, trajectories gathered in Cluster 10 (from poverty-concentrated neighbourhoods to gentrifying neighbourhoods) correspond to people with a lower individual income, on average, who are more affected by unemployment and more frequently were born abroad. In the next sections, we frame these findings around life-course transition and residential trajectories within the context of gentrification in Rotterdam and try to make sense of typical figures of gentrification among these varied profiles and trajectories.

4.4.3 Gentrifier trajectories

Clusters 5 and 8 consist of individuals relocating to or within early-stage gentrifying neighbourhoods, where the income distribution is mostly low to middle income. Both have a significantly high proportion of individuals without children during the 10-year sequence, and Cluster 5 also contains an above-average proportion of individuals finishing their studies during the sequence. With a low to middle-income distribution, individuals of this group match the description of *early gentrifiers*: they move into neighbourhoods in the early stages of gentrification in the initial phases of their professional and household careers and have limited financial resources.

Another gentrifier trajectory is detected in Cluster 6, consisting of trajectories in which individuals move from early gentrifying neighbourhoods to more advanced gentrifying neighbourhoods. This cluster has a significant overrepresentation of individuals born in the Netherlands but outside the Rotterdam region, suggesting that while they have resided in Rotterdam's gentrifying neighbourhoods for at least ten years, they are not originally from the area. Compared to Cluster 5, where individuals tend to move within early gentrifying neighbourhoods, Cluster 6 is characterised by a notably higher proportion of individuals who are stably employed and significantly more likely to start cohabitating with a partner during the 10-year sequence, with a relatively affluent income distribution. These combined findings suggest that individuals in Cluster 6 are, on average, further along their household and professional careers than those in Clusters 5 and 8. Their move into a more advanced, gentrifying neighbourhood likely reflects their growing economic capital and financial stability that is often experienced in later stages of life. At the same time, like the *early gentrifiers*, Cluster 6 also has an above-average share of households without children. These socio-spatial characteristics – moving to more advanced gentrifying neighbourhoods, stable employment, beginning cohabitation, and not having children – align with the '*late gentrifier*' trajectory.

Finally, Cluster 9 represents the trajectories of individuals who moved from middle-income suburban environments towards more advanced gentrifying neighbourhoods. These trajectories correspond to an above-average proportion of both retired and stable employed individuals. Additionally, individuals without kids are overrepresented, while these individuals starting a family are underrepresented. When combined with earlier findings showing that this cluster has a relatively high-income distribution (FIG. 4.3), it appears to resemble the profile of an *empty-nest gentrifier*. The cluster also shows an overrepresentation of individuals born in the broader Rotterdam region, though not necessarily in the city itself.

It is important to note that these gentrifier trajectories are not equally prevalent in Rotterdam. The most common gentrifier group is that of the *early gentrifier*, comprising 17,000 individuals – over one-third of all analysed trajectories (24% in Cluster 5 and 12% in Cluster 8). The *late gentrifiers* make up 12% of all trajectories analysed (~5,300 individuals), while the *empty-nest gentrifiers* are less numerous, with 2,900 individuals (8% of all trajectories). The largest overall cluster in our sample consists of *early gentrifiers* relocating within already gentrifying neighbourhoods. Additionally, we observe that *late gentrifiers* primarily move from early-stage to more advanced gentrifying areas. These findings suggest that gentrification is driven not predominantly by newcomers but by existing residents, indicating that the process was already well underway before their relocation. Finally, to assess temporal trends, we examined the prevalence of each cluster over time. Our findings indicate that individuals in the *late gentrifier* cluster were less likely (i.e. underrepresentation) to begin their sequence in the earlier years of our analysis, while more likely (i.e. overrepresentation) to start their sequence in the latter years of our analysis, implying that the late gentrifier trajectory has become more predominant over time.

4.4.4 Displacement trajectories

As for displacement, a notable trajectory appears in Cluster 3, in which low-income individuals leave gentrifying neighbourhoods for poverty-concentrated suburban environments. Cluster 3 shows an above-average representation of individuals facing unemployment or retirement, with fewer individuals in stable employment, a higher proportion of individuals receiving rent subsidies, a lower proportion of homeowners, an above-average proportion of individuals born outside the Netherlands, a significantly high proportion of individuals born in Rotterdam, and a low proportion of those born in other Dutch regions. These findings imply that individuals moving to poverty-concentrated suburbs have a weak socio-economic position compared to those relocating to middle- or high-income suburbs. Together with the finding that this cluster has a low-income distribution, we consider this trajectory the *suburbanised displaced*. While middle-income to affluent individuals relocate to middle- or high-income suburbs to meet their new residential needs, low-income movers – often born in the city – appear to have moved to poverty-concentrated suburbs out of necessity. Fortunately, this category of displacement is one of the smallest clusters, with 2,600 individuals (5.5%).

The *excluded displaced* seems an appropriate characterisation of Cluster 2, where individuals move out of gentrifying neighbourhoods towards deprived neighbourhoods with low income and low inequality. This cluster has a below-average representation of couples and an above-average representation of individuals relying on subsidised housing and those experiencing unemployment. It is somewhat surprising to find a high proportion of unemployed individuals in this cluster, given that literature typically associates the excluded displacement trajectories with employment-related relocations; the *excluded displaced* are expected to remain in the city due to employment obligations in the inner city, as opposed to the *suburbanised displaced*. We cannot confirm this in the context of Rotterdam. However, the significant overrepresentation of individuals born in the EU suggests that many are likely international labour migrants who may rely on unstable employment contracts. Further, given the high proportion of subsidised housing in both clusters, we also expect that the location of social housing plays a significant role in determining where individuals end up. Excluded trajectories represent 8% of the total, or ~3,800 individuals.

Cluster 7 primarily consists of individuals who moved from poverty-concentrated, gentrifying neighbourhoods to early-stage gentrifying areas. Like Clusters 2 and 3, this group has an above-average proportion of unemployed and foreign-born individuals, as well as a higher representation of retirees and single-person households. However, unlike Clusters 2 and 3, Cluster 7 also contains a significantly higher proportion of individuals with children or those whose children have left the home. This finding supports our theoretical framework, which suggests that households with children and elderly individuals are less likely to relocate due to the potential disruption of their daily routines. Therefore, we argue that Cluster 7 exhibits characteristics of the remaining displaced trajectory. They represent 3,200 individuals (~7%). Important to note is that the remaining displaced trajectory was significantly overrepresented in the early years of this analysis (2005/2006/2007) and significantly under-represented in the later phase (2011/2012/2012), implying that this cluster has become less predominant over time. This finding highlights the time trend in which gentrification prevails. Over time, low-income individuals face more difficulty entering gentrifying neighbourhoods, as there is less affordable housing available to them when gentrification advances. The diminishing abilities of low-income households moving into gentrifying neighbourhoods are widely referred to as exclusionary displacement.

In sum, we find similarities in the displacement trajectories: all three clusters have overrepresentations of unemployed and foreign-born individuals and underrepresentation of homeowners. Additionally, their income distribution is comparable. More interestingly, our analysis reveals differences between the clusters. For instance, Clusters 3 and 7 contain above-average proportions of retired individuals, whereas Cluster 2 shows a higher representation of EU labour migrants. Additionally, Cluster 7 stands out for having an above-average proportion of individuals with children, unlike Clusters 2 and 3. These findings suggest that displacement trajectories are largely shaped by individuals with weak economic positions – such as low income and unemployment, highlighting their reliance on affordable housing. However, their socio-economic situation still appears to influence the eventual residential outcomes of displaced individuals.

4.5 Conclusion

This paper examined the residential trajectories that interact with gentrifying neighbourhoods, conceptualising the diverse types of movers, their position in the life course and their embeddedness in the context of Rotterdam gentrification, thus situating the ideal-typical figures of gentrifiers and displacees in a life-course perspective. By conducting a multi-channel sequence analysis on individuals who moved either from or to gentrifying neighbourhoods, we were able to distinguish which type of trajectories prevailed in the gentrifying process. Subsequently, we examined the socio-economic and demographic characteristics associated with each cluster and compared these with typical life-course transitions and gentrifier / displacee profiles proposed in the academic literature. Our research paper answers the following research question: ‘How do the life-course trajectories of individuals moving into and out of gentrifying neighbourhoods align with academic conceptualisations of gentrifiers and displaced residents?’

Overall, we find a variety of mover types prevailing in the gentrification process. Out of the ten identified trajectories resulting from our cluster analyses, seven clusters are considered either a displacement or a gentrifier trajectory. Our findings reveal that the early gentrifier is the most prevalent residential trajectory in Rotterdam’s gentrifying neighbourhoods, comprising over one-third of all trajectories in our sample. Notably, the vast majority of these early gentrifiers relocate within gentrifying neighbourhoods. A similar pattern emerges among late

gentrifiers, who tend to move from early-stage gentrifying neighbourhoods to those in more advanced stages of gentrification. This important result implies that gentrifiers are not necessarily newcomers moving to these neighbourhoods but individuals already living within Rotterdam's gentrifying areas. The final gentrifier category that we identify is the empty-nest gentrifier: individuals who move from a suburban environment towards a gentrifying neighbourhood. It is noteworthy that we also identify clusters of relatively affluent individuals moving from gentrifying neighbourhoods to more affluent suburban areas. While these trajectories align with typical life-course theories, they fall outside the traditional classification of gentrifiers or displacees. In this context, research often focuses on the out-movement of low-income households (e.g., Freeman et al., 2016, 2024). However, the changing socio-economic composition of a gentrifying neighbourhood also gives rise to a different type of out-mover: former gentrifiers who choose to take the next step in their housing trajectory by relocating to the suburbs.

As for the displacement trajectories, low-income households moving out of gentrifying neighbourhoods generally moved to low-income surrounding neighbourhoods (i.e. the excluded displaced), low-income suburban environments (i.e. the suburbanised displaced), or remained in a gentrifying environment with higher average income (i.e. the remaining displaced). These trajectories are shaped by individuals with weak economic positions, highlighting their reliance on affordable housing. Striking is the significant overrepresentation of individuals born outside the Netherlands within the displacement clusters, capturing the vulnerable position of international migrants in the Dutch housing market. Another key finding is that the number of individuals in gentrifier clusters is more than twice that of displacement clusters, as the majority of gentrifiers move within the gentrifying environment. This result showcases the most important finding of our analysis, namely the complex dynamics of residential mobility and gentrification, which is not merely a straightforward vacancy chain of gentrifiers moving in and low-income households moving out. Instead, gentrification is a gradual process wherein gentrifiers not only move into the neighbourhood but also experience personal in-situ upgrading and choose to extend their residence by moving within the gentrifying environment. This process gradually reduces opportunities for low-income households to move in. Thus, gentrification is less about the direct displacement of working-class individuals (Freeman et al., 2016, 2024) and more about the steady upgrading of formerly affordable neighbourhoods, increasingly excluding the working class from entry.

This finding aligns with Hamnett's (2021) framework, which emphasises that gentrification has evolved into a more subtle, long-term mechanism of neighbourhood change. Like Hamnett, we observe that lower-income groups are not always directly displaced; instead, they and their successors encounter growing

barriers to accessing housing in areas they once occupied. As Hamnett notes, being displaced from a neighbourhood is distinct from being replaced through the gradual turnover of its population. Our results illustrate this replacement process in action, showing how shifts in in-movers gradually reshape the social composition of neighbourhoods. At the same time, our analysis adds a micro-level dimension to Hamnett's framework. Whereas Hamnett highlights the "reshuffling" of middle- and upper-class households within the urban area, we identify a specific mechanism through which this occurs: affluent households not only move into gentrifying areas but also remain there by relocating within the gentrifying neighbourhood. Thus, gentrification is not just about new people moving in, but about incumbent affluent residents becoming more deeply embedded, thereby accelerating the exclusion of lower-income groups and solidifying the neighbourhood's transformation.

Overall, our findings align with studies on residential mobility and neighbourhood status (e.g. Andersson, 2021; Brazil, 2017; Clark et al., 2006), revealing that affluence, homeownership, stable employment, and consistent cohabitation are strongly linked to upward residential mobility in neighbourhood status. In contrast, low income, unemployment, and a reliance on rental housing are associated with downward neighbourhood trajectories. Further, our research complies with studies that identify that low-income households moving out of gentrifying neighbourhoods tend to relocate to marginalised areas (e.g. Dragan et al., 2019; Hochstenbach & Musterd, 2018), as opposed to those that do not report such a relationship (e.g. Ding et al., 2016; Freeman et al., 2024). Our findings imply that over time, gentrifying neighbourhoods create a two-tier situation among their residents where low-income individuals, minority households, and renters face increased difficulty moving out of poverty-concentrated neighbourhoods (as evidenced by Bolt & van Kempen, 2003).

In contrast, wealthier individuals and homeowners are able to pursue their life-course trajectories within gentrifying neighbourhoods or outwards to middle and high-income suburbs, having accumulated capital in the process of gentrification. As gentrification spreads within and between cities (Booi, 2024; Martin et al., 2024; Janssen et al., 2024; Paccoud & Mace, 2018), housing opportunities for low-income residents continue to decline. We urge researchers to shift focus from the outward mobility of economically vulnerable individuals towards the growing scarcity of housing options for working-class households caused by gentrification and to explore how this process exacerbates socio-spatial inequality.

References

- Andersson, E. K., Malmberg, B., & Clark, W. A. (2021). Neighbourhood context and young adult mobility: A life-course approach. *Population, space and place*, 27(3), e2405.
- Arkins, M. C., & French, B. E. (2024). Demolition, Division and Displacement: Examining the Preservation of Whiteness in Rotterdam Municipal Housing Policy. *Critical Sociology*, 50(1), 107-124.
- Banabak, S., Kadi, J., & Schneider, A. E. (2024). Gentrification and the suburbanization of poverty: evidence from a highly regulated housing system. *Urban Geography*, 1-23.
- Blasius, J., Friedrichs, J., & Rühl, H. (2016). Pioneers and gentrifiers in the process of gentrification. *International Journal of Housing Policy*, 16(1), 50-69.
- Bocarejo, J. P., Guzman, L. A., Portilla, I., Meléndez, D., Gómez, A. M., & Rivera, C. (2017). Access as a determinant variable in the residential location choice of low-income households in Bogotá. *Transportation Research Procedia*, 25, 5121-5143.
- Boelhouwer, P. (2020). The housing market in The Netherlands as a driver for social inequalities: proposals for reform. *International Journal of Housing Policy*, 20(3), 447-456.
- Bolt, G., & van Kempen, R. (2003) Escaping poverty neighbourhoods in the Netherlands, *Housing, Theory and Society*, 20(4), 209-222.
- Booi, H. (2024). Spillover of urban gentrification and changing suburban poverty in the Amsterdam metropolis. *Urban studies*, 61(3), 495-512.
- Bounds, M., & Morris, A. (2005). High-rise gentrification: The redevelopment of Pyrmont Ultimo. *Urban Design International*, 10, 179-188.
- Brazil, N., & Clark, W. A. (2017). Residential mobility and dynamic neighbourhood change during the transition to adulthood. *Advances in Life-course Research*, 33, 1-10.
- Bridge, G. (2006). It's not just a question of taste: gentrification, the neighbourhood, and cultural capital. *Environment and planning A*, 38(10), 1965-1978.
- Brown-Saracino, J. (2019). *A neighbourhood that never changes: Gentrification, social preservation, and the search for authenticity*. University of Chicago Press.
- Brown, L. A., & Moore, E. G. (1970). The intra-urban migration process: a perspective. *Geografiska Annaler: Series B, Human Geography*, 52(1), 1-13.
- Butler, T., & Robson, G. (2001). Social capital, gentrification and neighbourhood change in London: a comparison of three south London neighbourhoods. *Urban studies*, 38(12), 2145-2162.
- Clampet-Lundquist, S. (2004). HOPE VI relocation: Moving to new neighbourhoods and building new ties. *Housing policy debate*, 15(2), 415-447.
- Clark, W., Deurloo, M., & Dieleman, F. (2006). Residential mobility and neighbourhood outcomes. *Housing studies*, 21(3), 323-342.
- Clark, W. A., & Ledwith, V. (2006). Mobility, housing stress, and neighbourhood contexts: evidence from Los Angeles. *Environment and planning A*, 38(6), 1077-1093.
- Clay, P. L. (1979). *Neighbourhood renewal: Middle-class resettlement and incumbent upgrading in American neighbourhoods*. Lexington Books.
- Coulter, R., Bayrakdarm S., & Berrington, A. (2020). Longitudinal life course perspectives on housing inequality in young adulthood. *Geography compass* 14(5), e12488.
- Coulter, R., & van Ham, M. (2013). Following people through time: An analysis of individual residential mobility biographies. *Housing Studies*, 28(7), 1037-1055. <https://doi.org/10.1080/02673037.2013.783903>
- Coulter, R., van Ham, M., Findlay, A. M. (2016). Re-thinking residential mobility: Linking lives through time and space. *Progress in Human Geography*, 40(3), 352-374.
- Custers, G., & Engbersen, G. (2022). The urban class structure: class change and spatial divisions from a multidimensional class perspective. *Urban Geography*, 43(6), 917-943.
- Custers, G., & Willems, J. J. (2024). Rotterdam in the 21st century: From 'sick man' to 'capital of cool'. *Cities*, 150, 105009.
- Desmond, M., & Gershenson, C. (2017). Who gets evicted? Assessing individual, neighbourhood, and network factors. *Social science research*, 62, 362-377.
- Ding, L., Hwang, J., & Divringi, E. (2016). Gentrification and residential mobility in Philadelphia. *Regional science and urban economics*, 61, 38-51.

