

Navigating the divided city: Place identity and the time-geography of segregation[☆]

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ABSTRACT

Research on segregation has expanded beyond its traditional focus on the residential demography of cities to explore how, why and with what consequences segregation manifests within activity spaces outside the home. As part of this shift, researchers have become increasingly interested in the time geography of residents' everyday mobility practices. Building on this work, the present paper explores the role of place identity dynamics in shaping how Catholic and Protestant residents navigate everyday spaces over time in the historically divided city of Belfast. To do so, we employ a novel combination of walking interviews ($n = 33$), GPS tracking, GIS visualizations, and photo-elicitation. By recovering residents' lived experiences of moving through the sensuous, material, and symbolic landscapes of the city, we show how the interrelated dynamics of place belonging and alienation influence their mobility choices in ways that maintain sectarian divisions. We also show how the concept of place identity enriches the materialist notion of mobility 'constraints' that has characterized most time geographic work on segregation. In conclusion, we suggest that interventions to promote desegregation must transform not only relations between different communities, but also relations between community members and the activity spaces in which their everyday movements are embedded.

1. Introduction

Research on segregation has recently expanded beyond its traditional focus on residential demography to explore how, why and with what consequences segregation manifests within activity spaces outside the home (e.g., see Dixon et al., 2020; Kwan, 2013; et al., 2012; Van Ham & Tammaru, 2016). As part of this shift, researchers have become increasingly interested in the time geography of residents' everyday mobility practices. That is, they have recognised how segregation may emerge as residents navigate everyday routes and pathways over time and use activity spaces such as parks, public transport, sports fields, shopping centres, beaches, markets, and public squares. Building on this emerging work, the present paper explores the role of place identity

dynamics in shaping how Catholic and Protestant residents navigate everyday spaces in the historically divided city of Belfast.

2. From residential demography to activity spaces

2.1. The concept and importance of activity space segregation

Most research on segregation has used census data to explore how ethnic and racial divisions are established within the residential organization of cities. Although researchers have recognised that segregation may take varying forms, residential demography has been accorded primary significance, being widely treated as the 'structural lynchpin' (Massey & Tanney, 2016; Pettigrew, 1979) of other forms of

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segregation. Where people live is also viewed as central to understanding the negative consequences of segregation in, for example, the domains of poverty, health, education, and intergroup relations (e.g., see Acevedo et al., 2003; Massey & Fischer, 2000; Pryce, Wang, Chen, Shan, & Wei, 2021; Pettigrew & Tropp, 2011).

While agreeing that residential organization is fundamental, Schnell and colleagues have argued for an approach that acknowledges the multiple contexts in which individuals may experience ‘socio-spatial isolation’ (see Schnell et al., 2015; Schnell & Haj-Yahya, 2014; Schnell & Yoav, 2001). Such contexts include home and neighbourhood spaces, spaces of leisure and other forms of social interaction, educational and workplace spaces, and virtual and telecommunication spaces. Their evolving programme of work on the lived experiences of Arabs who commute to work in Israel provides a nuanced illustration of this holistic perspective.

Other research has evidenced how an exclusive focus on residential demography may give an incomplete, limited or even distorted impression of the nature and extent of segregation. For example, in her ethnography of relations on Chicago’s Redline L train, Swyngedouw (2013) found that commuters’ behaviour both reflected and extended wider patterns of residential segregation. Because of where they lived in the city, black residents tended to ride from South side to downtown, while white residents tended to ride from North side to downtown. At the same time, Swyngedouw also documented a ‘segregation of social interactions’ on the train, with commuters tending to sit and communicate with members of their own groups.

Aksyonov (2011) demonstrated that wealthier and poor residents of a municipality of Saint Petersburg tended to live in comparatively close residential proximity to one another. However, they enacted segregation via their everyday consumer behaviour, with wealthier residents favouring chain stores and supermarkets that emerged in the post-communist era and poorer residents maintaining ‘pre-transition’ shopping behaviours and favouring low-cost convenience stores located farther away from their homes. Using cell-phone activities as data, Toomet et al. (2015) compared the home, work and leisure space usage of Estonians and Russian-speaking minority group members in Tallinn and reported that free-time leisure activities were more likely to occur in ethnically diverse settings than either home or workplace activities. The authors highlighted, however, that the mere copresence of different groups within leisure spaces need not translate into meaningful interactions among their members.

This point is supported by research on the so-called ‘microecology of segregation’ (for a review see Bettencourt, Dixon, & Castro, 2019). In a series of observational studies, for instance, Dixon and colleagues found that ostensibly desegregated leisure spaces in post-apartheid South Africa (e.g., beaches, bars, and public spaces) were marked by new forms of racial divisions operating at a microecological scale of analysis (Dixon & Durrheim, 2003; Tredoux & Dixon, 2009; Tredoux et al., 2005). Members of groups who were physically co-present and had the potential to interact with one another generally behaved in ways that reinstituted segregation (e.g., via seating arrangements and patterns of entry and exit).

The foregoing studies exemplify emerging work on the concept of activity space segregation (see also Davies et al., 2019; Dixon et al., 2020; Ellis et al., 2004; Huck et al., 2018; Wang et al., 2012; Wong & Shaw, 2011). They also highlight two general features of the field that our research attempts both to build upon and extend. First, most studies have had a descriptive emphasis, seeking to measure, for example, the extent to which domains outside the home are shared by different groups, to compare levels of ‘socio-spatial isolation’ across different contexts or time frames, or to derive indices for capturing segregation holistically. This emphasis is understandable given we still know relatively little about non-residential patterns of segregation. The present research adopted a different, but in our view complementary, approach. That is, our main aim was not describe or quantify general patterns of activity space segregation. Instead, we sought to explore individuals’

understandings of, and affective responses to, the activity spaces they encounter as they routinely move through their local environments.

Second, in trying to capture activity space segregation, researchers have drawn on quite disparate research methods. Unlike work on residential segregation, which tends to employ census data that are aggregated using standard statistics (e.g., Indices of Dissimilarity), the field is not informed by a standard methodology for gathering or analysing data. For example, the studies cited above variously employed interview and survey methods (Aksyonov, 2011), field observations (Dixon & Durrheim, 2003), time lapse photography (Tredoux et al., 2005), ethnography (Swyngedouw, 2013), GPS tracking (Dixon et al., 2020), travel diaries (Wong & Shaw, 2011), participatory GIS (Huck et al., 2018), and data on mobile phone call locations (Toomet et al., 2015). Drawing on the analytic framework of time geography, the present research exploited a novel combination of methods designed both to track residents’ movements through a historically divided city (using GPS tracking and GIS analytics) and to analyse how they made sense of the locations, pathways and destinations encountered en route (using walking interview and photo-elicitation methods).

2.2. The time geography of activity-space segregation

As its name suggests, time geography is a general framework for describing how individuals move through space over time and with what emergent properties and consequences. At its heart, lies the concept of the *space-time path* – the idea that individuals inscribe through their everyday movements (often recurring) trajectories that can be recovered, traced, visualised, and analysed. Such paths are subject to a range of constraints, three of which time geographers have emphasized (following Hägerstrand, 1970): (1) *capability constraints*, which designate how space-time paths are limited by the biological capacities of the human body and access to material resources such as transport; (2) *coupling constraints*, which designate how space-time paths are limited by the requirement that individuals be located in particular places (e.g. a workplace) at particular times (e.g. from 9am to 5pm) and with particular people and resources (e.g. work colleagues); and (3) *authority constraints*, which designate how space-time paths are subject to the control of other individuals, groups or institutions who may, for example, regulate access to given activity spaces.

It is important to note that time-geography was not devised to investigate segregation per se. It is better characterized as a general ontological framework - and associated set of concepts and tools - that can be applied to a range of social issues. At the same time, researchers have increasingly emphasized its more specific utility for exploring activity-space segregation (e.g., Aksyonov, 2011; Dixon et al., 2020; Klapka et al., 2020; Kwan, 2013; Palmer et al., 2012). Where and when individuals travel over time, along what pathways, to what destinations and for what duration - all shape the likelihood that they will encounter one another in shared spaces outside the home. Moreover, the general constraints identified by time geographers are specifically relevant to understanding segregation in everyday life spaces. Capacity and coupling constraints, for example, influence the extent to which individuals’ space-time paths bundle together in ‘pockets of local order’ (Klapka, Ellegard, & Frantal, 2020). They may thus help to explain the emergence of spaces that are comparatively homogenous in terms of their racial, class, ethnic or gender composition. Authority constraints may similarly divide communities from one another, as notoriously illustrated by the laws governing black South Africans’ movements and access to facilities under the apartheid system (Christopher, 1994).

Arguably the most significant contribution of time-geography is that it reconceives segregation as a *dynamic system*, highlighting its constant becoming (Pred, 1977) in ways that research on relatively static processes of residential organization has downplayed. However, critiques of this approach have noted its rather thin treatment of subjective experience and its tendency, at least in its earlier years of development, to prioritize ‘physicalist’ notions of constraint (see Lenntorp, 1999 for an

overview). Time geographic research on segregation, for instance, has barely explored the motives, memories, feelings, thoughts, or embodied perceptions that inform agents' daily mobility choices in divided cities. Nor has it explored the historical, social, or cultural factors that agents themselves view as constraining their day-to-day movements. In most work, human beings are reduced to psychologically empty vectors of movement, entangled in webs of material constraints beyond their control. More broadly, this line of critique has led several researchers to propose fruitful ways of extending time geographic research, retaining its core concepts and methods but complementing them with work that moves beyond "... treating the individual as an object and not a thinking, experiencing person with feelings and expectations for the future" (Lennartorp, 1999, p.157). McQuoid and Dijst's (2012) work on how spatiotemporal and emotional boundaries complexly interrelate in the lives of low-income, single women living in San Francisco provides an ethnographically rich example. In the present research, we develop this approach by exploring the role of place identity dynamics in explaining the time geography of segregation.

2.3. Place identity and everyday movement in the divided city

The concept of place identity was originally proposed by Proshansky (1978, p.155), who conceived it as "... those dimensions of self that define the individual's personal identity in relation to the physical environment by means of a complex pattern of conscious and unconscious ideas, feelings, values, goals, preferences, skills, and behavioural tendencies relevant to a specific environment". This broad-ranging definition has been widely adopted and informed subsequent empirical work, but it has also generated considerable debate, with theorists seeking to differentiate place identity from closely related concepts such as place attachment and place dependence (see Peng et al., 2021 for a recent review).