- Doucet, B., Van Kempen, R., & Van Weesep, J. (2011). Resident perceptions of flagship waterfront regeneration: The case of the Kop van Zuid in Rotterdam. *Tijdschrift voor economische en sociale geografie*, 102(2), 125-145.
- Dragan, K., Ellen, I., & Glied, S. A. (2019). *Does gentrification displace poor children? New evidence from New York City Medicaid data*.
- Dykstra, P. A., & van Wissen, L. J. (1999). Introduction: The life-course approach as an interdisciplinary framework for population studies. In *Population issues: an interdisciplinary focus* (pp. 1-22). Springer.
- Elsinga, M., & Wassenberg, F. (2014). Social housing in the Netherlands. *Social housing in Europe*, 21-40.
- Freeman, L., Cassola, A., & Cai, T. (2016). Displacement and gentrification in England and Wales: A quasi-experimental approach. *Urban studies*, 53(13), 2797-2814.
- Freeman, L., Hwang, J., Hauptert, T., & Zhang, I. (2024). Where do they go? The destinations of residents moving from gentrifying neighbourhoods. *Urban Affairs Review*, 60(1), 304-348.
- Gabadinho, A., Ritschard, G., Müller, N. S., & Studer, M. (2011). Analyzing and visualizing state sequences in R with TraMineR. *Journal of statistical software*, 40, 1-37.
- Galster, G. C. (2019). *Making our neighbourhoods, making our selves*. University of Chicago Press.
- Guibard, L., & Le Goix, R. (2024). Those who leave: Out-migration and decentralisation of welfare beneficiaries in gentrified Paris. *Urban studies*, 00420980231224640.
- Hamnett, C. (2021). The changing social structure of global cities: Professionalisation, proletarianisation or polarisation. *Urban studies*, 58(5), 1050-1066.
- Hochstenbach, C. (2017). State-led gentrification and the changing geography of market-oriented housing policies. *Housing, Theory and Society*, 34(4), 399-419.
- Hochstenbach, C., & Boterman, W. R. (2015). Navigating the field of housing: housing pathways of young people in Amsterdam. *Journal of Housing and the Built Environment*, 30, 257-274.
- Hochstenbach, C., & Boterman, W. (2018). Age, life-course and generations in gentrification processes. In *Handbook of gentrification studies* (pp. 170-185). Edward Elgar Publishing.
- Hochstenbach, C., & Musterd, S. (2018). Gentrification and the suburbanization of poverty: Changing urban geographies through boom and bust periods. *Urban Geography*, 39(1), 26-53.
- Hochstenbach, C., & Musterd, S. (2021). A regional geography of gentrification, displacement, and the suburbanisation of poverty: Towards an extended research agenda. *Area*, 53(3), 481-491.
- Hochstenbach, C., Musterd, S., & Teernstra, A. (2015). Gentrification in Amsterdam: Assessing the importance of context. *Population, space and place*, 21(8), 754-770.
- Hooimeijer, P., & Oskamp, A. (1996). A simulation model of residential mobility and housing choice. *Netherlands journal of housing and the built environment*, 11, 313-336.
- Huse, T. (2018). Gentrification and ethnicity. In *Handbook of gentrification studies* (pp. 186-204). Edward Elgar Publishing.
- Janssen, K. M. J., Cottineau, C., Kleinhans, R., & van Bueren, E. (2023). Gentrification and the Origin and Destination of Movers: A Systematic Review. *Tijdschrift voor economische en sociale geografie*, 114(4), 300-318.
- Janssen, K. M. J., Cottineau-Mugadza, C., Kleinhans, R., & van Bueren, E. (2024). Spatial dynamics of incoming movers and the state-led gentrification process: The case of Rotterdam. *Population, Space and Place*, 30(8), Article e2851. <https://doi.org/10.1002/psp.2851>
- Karsten, L. (2003). Family gentrifiers: Challenging the city as a place simultaneously to build a career and to raise children. *Urban studies*, 40(12), 2573-2584.
- Lee, K. O., Smith, R. J., & Galster, G. C. (2017). Neighborhood trajectories of low-income U.S. households: An application of sequence analysis. *Journal of Urban Affairs*, 39(3), 335-357. <https://doi.org/10.1080/07352166.2016.1251154>
- Lees, L. (2008). Gentrification and social mixing: towards an inclusive urban renaissance? *Urban studies*, 45(12), 2449-2470.
- Lees, L., Shin, H. B., & López-Morales, E. (2016). *Planetary gentrification*. John Wiley & Sons.
- Ley, D. (1997). *The new middle class and the remaking of the central city*. Oxford University Press.
- Marcuse, P. (1985). Gentrification, abandonment, and displacement: Connections, causes, and policy responses in New York City. *Wash. UJ Urb. & Contemp. L.*, 28, 195.
- Martin, N., Shipman, G., & Ting, V. (2024). Moving from “superstar” cities to “ordinary” cities to reclaim middle-class status: gentrification-induced inter-metropolitan migration. *Urban Geography*, 1-25.

- Millard-Ball, A. (2002). Gentrification in a residential mobility framework: Social change, tenure change and chains of moves in Stockholm. *Housing studies*, 17(6), 833-856.
- Modigliani, F. (1988). The role of intergenerational transfers and life cycle saving in the accumulation of wealth. *Journal of Economic Perspectives*, 2(2), 15-40.
- Mulder, C. H., & Hooimeijer, P. (1999). Residential relocations in the life-course. In *Population issues: An interdisciplinary focus* (pp. 159-186). Springer.
- Newman, K., & Wyly, E. K. (2006). The right to stay put, revisited: Gentrification and resistance to displacement in New York City. *Urban studies*, 43(1), 23-57.
- Ocejo, R. E. (2011). The early gentrifier: Weaving a nostalgia narrative on the lower east side. *City & Community*, 10(3), 285-310.
- Paccoud, A., & Mace, A. (2018). Tenure change in London's suburbs: Spreading gentrification or suburban upscaling? *Urban studies*, 55(6), 1313-1328.
- Rérat, P., Söderström, O., & Piguët, E. (2010). New forms of gentrification: issues and debates. *Population, space and place*, 16(5), 335-343.
- Posthumus, H., Bolt, G., & Van Kempen, R. (2013). Why do displaced residents move to socioeconomically disadvantaged neighbourhoods? *Housing studies*, 28(2), 272-293.
- Rosenblatt, P., & DeLuca, S. (2012). "We Don't Live Outside, We Live in Here": Neighbourhood and Residential Mobility Decisions among Low-Income Families. *City & Community*, 11(3), 254-284.
- Rossi, P. H. (1955). *Why families move: A study in the social psychology of urban residential mobility*. Free Press.
- Rotterdam Municipality (2003). Rotterdam zet door: op weg naar een stad in balans.
- Rotterdam Municipality (2007). Wonen in Rotterdam: Geactualiseerde woonvisie 2007-2010.
- Rotterdam Municipality. (2016). Woonvisie Rotterdam: Koers naar 2030, agenda tot 2020.
- Rotterdam Municipality. (2023). Rotterdamse Woonvisie: Koers tot 2040 en acties voor de komende 5 jaar.
- Schlichtman, J. J., Patch, J., & Hill, M. L. (2018). *Gentrifier*. University of Toronto Press.
- Smith, D. P. (2002). Extending the temporal and spatial limits of gentrification: a research agenda for population geographers. *International journal of population geography*, 8(6), 385-394.
- Smith, D. P., & Holt, L. (2005). 'Lesbian migrants in the gentrified valley' and 'other' geographies of rural gentrification. *Journal of rural studies*, 21(3), 313-322.
- Smith, N. (1979). Toward a theory of gentrification a back to the city movement by capital, not people. *Journal of the American planning association*, 45(4), 538-548.
- Studer, M. (2013). WeightedCluster library manual. *A practical guide to creating typologies of trajectories in the social sciences with*, 2013(24), 33.
- Studer, M., & Ritschard, G. (2016). What matters in differences between life trajectories: A comparative review of sequence dissimilarity measures. *Journal of the Royal Statistical Society Series A: Statistics in Society*, 179(2), 481-511.
- Uitermark, J., & Duyvendak, J. W. (2008). Civilising the city: Populism and revanchist urbanism in Rotterdam. *Urban studies*, 45(7), 1485-1503.
- Uitermark, J., Duyvendak, J. W., & Kleinhans, R. (2007). Gentrification as a governmental strategy: social control and social cohesion in Hoogvliet, Rotterdam. *Environment and planning A*, 39(1), 125-141.
- Van Den Berg, M. (2013). City children and gendered neighbourhoods: the new generation as urban regeneration strategy. *International Journal of Urban and Regional Research*, 37(2), 523-536.
- Van Ham, M., Hedman, L., Manley, D., Coulter, R., & Östh, J. (2014). Intergenerational transmission of neighbourhood poverty: An analysis of neighbourhood histories of individuals. *Transactions of the Institute of British Geographers*, 39(3), 402-417. <https://doi.org/10.1111/tran.12040>
- Winke, T. (2021). Housing affordability sets us apart: The effect of rising housing prices on relocation behaviour. *Urban studies*, 58(12), 2389-2404.
- Zhang, Z., & He, S. (2018). Gentrification-induced displacement. In *Handbook of gentrification studies* (pp. 134-152). Edward Elgar Publishing.

Rotterdam is geen illusie
door de camera gewekt
Rotterdam is niet te filmen
Rotterdam is vééls te ècht

Rotown magic – Jules Deelder

5 Understanding the dual narratives of displaced gentrifiers in Rotterdam

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ABSTRACT This paper examines the dual experiences of middle-class inter-urban movers from Amsterdam and Utrecht to Rotterdam, who simultaneously face indirect displacement in their cities of origin and contribute to gentrification in their destination city. Drawing on 17 semi-structured interviews, the study explores how these movers navigate their contradictory roles as both displacees and gentrifiers. The findings reveal that while participants experience pressure associated with economic and cultural displacement in their former cities, they employ strategies to advance their housing trajectories and establish themselves in Rotterdam. While they condemn the effects of gentrification in their previous city, they still express typical gentrifier preferences that shape neighbourhood change in Rotterdam, highlighting the complex interplay between displacement and gentrification across urban and regional scales, but also as dual identities. This study highlights the importance of considering middle-class mobility in discussions of urban change and reveals the nuanced ways in which gentrification and displacement are mutually constitutive processes.

5.1 Introduction

The urban middle class is traditionally viewed at the driver of urban transformation and gentrification. Middle-class households are typically the gentrifiers, while lower-income and working-class communities experience both direct and indirect displacement. Yet, as Richard Florida (2002) observes, the world's most successful cities have become increasingly unaffordable for all but the elite, a trend that can be described as second-order gentrification. Recent studies show that gentrification, together with rising housing unaffordability, is extending both within cities, regionally and internationally, a development documented with growing frequency in academic literature (e.g. Booi, 2023; Janssen et al., 2024; Martin et al., 2025; Ocejo, 2019; Zhao, 2024). While the term “gentrifier” identifies these individuals as key drivers of the process, it is important to recognise that over time, as gentrification advances, former gentrifiers themselves can increasingly become vulnerable to displacement (Martin et al., 2025; Ocejo, 2019).

Much of the displacement literature has focused on the working class, examining how they are excluded from once-affordable neighbourhoods and how gentrification undermines their sense of belonging (e.g. Newman and Wyly, 2006; Twigge-Molecey, 2014). By contrast, less is known about how middle-class households experience and navigate the harms of gentrification, and how their trajectories differ from those of the working class. These differences are important: the urban poor are often described as being stuck in place (Sharkey, 2013) or, when they do relocate, as being unlikely to move upward in their neighbourhood careers. Instead, their moves frequently lead to settlement in equally or more disadvantaged areas, thereby reinforcing existing patterns of residential segregation (Hochstenbach and Musterd, 2018; Dragan et al., 2020). In contrast, the highly educated and well-resourced middle class is generally better equipped to navigate these dynamics (Ocejo, 2011). As gentrification advances, middle-class households adapt their residential choice, pushing the process beyond traditional city centres and potentially fuelling spillover gentrification across wider urban areas (Booi, 2023; Janssen et al., 2024; Martin et al., 2025).

Examining how middle-class households navigate their dual roles as gentrifiers and as individuals experiencing displacement provides insight into how they both influence and are influenced by gentrification, revealing the complexities of their agency. The aim of this study is therefore twofold: first, to investigate how middle-class households interpret and navigate their experiences of displacement in Amsterdam and Utrecht; and second, to examine how their relocation contributes to

gentrification processes in Rotterdam. Drawing on 17 semi-structured interviews, we show that participants often describe their move as a response to displacement pressures in their cities of origin, yet in Rotterdam they reproduce gentrifier preferences that reshape neighbourhoods. Our findings thus highlight the dual role of the urban middle class as both displacees and gentrifiers, revealing how mobility contributes to the inter-urban spread of gentrification and to broader patterns of socio-spatial inequality. This highlights how middle-class households can simultaneously be vulnerable to displacement in one place and, through their relocation, contribute to spillover gentrification in another place, which in turn deepens socio-spatial inequality.

Rotterdam is an interesting case for exploring these dynamics. Historically, the city was less attractive to middle-class households compared to Amsterdam and Utrecht, which are further along in the gentrification process (Arundel & Hochstenbach, 2020; Custers & Engbersen, 2022; Custers & Willems, 2024). In recent years, however, Rotterdam's relatively affordable housing and strong connectivity to other core cities have made it an appealing destination for those priced out of Amsterdam and Utrecht (Nieuwland & Lavagna, 2020; Janssen et al., 2024). Focusing on these inter-urban movers allows us to investigate not only the factors shaping residential choice, but also how middle-class households interpret their moves within the broader processes of urban change. We address the following questions:

How do middle-class households experience their dual role as both experiencing displacement pressure and being drivers of gentrification. How do they adapt to the challenges associated with gentrification?

The remainder of this paper is structured as follows. We begin by describing the expected profiles of displacees and gentrifiers in the academic literature, linking both roles to inter-urban movers to Rotterdam. This is followed by an overview of the Rotterdam context, after which we present our research methods and sample. The results are then discussed, first from the perspective of the displacee and followed by the gentrifier perspective. Finally, we synthesise the findings in the discussion and conclusion.

5.2 Background

5.2.1 Displacement

Research on gentrification-induced displacement is not new; several studies have sought to quantify the extent of direct displacement experienced by low-income households in gentrifying neighbourhoods. These studies generally find limited evidence of direct displacement (e.g. Freeman and Braconi, 2004; Ding et al., 2016). However, scholars such as Slater (2006), Newman and Wyly (2006) and Davidson (2008) argue that the focus on outward mobility of low-income households does not exhaust the concept of displacement and ignores the phenomenon of indirect displacement. Davidson (2008) for instance emphasises the lived experience of space to explain how the transformation of one's surrounding neighbourhood often leads to indirect displacement, where residents lose their sense of belonging and attachment to the area. As community ties weaken, local amenities no longer meet their needs or financial means and rising costs price out residents or their children. Consequently, long-time residents feel compelled to move, as there is little left to stay for (Davidson & Lees, 2010). Indirect displacement, then, reflects a loss of belonging that can take economic, social, or cultural form.

Such indirect displacement is increasingly relevant to understand experiences of the urban-middle-class in gentrification research. Scholars' recognition of super-gentrification, which involves the transformation of already gentrified upper-middle-class neighbourhoods into exclusive and even more expensive enclaves (Lees, 2003), highlights the changing role of middle-class households within the gentrification process. Lees (2003) and Butler and Lees (2006) argue that super-gentrifiers, with substantial wealth, now displace middle-class residents who were once the primary agents of gentrification, as well as the businesses that catered to them. Research shows that middle-class residents are indeed relocating away from cities that have reached advanced stages of gentrification (Booi, 2023; Janssen et al., 2024; Ocejo, 2019). Concurrently, Ocejo (2014) and Pinkster and Boterman (2017) show that gentrifiers may become disillusioned with the very process they once benefited from, particularly as neighbourhoods intensify in gentrification and as they grow older within them. This highlights that indirect displacement is not only a concern for vulnerable groups but also an important lens for understanding how gentrifiers themselves may experience contemporary urban change.

In this paper, we examine the indirect displacement of the middle-class through three dimensions. The first is economic displacement pressure, which refers to the growing unaffordability of housing and amenities as higher-income groups compete for the same spaces (Millard-Ball, 2002). The second is social displacement pressure, which involves the fracturing of local social networks that residents have built over time. As gentrification unfolds, long-standing connections can be disrupted when friends or family members move away, leading to feelings of loneliness and disconnection (Twigge-Molecey, 2014). The third dimension is cultural displacement pressure, which emerges through shifts in urban form, neighbourhood services, and the everyday use of space. Long-term working-class residents may feel increasingly alienated as familiar shops, landmarks, and gathering places are replaced by businesses and institutions that cater to wealthier newcomers, resulting in a loss of cultural identity and sense of belonging. We specifically focus on these three dimensions because they have been documented in research on working-class displacement, and they offer a valuable lens for examining middle-class displacement as well, particularly since the underlying mechanisms operate differently for this group. Building on this framework, we examine how these dimensions play out among interurban movers relocating to Rotterdam, showing how the advanced stage of gentrification in Amsterdam and Utrecht generates indirect displacement pressures on the middle class that ultimately push them to move elsewhere.

5.2.2 The Gentrifier

These inter-urban movers are likely to also express typical gentrifier characteristics. There is a substantial body of literature that conceptualises the gentrifier, discussing either their profession (Ley, 1997), attitudes (Brown-Saracino, 2019), or socio-demographic characteristics (Blasius et al., 2016; Huse 2018; Smith & Holt 2005). Common Bourdieusian descriptions of the gentrifier rely on their reproduction of cultural capital and their preference for an urban habitus. Claufield (1994) explains that the “new middle-class” want to distinguish themselves from the mundane, standardised suburban life of the traditional middle-class. Instead, they seek a residence in the inner city, which they perceive as a space of liberation and alternative lifestyles. This urban habitus reflects the cultural and aesthetic preferences that define the gentrifier. Their choices are shaped by a desire to maximise spatial capital, which refers to the practical benefits of urban living such as proximity to work, access to amenities, and ease of mobility (Rérat and Lees, 2011). This is often framed in relation to housing trade-offs as a consequence of feminisation of the professional work force and the formation of dual career families (Bondi, 1991). The household has become an increasingly important factor in making decisions about where to live, in which the inner-city is often more practical (van den Berg, 2013; Butler & Robson, 2003).

To contextualise gentrifiers, Schlichtman and Patch (2014) developed a comprehensive framework and identified key “gentrification pulls”. Among these, affordability plays an important role in making certain areas attractive to gentrifiers, which Schlichtman and Patch (2014) term the *economic pull*. Practical factors, such as a central location or access to public transportation, which they refer to as the *practical pull*, also contribute to a neighbourhood’s appeal. Further, aesthetic qualities, from architectural style to overall visual charm, also factor into decision-making, alongside amenities like parks, schools, and other urban conveniences. These elements, together with the symbolic allure of residing in a place perceived as culturally rich or “authentic,” form what we in this paper refer to collectively as *cultural pulls*. The *social pull* is about the makeup of the community itself. Some gentrifiers seek diversity, others are drawn to neighbourhoods with people more like themselves. Besides these pulls, Schlichtman and Patch (2014) also point to gentrifiers’ flexibility around inconvenience. Many are willing to move into neighbourhoods that lack infrastructure or services, accepting short-term challenges in exchange for long-term potential. In a similar way to the dimensions of the displacement narrative, we will consider these traits in relation to inter-urban movers in order to better understand how gentrification in Rotterdam shapes their residential decisions.

5.2.3 Residential mobility and gentrification

Gentrification alone does not fully explain why people move. Extensive research has examined the factors that trigger residential mobility at both micro and macro levels. For instance, life-course theory emphasises how events such as (expected) childbirth, partnership formation or dissolution, and career changes influence individuals’ decisions to move (cf. Mulder & Hooimeijer, 1999; Michielien & Mulder, 2008). Moreover, household dynamics play a crucial role, particularly as middle-class households increasingly feature dual-earner partners. Thus, the micro-context of a partner’s situation can influence relocation behaviour as well (Karsten, 2003). At the same time, macro-level factors such as housing market conditions and the state of the labour market are closely connected to the residential opportunities and constraints people experience (Mulder & Hooimeijer, 1999). In the context of direct-displacement, residential moves are forced by housing factors such as rising costs or demolition, and residents are not expected to move up in their housing or neighbourhood careers, highlighting the disruptive nature of these processes. In contrast, indirect displacement, particularly displacement pressure, occurs when changes in the neighbourhood or community make the area less appealing, prompting residents to move more voluntarily. This form of displacement highlights a greater degree of flexibility in residential choice.