While accepting Proshansky and colleagues' definition remains a versatile starting point (see also Proshansky et al., 1983), our approach to place identity emphasizes three more specific processes. First, we treat sense of belonging as a central and defining feature of place identity; that is, in identifying with places, individuals express an affinity that is captured in phrases such as 'this is my home' or 'this is our area'. We also agree with Korpela (1989) that this sense of belonging, and associated feelings of place attachment, is derived largely from how individuals appropriate their environments, and we will suggest that mobility practices are part of this process of appropriation (see also Di Masso et al., 2019).

Second, we emphasize the collective and intergroup rather than the personal dimensions of place identity that have dominated most work in environmental psychology. We argue the former are particularly central to an understanding of mobility practices in historically divided cities such as Belfast. In developing this theme, we have benefitted from the contributions of researchers such as Bernardo and Palma-Oliveira (2016), Bonaiuto et al. (1996), Devine-Wright and Lyons (1997), Dixon and Durrheim (2000, 2004), Lewicka (2008), Mazumdar and Mazumdar (1997), Robert and Di Masso (2020), and Taylor (2009). Among other themes, their work has emphasized how: (a) places may become the sites for the expression and contestation of collective, identity-relevant meanings, values and symbolism; (b) our sense of belonging is not just a personal feeling, but also is bound up with wider historical experiences of intergroup processes and collective representations of who belongs where (and who does not), and (c) identification with, or emotional attachment to, 'our space' thus often involves countervailing processes of disidentification and emotional alienation from 'their' space. We shall later demonstrate how these interrelated processes of place identification and alienation powerfully shape residents' everyday movements in Belfast and are central to the reproduction of activity-space segregation.

Third and closely related, we emphasize a specific kind of affective and behavioural response, which relates to what Proshansky et al.

(1983) called the 'anxiety and defence' function of place identity. This captures how place identity enables individuals to recognise the threat (to self) posed by physical settings and to set in motion feelings of anxiety and behavioural avoidance. Whereas Proshansky and colleagues emphasized the personal role of the 'anxiety and defence' functions of place identity, we will emphasize its role in structuring collective responses and intergroup patterns of segregation between Catholic and Protestant residents of Belfast. To echo Bairner and Shirlow (2003), we will show how when moving through the everyday spaces of the city residents must navigate 'ethno-sectarian' landscapes of fear.

3. Research context

Even before the period of violent conflict known locally as 'the Troubles' (1969–1998), which was effectively ended by the Good Friday Agreement in 1998, Belfast's residential areas were organized along sectarian lines (Doherty & Poole, 1997). During the conflict, however, sectarian divisions intensified as many residents moved from, or were forced out of, relatively 'mixed' areas, and defensive barriers (known locally as 'peace walls') were erected throughout the city as a means of regulating violence between Catholic and Protestant communities (Shirlow & Murtagh, 2006). The sectarian demography of the city has since remained largely intact. West Belfast continues to be populated overwhelmingly by Catholic residents and East Belfast by Protestant residents. North Belfast, where the present research was conducted, displays a kind of checkboard pattern (see Fig. 1). Catholic and Protestant communities live close to one another, but in neighbourhoods that are demarcated by varying material and symbolic boundaries, including peace walls, murals, painted kerbs, flags, and even the language used on street signs.

North Belfast has a population of just over 100,000 residents (Northern Irish Assembly, 2013), divided into roughly equal numbers of people who identify as either Protestant or Catholic. The area suffered a disproportionate number of violent deaths and injuries during 'the Troubles' - relative to its size and population (e.g., see Mesev et al., 2009) - and the findings we present should be viewed in this context. Although sectarian violence has dramatically decreased since the 1998 peace agreement, residents of north Belfast have continued to experience sporadic, lower levels of conflict, including rioting, and they have also continued to suffer high levels of socio-economic deprivation (e.g., Jarman, 2003; McKittrick et al., 2001).

Levels of activity-space segregation in north Belfast also remain high. Building on Boal's (1969) classic research, Dixon and colleagues recently used GPS tracking methods to trace the movements of 243 Catholic and Protestant residents over a two-week period (Davies et al., 2019; Dixon et al., 2020). To simplify a more complex set of findings, they reported that (see Fig. 2): (1) residents seldom enter activity-spaces or use pathways associated with the other community, (2) movements along ingroup neighbourhood networks of tertiary streets are particularly segregated, (3) shared routes tend to fall along arterial roads into Belfast City centre, and (4) shared destinations tend to be located in spaces of shopping and consumption on the outskirts of residential areas (e.g., supermarket chains, retail parks or shops in the city centre). Understanding the environmental psychological processes that underpin the broad patterning of activity use captured in Fig. 2 is main objective of the present research.

4. Method

4.1. Participants

Using a door-to-door sampling method, our research initially recruited a total of 520 residents living in five areas in north Belfast (Fig. 1) as part of a quantitative survey of attitudes towards segregation. The five areas were selected because each featured Protestant and Catholic neighbourhoods located in proximity to one another. For

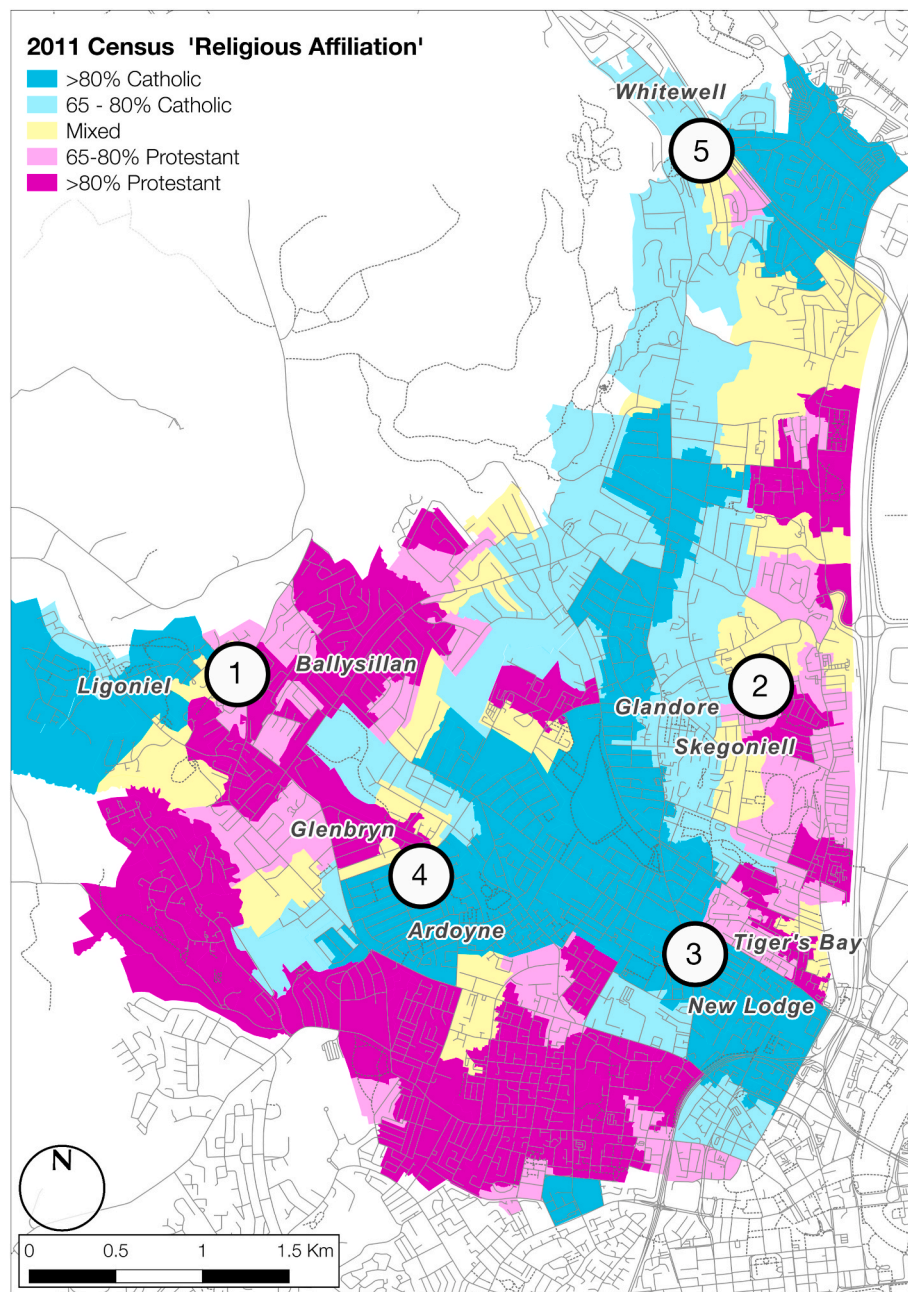


Fig. 1. The five study sites in north Belfast.

residents living in these neighbourhoods, the issue of sharing or segregating local activity spaces is thus part of their everyday lives. From our wider survey sample, 33 participants agreed to participate in the follow up walking interviews analysed in this paper. They comprised 14 self-identified Catholics, 17 self-identified Protestants, and two 'other'. They included participants of varying ages, ranging from 17 to 75 years. Thirteen of the sample identified as female, the rest as male.

4.2. Procedure

4.2.1. Walking interviews

During walking interviews, researchers 'walk along' with respondents through a given environment while asking questions (e.g., see Brown & Durrheim, 2009; Clark & Emmel, 2010). Such interviews are particularly useful for exploring the relationship between self and space (Evans & Jones, 2011), being "profoundly informed by the landscapes in

which they take place." In our study, having gathered basic biographical information and established rapport in their homes, we gave interviewees the following instructions:

"Imagine you are a tour guide and we're visiting your community. We want you to take us on a typical journey through your neighbourhood. We want to get an idea of how you use and experience the local environment on a typical day. We are particularly interested in how living in a divided part of the city affects your everyday life."

The resulting interviews were conducted by the second and fourth authors in 2016 and early 2017. They lasted between 45 min and 2 h, with the routes chosen by the interviewees themselves. The interviews were guided flexibly by a series of open-ended prompts that invited respondents to answer questions about: (1) the *everyday logistics of their mobility practices* (e.g. How often do you take this journey? Why do you take this route?), (2) *their feelings as they travelled through particular areas* (e.g. What does it feel like walking through this part of the journey?