This relative flexibility sets middle-class households apart from working-class households in the context of displacement (Benson, 2014). This is related to the fact that middle-class households have greater economic, social and cultural capital, which opens up more residential opportunities. In addition, studies show that highly skilled workers are often prepared to accept longer commutes or work remotely, making them less tied to a specific place of employment (Martin et al., 2025; van Ham et al., 2001). On the other hand, the displacing character of these moves also differentiates them from the stereotypical gentrifier, who is typically portrayed as moving because of pull factors, with little attention to the push factors that may have contributed to leaving their previous neighbourhood or, in this case, city (cf. Brown-Saracino, 2019; Donnelly, 2018; Ocejo, 2014; Schlichtman et al., 2018). This focus on pull factors, without considering push-factors, overlooks the broader dynamics of gentrification (and residential mobility), which extend beyond individual neighbourhoods and are shaped by broader conditions across urban and regional scales. Considering the origins of gentrifiers is therefore key, as their relocation decisions reflect not only the characteristics of the immediate neighbourhood but also the wider urban and regional context in which housing opportunities and constraints operate.

These distinctions from the “typical” displacee or gentrifier underline the complex social position of inter-urban movers and the scale at which gentrification operates. Feldman (1990) observes that when the new environment resembles the previous one, households are often able to maintain a sense of belonging. Building on this, our analysis examines how push and pull factors intersect at the city level for inter-urban movers, and the strategies they employ to strengthen their agency within the gentrification process. We acknowledge that residential mobility is shaped by both macro- and micro-contextual changes. In this paper, however, we focus on the macro-context, examining how broader urban and regional conditions influence people’s decisions to move, while recognising that micro-level shifts also matter.

5.2.4 **Rotterdam**

This paper specifically focuses on gentrification in Rotterdam. Rotterdam is the second-largest city in the Netherlands, with a population exceeding 670,000 in 2025 (CBS, 2025a). Situated in the Randstad, the polycentric core of the country, Rotterdam holds a key position alongside cities such as Amsterdam, The Hague, and Utrecht. Although these cities are closely connected, they remain distinct in political, administrative, and economic terms. Highly educated workers often live in one city while commuting to another, facilitated by efficient train and highway infrastructure, with travel times from Amsterdam or Utrecht to Rotterdam averaging

around one hour. Although the cities are relatively close in distance, Rotterdam has historically differed in character from Amsterdam and Utrecht. Its development has been shaped by a strong industrial past, leaving a legacy of structural challenges. Compared to other Dutch cities, Rotterdam has long faced higher levels of poverty and unemployment and has maintained relatively low real estate values (Arundel and Hochstenbach, 2020; Custers and Willems, 2025).

Over the past decade, however, Rotterdam has undergone a marked transformation. The city has become increasingly attractive both as a place to live and as a tourist destination (Custers and Willems, 2024). This renewed appeal is reflected in rising real estate prices, particularly in and around the city centre (Custers & Engbersen, 2022). At the same time, Rotterdam continues to a relatively high proportion of social housing, roughly 40% (CBS, 2025b), which remains a persistent concern for policymakers. In response to perceived issues around segregation and concentrated disadvantage, the city has pursued state-led gentrification strategies framed around social mixing (Arkins & French, 2024). These policies aim to attract wealthier residents, often by demolishing or privatising social housing stock (Custers & Willems, 2024). Although these goals have been in place since the 1990s, recent shifts in housing policy and increasing pressure on the housing market have accelerated the pace of gentrification. The result is a steady decline in available social housing, long waiting lists, and fewer new allocations, further restricting the residential options of low-income households (Hochstenbach, 2017). Custers and Engbersen (2022) observe a trend of socioeconomic upgrading within Rotterdam's population but caution that the city's growing popularity may come at a cost. Further, Janssen et al. (2024) identify increasing flows of middle- and high-income households relocating from other major Randstad cities to Rotterdam, highlighting the prevalence of gentrification spillovers. As housing prices continue to rise, access to the housing market is becoming increasingly restricted, not only for low-income residents but also for middle-class families seeking to establish themselves in the city.

5.3 Methods

To explain the dual narratives of these inter-urban middle class movers in Rotterdam, a qualitative study was conducted. In 2024 and 2025 a total of 17 semi-structured interviews were performed with Rotterdam residents who had moved from Amsterdam or Utrecht within the past 25 years⁷. Participants were recruited using Reddit (Rotterdam, Utrecht and Amsterdam Reddit communities) and the neighbourhood app Nextdoor⁸, as well as snowball sampling. All interviews lasted approximately one hour and were conducted in Dutch⁹. The topics of the interview ranged from housing choice and struggles to gentrification experiences in both cities. We were interested in the extent to which participants were aware of gentrification in their cities and whether and how this affected them and their housing choice. The interviews were transcribed and analysed in the software programme Atlas.ti with an abductive approach starting deductively with the push and pull factors of inter-urban gentrifiers and then turning to an inductive approach to complement the initial findings.

Positionality is an important consideration in qualitative research, as a researcher's perspectives and social position can influence data interpretation. In this study, the participants, middle-class households relocating from Amsterdam or Utrecht to Rotterdam, share characteristics similar to the researchers, including socio-economic background, educational attainment, and lifestyle. This resemblance may facilitate an intuitive understanding of participants' choices and motivations but also carries the risk of over-identifying with their experiences. Such over-identification could lead to projecting assumptions or underestimating the challenges faced by less privileged groups, whose circumstances and perspectives differ substantially. To minimise this potential bias, a structured analytical approach was adopted. A codebook was developed prior to coding, and codes were cross-compared among authors and checked against transcripts to ensure consistency. Combining deductive and inductive coding further allowed unexpected themes to emerge, supporting a balanced and reflexive interpretation of the data. While qualitative interviews allow for in-depth exploration of housing experiences, this method also carries limitations.

⁷ One participant lived in both Delft and Amsterdam simultaneously but was still included in this analysis based on his experiences in Amsterdam.

⁸ <https://nextdoor.com/>

⁹ The excerpts present in the rest of the paper have been subsequently translated into English by the first author.

The sample size of 17 participants is relatively small and skewed towards digitally active, middle-class households, limiting representativeness. Moreover, the reliance on retrospective accounts, sometimes spanning moves made up to 25 years ago, introduces possible recall bias. As with most qualitative research, reproducibility is constrained because findings are context dependent. To strengthen transparency and reliability, the interview guide and transcripts were discussed. This not only supports the consistency of the analysis but also enables other researchers to assess and build upon the approach taken here.

TABLE 5.1 gives an overview of the socio-economic and mover characteristics of the participants. All participants are considered gentrifiers in Rotterdam due to their educational background and or income situation at the time of the move. An overview of each participant, including their pseudonym, can be found in Appendix D.1.

TABLE 5.1 Socio-economic and demographic descriptives of participants

Characteristic	Participants	Characteristic	Participants
Age (at time of the move)		Cohabitation trajectory	
<=25	4	Stable single	5
25>x<35	8	Stable couple	9
>=35	5	Starting cohabitation	3
Years in Rotterdam		Children	
<=2	5	Household with children	2
>2x<5	6	Household	15
x>=5	6	Without children	
Years in Amsterdam/Utrecht		Education	
<=5	4	University	13
>5x<20	10	University of applied science	4
x>=20	3	Tenure trajectory	
Moved from		Stable tenant	8
Amsterdam	12	Stable homeowner	3
Utrecht	5	New homeowner	6

The next sections present the results of our qualitative analysis and are structured as follows. First, we describe the narratives of these inter-urban movers in light of economic, cultural and social displacement, illustrating how have lost within their previous macro-context. Next, we explain how these movers regained control (i.e. a sense of agency) by relocating to Rotterdam. Finally, we examine their position as gentrifiers in Rotterdam, considering the various gentrifier pulls identified by Schlichtman and Patch (2014). Here we also highlight their contradictory roles in the gentrification process; exploring how they themselves make sense of being displaced gentrifiers.

5.4 Losing control in the macro-context

5.4.1 Economic displacement

When asked about why participants decided to leave their former city and relocate to Rotterdam, all of the interviewees mentioned the unaffordability of housing in Amsterdam and Utrecht and how that restricted their residential choice. Indirect economic displacement refers to, among other things, not being able to find affordable housing in a formerly affordable residential environment. This is something that came up in several interviews, in which interviewees highlight the struggles they faced in Amsterdam or Utrecht to secure stable housing. For instance, Rachel (34)¹⁰, states:

"I always resided in houses that were temporary, and I eventually had to leave. I lived in a house that was similar to anti-squat¹¹, so it was not too expensive, but something more expensive I could not afford. So, I really felt under pressure because you can hardly do anything here in Amsterdam. Otherwise, we would not have made the decision to move."

The struggle to find secure housing in Amsterdam and Utrecht was a recurring theme among participants, particularly in the early stages of their housing careers. Some participants searched extensively for housing in their former city before considering moving to Rotterdam, for instance Anna (26) who was a tenant in both Utrecht and Rotterdam, says:

"We really tried very hard in Utrecht, but it just didn't work, we couldn't get in."

And

"I really think I've responded to 100 houses in Utrecht over the past 2 years."

¹⁰ The ages listed for participants correspond to their age at the time of the interview.

¹¹ Anti-squatting refers to vacant buildings, not intended for residential use, that are temporarily used for housing.

There were also participants who mentioned that it was largely a matter of choice, with the value for money being much better in Rotterdam compared to Amsterdam or Utrecht. The high housing prices in their previous city restricted their residential options at the time of the move. Thus, although their initial preference may have been to relocate within Amsterdam or Utrecht, the available housing options did not appeal to them, leading them to search beyond their city. Eric (27), a former tenant in Amsterdam, describes the housing situation there as:

“The houses you can get there are really quite small, the quality is pretty low, and at some point, I couldn’t find anything within my budget in neighbourhoods I actually liked, but more in areas, you know, outside neighbourhoods where you normally never really go, which, in my opinion, aren’t places I really feel connected to.”

The available neighbourhoods in the former city not meeting the desired criteria is something that was frequently stated by participants. These neighbourhoods were often considered to be too far from the city centre, containing too few amenities and facilities that appealed to them. This is somewhat interesting as this highlights the desire of these inter-urban movers for a particular urban environment; one they could no longer access or afford in their former city. Here the notion of consideration sets in housing search is useful. As Krysan and Crowder (2017) argue, people develop a limited set of neighbourhoods they consider as viable options, shaped by residential histories, daily routines, and information from social networks. Neighbourhood perception and status are likely central in this process. Even when some neighbourhoods within their price range were available, participants excluded them from consideration because their perceptions of these areas did not align with the characteristics of places where they felt connected to. As a result, rather than adjusting their preferences, participants sought housing in another city where neighbourhoods with their desired qualities were still within reach. This aligns with Feldman’s (1990) argument that when the new residential environment is similar to the previous one, these middle-class households can maintain a sense of belonging.

Additionally, being able to buy a house in Rotterdam, while not being able to do so in Amsterdam or Utrecht was a crucial factor explaining for middle-class households’ relocation to Rotterdam, and the type of house they could buy. Although most participants experienced this upgrade in their housing and neighbourhood career, some participants expressed resentment towards not being able to secure their desired housing in their origin city. For instance, Paul (44) mentioned that he was able to move to a beautiful house in a nice neighbourhood of Rotterdam, but when asked about how he felt towards moving to Rotterdam, he responded:

“I didn’t like it. No, I think it took me three years to get used to it.”

Describing Amsterdam as:

“Yes, to be fair, it’s still a fantastic city, but it’s unaffordable. Let that be clear as well.”

5.4.2 Cultural displacement

Another element that frequently came up in the interviews was how gentrification had changed participants’ former cities, making them less appealing over time. The role of this factor in their moving decision process varied. Some cited it as their primary reason for leaving Amsterdam or Utrecht, while others found it frustrating but not decisive. A few participants were even drawn to these changes, though they were in the minority and will not be discussed further in this section.

Indirect cultural displacement pressure on the working class is often understood in terms of a loss of belonging, as changes such as shifts in population and neighbourhood appropriation, make residents feel that gentrification transforms their community into something no longer meant for them (Shaw and Hagemans, 2015). Based on our interviews we find that this is different for the middle-class as changes brought by gentrification in Amsterdam and Utrecht did not make these inter-urban movers feel that their residential environment is becoming something not meant for them. Instead, these changes seemed to alter their sense of *wanting* to belong, which we explain below.

A change due to gentrification which was frequently mentioned by the participants was the increasing uniformity of cafés, restaurants, and shops, as well as the homogeneity of the population in Amsterdam and Utrecht. Many described the new amenities as “boring” and catering to a narrow demographic, referred to as “yuppies”. Katy (29), who was born and raised in Amsterdam and had lived there for 28 years, states:

“I just really wasn’t happy there, and because of that, I became more negative. I’d think: ‘Look at these stupid people in those stupid cafés,’ and then when something new opened, I’d be like: ‘Ugh, another shitty café, I don’t want this.’ It was like... yeah, I was feeding into it as well, and that’s why it felt amazing to leave.”

Her experience of growing up in the city also shaped her perception of how gentrification had transformed it. She further reflects:

“It just felt like one big mass, all the same kind of crowd, and not even friendly. I really missed the... the... the weirdos I was used to in Amsterdam.”

Lisa (26), who was born and raised in Utrecht, had similar experiences:

“Well, I found it really sad that one café after another was closing. Like, there were two cafés where I loved to go, and they kind of became my regular spots. And within half a year, both of them were just gone. So yeah, I really thought that was a shame.”

She continues:

“And Utrecht is just getting more and more of an elitist vibe. I think it always had that a little bit. That was kind of what Utrecht was known for. But it's only getting worse, and that's a pity.”

These experiences highlight how participants have become increasingly dissatisfied with the city as gentrification reshapes it, suggesting that the urban environment no longer aligns with their tastes or preferences. An experience that, in some ways, parallels the concept of cultural displacement observed among the working class, such as the closing of familiar amenities and the shifting appropriation of neighbourhoods (e.g. Green et al., 2017). However, there is a notable difference. For instance, in the study of a gentrifying neighbourhood in Montreal, Twigge-Molecey (2014) found that the working class struggled with the changing amenities primarily because they were priced out: the new amenities catered to a wealthier clientele, and they could no longer afford the products. In contrast, for these inter-urban movers, being priced out is not the reason they experience indirect cultural displacement; rather, it is the growing homogeneity of amenities that they find unappealing or monotonous. This is illustrated by Amy (33), who describes the changing amenities in Amsterdam:

“So, it wasn't even that I had the feeling that all of this was happening and I couldn't make use of it, because I was using it myself. Like buying ridiculously expensive cookies at Stach, or, you know, drinking coffee and stuff. We were all doing it. So that didn't play into it, the feeling of 'oh I can't be a part of it.' Because I was part of it, and maybe that was the confronting part or something.”

Thus, participants described a growing desire to distance themselves from a particular type of uniform and expensive lifestyle that they increasingly disliked. While indirect displacement is typically described as occurring when a place changes due to newcomers whose norms and behaviours differ from those of longstanding residents (Green et al., 2017), this does not hold true for these inter-urban movers.

The evolving amenities and changing population should, in theory, cater to a gentrifier-type clientele. However, as the gentrification process advances, these changes start to lose their appeal to this particular segment of the middle-class. Participants often described that the lack of diversity in Amsterdam and Utrecht, enforcing some kind of uniform lifestyle that did not appeal to them. Erin (36) describes her experience in Utrecht as:

“The people. Like, when you cycle through the city, you see a lot of people who look like you because everyone is white. Well, not everyone, and of course, it depends on the neighbourhood, but take the city centre, for example. There are a lot of women, many highly educated, everyone is dressed relatively the same, sitting on terraces enjoying themselves, and there's little diversity. And I imagine that everyone is kind of having the same conversations, and then I think: yeah, isn't that actually a bit boring?”

This unease of blending in with this homogeneous lifestyle impacts how these inter-urban movers view their former city. While they may identify with the broader population and the evolving city dynamics, they are not drawn to the homogeneity that comes with the highly gentrified urban environment. This is also reflected in Clay's (1979) stage model of early gentrifiers, which suggests that they are particularly drawn to the imperfection and grittiness of neighbourhoods in the initial stages of gentrification. At the same time, the responses resemble characteristics described by Claufield (1994), who notes that the new middle-class seeks to distinguish itself from the mundane, standardised suburban life. In our case, these inter-urban movers differentiate themselves not from suburban environments but from the homogeneous urban landscapes of their former cities. The sense of blending in with a uniform crowd, combined with limited interaction with people who are different, seems to reduce their enjoyment of city life and, in turn and in retrospect, diminishes their sense of *wanting* to belong.

5.4.3 Social displacement

Unlike studies on social displacement of the working class (e.g., Twigge-Molecey, 2014; Versey et al., 2019), the loss of nearby friends due to gentrification did not appear to be a significant factor in participants' decisions to leave Amsterdam and Utrecht. Instead, most said to be the first in their friend group to leave either city. When asked whether friends before her had moved to Rotterdam, Katy (29) answers:

“No, actually zero, I think pretty much everyone has stayed in Amsterdam”

Thus, relocating to Rotterdam meant leaving behind a significant part of their social network, which appeared to be just one factor among the broader set of choices they were navigating. This aligns with the behaviour of typical gentrifiers described by Schlichtman and Patch (2014), who note that gentrifiers often accept certain inconveniences in their housing decisions. In practice, these middle-class movers adapted by regularly visiting friends in their former city, which helped to limit the social impact of their relocation. This flexibility was partially enabled by the high connectivity between Utrecht, Amsterdam, and Rotterdam, allowing for relatively short inter-urban travel times. Eric (27) explains:

“In an ideal world, I would prefer to live close to my friends. But on the other hand, it's not that far, and I just have to accept that you can't have everything. If that's the case, I can just travel a bit longer to see my friends or go there on the weekends”

A social factor that did matter in some instances was that of anticipatory social displacement. Specifically, participants who had really struggled in securing housing in their former city, anticipated their friends would experience the same and would eventually move out, resulting in a lower urgency to stay in their former city. Again, Eric (27) describes:

“Many of my friends will graduate soon, and they'll probably come to the conclusion that it's really expensive in Amsterdam, unless you have some social housing or can get something from your family or something like that. And I took a bit of a gamble, but I thought, yeah, many friends will probably move towards the whole Randstad and probably end up in Rotterdam too.”