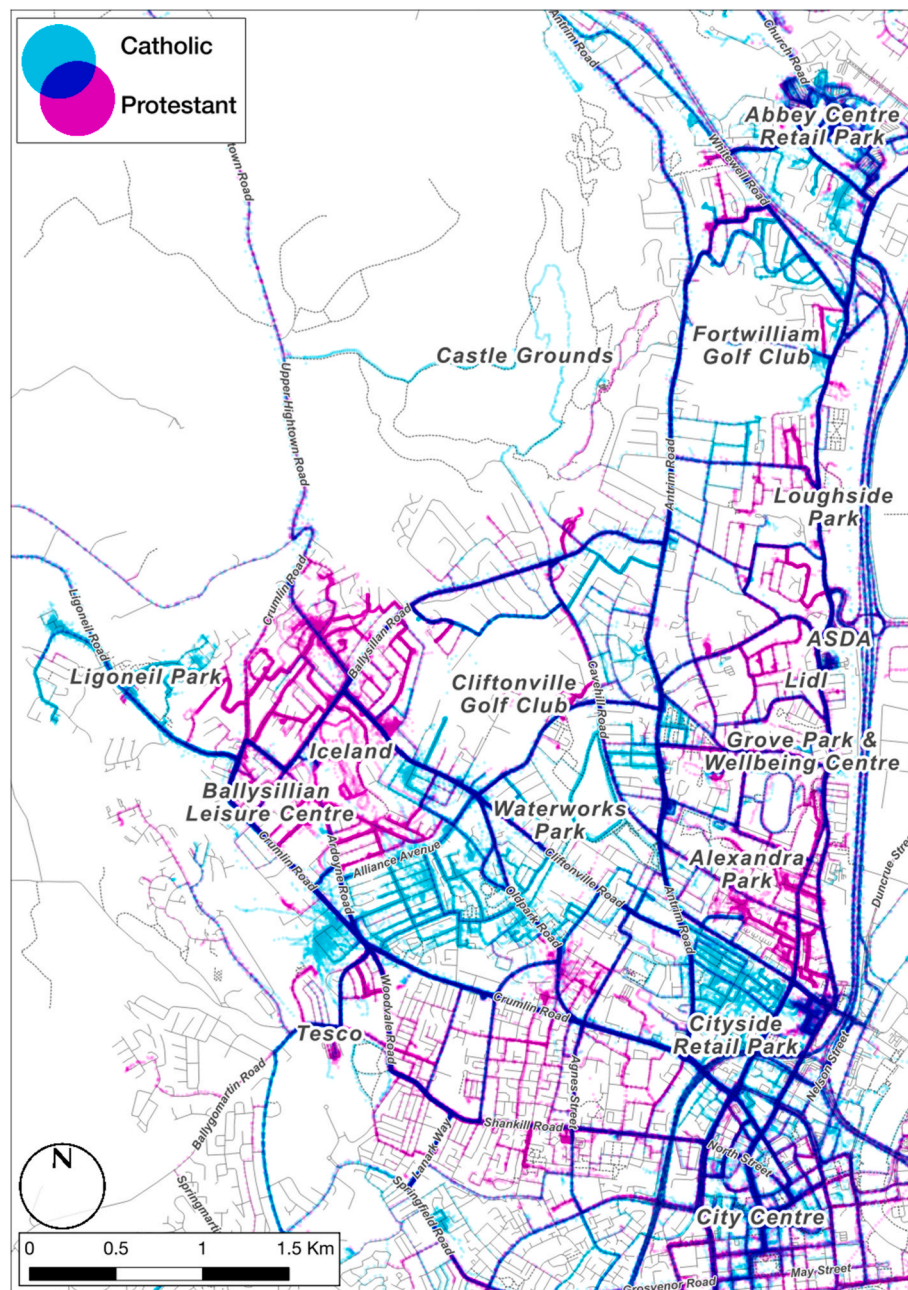


Fig. 2. Activity spaces and pathways by community identity in north Belfast (based on Dixon et al., 2020, p.465).

Note: Cyan tracks and activity spaces are used predominantly by Catholics, pink tracks and activity spaces by Protestants, and dark blue tracks and activity spaces are shared. (For interpretation of the references to colour in this figure legend, the reader is referred to the Web version of this article.)

What landmarks do you identify with?) (3) *their perceptions of spaces belonging to the 'other' community and spaces potentially shared* (e.g., So we now seem to be passing through, or close to, an area that belongs to the other community? How can you tell? Can you indicate any part of this journey that occurs within this space that you would regard as equally 'shared' by both communities?), and (4) *their capacity to access local facilities* (e.g., Are there local facilities that you would like to access more easily? Can you tell or show us where?). All 33 interviews were digitally recorded and then transcribed in full prior to analysis.

4.2.2. GPS tracking and photo-elicitation

The walking interview data were supplemented by a combination of GPS tracking and photo-elicitation. The GPS tracking used a custom mobile phone app to gather space-time point estimates at a rate of one data point per 4 s (see <https://github.com/jonnyhuck/bmp-path>

ways-app). These data were then exported to a cloud-based storage system. Each point screened for accuracy and integrated with GIS maps of the local environment to provide visualisations of the pathways along which interviewees travelled. The tracked data also allowed us to geo-code the time and location of key environmental features identified en route. The latter were indicated by participants themselves and then photographed, resulting in a set of over 1000 images. Interviewees were told that the photographs were designed to illustrate and provide context for their interview accounts.

4.2.3. Ethics

All aspects of our research followed the ethical guidelines of the British Psychological Society. The research was also formally evaluated and approved by the Human Research Ethics Committee of the Open University.

5. Results

The thematic analysis (Braun & Clarke, 2006) developed below was based both on theoretically-informed coding, drawing particularly on the work on concept of place identity in environmental psychology, and coding informed by 'bottom up' analysis of walking interview materials. The first section explores a theme we entitled 'captive geographies'. This concerns the varying ways in which residents described their everyday movements as being constrained by the sectarian geography of north Belfast. The second section explores a theme we entitled 'place identity and activity space segregation'. This concerns how place-identity relations were described as shaping residents' mobility choices in ways that maintained segregation over time. Here we discuss two interrelated sub-themes. The first concerns the role of place identity in creating 'comfort zones' marked by a sense of familiarity, belonging and attachment to ingroup spaces. The second concerns the role of place identity in fostering a sense of discomfort in, and alienation from, out-group spaces. The thematic analysis drew primarily on walking interview data, but also used GPS tracking of interviewee pathways and associated photographic data of key environmental features to supplement, illustrate and develop this textual analysis.

5.1. Theme 1 - captive geographies

Extract 1

Catholic, female, 16 years old.

Interviewer: Okay. When you see these gates how do they make you feel?

Participant: I think it's bad because it's like separating Catholics and Protestants from each other.

Interviewer: Yeah yeah

Participant: But like sometimes it's good, sometimes it's bad. But like if you're walking down like during the night you can't go far, like you've got to walk the whole way down because they're closed. They get closed at around 5 or 6.

Interviewer: Right.

Participant: Something like that.

Interviewer: So you've to go all the way back down to Queen Street.

Participant: Yeah, North Queen Street, and then walk round.

Extract 2

Protestant, female, 19 years old.

Participant: Well, I would always walk down the street. I would never walk down and along because also down the front of the road it's mainly Catholics as well cause you've got the chapel, you've got St. Marys, Star of the Sea. So the people are all there getting their kids from school and it's all a Catholic area so I wouldn't. I would avoid walking along the front of the road and down to the right because I would rather walk down the street 'til I'm at the bottom of Gray's Lane, which is Protestant.

Interviewer: So you avoid the Shore Road then?

Participant: Yeah.

Interviewer: And this street right here again is?

Participant: Graymount Road.

Interviewer: Graymount Road. So you would go down?

Participant: I would go down Graymount Parade to just get wherever I was going. Even to get the bus, you have to go down this street to the very bottom.

These opening extracts capture a theme that recurred in almost all our walking interviews, which concerned how residents' mobility choices were restricted within the material and symbolic landscapes of north Belfast. We have gathered this theme under the heading 'captive geographies', as several interviewees used metaphors of captivity when describing residents' experiences of navigating the local environment (e. g., they spoke of being "hemmed in", Participant 385; living in a "big fishbowl", Participant 248; or in "a constant prison", Participant 39).

In Extract 1, a young Catholic woman describes how she must

navigate the opening times of a gate located in a peace wall that divides her own neighbourhood from an adjacent Protestant neighbourhood (see [Pathway 1](#), Photograph 1). If she arrives too late in the day (after 5 or 6pm), then this gate is locked, and she is forced to take a circuitous route home (see the alternative route marked on [Pathway 1](#)). This is a classic example of what time geographers have termed an authority constraint on human mobility; that is, the resident's passage through the gate in question is subject to external control. Extract 2, by contrast, illustrates a mobility constraint that is not imposed from above, but instead arises from the interviewee's sense of which pathways – indeed which sides of the street – belong to which communities ([Pathway 2](#)). In north Belfast, as this extract illustrates, residents often display a finely attuned sense of the routes and directions that they must follow to complete their everyday journeys. It is not an exaggeration to say that the interviewee here offers a kind of ethno-sectarian roadmap, proposing precise guidance not only about where to go but also where *not* to go.

Both extracts also capture two straightforward but important consequences of activity space use in north Belfast. First, being physically and symbolically divided from other communities (Extract 1, Photograph 1) or choosing to avoid the everyday spaces and pathways on which the other community travels (Extract 2, [Pathway 2](#)) also limits the potential for interactions across group lines. As the interviewee in Extract 1 summarizes, it separates Catholics from Protestants. Second, activity-space segregation is also a matter of environmental justice in that it curtails residents' opportunities to benefit fully from the resources of the city. For example, it forces them to take unnecessarily long routes home (Extract 1, [Pathway 1](#)) or to use bus stops that are neither closest nor most convenient (Extract 2, [Pathway 2](#); note that Photograph 2 indicates the 'Catholic' bus stop the participant avoids and Photograph 3 the alternative bus stop she uses). Extract 3 further illustrates this theme.

Extract 3

Protestant, female, 40 years old.

Participant: Now there's a wee play area down here and a lot of times I've taken my son down to Fuscus, and he walked past, and said: "mummy, can I go in there?" I can't explain why he can't go in there, cause it's a Catholic play area. So I said to him: "You can't go in there, cause that's for other children to play in", and he said: "What do you mean?" Cause he doesn't understand what Catholic and Protestant mean. So it's so hard to explain why he can't go in there. I mean play areas are supposed to be for all children, obviously but that's their play area. You know so, it's a bit hard to try and explain to a five-year-old that he cannot go into a Catholic play area.