In summary, the indirect-displacement experiences of these inter-urban movers seem to primarily revolve around the unaffordability of housing in Amsterdam and Utrecht, and cultural displacement translating into losing their sense of wanting to belong. These findings highlight how economic and cultural changes in the macro-context limit residential choice for middle-class households. They have seemed to have lost control as they cannot find suitable affordable housing in their former city, nor can they impact how the city is changing culturally due to gentrification. While their preference for an urban habitus has remained the same, the city where they once lived does not offer what they are looking for. This positions them as those experiencing displacement in Amsterdam and Utrecht instead of those driving the gentrification process in these cities.

5.5 Taking back control

While these inter-urban movers no longer benefit from the gentrification process in their previous city, their cultural and economic capital equips them to cope with its negative effects. In this section, we show how these displaced gentrifiers regain a sense of agency in the housing market and in other aspects of life by relocating to Rotterdam.

Displacement is often perceived as a situation with limited choice, where the outcome of the residential move is typically not seen as an improvement. Posthumus and Kleinhans (2013) find that tenants who were forced to move were often unhappy with the compromises they had to make. They also found that higher-educated individuals, as well as those who anticipated the move, were more likely to be satisfied with their housing outcome. The same applies to middle-class households making the inter-urban move to Rotterdam. While they experience indirect displacement effects, such as being unable to find affordable housing in their current city, the move still involves a significant element of choice; whether it's the desire for more space, buying their first home, or wanting to live in the city centre. As Fiona (31) puts it:

“Of course, I have a choice. I could also say I’m going to live in a suburb and live there, but I don’t want that. I also want to live in a city, and in that regard, I don’t have many options. Or I would have to make the choice to pay a lot and live in a very small space, but I don’t want that.”

Other participants primarily framed their positive housing outcome in relation to the limited choices in their former city, as moving to Rotterdam provided them with housing stability, allowing them to no longer worry about their next move. For instance, Eric (27) who spent three years subletting rooms in Amsterdam, explains:

“Well, I had to move a lot, and there were even months when I didn’t have a home and had to stay with my girlfriend. The advantage of that was that I had to pay much less rent, so it more or less stayed within my budget. But the downside was that I didn’t really have a place of my own to live. [...] I had to be very flexible, and, in fact, I even once slept in a living room just to be able to keep living in the city.”

And after moving to Rotterdam describes:

"I now have my own place to live, where I can stay as long as I want for a reasonable price that I pay each month. And yes, I simply wouldn't have that in Amsterdam. Either I'd have to pay a lot of money, or I'd have to live in quite uncertain circumstances, which I don't have now. So, that's a huge weight off my shoulders."

Participants also described that they experienced increased flexibility in light of their professional career. The high cost of living and housing in their former cities not only enabled difficulties for them to acquire housing, but it also created a feeling of being trapped in employment that yielded significant wages in order to accommodate such lifestyles. Erin (36), who was a tenant in Utrecht and a homeowner in Rotterdam, describes:

"We actually wanted to buy a house that can be supported by one of our incomes, so that there's room in case we suddenly decide to do something completely different, like taking a job with a lower income or starting a business, or whatever. We mainly wanted to keep those options open, so we set a maximum amount for ourselves."

And Lisa (26), who was a tenant in both Utrecht and Rotterdam, states:

"I think it's more realistic that, well, I'm going to quit my job soon, and then I'll, I don't know, jump into the unknown, but I might want to rent a studio space for myself, for example. And that's something that's just too expensive in Utrecht. And if you find one that's affordable, it's often temporary, so you can be kicked out at any time. But in Rotterdam, I see that there are definitely more options, so it feels like a more realistic option if I would want that."

Although these participants experienced various forms of indirect displacement, their move to Rotterdam brought a stronger sense of agency, not just in terms of housing but across other areas of their lives. This allowed them to regain a sense of control that had previously felt lost. While the move required compromises, participants consistently described it as a positive change compared to the life they would have had if they had remained in their former city. In the next section, we take this analysis a step further by showing how movers displaced from their former cities also take on the role of gentrifiers in Rotterdam, situating them in light of the various gentrifier pulls described by Schlichtmann and Patch (2014).

5.6 The Gentrifier Narrative

5.6.1 The Economic Pull

The economic incentive to relocate to a more affordable neighbourhood is a well-documented characteristic of the gentrifier (e.g., Schlichtman et al. 2018). After leaving behind highly competitive housing markets, all participants emphasised that the relative affordability of housing in Rotterdam influenced their decision to move. Yet these inter-urban movers bring a particular perspective to this pull factor, shaped by their experiences in the overheated markets of Amsterdam and Utrecht. Many expressed surprise at both the availability and quality of housing in Rotterdam compared to their former cities. As Katy (29) explains:

“When I started exploring the neighbourhood, I really thought, how is this possible? That I got this apartment for this price? I honestly thought maybe my entire wall would soon collapse from mould or something, like it was too good to be true. This is really such a great neighbourhood.”

Also, their ability to choose where to live, rather than being at the mercy of the housing market, was also frequently mentioned during interviews.

While it is clear that these participants were driven by economic incentives, they also expressed surprise and a sense of luxury in being able to choose where to live, something they had previously lacked the agency to do. Their experiences navigating tighter housing markets had shaped their perception of housing choice, making the relative flexibility they encountered in Rotterdam feel almost unbelievable. At the same time, their move to Rotterdam should also be understood as opportunistic. While participants were sometimes surprised by the value for money in the city, their initial consideration of Rotterdam was also driven by affordability. Their relocation thus represents a strategy that allows them to maintain their urban habitus in a different city, as Rachel (34) states:

“I think it goes hand in hand with the fact that it started when I didn’t have full control over what I wanted, and at some point, I went along with it. Then, at a certain moment, I thought, if I am going to buy, now is the time to do it, because I could see that there was a particular opportunity here. It was really a moment in time when it was possible, and I thought I might as well take advantage of it, because when would this chance come again?”

Such opportunistic behaviour mirrors the characteristics of a stereotypical gentrifier, yet their limited sense of agency over their housing situation highlights the dual role of these inter-urban movers in the gentrification process, a complexity that is further reflected in Rachel's response when asked whether she considers herself a gentrifier:

"I have known what that concept means for a long time; it already came up during my studies. For a long time, I didn't apply it to myself because it carried a certain association with a kind of easy gain, as if the main idea was people wanting the best spot for a lower price or something like that."

And:

"It's not like I was planning to buy and live off a fortune, no, I just wanted stability"

In her previous city, Rachel (34) had limited agency in her housing choices, making the role of gentrifier less applicable. In Rotterdam, however, the relative affordability of housing has allowed her to regain agency, positioning her within the role of a gentrifier. Yet, she hesitates to fully identify as one, due to her past struggles with housing access.

Not all participants experienced this surprise in the affordability of housing in Rotterdam. Some admitted that buying a house in Rotterdam was a strategic financial investment. For instance, Erin (36) states:

"Utrecht is already saturated in terms of how many renovations you can still do, so the added value isn't that significant anymore. But here, you can add that value yourself. And that's true because the houses actually sell for more on the market. Yes, we did take that into account."

And when asked if Erin (36) identifies as a gentrifier, she responds with:

"Partly, yes, for example in my neighbourhood and certainly within our homeowners' association [...]. I have taken the initiative to make sure that all the floors in the building are insulated and that we will insulate the roof. And that is maybe not something my 98-year-old neighbour is necessarily interested in."

And:

"Yes, maybe in terms of organisation or initiative, it simply wasn't done before, and now I was able to do it, and that is something positive. So, of course, there is a very negative side to it [gentrification]. But you can also improve the quality of a home."

Erin's response illustrates that she not only recognises herself as a gentrifier and acknowledges the negative connotations of the term, but also consciously exerts influence over fellow residents to improve the quality of their homes through targeted housing investments. While these actions are typical of gentrifiers, Erin frames them positively, a strategy also observed by Donnelly (2018), who shows how gentrifiers justify their role by redefining concepts and actions in ways that cast gentrification as progressive and beneficial for the neighbourhood.

There were also participants who acknowledged their role as gentrifiers or “yuppies” yet sought to distance themselves from the negative connotations of these labels by emphasising their own housing struggles. For instance, Vivianne (31), who moved to Rotterdam in 2020, describes:

“At the end of the street, I don't know if you noticed it, but that's the yuppie side. Those are all houses [...] that were sold to a developer who invested a huge amount of money in them. So, for example, this house [her house] leaks and is crooked and has all those kinds of issues, a real fixer-upper, whereas over there everything was fixed up and those houses suddenly became worth twice as much.”

These responses illustrate the moral strategies and coping mechanisms of participants who do not reject the label of gentrifier outright. Instead, they distinguish themselves from the stereotypical “bad” gentrifier who disregards the existing community. As Donnelly (2018) also observes, interviewees create this distinction by speaking positively about longtime residents and highlighting even minimal interactions with them, allowing them to present themselves as respectful and caring members of the neighbourhood, unlike other newcomers. In other words, these participants acknowledge that their presence and choices contribute to displacement and rising housing costs, but they attempt to distance themselves morally from the label. This tension may reflect their negative experiences with gentrification in their former city, but it is also likely shaped by the broader societal perception of gentrification, in which being a gentrifier is associated with inequality and exclusion.

5.6.2 Cultural pull

In addition to the financial incentives of moving to Rotterdam, numerous participants also described how the city's character, architecture, and diversity drew them in. In line with Clay's (1979) description of early gentrifiers, some participants were explicitly drawn to the grittiness that Rotterdam had to offer. For instance, Amy (33) states:

"I still often notice— and I think this is very characteristic of Rotterdam— that you'll have a really beautiful street, but then you turn the corner, and it's super ugly, you know? That happens quite a lot here, whereas in Amsterdam, it's almost non-existent. It's either all really beautiful or all really ugly. And I like that Rotterdam has more space, so to speak, for ugly spots. For 'blemishes,' so to say. I think that's fun."

Others saw it more as an escape from their previous environments, perceiving Rotterdam as more real and authentic. This search for authenticity in a residential location aligns with Ocejo's (2011) observations, who notes that gentrifiers ageing in a gentrifying place often draw on nostalgic narratives. These narratives reflect their personal experiences of the neighbourhood's gritty past, its ethnic and cultural diversity, and its creative production. These gentrifiers express a longing for the authenticity associated with the early stages of gentrification; a sentiment also echoed by inter-urban movers. As David (41) explains:

"it also felt more real in a way. There were people who genuinely connected with you, not everyone wore the same clothes or shopped at the same stores. It just felt more natural or real. I think 'authentic' is the right word for it."

Participants also frequently highlighted Rotterdam's cultural diversity, emphasising how it stood in stark contrast to the relative homogeneity of their previous city. As Marian (37) explains:

"But I really like that when you're at a yoga studio with a café where you can enjoy your sourdough bread with avocado, you might, so to speak, have a 'Henk and Ingrid' sitting there, along with someone wearing a hijab and some yoga enthusiasts. So, it's more of a mix."

These preferences have been discussed in the literature, for instance by Brown-Saracino (2019), who described gentrifiers committed to maintaining neighbourhood authenticity as social preservationists, and by Zukin (2008), who linked gentrifiers' taste for authenticity to the acceleration of gentrification. In our case, the point of reference appears important: the attraction to Rotterdam's grittiness and diversity is most strongly expressed in the narratives of younger participants. While older participants also value the city, they focus less on discovering authenticity and more on reflecting on how Rotterdam has transformed over time. For them, gentrification itself has reshaped the city in ways that enhanced its appeal and influenced their decision to relocate. Martha (48), who had been working in Rotterdam for some time before actually moving there, explains:

"I think Rotterdam has become a really fun city, and there's a clear difference between why I wouldn't have chosen it before and what I like about it now. And honestly, I find that difficult to admit [...]. But the fact that the city has become more diverse in a certain way and now also offers more for highly educated people. Unfortunately, that does make it more attractive to me."

Martha's response is noteworthy because she recalls Rotterdam at a time when it was not an attractive destination for middle-class households, suggesting that gentrification in the city has directly influenced her decision to move. In contrast, younger participants have no memory of Rotterdam's gritty past and therefore perceive its ongoing early-stage gentrification as appealing and "cool". For them, the city's current attractiveness is intertwined with gentrification itself, meaning that, perhaps unknowingly, they are drawn to the very process that has transformed the city. This becomes particularly evident among participants who, despite experiencing cultural displacement and disliking gentrification in Amsterdam and Utrecht, indicated that they would not mind if Rotterdam gentrified further. For example, as Amy (33) explains:

"I would also love it if a nice coffee place opened here. We do have a very old-fashioned bakery, and we're really loyal customers there. But at the same time, I know that in a few years, they'll probably be gone. And then I think, well, it would actually be quite nice if something like a Jordy's Bakery opened there. I'd really like that."

And Erin (36), when asked whether she would be disappointed if her neighbourhood became even more trendy, replied:

“Well, I think there’s still quite a bit of room to make it trendier, so I don’t think I’d find that annoying anytime soon. But if it ever really gets to that point, you know, like in De Pijp in Amsterdam, then I think I would leave.”

These responses highlight a certain inconsistency in how these inter-urban movers view gentrification. It has become clear that gentrification in Amsterdam and Utrecht is largely perceived as bad, boring, and unaffordable by these inter-urban movers. In contrast, the majority of participants, while attracted to the grittiness typical of the early stages of gentrification, are not as critical of the process or the changing amenities it brings to Rotterdam. Striking is the difference compared to the working-class, whose displacement tends to exclude them from gentrification altogether, middle-class inter-urban movers, even after experiencing indirect displacement, continue to reproduce gentrifier preferences in their new city. This points to a deeper cognitive dissonance: they condemn gentrification when they are on the losing side of it yet simultaneously perpetuate it when they find themselves in a more advantageous position. Their narratives thus reveal not only ambivalence but also the self-contradictory position of being displaced gentrifiers.

5.7 Conclusion

In this paper, we have examined the narratives of displaced gentrifiers in relation to their cities of departure and arrival, addressing the following research question:

How do middle-class individuals who relocate from Amsterdam or Utrecht to Rotterdam experience their dual role as both experiencing displacement pressure and driving gentrification, and how do they adapt to the challenges associated with gentrification?

Through semi-structured interviews with participants who moved from Amsterdam or Utrecht to Rotterdam, we have examined how these inter-urban movers interpret and respond to the gentrification process. While increasing gentrification restricts access to housing and diminishes participants' sense of *wanting* to belong in their former city, these inter-urban movers demonstrate adaptability by relocating to Rotterdam. Despite the pressures they face, this move allows them not only to continue advancing along their housing trajectories but also to assume a gentrifier role in their new environment, evidently contributing to spillover gentrification in Rotterdam.

To elaborate, the majority of participants in our study reported experiencing one or more forms of displacement pressure in Amsterdam and Utrecht. The high cost of housing and their limited ability to either secure stable housing or advance in their housing careers influenced their decision to relocate to Rotterdam. Most participants expressed negative sentiments about the extent of gentrification in Amsterdam and Utrecht, suggesting it had diminished the vibrancy and liveability of these cities, although not everyone shared this perspective. While working-class residents face cultural displacement through shifts in neighbourhood appropriation and demographic change that make them feel out of place (e.g. Twigge-Molecey, 2014), our participants recognised that the gentrified environments of Amsterdam and Utrecht were tailored to appeal to their own middle-class tastes. However, the increasingly homogeneous environment, reflected in a less diverse population and uninspiring amenities, affected their sense of wanting to belong and therefore played a role in their decision to relocate to Rotterdam.

The decision to move to Rotterdam should also be interpreted through a gentrifier narrative, where, in addition to the relatively affordable housing, participants were drawn to the city's early stage of gentrification and the chance to settle in neighbourhoods that reflected typical gentrifier preferences. All participants described their residential outcomes in Rotterdam as representing an upward

trajectory in their housing careers, and participants often described that the reduced housing cost enabled more freedom in their professional careers. Even challenges such as the fragmentation of social ties were navigated accordingly, illustrating the extent to which these middle-class movers have adapted to the adverse effects of gentrification. These findings highlight that their relocation to Rotterdam is a strategy of the middle class to take back control. While in their former cities their lives were subject to the housing market, their relocation to Rotterdam enabled them not only more housing choice and stability, but also more professional freedom, yielding a positive housing outcome. Furthermore, many participants acknowledged both their role in the gentrification process and typical gentrifier behaviours, yet they often sought to distance themselves from the negative stereotypes associated with gentrifiers. Despite experiencing indirect displacement and criticising gentrification, they simultaneously contribute to it, revealing the contradictory position they occupy. They navigate this tension by finding ways to reconcile their role as gentrifiers with their personal values and sense of identity.

Thus, we find that while middle-class households have become vulnerable to displacement, they employ strategies to continue advancing in their housing trajectories, simultaneously contributing to inter-urban gentrification spillovers. The growing trend of middle-class displacement towards Rotterdam has consequences for housing affordability among incumbent residents, particularly those from the working class. As the influx of inter-urban movers accelerates gentrification, housing opportunities for lower-income groups become more restricted, reinforcing socio-economic inequality (Janssen et al., 2024; 2025). It is therefore crucial to clarify that this paper is not a call to prioritise middle-class housing concerns over those of the working class, which have already been central in policy agendas for the past decade (Hochstenbach, 2025).

The phenomenon of gentrification spillovers is not unique to Rotterdam or the Randstad region. Martin et al. (2025) document similar patterns in the United States, where remote work has driven middle-class displacement and inter-urban gentrification. Ocejo (2011; 2019) illustrates how middle-class households displaced from New York City relocate to places like Newburgh, contributing to spill-over gentrification. Comparable dynamics are observed in the Paris region, where Loumeau and Russo (2023) link gentrification to new transit infrastructure. These cases suggest that middle-class displacement and spillover gentrification occur in multiple urban contexts. It is worth noting, however, that certain regional characteristics can intensify these dynamics. In contrast to the vast metropolitan sprawl of cities like London—where Butler and Robson (2003) distinguished between different types of gentrifying neighbourhoods catering to various middle-class groups—the relatively small size of Dutch cities and the polycentric structure of the Randstad

especially facilitate inter-urban spillovers. When preferences cannot be met within a given city, relocation elsewhere in the region often requires minimal adjustment, due to short travel times and strong infrastructural connectivity. Although the labour market in the polycentric Randstad has long functioned as an integrated system (van Ham et al., 2001), today's constrained housing markets now appear to make housing decisions increasingly detached from city boundaries as well (Janssen et al., 2024). As a result, relatively affordable secondary cities within the Randstad, such as Rotterdam, are becoming increasingly susceptible to spillover gentrification. Importantly, these dynamics do not stop at city boundaries: Rotterdam's surrounding cities, such as Breda and Dordrecht, may also experience rising housing pressures as displaced middle-class households seek alternatives within the region. This highlights the necessity for policymakers to adopt a regional perspective, as local interventions in one city can unintentionally shift demand and displacement pressures to neighbouring municipalities (cf. Booi, 2023). Addressing gentrification and housing affordability effectively therefore requires regional coordination to anticipate and manage these spillover effects, ensuring that policy measures do not inadvertently exacerbate socio-spatial inequalities elsewhere in the region.