Interviewer: Yeah, that's too bad.

Participant: That's why I don't, I don't bring him down here anymore now.

Here a Protestant mother describes her experience of walking her young son past a 'Catholic' play area ([Pathway 3](#), Photograph 4) and explaining to him why he cannot play there. She offers a narrative that contrasts his innocent, non-sectarian understanding with her own understanding as a mother who can recognise the difference between 'our' facilities and 'their' facilities. The frustration she articulates focuses not so much on the sectarian division of resources per se as on her difficulties in explaining to her young son why they are divided in the first place. Such difficulties, she explains, mean she now avoids taking this route into the city. We would again emphasize here that the factors constraining her entry into the play area depicted in Photograph 4 are not imposed from above by a supervising authority. Nor do they reflect the influence of what time geographers have labelled capacity or coupling constraints ([Hägerstrand, 1970](#)). Rather, they reveal her lived understanding of who belongs where in the divided city and thus implicate the concept of place identity.

5.2. Theme 2: place identity and activity space segregation

[Pathway 4](#) captures a socio-spatial pattern that marked many of our interviews. Interviewees would begin their journey by leaving their



Fig. 3. Pathway 1.

home and walking us through their own neighbourhood. En route they would point out features of their local environment of significance to themselves or the local community. For example, at Point A, the interviewee highlights a space of commemoration that is important both to himself and the local Catholic community (Photograph 5). As they left their neighbourhood spaces, interviewees would sometimes highlight spaces potentially shared by Protestant and Catholic communities. At Point B on Pathway 4, for instance, the interviewee highlights the Everton Medical Centre as a potentially shared facility (Photograph 6). Then, as they approached the boundary of the 'other' community, they would articulate their anxiety about approaching or entering 'their' space. At point C in Pathway 4, for example, the interviewee took us to the interface between the Ardoyne (the Catholic area in which he lived) and Glenbryn (a Protestant area). He then pointed to sectarian graffiti on a post box (Point C, Pathway 4, Photograph 7) and used this to explain his reluctance to enter Glenbryn. The term KAT is an acronym standing

for Kill All Taigs, Taigs being a derogatory term for Catholics.

The pattern highlighted in Pathway 4 was repeated, albeit in varying ways, in all our interviews. It demonstrated how the interrelated dynamics of place identification and disidentification shaped residents' activity-space use. Before developing this theme, it is worth noting the overlap here between Pathways 3 and 4, if only to emphasize how interviewees often invested the same physical spaces and routes with quite different meanings. The interviewee who led us along Pathway 3, for example, treated the area around Glenbryn gardens as part of ingroup space and thus as a space of familiarity and belonging; the interviewee who led us along Pathway 4, by contrast, treated the same area as part of outgroup space and thus as a space of threat and alienation.

5.2.1. Comfort zones: place identity as belonging, familiarity and attachment

Activity-space segregation is informed not only by a reluctance to use



Fig. 4. Pathway 2.

other group spaces, as captured in our opening three extracts, but also by residents' sense of belonging when moving through own group spaces, as expressed through feelings of comfort and 'at homeness' and an associated preference for sticking to own group spaces. Sometimes (see Extract 4, [Pathway 5](#)) this was articulated by our interviewees in terms of feelings of embodied familiarity, a sense of physical insideness that over time becomes part of self ('... its just being in your home zone, you know'). At other times, it was articulated via a sense of what [Rowles \(1983\)](#) once called 'social insideness'. In Extract 5 ([Pathway 6](#)), for instance, the interviewee speaks about the importance of being known and acknowledged through mundane greetings by her neighbours in the Protestant neighbourhood of Glenbryn Gardens. She also notes, however, how this 'friendly' feeling dissipates as she and her husband travel outside the comfort of their neighbourhood and approach local shops - located on the boundary of a Catholic Area - where she is neither known nor greeted (Photograph 8).

Extract 4

Male, Catholic, 65 years old.

Interviewer: Okay. Alright. What features, as we walk through this space what features make it feel good, make it feel safe?

Participant: I think it's just being your home zone, you know. That you sort of, as you drive daily through the street and you walk the street you sort of know the people. If there's someone coming out you recognise them. You know, it's familiarity. Familiarity.

Extract 5

Protestant, Female, 40 years old.

I know all the neighbours. The neighbours actually know my husband, so any time you're walking down the street they say: 'Hello'. They would actually stand and chat with you. So that would make you feel very comfortable as well. So, walking down this is Glenbryn Gardens, where I live. It is very familiar and friendly. Then, walking downwards to the shops it is not. I wouldn't say it is unfriendly but just I don't know

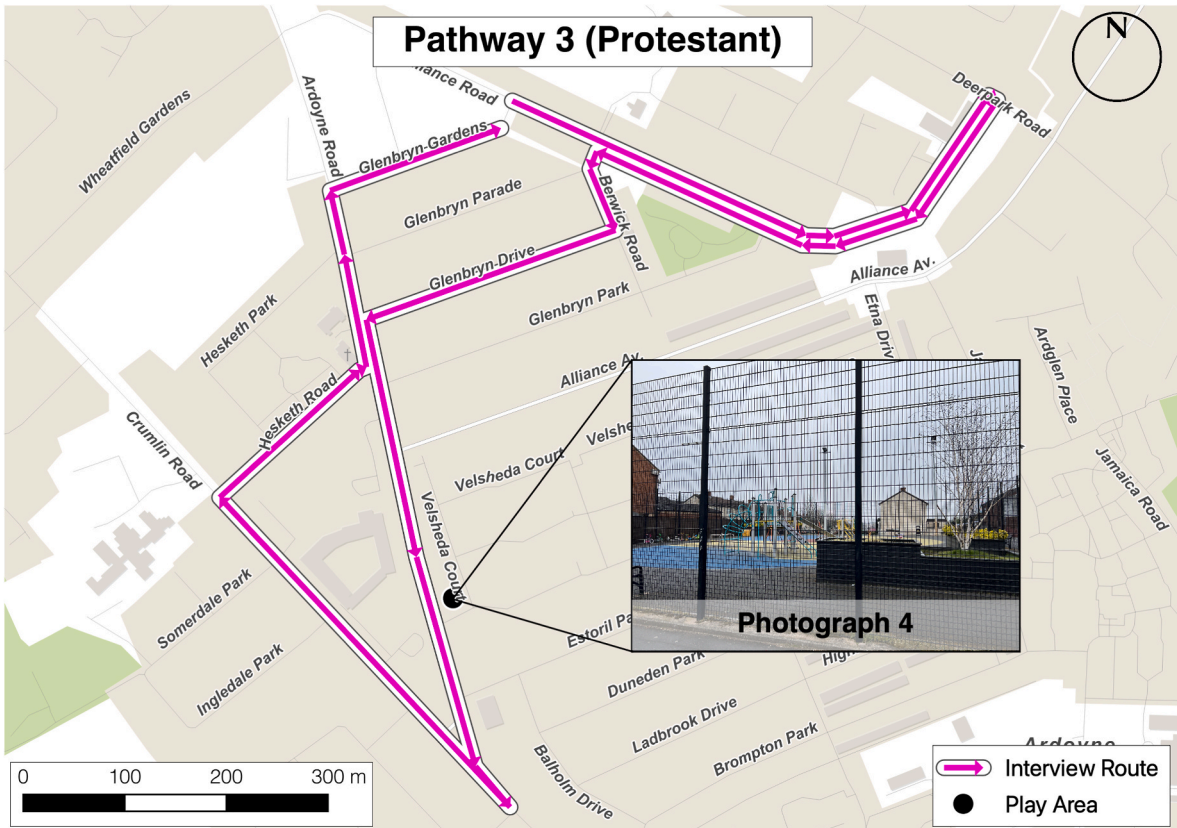


Fig. 5. Pathway 3.

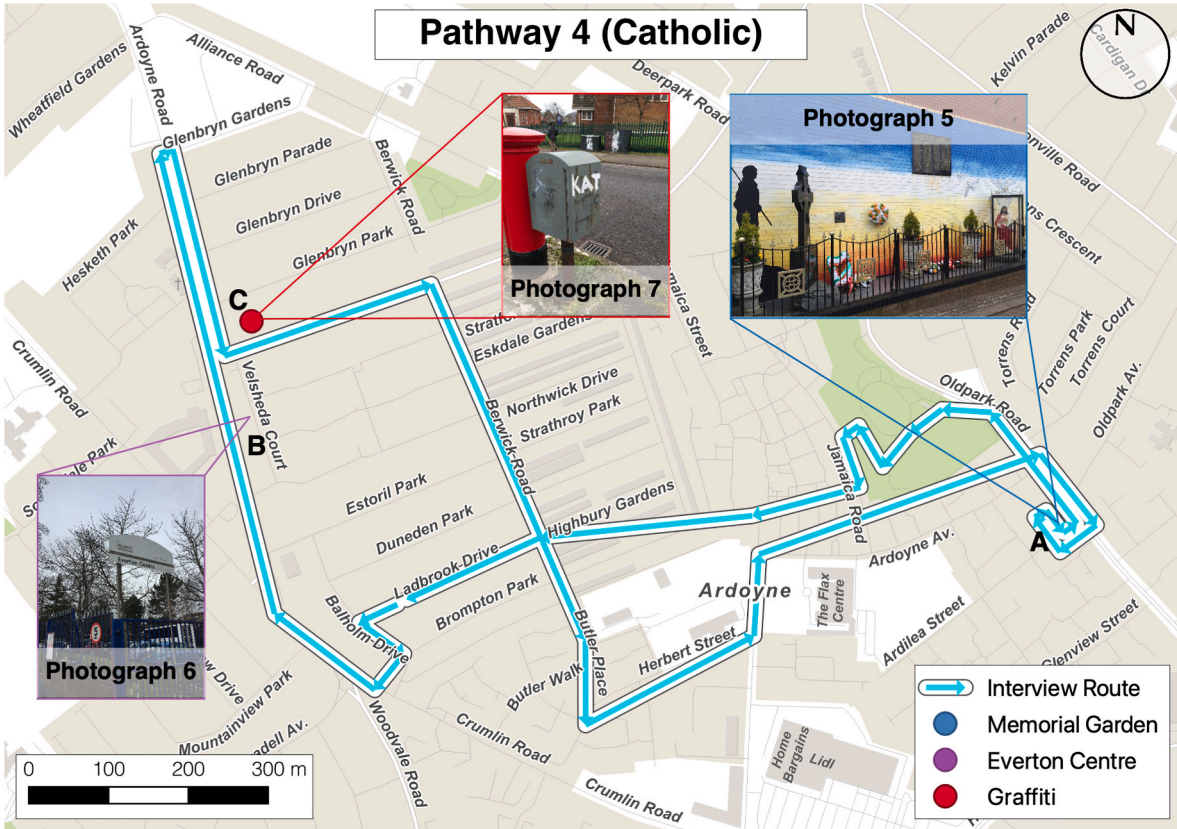


Fig. 6. Pathway 4.