References

- Arkins, M. C., & French, B. E. (2024). Demolition, division and displacement: Examining the preservation of whiteness in Rotterdam municipal housing policy. *Critical Sociology*, 50(1), 107–124.
- Arundel, R., & Hochstenbach, C. (2020). Divided access and the spatial polarization of housing wealth. *Urban Geography*, 41(4), 497–523.
- Blasius, J., et al. (2016). Pioneers and gentrifiers in the process of gentrification. *International Journal of Housing Policy*, 16(1), 50–69.
- Bondi, L. (1991). Gender divisions and gentrification: A critique. *Transactions of the Institute of British Geographers*, 190–198.
- Booi, H. (2024). Spillover of urban gentrification and changing suburban poverty in the Amsterdam metropolis. *Urban Studies*, 61(3), 495–512.
- Brown-Saracino, J. (2019). *A neighbourhood that never changes: Gentrification, social preservation, and the search for authenticity*. University of Chicago Press.
- Butler, T., & Lees, L. (2006). Super-gentrification in Barnsbury, London: Globalization and gentrifying global elites at the neighbourhood level. *Transactions of the Institute of British Geographers*, 31(4), 467–487.
- Butler, T., & Robson, G. (2003). Negotiating their way in: The middle classes, gentrification and the deployment of capital in a globalising metropolis. *Urban Studies*, 40(9), 1791–1809.
- Caulfield, J. (1994). *City form and everyday life: Toronto's gentrification and critical social practice*. University of Toronto Press.
- CBS. (2025a). *Inwoners per gemeente* [Dashboard]. CBS. <https://www.cbs.nl/nl-nl/visualisaties/dashboard-bevolking/regionaal/inwoners>
- CBS. (2025b). *Bevolking: geslacht, leeftijd en regio, 1 januari* [Dataset]. Centraal Bureau voor de Statistiek. <https://www.cbs.nl/nl-nl/cijfers/detail/82900NED>
- Clay, P. (1979). *Neighbourhood renewal: Middle class resettlement and incumbent upgrading in American neighbourhoods*. D.C. Heath.
- Custers, G., & Engbersen, G. (2022). The urban class structure: Class change and spatial divisions from a multidimensional class perspective. *Urban Geography*, 43(6), 917–943.
- Custers, G., & Willems, J. J. (2024). Rotterdam in the 21st century: From 'sick man' to 'capital of cool'. *Cities*, 150, 105009.
- Davidson, M. (2008). Spoiled mixture: Where does state-led positive gentrification end? *Urban Studies*, 45(12), 2385–2405.
- Davidson, M., & Lees, L. (2010). New-build gentrification: Its histories, trajectories, and critical geographies. *Population, Space and Place*, 16(5), 395–411.
- Ding, L., et al. (2016). Gentrification and residential mobility in Philadelphia. *Regional Science and Urban Economics*, 61, 38–51.
- Donnelly, K. (2018). The gentrifier's dilemma: Narrative strategies and self-justifications of incoming residents in Bedford–Stuyvesant, Brooklyn. *City & Community*, 17(2), 374–393.
- Dragan, K., et al. (2020). Does gentrification displace poor children and their families? New evidence from Medicaid data in New York City. *Regional Science and Urban Economics*, 83, 103481.
- Feldman, R. M. (1990). Settlement-identity: Psychological bonds with home places in a mobile society. *Environment and Behaviour*, 22(2), 183–229.
- Florida, R. (2002). *The rise of the creative class, and how it's transforming work, leisure, community, and everyday life*. Basic Books.
- Freeman, L., & Braconi, F. (2004). Gentrification and displacement: New York City in the 1990s. *Journal of the American Planning Association*, 70(1), 39–52.
- Green, R. D., et al. (2017). The indirect displacement hypothesis: A case study in Washington, DC. *The Review of Black Political Economy*, 44(1–2), 1–22.
- Hochstenbach, C. (2017). State-led gentrification and the changing geography of market-oriented housing policies. *Housing, Theory and Society*, 34(4), 399–419.
- Hochstenbach, C., & Musterd, S. (2018). Gentrification and the suburbanization of poverty: Changing urban geographies through boom and bust periods. *Urban Geography*, 39(1), 26–53.
- Huse, T. (2018). Gentrification and ethnicity. In *Handbook of gentrification studies* (pp. 186–204). Edward Elgar Publishing.

- Janssen, K. M. J., Cottineau-Mugadza, C., Kleinhans, R., & van Bueren, E. (2025). Spatial dynamics of incoming movers and the state-led gentrification process: The case of Rotterdam. *Population, Space and Place*, 30(8), e2851.
- Janssen, K. M. J., Cottineau-Mugadza, C., & Kleinhans, R. (2026). Residential pathways: Understanding moving dynamics in gentrifying neighborhoods through a multidimensional sequence analysis. *Journal of Urban Affairs*, 1–22.
- Krysan, M., & Crowder, K. (2017). *Cycle of segregation: Social processes and residential stratification*. Russell Sage Foundation.
- Lees, L. (2003). Super-gentrification: The case of Brooklyn Heights, New York City. *Urban Studies*, 40(12), 2487–2509.
- Ley, D. (1997). *The new middle class and the remaking of the central city*. Oxford University Press.
- Loumeau, G., & Russo, A. (2023). Second-hand gentrification: Theory and evidence from high-speed rail extensions. *The Sheffield Economic Research Paper Series (SERPS) 2023011* (2023011).
- Martin, N., et al. (2025). Moving from “superstar” cities to “ordinary” cities to reclaim middle-class status: Gentrification-induced inter-metropolitan migration. *Urban Geography*, 46(1), 87–111.
- Michielin, F., & Mulder, C. H. (2008). Family events and the residential mobility of couples. *Environment and Planning A*, 40(11), 2770–2790.
- Millard-Ball, A. (2002). Gentrification in a residential mobility framework: Social change, tenure change and chains of moves in Stockholm. *Housing Studies*, 17(6), 833–856.
- Mulder, C. H., & Hooimeijer, P. (1999). Residential relocations in the life course. In *Population issues: An interdisciplinary focus* (pp. 159–186). Springer.
- Newman, K., & Wyly, E. K. (2006). The right to stay put, revisited: Gentrification and resistance to displacement in New York City. *Urban Studies*, 43(1), 23–57.
- Nieuwland, S., & Lavanga, M. (2020). The consequences of being ‘the Capital of Cool’: Creative entrepreneurs and the sustainable development of creative tourism in the urban context of Rotterdam. *Journal of Sustainable Tourism*, 29(6), 926–943.
- Ocejo, R. E. (2011). The early gentrifier: Weaving a nostalgia narrative on the lower east side. *City & Community*, 10(3), 285–310.
- Ocejo, R. E. (2019). The creative class gets political: Gentrifier politics in small city America. *Journal of Urban Affairs*, 41(8), 1167–1182.
- Pinkster, F. M., & Boterman, W. R. (2017). When the spell is broken: Gentrification, urban tourism and privileged discontent in the Amsterdam canal district. *Cultural Geographies*, 24(3), 457–472.
- Posthumus, H., & Kleinhans, R. (2014). Choice within limits: How the institutional context of forced relocation affects tenants’ housing searches and choice strategies. *Journal of Housing and the Built Environment*, 29(1), 105–122.
- Rérat, P., & Lees, L. (2011). Spatial capital, gentrification and mobility: Evidence from Swiss core cities. *Transactions of the Institute of British Geographers*, 36(1), 126–142.
- Schlichtman, J. J., & Patch, J. (2014). Gentrifier? Who, me? Interrogating the gentrifier in the mirror. *International Journal of Urban and Regional Research*, 38(4), 1491–1508.
- Schlichtman, J. J., et al. (2018). *Gentrifier*. University of Toronto Press.
- Sharkey, P. (2013). *Stuck in place: Urban neighbourhoods and the end of progress toward racial equality*. University of Chicago Press.
- Slater, T. (2009). Missing Marcuse: On gentrification and displacement. *City*, 13(2–3), 292–311.
- Smith, D. P., & Holt, L. (2007). Studentification and ‘apprentice’ gentrifiers within Britain’s provincial towns and cities: Extending the meaning of gentrification. *Environment and Planning A*, 39(1), 142–161.
- Twigg-Molecey, A. (2014). Exploring resident experiences of indirect displacement, displacement risk, and aging precarity as challenges to aging in place in gentrifying cities. *International Journal of Environmental Research and Public Health*, 16(23), 4633.
- Zhao, Y. (2024). On and beyond gentrifiers: Middling transnationals, rental agents, and the housing search. *Housing Studies*, 1–20.

And they're all made out of ticky-tacky
And they all look just the same

Little Boxes – Malvina Reynolds

6 Conclusion and discussion

6.1 Introduction

This dissertation began amidst the housing protests of 2021 and the controversy surrounding the demolition of the Tweebosbuurt in Rotterdam. These events, which initially shaped the focus of my research, underscored the need to better understand how state-led gentrification and housing market pressures shape residential opportunities in Rotterdam. In this thesis, I examined different trends in relocation patterns in the context of gentrification. The overall aim was to better understand how gentrification evolves by unravelling not only the socio-economic but also the spatial dynamics of residential mobility within the gentrification process. I found that to fully capture and understand the impact of gentrification on residential mobility and inequality, we must examine how residential mobility patterns change over space and time. This means examining not merely shifts between two time points within a single neighbourhood but linking local changes to broader patterns of gentrification and inequality, and how these changes occur over time. Gentrification is a spatial-temporal phenomenon, and to understand changing mover dynamics, we must situate them within this ongoing process.

To capture these mover dynamics, I have applied a variety of tools and methods to develop a comprehensive methodology for and an understanding of residential mobility in the context of gentrification. The structure of this thesis reflects the progression of my insights during the research process: each completed chapter informed and shaped the direction of the next, creating a narrative throughout the dissertation. First, I needed to map the current state of research on gentrification and the spatial dynamics of residential mobility. To do so, I conducted a systematic literature review (Chapter 2) focusing on the origins and destinations of people moving to and from gentrifying neighbourhoods. The findings suggested that while

research on the destinations of displaced households is advancing, less is known about the changing origins of incoming movers. Building on this gap, I carried out an empirical study to identify the origin locations of movers relocating to different types of neighbourhoods in Rotterdam (Chapter 3). Two distinct patterns emerge. First, spillover gentrification: Rotterdam is increasingly attracting middle- and high-income households from other Randstad cities where gentrification is more advanced. Second, exclusionary displacement: the number of households moving into Rotterdam's gentrifying neighbourhoods is declining, particularly among lower-income groups.

Subsequently, the results of Chapter 3 informed the research questions for Chapters 4 and 5, which expand on the two trends identified, each operating at a different scale (i.e. intra and inter-urban moves). Chapter 4 continues to explore intra-urban residential mobility dynamics in Rotterdam, shifting to a more detailed temporal lens by analysing individuals' residential trajectories and how these changes, rather than focussing on aggregated residential moves. This research confirms that exclusionary displacement persists, pushing low-income households into poverty-concentrated neighbourhoods. Yet it also illustrates that gentrification is an evolving process, characterised less by the influx of new residents and more by former gentrifiers continuing their housing career through internal relocation within gentrifying neighbourhoods. Next, Chapter 5 builds on the findings of Chapter 3 by examining the spillover effects of gentrification through a qualitative approach. This study helps to better understand the experiences and motivations of middle-class households moving from more advanced gentrifying cities (Amsterdam and Utrecht) to Rotterdam, positioning them simultaneously as subjects and agents of gentrification. I find that participants describe how the advanced stages of gentrification in Amsterdam and Utrecht increasingly have a negative impact on them. By moving to Rotterdam, they claim to regain control in various aspects of their life-course career while maintaining their urban habitus.

By combining these different methodologies, I was able to shed light on how and why residential mobility patterns change in light of gentrification. In the following sections I summarise in more detail the results of my thesis. Subsequently, I will reflect on the overall contribution of this thesis to academia and society and describe the limitations of this study as well as recommendations for future research.

6.2 Summary of the research results

The research question addressed in this thesis is the following:

How is state-led gentrification in Rotterdam (re)shaping residential mobility patterns across socio-economic groups, and what implications is this having for spatial inequality?

Central in this thesis are the spatial characteristics of residential moves (i.e. where people move from and to) and how these change in the process of gentrification. Typically, the gentrification literature distinguishes between two types of residential movers: those who move into the neighbourhood, *the gentrifiers*, and those who were initially living there and move out, *the displacees*. In this study, I generally assume that movers of a higher socio-economic class compared to the incumbent residents can be regarded as gentrifiers, while moving residents of a lower socio-economic class than these newcomers are considered displacees. I further distinguish among different types of gentrifiers and explore how their mobility unfolds across space and over time during the gentrification process. For example, I introduce the concept of the inter-urban gentrifier and also discuss variations such as early, late, family, and empty-nest gentrifiers. On the side of the displacees, I examine diverse patterns of displacement, including exclusionary displacement, relocation to low-income suburbs, and those that manage to remain in gentrifying neighbourhoods.

It is important to acknowledge that people relocate for a wide range of reasons, such as changes in household composition or professional circumstances, as demonstrated by Mulder and Hooimeijer (1999). Gentrification may shape these decisions, but it does not necessarily determine them. I view residential mobility into and out of gentrifying neighbourhoods as part of broader processes of neighbourhood change, while also recognising that mobility is shaped by individuals' life-course trajectories. While low-income households may relocate without experiencing direct negative effects of gentrification, their departure still creates space for a socio-economic transformation of the area. Conversely, gentrifiers may move into these areas primarily due to affordability pressures elsewhere in the city. Nevertheless, their patterns of consumption in the neighbourhood combined with their socio-economic characteristics continue to drive gentrification, regardless of their initial motivations.

In the following sections, I analyse my findings through the lens of these two distinct roles in the gentrification process, showing how relocation patterns have shifted spatially, how these movements reflect broader dynamics of gentrification and socio-spatial inequality, and how they are experienced, interpreted and navigated by individuals involved.

6.2.1 Residential patterns of gentrifiers

Gentrifiers are of a higher socio-economic status compared to the incumbent residents, often described through their cultural capital and preference for an urban lifestyle. As noted, there has been extensive literature on the characteristics of these incoming movers, focussing on their professions (Ley, 1997), attitudes (Brown-Saracino, 2019), and socio-demographics (Blasius et al., 2016; Smith & Holt, 2007). My thesis focuses on both the socio-economic characteristics of movers and the spatial dimensions of gentrification-related residential mobility. An initial finding, based on a systematic literature review, is that relatively little attention has been paid to the origin locations of gentrifiers. However, a few exceptions exist, with two studies highlighting striking patterns in the residential mobility of gentrifiers, which subsequently emerged in the empirical analysis of Rotterdam.

The first study is a qualitative study by Ocejio (2019) which identified gentrifiers who themselves were displaced from New York City and relocated to a less gentrified secondary city, something Loumeau and Russo (2023) would define as second-hand gentrification. Housing unaffordability is increasingly restricting the housing opportunities of middle-class households (Hochstenbach, 2025; Booi, 2024; Arundel and Hochstenbach, 2020), especially in metropolitan cities. This gives way for the middle-class to reorientate over space to find affordable housing that meets their standards, potentially gentrifying the destination location in the process as found by (Booi, 2023; Loumeau and Russo, 2023; Martin et al., 2025). The Netherlands is a densely populated country, with approximately 18 million people living within an area of 41,865 km². Its economic core is the Randstad, a polycentric urban region comprising the four largest cities: Amsterdam, Rotterdam, The Hague, and Utrecht. These cities are well connected through an extensive transportation network, and it is well established that daily commuting between them is common (van Ham et al., 2001). Given this high level of inter-city connectivity, the concept of second-hand gentrification is likely applicable to the Dutch context as well. Since Rotterdam's housing market has remained relatively affordable compared to the other major cities in the Randstad, I hypothesised that the city is particularly susceptible to second-hand gentrification. By using large-scale register data from Statistics Netherlands

I examined how origin locations of moves into and within Rotterdam changed over time, with a focus on neighbourhoods targeted by urban restructuring policies aimed at attracting higher-income “promising households”. I found a significant increase in the number of households relocating from other, more expensive, core cities in the Randstad. These were predominantly middle- to high-income households moving into state-led gentrifying neighbourhoods, indicating that gentrification pressures in surrounding cities are spilling over into Rotterdam, particularly in areas targeted by urban restructuring policies.

To understand these inter-urban gentrification spillovers in further detail, I conducted 17 semi-structured in-depth interviews with participants who moved from Amsterdam or Utrecht to Rotterdam over the past 20 years. I found that the inter-urban moves of participants should be, partially, understood through a gentrifier narrative. Participants were drawn to Rotterdam due to its early stage of gentrification and the opportunity to settle in neighbourhoods that aligned with typical gentrifier preferences. Notably, these individuals were often attracted to specific areas in Rotterdam that would have been unaffordable in the cities they previously lived in. They frequently described their move as an upward step in their housing careers, suggesting that although they were priced out of their former cities, they adapted in ways that led to the most favourable outcomes. Participants also highlighted that Rotterdam’s lower housing costs provided not only greater residential stability but also increased professional freedom, as reduced financial pressure allowed them to pursue career choices more flexibly. This suggests that their relocation was a strategic move by members of the middle class to regain control over their lives. While they had felt constrained by the housing markets in their previous cities, moving to Rotterdam offered them improved housing options, stability, and professional autonomy. Although participants often expressed awareness of gentrification and voiced critical attitudes toward the process, their preferences and consumption patterns in Rotterdam actively contributed to it.

The second interesting study that I identified in the systematic literature review is that by Bridge (2003) who finds that in some cases, gentrifiers move within their gentrifying neighbourhood. While gentrifiers are often positioned as newcomers, most residential moves occur over relatively short distances (Clark and Dieleman, 1996). It was therefore reasonable to assume that many gentrifiers relocate from nearby areas. This is something that came out in my analysis in chapter 4 where I study how residential trajectories within gentrifying neighbourhoods evolve over time. Many gentrifiers remain within gentrifying neighbourhoods, gradually upgrading their housing situation without leaving the area. These internal movements create competition for housing and slowly reduce access for low-income households. This is backed by empirical evidence

as late-gentrifier trajectories have become more predominant over time, while the number of trajectories concerning low-income individuals moving towards and within gentrifying neighbourhoods decreases. Gentrification, therefore, emerges not as a straightforward process of low-income residents being pushed out by newcomers, but as a more gradual transformation of neighbourhoods in which gentrifiers extend their housing career in the neighbourhood and by doing so, increasingly exclude the working class from entry.

Overall, the residential mobility patterns of gentrifiers highlight the importance of understanding gentrification through the spatial characteristics of residential moves. The common assumption that gentrification is driven by affluent households moving in without considering where they come from offers limited insight into how the process unfolds or how it connects to broader spatial dynamics. In Rotterdam, neighbourhoods undergoing state-led gentrification have experienced socio-economic upgrading (cf. Permentier, 2018; Custers and Engbersen, 2022). Consequently, I find that gentrifiers tend to extend their urban habitus within these transforming areas. At the same time, these gentrifying neighbourhoods are increasingly attracting residents from more extensively gentrified cities elsewhere in the Netherlands, highlighting the inter-urban dimension of gentrification. Thus, state-led gentrification policies, combined with spatial demographic trends, appear to have together accelerated the gentrification process in Rotterdam.

6.2.2 Residential patterns of displacement

Another role central to my analysis is that of the displacee, referring to those who are negatively affected by the gentrification process. Displacement can occur directly, for example through sharp increases in rent or housing demolition that force households to leave their neighbourhood. Displacement can also take an indirect form through exclusionary mechanisms such as the reduction of affordable housing stock, which limits the ability of low-income households to move into gentrifying neighbourhoods (Marcuse, 1985). In this thesis, I consider displacement broadly to include both forced relocations, and more subtle forms such as restricted residential opportunities or the loss of a sense of belonging. Considering these, I find several displacement patterns in Rotterdam, which I will elaborate on below.

A notable pattern of displacement is when residents are unable to move into previously affordable neighbourhoods, a process Marcuse (1985) defines as exclusionary displacement. Traditionally, a relatively large social housing stock provided low-income individuals access to the city. However, national policies

aimed at liberalizing social housing have reduced its availability across many neighbourhoods and cities. Hochstenbach (2017) and Uitermark et al. (2024) highlight how conversions away from social housing accelerate gentrification in Dutch cities by opening up space for more affluent residents to move in. As a result, the decline in social housing diminishes access for low-income households to gentrifying neighbourhoods. This trend is evident in both Chapters 3 and 4, which show that over time, low-income residents are increasingly less likely to move into these areas. These residents tend to relocate mostly within the city. In Chapter 3, using the Gravity Model, I found that moves within Rotterdam and its surrounding areas have declined relative to expectations, while interurban moves into the city have increased more than predicted. Low-income, and to a lesser extent middle-income, households are moving less, especially toward gentrifying neighbourhoods. Furthermore, Chapter 4 shows that when low-income households leave gentrifying neighbourhoods, they mainly relocate to poverty concentrated areas. Those who move to these areas tend to have relatively low incomes, higher unemployment rates, and migration backgrounds. This suggests that their move out of gentrifying neighbourhoods may be influenced less by life-course events and more by the availability of affordable housing.

Taken together, these findings illustrate how gentrification drives exclusionary displacement: low-income residents are generally less mobile, especially towards gentrifying neighbourhoods, and when they move out of gentrifying neighbourhoods, they often end up in high-poverty areas. This resonates with broader research on residential mobility and neighbourhood status (e.g. Andersson, 2021 Brazil, 2017; Clark et al., 2006), which associates upward mobility with affluence, homeownership, and stable employment, and downward mobility with low income, rental dependency, and unemployment. While prior studies often emphasise direct displacement, this thesis calls attention to the structural exclusion caused by the accumulation of advantage within gentrifying areas. This dynamic has long-term implications for socio-spatial segregation in Rotterdam. If current residential mobility patterns persist, gentrification will continue to spread, further restricting low-income households to the few remaining affordable neighbourhoods in the region.

In addition to the displacement of low-income residents in Rotterdam, I find that in today's context of widespread housing shortages, the concept of displacement can also be extended to include middle-class households. Many middle- and high-income residents who move from cities like Amsterdam, Utrecht, and The Hague to Rotterdam do so in response to the unaffordability of housing in those cities. To better understand this pattern, I analysed the interviews from Chapter 5 through the lens of displacement. Most participants reported experiencing indirect displacement pressures in Amsterdam and Utrecht, driven by soaring housing costs and limited

prospects for stable or improved housing. While they acknowledged that these gentrified cities often reflected their own middle-class tastes, many felt that the growing homogeneity and decline in urban vibrancy diminished their sense of belonging. These factors ultimately contributed to their decision to relocate to Rotterdam.

As middle-class households are priced out of more advanced gentrified areas, they move to cities like Rotterdam, still in earlier stages of gentrification. Bringing preferences shaped by prior urban contexts, they contribute to the inter-urban spread of gentrification as identified in Chapter 3. This influx affects housing affordability for incumbent, particularly working-class, residents. While Hochstenbach and Musterd (2018) previously found little evidence of suburbanised poverty in Rotterdam, Chapter 4 identified that vulnerable groups are relocating to areas with high poverty concentrations and increasingly excluded from gentrifying environments. This development is not unprecedented; similar patterns have been observed in Amsterdam (Hochstenbach & Musterd, 2018), suggesting that Rotterdam may be following a similar path of rising unaffordability and segregation, ultimately leading to a housing market increasingly out of reach for both working- and middle-class households.

Returning to the central question—**How is state-led gentrification in Rotterdam (re) shaping residential mobility patterns across socio-economic groups, and what implications is this having for spatial inequality?**— I find that state-led gentrifying neighbourhoods over time attract second-hand gentrifiers from more expensive cities, encourage early gentrifiers to stay longer in the city, and increasingly exclude low-income residents living in Rotterdam from moving in, confining them to the more affordable parts of the city. These patterns indicate not only that gentrification spills over from already gentrified areas, but also that it restricts residential opportunities for Rotterdam's inhabitants, contributing to heightened spatial inequality and likely reinforcing socio-economic segregation both within and beyond the city."

6.3 Contributions, limitations and directions for future research

6.3.1 Societal contributions

Housing markets, particularly in urban areas, are widely known to be under pressure, and the Dutch context is no exception (Arundel and Hochstenbach, 2020). My research highlights the ways in which local housing markets are shaped by regional dynamics. Specifically, in my research, I show that a growing number of middle- and high-income households from Amsterdam, Utrecht, and The Hague are moving to Rotterdam. In-depth interviews reveal that many of these movers could no longer afford to live in Amsterdam or Utrecht and chose Rotterdam as an alternative. First-time buyers in particular experienced a great deal of uncertainty about their housing situation in Amsterdam and Utrecht, whereas in Rotterdam they were able to achieve greater housing security.

This development may initially appear positive for Rotterdam, given the city's historical reputation for high levels of poverty (Custers & Willems, 2024). Yet these regional dynamics also bring new challenges. Residents of Rotterdam, particularly those with lower incomes, are moving less frequently, and when they do, they are often relocating to disadvantaged neighbourhoods on the outskirts of the city or beyond. A similar pattern has previously been documented in Amsterdam (Hochstenbach and Musterd, 2018). The societal contribution of this thesis lies in demonstrating that the mobility patterns of gentrifiers—both their inter-urban moves and their tendency to extend housing careers within gentrifying neighbourhoods—restrict the residential opportunities of low-income residents, thereby contributing to growing socio-spatial inequalities (cf. Manley et al., 2011). This finding is particularly significant in light of Rotterdam's municipal policies, which for years have actively promoted gentrification by seeking to attract higher-income households. By neglecting the exclusionary effects of such policies, the municipality risks reinforcing the very inequalities it aims to reduce, ultimately undermining ambitions to create a socially balanced and inclusive city. Current developments suggest that Rotterdam is following a trajectory similar to Amsterdam and Utrecht, where rising housing costs are rendering the city increasingly unaffordable for a broadening range of income groups.

Given the current pressure on the housing market, it is important to understand the process of gentrification in light of these regional dynamics. While the greatest tensions are still found in Amsterdam and Utrecht (Arundel & Hochstenbach, 2020), it is crucial for policymakers to also consider broader regional dynamics. So far, municipal strategies in Rotterdam have mainly focused on strengthening vibrancy, safety, and economic growth, often without acknowledging these broader regional developments (cf. Rotterdam Municipality, 2003; 2007; 2016; 2023). Based on my findings in this thesis, it is key to implement policies that address not only the city of Rotterdam itself but also its role within the broader regional urban network and the ways in which this role influences residential opportunities. Rotterdam has increasingly become an attractive destination for households that can no longer afford to live in more expensive cities. As a result, incumbent residents are likely to face greater challenges in securing affordable housing. Recognizing this dynamic is essential to effectively mitigate the spread of gentrification and its impact on housing affordability.

6.3.2 Theoretical and methodological contributions

In this thesis, research on residential mobility and gentrification is brought together, yielding new insights into how gentrification unfolds from a micro-level perspective. Beyond identifying the existence of gentrification spillovers in Rotterdam and exclusionary displacement affecting both working- and middle-class households, the core theoretical contribution of this thesis lies in adopting a micro-level lens on gentrification. As outlined in Chapter 1, Section 1.2.1, gentrification operates simultaneously as a macro- and micro-level phenomenon. Individuals are shaped by broader gentrification processes while at the same time contributing to them. The interplay between macro-level patterns and individual choices and actions is therefore central to understanding both the unfolding of gentrification and its consequences. This interaction is particularly important from a policy perspective. Policymakers in Rotterdam have prioritised attracting middle-class households to the city, a macro-level intervention. Yet such policies have not sufficiently acknowledged what is happening at the micro level: middle-class households have themselves been outpriced elsewhere and are responding to these pressures in their mobility decisions. As a result, state-led gentrification policies have reinforced a process that was already underway rather than initiating it. Thus, my argument is not that state-led gentrification has caused these spillovers, but rather that micro- and macro-level forces continuously interact, with individuals adapting to and reinforcing gentrification processes, thereby amplifying broader patterns of spatial inequality.

A further theoretical contribution of this thesis lies in demonstrating that the spillover dynamics identified in Rotterdam are not isolated developments but part of a broader pattern increasingly observed in other urban contexts. Recent studies show that middle-class displacement and interurban gentrification occur across diverse settings: for instance, Martin et al. (2025) document how remote work has fuelled similar spillovers in the United States, while Ocejó (2011; 2019) describes how households priced out of New York City relocate to smaller cities such as Newburgh, thereby initiating new waves of gentrification. Comparable developments have been observed in the Paris region, where Loumeau and Russo (2023) link spillover gentrification to new transport infrastructure. These examples suggest that spillover-driven mobility is not unique to the Randstad, but forms part of a wider trend in which rising housing pressures in core metropolitan areas reshape residential patterns at the regional scale. At the same time, the specific geography of the Netherlands—characterised by relatively small cities, short travel distances, and a strongly integrated polycentric labour market—amplifies these tendencies and makes interurban spillovers particularly pronounced. By situating the Rotterdam case within this emerging international evidence, this thesis contributes theoretically to understanding spillover gentrification as a process likely to persist and intensify in other regions facing similar housing pressures.

Finally, an important contribution of this thesis is the application of a mixed-methods approach. As outlined above, the central focus of this research lies at the micro level, examining both the dynamics of moving and the changes that occur over the life course. To properly capture these processes, it was essential not only to identify patterns and trends through quantitative analyses but also to understand the experiences, motivations, and narratives of those who move. The combination of quantitative and qualitative methods allowed me to go beyond a purely descriptive account of mobility. Quantitative analyses revealed systematic patterns of who moves, when, and under what conditions, while qualitative insights offered a deeper understanding of how individuals interpret their moves and how they experience broader gentrification processes in their daily lives. In this way, the thesis makes a methodological contribution by demonstrating that the mixed-methods approach was not merely a design preference but a necessity for grasping the complexity of gentrification as both a structural process and a lived experience.

6.3.3 Limitations

While this thesis employs a range of methods and data sources to answer the central research question, it also faces several important methodological limitations, which I will discuss in threefold.

The first limitation concerns the focus on domestic residential mobility, which excludes patterns of international migration and their potential effects on gentrification. This is a significant omission, particularly considering recent studies suggesting that transnational mobility increasingly contributes to gentrification processes (Hayes and Zaban, 2020), something also documented in Amsterdam (Urria, 2025). Although this thesis concentrates on domestic moves within Rotterdam to highlight regional spillover effects of gentrification, a comprehensive understanding of changing mobility patterns and their connection to gentrification would also require the inclusion of international migration. Both in- and outflows of households across national borders influence the dynamics of displacement and affordability in local housing markets. While I recognise the relevance of these patterns, they were beyond the analytical scope of this study.

The second limitation relates to the potential inaccuracy of administrative register data, especially in a context of growing housing unaffordability. Although register data offers valuable insights into where people are officially registered as living, they may not accurately reflect actual living arrangements. In times of housing scarcity, it is increasingly likely that households live in unofficial or unregistered arrangements. For example, some individuals may avoid registering as cohabitants to retain access to housing allowances, while private rental regulations may discourage official co-housing arrangements (Ronald et al., 2024). Moreover, illegal subletting where tenants rent out their homes without informing landlords, is also a pattern likely to be prevalent in a tight housing market (Hochstenbach and Boterman, 2015). Thus, while register data offers a strong foundation for analysing residential mobility, it only captures moves within the formal housing market. This limitation should be kept in mind when interpreting the findings in the empirical chapters that rely on Dutch microdata.

The final concerns the limited attention paid to wealth and rising wealth inequality, and how these factors shape residential opportunities. Although this thesis refers to growing wealth disparities, wealth has not been a central variable in the empirical analysis nor a primary explanatory factor for residential mobility patterns. In today's context, however, wealth, both in the form of property ownership and intergenerational transfers, has become a major determinant of access to housing,

particularly in gentrified neighbourhoods. As scholars such as Pfeffer and Waitkus (2021), and Piketty, (2014) have argued, wealth accumulation and transmission increasingly influence urban inequality and housing outcomes. A deeper engagement with wealth dynamics would offer further insights into who is able to move into, remain in, or be excluded from gentrifying neighbourhoods.

6.3.4 Future research

The four years of this PhD research have given me the opportunity to deeply explore the dynamics of gentrification-related residential mobility in Rotterdam. However, certain patterns and questions remained beyond the scope of this project. In light of these, I would like to outline three promising directions for future research.

My first idea would be to deepen the study of gentrification through sequence analysis by shifting the focus from gentrifying neighbourhoods to individual residential trajectories. Chapter 4 examines how individual trajectories intersect with gentrifying areas, assuming that gentrification is primarily occurring around Rotterdam's city centre. However, considering research on suburban, rural, and spillover gentrification, it would be valuable to reverse this lens. Rather than focusing on the neighbourhood and understanding how these residential patterns change, I would propose focussing on the individual gentrifier. Analysing the residential pathways of gentrifiers themselves can provide insights into how and where gentrification develops and how this should be understood in light of social mobility (e.g. Hochstenbach et al., 2015). By tracing the long-term residential trajectories of gentrifiers and examining how their wealth accumulates in relation to the areas they inhabit, we can gain a better understanding of the spatial and temporal dynamics of gentrification (D. Smith, 2002). This approach could reveal whether gentrifiers capitalise on a type of rent gap by leveraging profits from owner-occupied homes in gentrifying neighbourhoods to buy property elsewhere, thereby driving gentrification in those areas. In addition, as Chapter 4 shows, gentrifiers exist at various stages of life, this method would make it possible to follow those who enter gentrifying areas early on and observe how they become long-term or family-oriented residents. It also allows for an exploration of how their housing pathways develop over time, how these are linked to broader patterns of gentrification, and whether their movements contribute to gentrification spillovers in secondary cities, suburban areas, or the countryside. In sum, it would deepen our understanding of how gentrification unfolds across space by examining it through the life-course trajectories of gentrifiers.

My second idea is to deepen our understanding of gentrifiers through qualitative analysis on inter-urban gentrifiers versus intra-urban gentrifiers. By comparing the narratives of individuals with similar socio-demographic profiles and experiences who either choose to stay in the city or relocate elsewhere, we can better understand the motivations and constraints behind residential decisions and complement contemporary knowledge on the various types of gentrifiers. This line of inquiry is particularly valuable for research on residential choice, especially regarding how individuals construct and evaluate their residential choice sets (cf. Krysan and Crowder, 2017). The inter-urban gentrifiers interviewed for this thesis largely moved in search of better housing and neighbourhood conditions, often at the cost of leaving established social networks behind. While these gentrifiers are motivated by a desire to live in neighbourhoods that reflect their preferences and therefore relocate to more affordable cities, others feel a stronger attachment to their current city and choose to stay, even if this means living in areas that have not yet gentrified. Examining these differing perspectives and preferences provides insight into how the middle-class experiences advanced stages of gentrification, how it affects them, and how they in turn shape the process itself.

My final idea is to apply a vacancy-chain analysis the impact of gentrification spillovers on residential mobility in affected areas. Millard-Ball (2002) applies this method to gentrification by tracing who vacates and who subsequently occupies a dwelling, linking these changes to broader residential movement patterns across different housing units. This approach offers valuable insights into how the departure of one household creates housing opportunities for others, thereby revealing the cascading effects of gentrification on the housing market. Chapter 3 of this dissertation identified not only the presence of inter-urban gentrification spillovers but also a relative and in some cases absolute decline in the residential mobility of incumbent residents in Rotterdam. A vacancy-chain analysis can help understand how these dynamics are connected. For example, when a dwelling is taken up by an inter-urban gentrifier, it leads to a much shorter local vacancy chain than if the same dwelling had been inhabited by an incumbent resident. This distinction reveals how in-migration influences housing opportunities for existing residents and pinpoints how newcomers to the city enhance exclusionary displacement for incumbent residents. Such insights are particularly important in the context of growing wealth inequalities and their relationship with patterns of owner-occupancy across urban space (Arundel and Hochstenbach, 2020). This type of approach can assist policymakers in developing more effective housing strategies. It demonstrates the value of constructing homes that serve incumbent residents, since doing so increases movement within the housing market and creates more residential opportunities for both old and new residents by opening up dwellings.

In sum, I propose to continue understanding gentrification through an individual residential mobility perspective. Understanding how moves are interrelated to gentrification, and how they impact one another. This approach does not suggest that gentrification can be explained by residential movement alone. Gentrifiers play a role in transforming specific neighbourhoods, and their mobility is shaped by broader structural forces such as housing inequality, globalization, financialization, and housing policies shaped by governments. While there is a greater share of middle-class households in the post-industrial society, which drives gentrification (Hamnett, 2000;2003; Slater, 2009), their decisions are responses to market conditions as well as their gentrifier preference. This contributes to the spread of gentrification. Therefore, gentrification is not caused by individual movers alone and should be understood as part of wider systemic developments.

6.4 Positionality and concluding remarks

A significant part of the motivation behind this thesis stems from my own personal experiences. At the beginning of my PhD, attending a housing protest made me acutely aware of the urgency of the housing crisis and instilled in me a strong urge to contribute to change. I wanted to communicate how challenging housing access has become as I saw housing not only a societal issue, but one that has affected me personally. Over the past four years, housing has been a major source of stress for both myself and the people around me. I have navigated uncertainty regarding my own housing situation while witnessing similar struggles among friends and family.