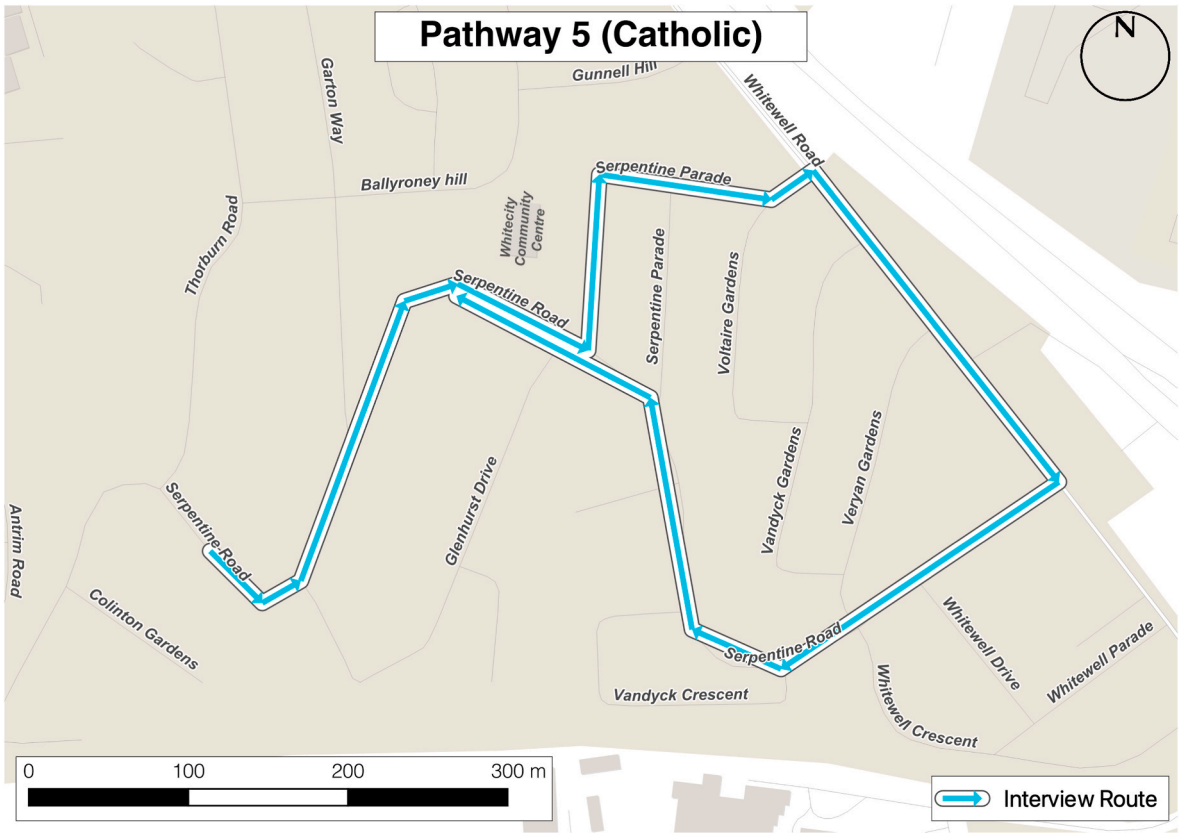


Fig. 7. Pathway 5.

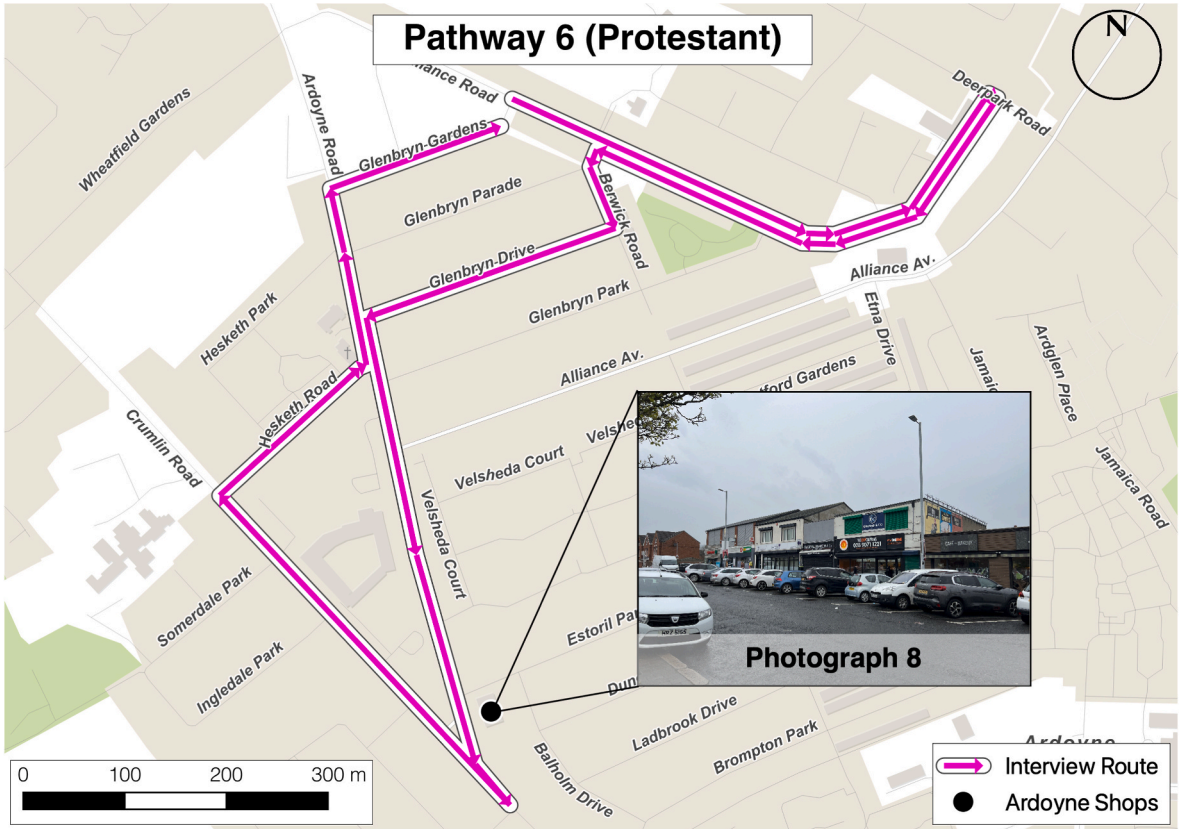


Fig. 8. Pathway 6.

anyone in this part of the street so to me this does feel very familiar or friendly. Nobody would really talk to you or say hello.

A striking feature of public activity spaces in north Belfast is their strong 'territorial personalization' (Greenbaum & Greenbaum, 1981). That is, public spaces are symbolically adorned in ways that signify collective identities and demarcate group territories. As such, residents walking through the spaces of everyday life routinely encounter the 'sensuous geography' (Rodoway, 2011) of sectarian divisions and this informs their sense of where they do or do not belong.

Extract 6

Protestant, Female, 54 years old.

Interviewer: Ah, so this is one of the landmarks you would identify with?

Participant: Absolutely. Well, it's a memorial for men who lived in the area and died in the Troubles, specifically who were in the UDA (Ulster Defence Association).

Interviewer: Alright. And would you come to any particular ceremonies here or particular?

Participant: Remembrance Day.

Interviewer: You would come to the Remembrance Day?

Participant: So that's my brother's name.

Extract 7

Protestant, male, 24 years old.

Participant: The mural on the other side of this wall, it's just 'Welcome to Loyalist Tigers Bay.' Says it all. It's just big black letters.

Interviewer: Do you think that this mural is important to the area? It's quite visual.

Participant: Yeah that Community Pride and Culture one, I think they do like that. The one on the other side 'Welcome to Tigers Bay, well 'Welcome to Loyalist Tigers Bay' whenever I'm coming from that direction and I see that I just think 'I'm Home.

Extract 6 reveals how everyday activity spaces in north Belfast express the visual symbolism of collective history and remembrance,

connecting residents to the past sacrifices of their communities. Early in her walking interview, the interviewee pointed out the spot at which her brother had been murdered during the Troubles (which we have not indicated on Pathway 7 for ethical reasons). She then led the interviewers to the commemorative garden featured in Photograph 9 (Pathway 7) and pointed to her brother's name on a roll call of local Protestant men who had lost their lives. As we have seen, the interviewee who travelled along Pathway 4 indicated a corresponding Catholic memorial visited by his community's members (Point A, Photograph 5), particularly at Easter when the 1916 uprising to end British rule is traditionally celebrated. In both cases, then, sites of commemoration served as a kind of 'place tradition' (Jacobi & Stokols, 1983), connecting residents to their shared past and collective identities.

Extract 7 (Pathway 8) illustrates a different form of territorial demarcation. Here the interviewee led us first to a wall mural designed by one of his friends (Photograph 10) that is now a source of local pride, expressing community identity via a visually striking image of a tiger's head. He then highlighted a simpler mural nearby, which proclaims "Welcome to Loyalist Tigers Bay" and features well-known Protestant symbolism (e.g. the red hand of Ulster, Photograph 11). For the interviewee, encountering this kind of mural creates a sense of belonging as he moves through the local environment and approaches his own community's territory ("... whenever I'm coming from that direction and I see that I just think I'm home."). However, for members of other communities in north Belfast, as the final section of our analysis illustrates, it would have precisely the opposite effect.

5.2.2. Place identity threat: discomfort zones and feeling 'out of place'

Extract 8

Protestant, male, 57 years old.

Participant: You know this is, you know this part of it isn't too bad. If I had to go, it's strange because my partner uses the library which is on up there a bit and doesn't. You know maybe it's just me, maybe it's just

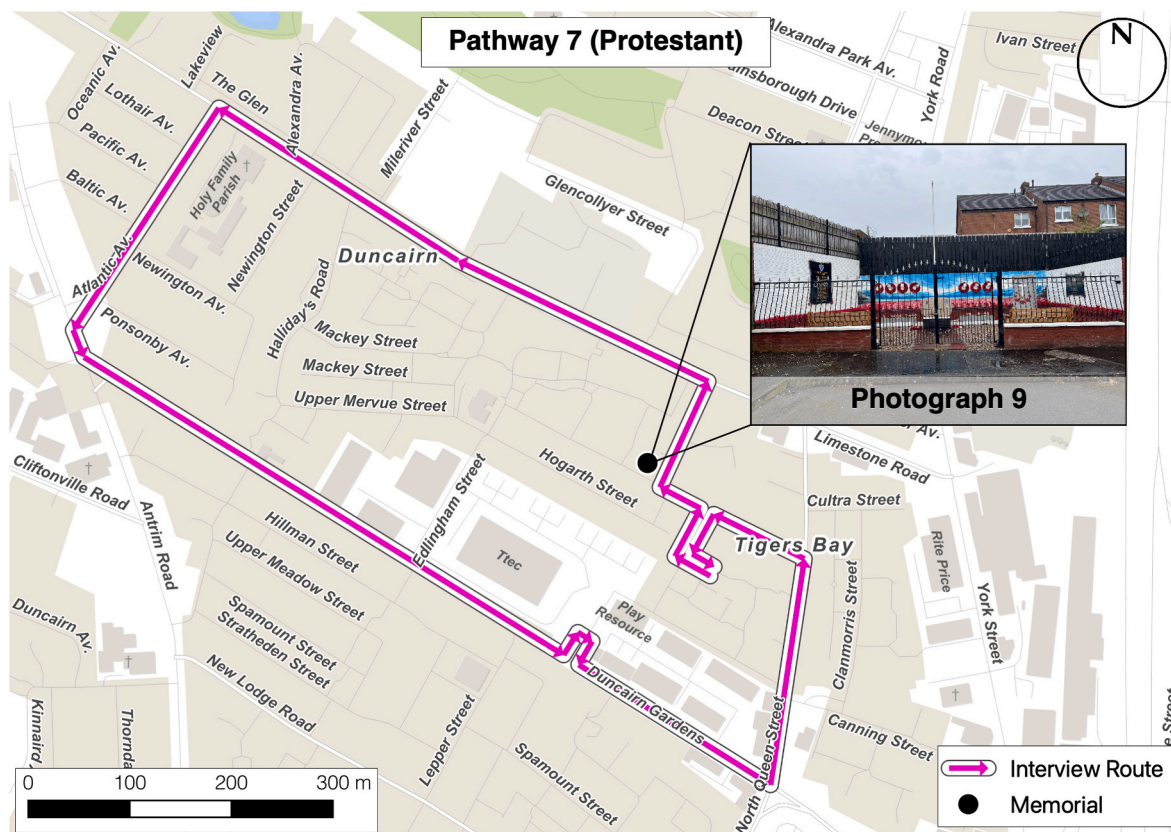


Fig. 9. Pathway 7.

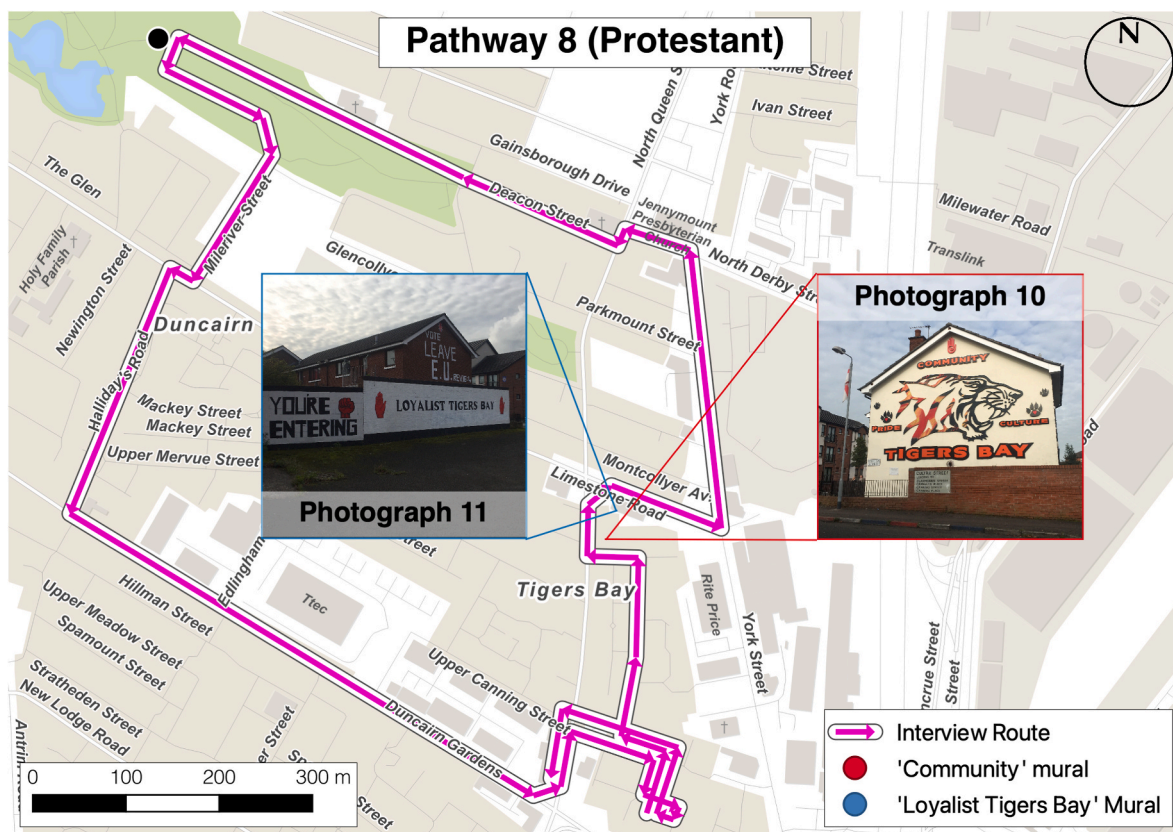


Fig. 10. Pathway 8.

me, but I don't feel fear as in fear but you always have the wee thing in the back of your head, right. I'm out of my comfort zone now. I'm into something completely different.

Interviewer: So you've been on this side of the road and you still feel out of your comfort zone?

Participant: Well it's something, I wouldn't, it's somewhere where I wouldn't stand at night and have a smoke and stand with my dog or anything, you know. It's just it wouldn't happen, basically no.

Extract 9

Protestant, female, 54 years old.

Interviewer: So we've now crossed over into a Catholic area. Tell us a little bit about the community that lives here.

Participant: I've no idea.

Interviewer: Okay. And why would you have no idea?

Participant: Because there would be no reason for me to go into it. Em, now, because mum likes to go up shopping in the Antrim Road, I would drive through it. I don't know if I've ever walked through it. And I'm thinking, oh God.

Interviewer: So if you were walking the dog would you have turned into the park?

Participant: Yeah.

Interviewer: Okay. Alright. And does your sort of experience of the space change?

Participant: Now I'm quite tense.

Interviewer: Even with us here with you?

Participant: Yeah.

Interviewer: Okay. And what are you thinking might happen?

Participant: No idea. I've no idea. I'm not thinking oh my God I'm walking past a chapel. Em, I don't know, I would have no reason to walk up here. It's quite nice really.

In this section, we focus on forms of threat that characterize what Proshansky et al. (1983) called the anxiety-defense role of place identity, that is, its role in producing uncomfortable feelings of being 'out of

place' in the 'wrong' areas of the city and a corresponding desire to avoid others' areas. As Extracts 8 and 9 illustrate, our interviewees sometimes struggled to articulate exactly why such outgroup spaces provoked discomfort.

In Extract 8, pathway 9, our interviewee took us across the road indicated in Photograph 12 and in so doing, he crossed a sectarian boundary that would be invisible to outsiders but self-evident to insiders. Having returned to his 'own' side of the street, he explains how his experience is not necessarily grounded in fear, but rather in a nagging sense ("a wee thing in the back of your head") of being "out of my comfort zone". Similarly, in Extract 9, Pathway 10, the interviewee walked us to an unmarked boundary line between Catholic and Protestant spaces and then articulated her generalized sense of anxiety when crossing this line (Photograph 13). We would note that her body language and facial expressions shifted as this event occurred. She acknowledged feeling "quite tense", even in the company of the two interviewers, and explained that she had driven but never walked through this part of the city. Later in her interview, she added that her discomfort also stemmed from a sense of feeling unwelcome in a Catholic area: "It just feels a bit rude. Like, I'm going into someone's house without being invited".

Extract 10

Catholic, male, 40 years old.

Interviewer: And this is the Westland and you mentioned this being more of an extreme area.

Participant: I don't like it because it's right at the outskirts of a road basically that divides the Loyalist area from the Catholic area and marking territories. I don't think there's any need for it. There's flags there that's in full view of a whole Catholic area, it's basically just to rub their nose in it. It's not so much about them about being proud of their flag or proud about it. Put it on your living room wall, you're not offending anybody. But it seems to be some people like to push it down other people's throats. It kind of a way does and it doesn't annoy me you



Fig. 11. Pathway 9.