These personal experiences have inevitably shaped the way I approach my research, highlighting the importance of positionality in social science. Recognizing positionality means acknowledging that our perspectives, experiences, and social locations influence how we understand and interpret the world. In my case, being a middle-class researcher who has personally struggled to secure housing in a gentrifying city, shapes both the focus of my study and the groups I attend to most closely. For instance, middle-class gentrifiers moving to Rotterdam resemble me in terms of socio-economic background, educational attainment, and lifestyle, whereas an elderly couple with a migration background who rely on social benefits, for instance, have life circumstances and experiences that are much further removed from my own. This resemblance to middle-class movers allows me to understand some of their choices and motivations more intuitively. At the same time, it carries the risk of over-identifying with their experiences, which may introduce bias and lead to underestimating the challenges faced by less privileged groups.

This potential bias reflects a broader tendency in public debate. Research by Hochstenbach (2025) shows that housing unaffordability among middle-class households has received far more political attention than the struggles of economically vulnerable groups. It is therefore crucial to clarify that this thesis is not a call to prioritise middle-class housing concerns over those of the working class. Rather, my argument is that unaffordability, largely stemming from liberalization policies, increasingly affects a wide spectrum of households. Policies such as the reduction of social housing through social mixing, as seen in the Tweebosbuurt, risk further intensifying gentrification and limiting affordable options, including for the middle class. The municipality should instead focus on mitigating gentrification by ensuring a sufficient supply of social housing in decent neighbourhoods, thereby supporting equitable access to housing across socio-economic groups.

References

- Andersson, E. K., Malmberg, B., & Clark, W.A.V. (2021). Neighbourhood context and young adult mobility: A life course approach. *Population, Space and Place*, 27(3), e2405.
- Arundel, R., & Hochstenbach, C. (2020). Divided access and the spatial polarization of housing wealth. *Urban Geography*, 41(4), 497–523.
- Blasius, J., Friedrichs, J., & Ruhl, H. (2016). Pioneers and gentrifiers in the process of gentrification. *International Journal of Housing Policy*, 16(1), 50–69.
- Booi, H. (2024). Spillover of urban gentrification and changing suburban poverty in the Amsterdam metropolis. *Urban Studies*, 61(3), 495–512.
- Brazil, N., & Clark, W. A. V. (2017). Residential mobility and dynamic neighbourhood change during the transition to adulthood. *Advances in Life Course Research*, 33, 1–10.
- Bridge, G. (2003). Time-space trajectories in provincial gentrification. *Urban Studies*, 40(12), 2545–2556.
- Brown-Saracino, J. (2019). *A neighbourhood that never changes: Gentrification, social preservation, and the search for authenticity*. Chicago: University of Chicago Press.
- Clark, W. A.V., Deurloo, M., & Dieleman, F. (2006). Residential mobility and neighbourhood outcomes. *Housing Studies*, 21(3), 323–342.
- Clark, W. A. V., & Dieleman, F. M. (1996). *Households and housing: Choice and outcomes in the housing market*. New Brunswick, NJ: Transaction Publishers.
- Custers, G., & Engbersen, G. (2022). The urban class structure: Class change and spatial divisions from a multidimensional class perspective. *Urban Geography*, 43(6), 917–943.
- Custers, G., & Willems, J. J. (2024). Rotterdam in the 21st century: From ‘sick man’ to ‘capital of cool’. *Cities*, 150, 105009.
- Hamnett, C. (2000). Gentrification, postindustrialism, and industrial and occupational restructuring in global cities. In G. Bridge & S. Watson (Eds.), *A companion to the city* (pp. 331–341). Oxford: Blackwell.
- Hamnett, C. (2003). Gentrification and the middle-class remaking of inner London, 1961–2001. *Urban Studies*, 40(12), 2401–2426.
- Hayes, M., & Zaban, H. (2020). Transnational gentrification: The crossroads of transnational mobility and urban research. *Urban Studies*, 57(15), 3009–3024.
- Hochstenbach, C. (2017). State-led gentrification and the changing geography of market-oriented housing policies. *Housing, Theory and Society*, 34(4), 399–419.
- Hochstenbach, C. (2025). Framing the housing crisis: Politicization and depoliticization of the Dutch housing debate. *Housing Studies*, 40(5), 1226–1251.
- Hochstenbach, C., & Boterman, W. R. (2015). Navigating the field of housing: Housing pathways of young people in Amsterdam. *Journal of Housing and the Built Environment*, 30(2), 257–274.
- Hochstenbach, C., & Musterd, S. (2018). Gentrification and the suburbanization of poverty: Changing urban geographies through boom and bust periods. *Urban Geography*, 39(1), 26–53.
- Hochstenbach, C., Musterd, S., & Teernstra, A. (2015). Gentrification in Amsterdam: Assessing the importance of context. *Population, Space and Place*, 21(8), 754–770.
- Ley, D. (1997). *The new middle class and the remaking of the central city*. Oxford: Oxford University Press.
- Loumeau, G., & Russo, A. (2023). Second-hand gentrification: Theory and evidence from high-speed rail extensions. *Sheffield Economic Research Paper Series (SERPS)*, 2023011.
- Marcuse, P. (1985). Gentrification, abandonment, and displacement: Connections, causes, and policy responses in New York City. *Washington University Journal of Urban and Contemporary Law*, 28, 195–240.
- Martin, N., Shipman, G., & Ting, V. (2025). Moving from “superstar” cities to “ordinary” cities to reclaim middle-class status: Gentrification-induced inter-metropolitan migration. *Urban Geography*, 46(1), 87–111.
- Millard-Ball, A. (2002). Gentrification in a residential mobility framework: Social change, tenure change and chains of moves in Stockholm. *Housing Studies*, 17(6), 833–856.
- Mulder, C. H., & Hooimeijer, P. (1999). Residential relocations in the life course. In L. van Wissen & P. Dykstra (Eds.), *Population issues: An interdisciplinary focus* (pp. 159–186). Dordrecht: Springer.
- Ocejo, R. E. (2011). The early gentrifier: Weaving a nostalgia narrative on the lower east side. *City & Community*, 10(3), 285–310.

- Ocejo, R. E. (2019). The creative class gets political: Gentrifier politics in small city America. *Journal of Urban Affairs*, 41(8), 1167–1182.
- Permentier, M. (2018). *Dynamiek in de kansrijke wijken*. Kenniswerkplaats Leefbare Wijken (No. 4181). Gemeente Rotterdam.
- Pfeffer, F. T., & Waitkus, N. (2021). The wealth inequality of nations. *American Sociological Review*, 86(4), 567–602.
- Piketty, T. (2014). *Capital in the twenty-first century* (A. Goldhammer, Trans.). Cambridge, MA: Harvard University Press.
- Ronald, R., Schijf, P., & Donovan, K. (2024). The institutionalization of shared rental housing and commercial co-living. *Housing Studies*, 39(9), 2300–2324.
- Rotterdam Municipality. (2003). *Rotterdam zet door: Op weg naar een stad in balans*. Rotterdam: Gemeente Rotterdam.
- Rotterdam Municipality. (2007). *Wonen in Rotterdam: Geactualiseerde woonvisie 2007–2010*. Rotterdam: Gemeente Rotterdam.
- Rotterdam Municipality. (2016). *Woonvisie Rotterdam: Koers naar 2030, agenda tot 2020*. Rotterdam: Gemeente Rotterdam.
- Rotterdam Municipality. (2023). *Woonvisie: Een koers tot 2040 en acties voor de komende 5 jaar*. Rotterdam: Gemeente Rotterdam.
- Slater, T. (2009). Missing Marcuse: On gentrification and displacement. *City*, 13(2–3), 292–311.
- Smith, D. P. (2002). Extending the temporal and spatial limits of gentrification: A research agenda for population geographers. *International Journal of Population Geography*, 8(6), 385–394.
- Smith, D. P., & Holt, L. (2007). Studentification and ‘apprentice’ gentrifiers within Britain’s provincial towns and cities: Extending the meaning of gentrification. *Environment and Planning A*, 39(1), 142–161.
- Uitermark, J., Hochstenbach, C., & Groot, J. (2024). Neoliberalization and urban redevelopment: The impact of public policy on multiple dimensions of spatial inequality. *Urban Geography*, 45(4), 541–564.
- Urria, I., Petrovic, A., van Ham, M., & Manley, D. (2025). The spatio-temporal evolution of social inequalities in cities: A multidimensional, multiscalar and longitudinal approach for neighbourhood classification. *Cities*, 165, 106082.
- Van Ham, M., Hooimeijer, P., & Mulder, C. H. (2001). Urban form and job access: Disparate realities in the Randstad. *Tijdschrift voor Economische en Sociale Geografie*, 92(2), 231–246.

Oh man, was it that much better then?
We were left alone, we were proud of our pain
And so I want to walk out in the night
See the wide young river flood rain
[...]
That's that, we're a long way from the past
I'll be better off in a year or in two

A Long Way Past the Past – Fleet Foxes

Appendices

Chapter 2

APP. A.1 Search query

(TITLE-ABS-KEY ("Gentrification" OR "State-led gentrification" OR "Urban renewal" OR "Urban restructuring" OR "Incumbent upgrading" OR "New Construction" OR "Urban revitalisation" OR "Housing developments" OR "residential redevelopment" OR "Gentrifier" OR "Incoming household" OR "Incoming migrant" OR "Middle class" OR "affluent migrant" OR "affluent household" OR "Incoming migrant") AND TITLE-ABS-KEY ("residential mobility" OR "Residential Movements" OR "Residential circulations" OR "Migration" OR "Mobility rate" OR "Residential Turnover" OR "Residential choice" OR "Residential trajectories" OR "Housing trajectories" OR "Life course" OR "Neighbourhood trajectories" OR "Displacement" OR "Forced relocations" OR "Relocation" OR "Origin" OR "Destination" OR "Neighbourhood Destination" OR "Neighbourhood of origin" OR "Residential destination")) AND PUBYEAR > 1964 AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English")) AND (EXCLUDE (EXACTKEYWORD , "Rural Area"))

APP. A.2 Reference list of literature database

- BOLT, G. & VAN KEMPEN, R. 2010. Dispersal patterns of households who are forced to move: Desegregation by demolition: A case study of Dutch cities. *Housing Studies*, 25, 159-180.
- BOLT, G., VAN KEMPEN, R. & VAN WEESEP, J. 2009. After urban restructuring: relocations and segregation in Dutch cities. *Tijdschrift voor economische en sociale geografie*, 100, 502-518.
- BOSTON, T. D. 2005. The effects of revitalization on public housing residents: A case study of the Atlanta Housing Authority. *Journal of the American Planning Association*, 71, 393-407.
- BRIDGE, G. 2003. Time-space trajectories in provincial gentrification. *Urban Studies*, 40, 2545-2556.
- BROOKS, F., ZUGAZAGA, C., WOLK, J. & ADAMS, M. A. 2005. Resident perceptions of housing, neighborhood, and economic conditions after relocation from public housing undergoing HOPE VI redevelopment. *Research on Social Work Practice*, 15, 481-490.
- BROWN, K. & WYLY, E. 2000. The New Gentrification? A Case Study of the Russification of Brighton Beach, New York. *The Geographical Bulletin*, 42, 94.
- CAIN, T. 2020. Keeping the family home: Reproducing gentrifiers in two Boston neighborhoods. *Journal of Urban Affairs*, 42, 1222-1241.
- CLAMPET-LUNDQUIST, S. 2004. HOPE VI relocation: Moving to new neighborhoods and building new ties. *Housing policy debate*, 15, 415-447.
- DING, L., HWANG, J. & DIVRINGI, E. 2016. Gentrification and residential mobility in Philadelphia. *Regional science and urban economics*, 61, 38-51.
- DOFF, W. & KLEINHANS, R. 2011. Residential outcomes of forced relocation: Lifting a corner of the veil on neighbourhood selection. *Urban Studies*, 48, 661-680.
- DRAGAN, K., ELLEN, I. G. & GLIED, S. 2020. Does gentrification displace poor children and their families? New evidence from medicaid data in New York City. *Regional Science and Urban Economics*, 83, 103481.
- EGAN, M., LAWSON, L., KEARNS, A., CONWAY, E. & NEARY, J. 2015. Neighbourhood demolition, relocation and health. A qualitative longitudinal study of housing-led urban regeneration in Glasgow, UK. *Health & place*, 33, 101-108.

- EVANS, M. 2021. The unequal housing and neighborhood outcomes of displaced movers. *Journal of Urban Affairs*, 43, 1214-1234.
- FRIEDRICHS, J. 1987. Urban Renewal Policies and Back-to-the-city Migration: The Case of West Germany. *Journal of the American Planning Association*, 53, 70-79.
- GOETZ, E. G. 2002. Forced relocation vs. voluntary mobility: The effects of dispersal programmes on households. *Housing studies*, 17, 107-123.
- GOETZ, E. G. 2010. Better neighborhoods, better outcomes? Explaining relocation outcomes in HOPE VI. *Cityscape*, 5-31.
- HOCHSTENBACH, C. & BOTERMAN, W. R. 2017. Intergenerational support shaping residential trajectories: Young people leaving home in a gentrifying city. *Urban studies*, 54, 399-420.
- HOCHSTENBACH, C. & MUSTERD, S. 2018. Gentrification and the suburbanization of poverty: Changing urban geographies through boom and bust periods. *Urban geography*, 39, 26-53.
- HOCHSTENBACH, C. & MUSTERD, S. 2021. A regional geography of gentrification, displacement, and the suburbanisation of poverty: Towards an extended research agenda. *Area*, 53, 481-491.
- HUANG, X. & LIU, Y. 2022. Worse life, psychological suffering, but 'better' housing: The post-gentrification experiences of displaced residents from Xuanwumen, Beijing. *Population, Space and Place*, 28, e2523.
- HWANG, J. & DING, L. 2020. Unequal displacement: gentrification, racial stratification, and residential destinations in Philadelphia. *American Journal of Sociology*, 126, 354-406.
- HYRA, D. 2015. The back-to-the-city movement: Neighbourhood redevelopment and processes of political and cultural displacement. *Urban Studies*, 52, 1753-1773.
- KLEINHANS, R. 2003. Displaced but still moving upwards in the housing career? Implications of forced residential relocation in the Netherlands. *Housing Studies*, 18, 473-499.
- KLEIT, R. G. & GALVEZ, M. 2011. The location choices of public housing residents displaced by redevelopment: Market constraints, personal preferences, or social information? *Journal of Urban Affairs*, 33, 375-407.
- LAWSON, L., KEARNS, A., EGAN, M. & CONWAY, E. 2015. "You Can't Always Get What You Want..."? Prior-Attitudes and Post-Experiences of Relocation from Restructured Neighbourhoods. *Housing Studies*, 30, 942-966.
- LELEVRIER, C. 2013. Forced relocation in France: How residential trajectories affect individual experiences. *Housing Studies*, 28, 253-271.
- LOPEZ, E. & GREENLEE, A. 2016. An ex-ante analysis of housing location choices due to housing displacement: The case of Bristol Place. *Applied Geography*, 75, 156-175.
- LÜTZELER, R. 2008. Population increase and "new-build gentrification" in central Tōkyō. *Erdkunde*, 287-299.
- LYONS, M. 1996. Gentrification, socioeconomic change, and the geography of displacement. *Journal of Urban Affairs*, 18, 39-62.
- MAH, J. 2021. Gentrification-induced displacement in Detroit, Michigan: An analysis of evictions. *Housing Policy Debate*, 31, 446-468.
- MILLARD-BALL, A. 2002. Gentrification in a residential mobility framework: Social change, tenure change and chains of moves in Stockholm. *Housing Studies*, 17, 833-856.
- NEWMAN, K. & WYLY, E. K. 2006. The right to stay put, revisited: Gentrification and resistance to displacement in New York City. *Urban studies*, 43, 23-57.
- OAKLEY, D. & BURCHFIELD, K. 2009. Out of the projects, still in the hood: The spatial constraints on public-housing residents' relocation in Chicago. *Journal of Urban Affairs*, 31, 589-614.
- OAKLEY, D., RUEL, E. & REID, L. 2013. Atlanta's last demolitions and relocations: The relationship between neighborhood characteristics and resident satisfaction. *Housing Studies*, 28, 205-234.
- OCEJO, R. E. 2019. From apple to orange: Narratives of small city migration and settlement among the urban middle class. *Sociological Perspectives*, 62, 402-425.
- POPKIN, S. J., LEVY, D. K. & BURON, L. 2009. Has HOPE VI transformed residents' lives? New evidence from the HOPE VI panel study. *Housing Studies*, 24, 477-502.
- POPKIN, S. J., RICH, M. J., HENDEY, L., HAYES, C., PARILLA, J. & GALSTER, G. 2012. Public housing transformation and crime: Making the case for responsible relocation. *Cityscape*, 137-160.
- POSTHUMUS, H., BOLT, G. & VAN KEMPEN, R. 2014. Victims or victors? The effects of forced relocations on housing satisfaction in Dutch cities. *Journal of Urban Affairs*, 36, 13-32.
- RÉRAT, P. 2012. Gentrifiers and their choice of housing: characteristics of the households living in new developments in Swiss cities. *Environment and Planning A*, 44, 221-236.

- SINK, T. & CEH, B. 2011. Relocation of urban poor in Chicago: HOPE VI policy outcomes. *Geoforum*, 42, 71-82.
- STURTEVANT, L. 2014. The new District of Columbia: What population growth and demographic change mean for the city. *Journal of Urban Affairs*, 36, 276-299.
- KINGSLEY, T. G., JOHNSON, J. & PETTIT, K. L. 2003. Patterns of Section 8 relocation in the HOPE VI program. *Journal of Urban Affairs*, 25, 427-447.
- TIESKENS, K. F. & MUSTERD, S. 2013. Displacement and urban restructuring in Amsterdam; following relocatees after demolition of social housing. *Urban Research & Practice*, 6, 194-210.
- VAN CRIEKINGEN, M. 2006. What is happening to Brussels' inner-city neighbourhoods?. Selective migration from areas undergoing gentrification. *Brussels Studies. La revue scientifique pour les recherches sur Bruxelles/Het wetenschappelijk tijdschrift voor onderzoek over Brussel/The Journal of Research on Brussels*.
- VAN CRIEKINGEN, M. 2008. Towards a geography of displacement. Moving out of Brussels' gentrifying neighbourhoods. *Journal of housing and the built environment*, 23, 199-213.
- VAN CRIEKINGEN, M. 2009. Moving in/out of Brussels' historical core in the early 2000s: migration and the effects of gentrification. *Urban studies*, 46, 825-848.
- VARADY, D. P., WANG, X., WANG, Y. & DUHANEY, P. 2010. The geographic concentration of housing vouchers, blacks, and poverty over time: A study of Cincinnati, Ohio, USA. *Urban Research & Practice*, 3, 39-62.
- WELLER, S. & VAN HULTEN, A. 2012. Gentrification and displacement: the effects of a housing crisis on Melbourne's low-income residents. *Urban Policy and Research*, 30, 25-42.