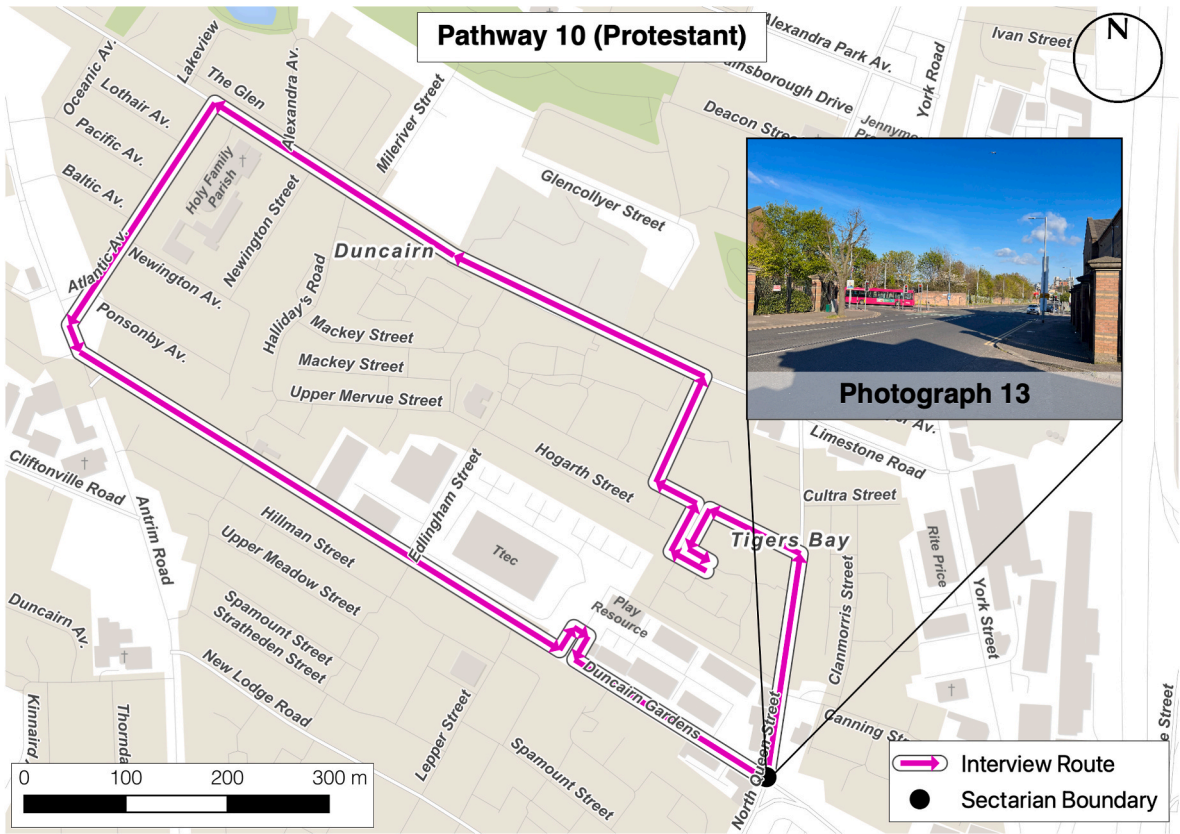


Fig. 12. Pathway 10.

know. It just lets me know that this is a Loyalist area. And you always feel you've to look over your shoulder or be more conscious of where you're going.

Extract 11

Protestant, female, 54 years old.

Participant: Okay. I do this walk every day just with my dog.

Interviewer: Okay. Alright. And it's generally a safe and comfortable journey for you with your dog.

Participant: Yes, absolutely. As long as I don't go up to the top end of Alexandra Park. Not that anything's ever happened, but I'm just mindful that that's the part for the Catholic end.

While extracts 8 and 9 illustrate the role of place identity in shaping how residents respond to intergroup boundaries that are implicit, in many other instances interviewees walked us to areas where such boundaries were visibly demarcated. Extract 10 (Pathway 11) exemplifies both the nature of this concrete demarcation of activity spaces

and the strongly affective responses it can produce. Here, the interviewee discusses a flag placed on the interface between a Protestant and Catholic area (Photograph 14) and uses this to exemplify a wider problem – the visible expression of sectarian identities in public areas of north Belfast.

On the one hand, he clearly treats this as an obtrusive expression of loyalist identity, which he describes as being “pushed down other people's throats” and designed to offend the Catholic community by being made a matter of public rather than private display. On the other hand, his language again engenders an embodied sense of anxiety that shapes how he travels through the area (“you always feel you've to look over your shoulder or be more conscious about where you are going”). Worth noting here is that several Protestant interviewees gave corresponding accounts of their feelings about entering areas marked with overt nationalist symbolism such as the tricolour. One observed, for example, “... if I was driving through an area that was green, white, and gold, I'd

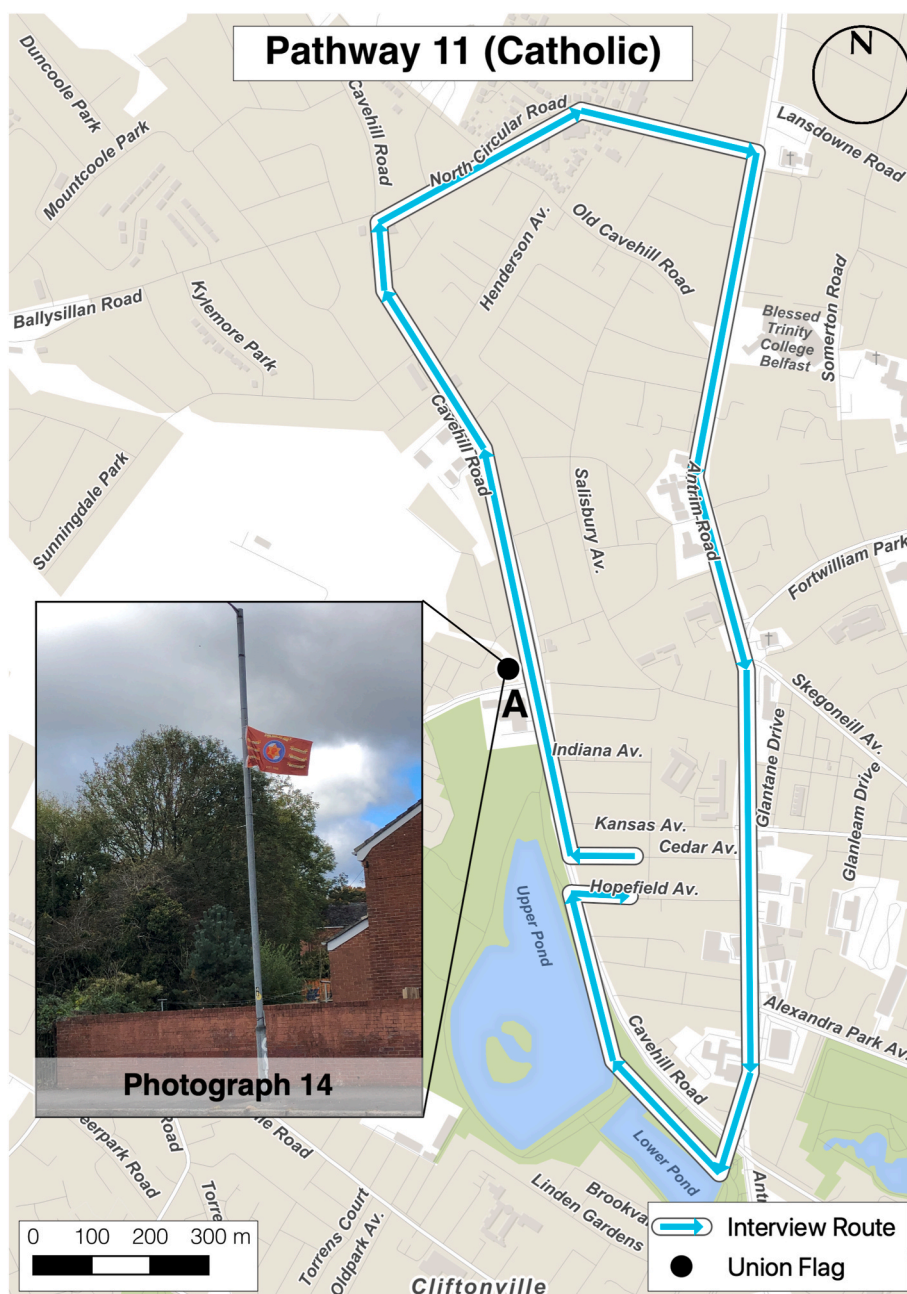


Fig. 13. Pathway 11.

start panicking. I would, I'd be going like agh. I don't want to break down here. You know. You just know." (Participant 43).

Extract 11 provides a final example of how feelings of lack of belonging, and associated apprehension over entering the spaces of other communities, may shape activity space use over time. In this case, the interviewee discusses a facility that in many urban contexts would be treated as shared by all citizens, namely a public park. The extract is striking because it indicates how use of even ostensibly public spaces may be constrained by assumptions about who belongs where in north Belfast (see Extract 3 above for a similar example).

In the interview from which the extract is drawn, the interviewee took us along [Pathway 12](#) and highlighted Alexandra Park as part of the route along which she routinely walked her dog. This park was established in 1888 and has a Victorian layout with tree lined avenues, grass embankments, and children's play areas. It is a public space that residents use to engage in mundane activities such as jogging, playing with their children, and having picnics. However, as [Hocking et al. \(2019\)](#) have observed, in north Belfast such spaces often have a liminal or 'in between' quality; that is, they are simultaneously shared and divided, public and sectarian, and this quality is arguably captured by the account offered in Extract 11. While the interviewer agrees that her routine walk through the park is comfortable and safe, she qualifies this assessment by highlighting how the park is divided into Protestant and Catholic areas and how she tends to avoid the 'top end' for this reason.

The division in question here is not merely symbolic or imagined: it is underlined by the peace wall depicted in Photograph 15 (partially obscured by vegetation on the 'Protestant side'). The wall was erected by local government in 1994 and was designed to pre-empt inter-community conflict. The gate also pictured in Photograph 15 was installed in September 2011 and is currently open between 9am and 5pm. This modification to what is essentially a security feature was intended to encourage residents to use the full facilities of Alexandra Park and thus to erode the sectarian patterns of activity space use documented by our

analysis.

6. Discussion

Our research has explored activity space segregation in north Belfast, showing how the 'socio-spatial isolation' ([Schnell & Yoav, 2001](#)) of Catholic and Protestant residents has become part of what [Pred \(1977\)](#) rather beautifully described as 'the choreography of existence'. Its main contribution has been to bring together research on the time geography of activity space segregation, as enacted through everyday mobility choices and practices, with research on place identity, as enacted through the dynamics of place belonging and alienation. We would argue that this integration has the potential to enrich both fields of inquiry.