APP. A.3 Systematic literature survey

Full form can be found at: https://docs.google.com/forms/d/e/1FAIpQLScgOKf8p4Z070VI15GEZt8vxciv1qKnFqVnS3jPjuRdNmpO9w/viewform?usp=sf_link

APP. A.4 MCA eigenvalues and variances

	Eigenvalues	Percentage of variance	Cumulative variance
Dim 1	0,30	9,84	9,84
Dim 2	0,29	9,46	19,31
Dim 3	0,23	7,42	26,73
Dim 4	0,22	7,27	34,00
Dim 5	0,19	6,23	40,23
Dim 6	0,18	5,95	46,18
Dim 7	0,15	4,95	51,14
Dim 8	0,15	4,76	55,14
Dim 9	0,14	4,41	60,32
Dim 10	0,13	4,11	64,43
Dim 11	0,11	3,64	69,10
Dim 12	0,10	3,27	71,35

Note: only the dimensions with an eigenvalue larger or equal to 0.1 were included in the table

APP. A.5 Variable coordinates and contributions for dimensions 1 and 2

Variable	Topic	Count	Dim 1	Contribution	Dim 2	Contribution
Topic	both	1	1,93109065	0,079342789	0,815488584	0,014149396
	Displacees	26	-0,25162895	0,189951386	-0,423391089	0,537780043
	gentrifiers	11	0,64795923	0,124820617	1,311508238	0,511367364
Concept	Gentrification	17	0,34938578	0,182993929	0,264696622	0,001693934
	State-led gentrification	2	-0,12731465	0,335380466	-1,254443063	0,00606631
	Urban restructuring	29	-0,21331716	0,488623697	-0,016269543	0,014354057
Method	Qualitative	9	0,6049693	0,151887205	0,581246341	0,035032151
	Mixed methods	6	2,24292376	0,013338616	-0,048471814	0,104908493
	Quantitative	33	-0,56580276	0,168579618	-0,149708672	0,000404013
Data ownership	Primary and secondary	8	-0,81128163	0,000225074	-0,008183795	1,33949E-05
	Primary	17	-0,30556557	0,194902944	0,45073339	0,111410646
	Secondary	23	0,276816	0,188218541	-0,33030423	0,100372813
Time data	Cross-section	23	-0,03354651	0,075797446	0,203837656	0,038225807
	Longitudinal	15	-0,59616378	0,000933896	-0,675681636	0,207520761
	Time trend	10	0,45231114	0,092285694	0,544695845	0,078077254
Context Scale	Inner-city	26	0,03007699	0,00116309	-0,466408962	0,008656329
	Metropolitan	8	0,21750576	0,015769585	1,442698338	0,200394399
	na	2	1,00980175	0,044334764	1,275262945	0,113728243
	National	3	-0,99447045	0,089906498	0,075606986	0,074305734
	Neighbourhood	4	-0,48795653	0,015873438	0,018609876	0,000419259
	Sub-national	5	0,03007699	0,00116309	0,217378675	0,008656329
Administrative category	Census tract	12	-0,2794142	0,026024098	-0,5162287	0,07251244
	District	6	1,02313092	0,14954241	1,62417741	0,297339785
	Municipality	1	2,30773496	0,113311503	2,2831474	0,034602034
	na	3	-0,5223564	0,018190414	-0,0789595	0,000381094
	Neighbourhood	16	-0,60996929	0,186031265	-0,1255143	0,000173164
	Residential Units	6	-0,16826389	0,004044677	-0,0019683	0,006750498
	Statistical areas	4	1,81065276	0,29804213	-0,9255161	0,215837817
Unit of analysis	Individual	41	-0,13768528	0,111035237	0,098708392	0,05706817
	Spatial	7	0,80644234	0,111035237	-0,578149151	0,05706817
Extent-movements	Inter-urban	3	-0,097408649	0,000632563	-0,25021674	0,004173894
	International	2	2,369774017	0,244166474	2,10789725	0,193183949
	Intra-urban	20	-0,646156135	0,228961347	0,03092908	0,000524591
	Metropolitan	11	0,181887447	0,01362243	-0,464515814	0,088848505
	na	3	-0,632219711	0,026646784	0,000469782	1,4713E-08
	National	9	0,654174121	0,098756257	0,278985933	0,017961496

>>>

Variable	Topic	Count	Dim 1	Contribution	Dim 2	Contribution
Country	Australia	1	0,975697441	0,020255011	-1,286543849	0,035216916
	East Asia	2	-0,347253663	0,005242831	1,127752043	0,055296725
	USA	25	-0,184273271	0,03690939	0,005532748	3,32732E-05
	Western Europe	20	0,216282083	0,033412814	-0,055363947	0,002189405
Phase	During	14	0,781892973	0,251735079	-0,558109905	0,12825922
	During to post	5	0,545430975	0,034592436	0,608966808	0,043121
	na	2	1,603201533	0,111750224	2,148787714	0,20075168
	post	22	-0,635784083	0,342033492	0,169732656	0,02437699
	prior to post	5	-0,578561949	0,03892255	-0,652597844	0,04952139
Segregation	Desegregation	6	-0,627304747	0,045757122	-0,468121618	0,02548115
	Ethnic and income segregation	5	-0,20070971	0,004684231	-0,641561814	0,04786065
	Ethnic segregation	6	-0,696620711	0,082852754	-0,252830164	0,0109137
	Income segregation	5	1,53811513	0,275092809	-1,745566005	0,3543024
	na	26		0,251735079		0,12825922
Origin	International	1	2,431813074	0,12582372	2,940531556	0,18397289
	na	39	-0,39643212	0,045334746	-0,4319112	0,62196414
	Functional region	2	1,447505647	0,091098809	1,191920707	0,061768477
	Within the city	6	0,806172463	0,0755714	1,323953462	0,203820089
Destination	na	28	-0,060620117	0,004342944	0,489904117	0,283643507
	out of the city	1	1,160741642	0,058579181	0,054701509	0,000130098
	Surrounding area	11	-0,432558204	0,069496737	-0,355262109	0,046878433
	to satellite towns	3	2,052032549	0,280722506	-2,170318051	0,314018696
	To the suburbs		-0,319550307	0,009282945	-0,429387124	0,016761209

Chapter 3

APP. B.1 Absolute values and proportions of the total number of incoming households moving from different origin locations between 2005 and 2019

	Total moves	Proportion
Inter-urban		
Core Randstad cities	22,147	5.0
Secondary Randstad cities	18,293	4.1
Non-Randstad cities	17,371	3.9
Intra-urban		
Rotterdam agglomeration	42,161	9.4
Rotterdam (beyond neighborhood and district)	182,992	41.0
Inside district	66,220	14.8
Inside neighborhood	55,272	12.3
Other		
Low-density areas	42,534	9.5

APP. B.2 Housing policy interventions by Rotterdam Municipality by neighborhood

Policy	Description	Housing interventions	Neighborhoods
Promising neighborhoods	Policy to attract promising families	Dwelling restructuring; new-build housing; transformation of vacant real estate	Liskwartier; Oude Noorden; Nieuw-Crooswijk; Kralingen West; Middelland; Loydkwartier (Schiemon); Katendrecht; Kop van Zuid Entrepot
National Program Rotterdam South	Improve neighborhoods and social mixing in Rotterdam-Zuid	Sale of social housing; dwelling restructuring; new-build housing	Feijenoord; Afrikaanderwijk; Carnisse; Hillesluis; Oud-Charlois; Tarweijk; Bloemhof
Young potentials	Attract students and young families to the city	New-build student housing; dwelling restructuring; transformation of vacant real estate; sale of social housing	Cool; Stadsdriehoek; Oude Westen; Delfshaven; CS Kwartier; Dijkzigt
Inner city densification	Densify housing stock	New-build housing; transformation of vacant real estate	Cool; Stadsdriehoek; Oude Westen; Nieuwe Werk; Kop van Zuid
Area development and restructuring	Improve the quality of neighborhoods		Zestienhove; Nesselande; Kralingen Oost; Loydkwartier (Schiemon); Kop van Zuid Entrepot; Kop van Zuid; Katendrecht; Hoogvliet; Kleinpolder; Bospolder; Spangen; Nieuw-Crooswijk; Heijplaat; Feijenoord

Source: Rotterdam Municipality (2016)

APP. B.3 Gravity model

We applied the gravity model to estimate the predicted change in the number of moves for every moving direction in our analysis. As implied by its name, the gravity model finds its roots in Newton's law of gravitational force. It proposes that the interaction between two geographic entities is influenced by forces inversely related to the distance between them and other pertinent measures of their masses. In our case, we control for population size of each origin and destination for 2005 and 2019 respectively.

The basic model of the interaction between places takes the following form:

$$F_{ij} = G \frac{M_i M_j}{D_{ij}^2}$$

where F_{ij} stands for the expected interaction between Origin i and Destination j , G is a constant, D stands for the distance between Origin i and Destination j , and M_i and M_j are the total number of households in Origin i and Destination j for a given year. For each municipality outside of Rotterdam, we calculated the gravity model based on the total number of households of municipality i and Rotterdam, as well as the Euclidian distance between municipality i and Rotterdam. The values of the gravity model for each municipality were aggregated into an overall gravity estimate per cluster. For moves occurring within Rotterdam, we applied the gravity model based on Euclidian distance within and between neighborhoods and the total number of households in origin neighborhood i and destination neighborhood j . The distance within neighborhoods was calculated by allocating 1000 random points within each neighborhood and calculating the aggregate Euclidian distance between these points. By estimating the gravity model for two distinct periods (2005 and 2019), we could estimate the predicted growth of residential moves for each moving direction. The outcome is plotted in TABLE APP B.3 below). Table A3 also includes the percentual change between 2005 and 2019 in the number of households who moved out of Rotterdam towards core-Randstad cities, secondary Randstad cities, non-Randstad cities, and the Rotterdam agglomeration. Striking is that while the number of households moving towards core Randstad cities and secondary Randstad cities both increase (23.7% and 29.0% respectively), this increase is limited compared to the number of households who moved towards Rotterdam from core Randstad and secondary Randstad cities (98.3% and 84.1% respectively). This strengthens our argument on the second-hand gentrification hypothesis, as the changing number of households moving towards Rotterdam substantially outweighs the changing number of households moving out of Rotterdam. Furthermore, we observe an increase in the number of households moving from Rotterdam to non-Randstad cities and the Rotterdam agglomeration. These increases align closely with the gravity model predictions, suggesting that they can primarily be attributed to the growing population sizes at both the origin and destination locations.

APP. B.4 Expected change based on the 2005–2019 gravity model by origin and the actual change in the number of movers between 2005 and 2019.

	Expected % change (gravity model)	% change moving into Rotterdam	% change moving out of Rotterdam
Inter-urban			
Core Randstad cities	+7.4%	+98.3%	+23.7%
Secondary Randstad cities	+11.1%	+84.1%	+29.0%
Non-Randstad cities	+14.8%	+36.5%	+9.9%
Intra-urban			
Rotterdam agglomeration	+17.5%	-11.2%	+23.6%
Rotterdam (beyond neighborhood and district)	+40.7%	+5.6%	
Inside district	+10.4%	-20.1%	
Inside neighborhood	-3.0%	-30.5%	

Chapter 4

APP. C.1 Overview of cluster metrics

Quality scores	Moving to gentrifying neighbourhoods			Moving from / within gentrifying neighbourhoods		
	PBC	ASW	HC	PBC	ASW	HC4
cluster2	0.43	0.24	0.23	0.46	0.28	0.22
cluster3	0.54	0.28	0.16	0.59	0.31	0.14
cluster4	0.52	0.24	0.17	0.56	0.30	0.15
cluster5	0.54	0.24	0.15	0.60	0.31	0.12
cluster6	0.56	0.27	0.12	0.61	0.33	0.09
cluster7	0.51	0.23	0.14	0.61	0.35	0.09
cluster8	0.51	0.26	0.13	0.57	0.33	0.10
cluster9	0.49	0.25	0.13	0.58	0.35	0.08
cluster10	0.49	0.26	0.11	0.59	0.37	0.07
cluster11	0.49	0.27	0.11	0.57	0.35	0.07
cluster12	0.48	0.27	0.11	0.55	0.33	0.07
cluster13	0.45	0.25	0.12	0.54	0.33	0.07
cluster14	0.45	0.24	0.12	0.53	0.32	0.07
cluster15	0.43	0.22	0.12	0.52	0.31	0.07
cluster16	0.44	0.23	0.11	0.52	0.31	0.07
cluster17	0.43	0.23	0.11	0.52	0.31	0.07
cluster18	0.42	0.23	0.11	0.52	0.32	0.06
cluster19	0.43	0.24	0.10	0.51	0.31	0.06
cluster20	0.42	0.24	0.10	0.48	0.29	0.07

Chapter 5

APP. D.1 Pseudonyms and characteristics

Pseudonym	Moved from	Year of the move	Age at move	Years in previous city	Tenure before	Tenure after	Household before	Household after	Employment at time of the move
	Amsterdam	2003	38	38	Tenant	Homeowner	Family with children	Family with children	Self-employed
	Amsterdam	2020	23	19	Tenant	Tenant	Single	Single	Working/Student
Marian	Amsterdam	2024	36	18	Tenant	Tenant	Single	Single	Self-employed
	Amsterdam	2023	55	20	Homeowner	Homeowner	Couple	Couple	Employed
Rachel	Amsterdam	2020	30	11	Tenant	Tenant	Single	Couple	Employed
Paul	Amsterdam	2015	34	10	Homeowner	Homeowner	Couple	Couple	Employed
Amy	Amsterdam	2018	25	7	Tenant	Homeowner	Couple	Couple	Self-employed
Anna	Utrecht	2024	26	5	Tenant	Tenant	Couple	Couple	Employed
Lisa	Utrecht	2024	25	25	Tenant	Tenant	Single	Single	Employed
Erin	Utrecht	2021	32	2	Tenant	Homeowner	Couple	Couple	Employed
Vivienne	Amsterdam	2020	26	26	Tenant	Homeowner	Single	Couple	Working/Student
Fiona	Utrecht	2016	22	4	Tenant	Tenant	Couple	Couple	Student
Martha	Amsterdam	2019	42	15	Homeowner	Homeowner	Family with children	Family with children	Employed
	Utrecht	2020	30	1.5	Tenant	Homeowner	Couple	Couple	Employed
Katy	Amsterdam	2024	28	28	Tenant	Tenant	Single	Single	Employed
Eric	Amsterdam	2024	27	8	Tenant	Homeowner	Single	Single	Employed
David	Amsterdam	2019	36	5	Tenant	Tenant	Single	Couple	Employed

Note: only participants who have been cited in Chapter 5 have a Pseudonym.

Curriculum Vitae

Kyri Maaïke Joey Janssen was born in Amstelveen, the Netherlands, in 1995. In 2014, she moved to Wageningen to study at Wageningen University & Research, where she specialised in development economics. In 2018, she moved to Amsterdam to pursue a master's degree in Spatial Economics at Vrije Universiteit Amsterdam. Alongside the programme, she completed additional coursework in Geographic Information Systems.

After graduating in 2019, Kyri began working as a lecturer at Utrecht University, where she taught courses in Geographic Information Systems, quantitative research methods, urban geography and economic geography.

During her PhD, Kyri remained actively involved in teaching and academic education. She taught GIS in several university courses and introduced students to R through the R Carpentries workshops organised by Rbanism. She gave guest lectures on spatial inequality and gentrification for the THIC minor at the Faculty of Architecture and the Built Environment and supervised several master's thesis projects.

Kyri was also involved in organising the European Network for Housing Research conference at Delft University of Technology. As part of the organising team, she shared responsibility for the New Housing Researchers Colloquium, which provides early-career housing researchers with an opportunity to present and discuss their work.

In addition to presenting her research at academic conferences, Kyri considered it important to engage with researchers and practitioners outside the university. She presented and discussed her work at the municipalities of Rotterdam and Amsterdam, the Netherlands Environmental Assessment Agency (PBL) and Statistics Netherlands (CBS). These exchanges enabled her to connect her academic research to wider policy debates and to incorporate perspectives from organisations working directly with spatial and housing-related issues.

Publications

Peer-reviewed

- Janssen, K. M. J., Mulder, P., & Yudhistira, M. H. (2022). Spatial sorting of rich versus poor people in Jakarta. *Bulletin of Indonesian Economic Studies*, 58(2), 167–194. <https://doi.org/10.1080/00074918.2021.1876209>
- Janssen, K. M. J., Cottineau, C., Kleinhans, R., & van Bueren, E. (2023). Gentrification and the origin and destination of movers: A systematic review. *Tijdschrift voor Economische en Sociale Geografie*, 114(4), 300–318. <https://doi.org/10.1111/tesg.12581>
- Janssen, K. M. J., Cottineau-Mugadza, C., Kleinhans, R., & van Bueren, E. (2024). Spatial dynamics of incoming movers and the state-led gentrification process: The case of Rotterdam. *Population, Space and Place*, 30(8), Article e2851. <https://doi.org/10.1002/psp.2851>
- Janssen, K. M. J., Cottineau-Mugadza, C., & Kleinhans, R. (2026). Residential pathways: Understanding moving dynamics in gentrifying neighborhoods through a multidimensional sequence analysis. *Journal of Urban Affairs*, 1–22. <https://doi.org/10.1080/07352166.2026.2665185>

Working paper

- Cottineau-Mugadza, C., Forgaci, C., Janssen, K. M. J., Li, B., Zhang, S., & Zhang, X. (2024). Guidelines and open-source toolbox for systematic literature reviews in the field of urbanism [Preprint]. *SocArXiv*. <https://doi.org/10.31235/osf.io/w5b8v>

26#22

Beyond Rotterdam's Gentrifying Neighbourhoods

Who Moves Where and Why It Matters

Kyri Janssen

This dissertation examines how state-led gentrification reshapes residential mobility patterns and socio-spatial inequality in Rotterdam, the Netherlands. While gentrification research has traditionally focused on neighbourhood change, less attention has been paid to the residential trajectories of movers and the ways these trajectories connect local transformations to broader regional housing dynamics. Addressing this gap, the thesis investigates who moves to and from gentrifying neighbourhoods, where they come from and go, and how they interpret these moves within the context of gentrification. Using a mixed-methods research design, the study combines a systematic literature review, longitudinal Dutch register data from Statistics Netherlands, and semi-structured interviews with inter-urban movers. The findings demonstrate that Rotterdam's gentrification is not solely a neighbourhood-level process but is embedded within wider regional housing markets. Rising housing costs in highly gentrified cities generate inter-urban mobility flows that contribute to the restructuring of Rotterdam's neighbourhoods, a process described as second-hand gentrification. The analysis further shows that gentrification is reinforced through internal upgrading, as middle-class residents increasingly remain within and move between gentrifying areas, gradually reducing housing opportunities for lower-income households. At the same time, housing affordability pressures increasingly affect middle-class households, positioning them simultaneously as subjects and agents of displacement. By linking residential mobility patterns across regional, local, and individual scales to processes of urban change, this dissertation shows that mobility both shapes and is shaped by gentrification. It argues for a spatial-demographic perspective that recognises gentrification as a relational process through which housing inequalities are reproduced across interconnected urban regions.

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