6.1. How place identity enriches our understanding of the time geography of segregation

Research on the time geography of segregation has to date presented a limited conception of human agency, largely neglecting the constellation of thoughts, feelings, and motivations that may affect individuals' everyday mobility choices. The environmental psychological concept of place identity begins to address this gap ([Dixon & Durrheim, 2000](#); [Peng et al., 2021](#); [Proshansky et al., 1983](#)). As we have demonstrated, residents' movements in and around north Belfast are shaped by their sense of where they belong and feel attached. Journeys through own group activity spaces and pathways are marked by physical and social 'insideness' (cf. [Rowles, 1983](#)), a comfortable familiarity, an intimate knowledge of the material environment, and a sense of knowing and being known *there*. Such spaces express own group identity by connecting residents to their shared history via a range of visual symbolism (e.g., murals, flags, and gardens of commemoration). By contrast, journeys in and around outgroup activity spaces are marked by a sense

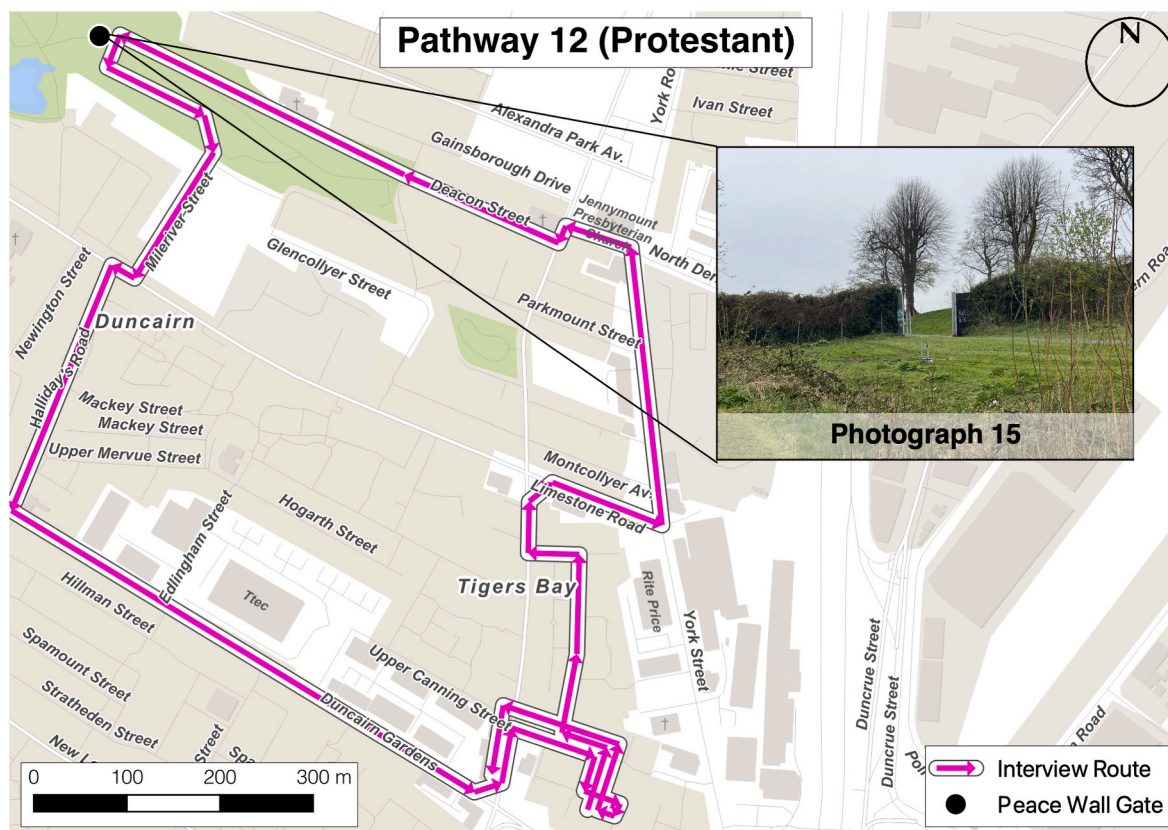


Fig. 14. Pathway 12.

of discomfort and feelings of being 'out of place'. As we have seen, sometimes such feelings reflect residents' tacit knowledge of boundaries that would be largely invisible to outsiders (see also Coyles et al., 2017). At other times, they reflect residents' anxiety when moving near or through spaces that are characterized by visible expressions of 'territorial personalization' (Greenbaum and Greenbaum, 1981). These trigger the kinds of defensive reactions described in Proshansky et al.'s (1983) classic work on place identity and explored in later work (e.g., Dixon & Durrheim, 2004). They encourage behavioural patterns of avoidance that - over time and across different spatial scales - reproduce the broader patterning of activity space segregation in north Belfast (as portrayed in Fig. 2 above).

This application of the place identity concept also expands and complements the notion of constraint that lies at the heart of time geographic research (Hägerstrand, 1970), which has tended to emphasize the physical restraints on movement imposed by capacity limitations (e.g., access to transport), the need to 'couple' with others at given locations and times, or the restrictions imposed by external authorities (though see McQuoid & Dijst, 2012 for an exception). We do not deny that these factors powerfully shape activity space segregation. Indeed, the role of authority constraints is illustrated by our interviewees' accounts of how their passage through gateways in 'peace walls' is subject to external control over opening and closing times. However, we have highlighted how constraints also find expression in residents' deep-seated sense of *who belongs where*. As such, in north Belfast residents' use of seemingly public facilities such as parks, play areas, and bus stops are shaped not only by governing authorities, but also by residents' knowledge of the sectarian geography of the city and associated sense of place identity and alienation.

6.2. How the time geography of activity space segregation enriches work on place identity

The current research also has the potential to extend environmental psychological research on place identity. First and most important, we would argue that the relationship between place identity and human mobility is not one-way. While place identity undoubtedly shapes our mobility choices and experiences of navigating divided cities, this form of identity is in turn actively shaped by the same choices and experiences. That is, our sense of where and with whom we belong is *created* and *maintained* in part through recurring patterns of movement, enacted through the routes we travel, the places we shop, the streets on which we meet or greet others, the leisure spaces where we exercise, and so on. Movement, after all, is one of most important ways in which we appropriate (Korpela, 1989) the environment, and how it is organized and experienced is central to our sense of place belonging and alienation.

Recognition of this dynamic interplay between human movement and place identity encourages researchers to draw on the wider 'mobility turn' in the social sciences and move beyond 'static' conceptions of environmental psychological processes, a point developed by Di Masso, et al.'s (2019) recent commentary. It also encourages a related expansion in terms of research methodology. In the present research, we drew on mobile methods that combined GPS tracking, GIS analytics and photo-elicitation with walking interviews. In so doing, we attempted to capture, analyse, and visualise residents' lived experiences of segregation 'on the move'. We would argue that such methods, though still comparatively neglected within the environmental psychological literature, have the potential to provide valuable new empirical data on place identity dynamics (see Hinds et al., 2021 for a broader discussion of the relationship between psychological processes and human movement).

6.3. Limitations and applied implications

Our work is based around data collected from residents of north

Belfast, an area of the city that suffered high levels of violence during Northern Ireland's conflict. The extent to which our findings generalize to other urban contexts - for example contexts that are not marked by a history of conflict - are matter for future research. Relatedly, we should recognise that the forms of intergroup threat that shape activity space use in North Belfast derive not only from processes of place identification. They also reflect residents' fear of encountering physical violence when moving near or through the other community's spaces (see also Dixon et al., 2020). This fear has a 'realistic' basis in that many residents of north Belfast have themselves been targeted for sectarian attacks - or know other residents who have been targeted - based where they lived or in which direction they were moving (see McKittrick et al., 2001 for many stark examples). In other words, although sectarian attacks are now comparatively rare, their threat remains tangible for many residents and shapes mobility practices in ways that are not fully captured by the concept of place identity.

We would also acknowledge that both of our interviewers lived in Belfast when the research was conducted, and both knew the area of north Belfast well. This knowledge may have introduced biases; for instance, our interviewers may have communicated their own assumptions about the sectarian geography of the city during the walking interviews. In a similar way, the contextual framing of our interviews may have affected our resulting data. We directed interviewees explicitly to focus on how living 'a divided part of the city affects your everyday life'. As such, our data may well have simplified the richer variety of motives, understandings, and behaviours that underpin their day-to-day mobility practices.

Our analysis may have simplified the dynamics of activity space segregation in another important way. For reasons of space, we have focused on a rather crude Catholic versus Protestant dichotomy. This has been useful in developing our general argument about the interrelations between place identity and mobility practices. However, it has neglected how sectarian identities may intersect with other identities, and related structural constraints, to shape activity space segregation. For example, our interviewees mostly live in working-class neighbourhoods (e.g., the Ardoyne and Tigers Bay) where access to private transport is limited and residents rely on walking and public transport to reach their destinations. Middle class residents in Belfast generally live in safer neighbourhoods and tend to own cars. They can thus more readily avoid experiences of walking near or through the spaces of other communities. In addition, several of our interviewees highlighted the gendered and intergenerational nature of place identity threat, arguing that young Catholic and Protestant men are more likely than other sub-groups to feel uncomfortable when entering the spaces of other communities. One, for instance, contrasted her experiences as a middle-aged mother with that of her son: "... I'd have no fear of walking through any area, but then I'm a woman. Do you know, I'm not a teenage boy. I mean my son went to Glengormley High School years ago. I mean he couldn't get off the bus on the Antrim Road when they saw the uniform. He had to get the Shore Road bus" (Participant 175).

This example also captures a theme running throughout this paper, which concerns the role of activity space segregation in shaping residents' capacity to use local facilities such as public transport and move freely through the city. As we hope to have shown, activity space segregation does not only limit interaction among communities in ways that may sustain sectarian prejudice (e.g., Dixon et al., 2020): it is also a matter of environmental justice.

What, then, are the implications of the present research for promoting social change? We would emphasize two general points. First, our research suggests the need to complement a *place-centred approach* to the problem of accessing segregated public spaces and facilities, which emphasizes the role of physical and functional proximity, with a *person-centred approach*, which emphasizes the role of social, psychological, and behavioural factors. When our residents discussed how they avoided amenities and leisure spaces (e.g., bus stops, play areas, particular areas of parks), for instance, it was not because those facilities were physically

remote or inaccessible: it was because they were associated with powerful feelings of place identity threat. This idea was captured poignantly by the account offered in Extract 3, where a mother discussed her child's inability to access a 'Catholic' play area that they routinely passed but did not feel able to enter.

Second and related, our research suggests that interventions to promote social change must transform not only relations between Catholic and Protestant communities, but also relations between community members and the activity spaces in which their everyday lives are embedded. To do so, we would argue, local government needs to reconfigure the material and symbolic geography of the city, which stands as a constant reminder of sectarian divisions as residents move through everyday life spaces. Several interventions are currently addressing this very problem. Proposals implemented in Belfast, for instance, are seeking to remove the peace walls that divide communities, limit the use of flags on the interfaces between communities or along routes into the city centre, and create wall murals that signify inclusive values rather than sectarian identities (e.g., see [Office of the First Minister and Deputy First Minister, 2005](#); [Northern Ireland Executive Office, 2013](#)). Through such interventions, local government is also challenging long-established relations between place identity, activity space use, and sectarian segregation in Belfast.

Author statement

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