CURRENT ISSUES OF SUSTAINABLE DEVELOPMENT – PRIORITIES AND TRENDS
ECONOMIC AND ENVIRONMENTAL STUDIES No. 8 OPOLE 2006

Stefan BUZAR
University of Oxford (England) / University of Gdansk (Poland)
Maja GRABKOWSKA
University of Gdansk (Poland)

THE SOCIAL REPRODUCTION OF FLEXIBILITY IN THE HOUSING ENVIRONMENT: STORIES FROM INNER-CITY GDANSK

Sometimes the comfort of a room
Sometimes I'm quite alone
I pack to leave a foreign town
It seems I'll never know
But I'll rent new accommodation...
Still we'll make plans for buildings and houses
From mobile homes... mobile homes

"Still life in mobile homes", Japan, *Tin Drum,* 1981

1. Introduction

"Flexibility" and "fluidity" are the buzzwords of the 21st century. Regimes of 'flexible specialisation' [Piore and Sabel, 1984; Storper, 1989; Phelps, 1992] and 'flexible accumulation' [Harvey, 1987; 1989; Wood, 1991] have transformed the nature of capitalist production. The appearance of industrial districts that resemble 'sticky places in slippery space' [Markusen, 1996] has been accompanied by deep-seated shifts in the structure of labour and capital markets, as firms and locales have started to compete with each other across national borders [Killick, 1994; Scott, 1988]. The globalisation and liberalisation of economic flows has lead to the "flexibilisation" of work and employment, entailing both the dismantling of regulations and institutions protecting workers and the increasing prevalence of work arrangements that enable employees to meet the demands of longer opening hours, 'round-the-clock demand' and 'just-in-

time production' [Wallace, 2003]. Workers are now expected to be more mobile and adaptable to the changing requirements of the labour market, as employment contracts become shorter and there is a greater need for part- and flexible-time contracts such as annualised hours, overtime, shift work, and time sharing [Wallace, 2003].

At the same time, developed countries have experienced an unprecedented shift in the demographic structure of households and families. The growing individualisation and atomisation of society has been followed by the decline of the 'model of the male breadwinner' and the traditional nuclear family. The new demographic topologies of society have stretched human relationships across time and space, creating 'flexible' household structures that defy conventional definitions of kin and friendship [Bongaarts, 2001; Watters, 2003]. An analogous process can be observed at the scale of the body: Martin [1994, xvii] argues that 'a conception of a new elite may be forged that finds the desirable qualities of flexibility and adaptability to change in certain superior individuals of *any* [author's emphasis] ethnic, racial, gender, sexual identity, or age group in the nation. The 'currency' in which these desirable qualities will be calculated is health, especially the health of one's immune system'.

However, the ramifications of these developments on urban spatial structures remain unclear. One of the most interesting questions is how the perpetual contradiction between inflexible buildings and flexible socio-economic trends is played out in the housing environment. Buildings, after all, are solid structures that cannot easily be made to adapt or change in line with fluctuating social demands. How does the tension between fluid social processes and rigid building structures affect the development of cities? Such issues have already received some attention in urban design and architecture, as a growing number of theorists are arguing for 'the socio-demographic, as well as economic need, for the adaptability of buildings by establishing that flexibility is inextricably linked to sustainability and stability in communities' [Schneider and Till, 2005, 1]. It is being increasingly recognized that 'the ever-changing demands of users make it unavoidable that both houses and offices must undergo structural modifications regarding their spatial, architectural and technical installation characteristics', because 'flexibility, adaptability and changeability' are 'crucial concepts that cannot be ignored' [Geraerds, 2001, 2]. Markus's [1993] contribution provides a valuable illumination of some of these relations, if only by finding that a 'classless yet responsive' architecture should include flexible buildings that allow their users to change functions over time, while being associated with a formal language whose meanings can be widely understood.

One of the implications of this perspective – as well as Martin's study cited above – is that there is a relationship between socio-spatial flexibility and deprivation, as households and individuals who are less territorially 'tuned' to the fluctuating needs of post-modern and post-Fordist societies may find themselves in a more difficult situation than others. This raises the question as to whether a household is at risk of social exclusion if it is less spatially flexible within the fabric of the city. It remains unclear how different households interpret, articulate and experience 'flexibility' in the housing environment through their everyday lives. One of the key issues in this context is the manner in which urban households mediate flows of power and inequality by changing the function and purpose of structures in the housing fabric. Geography has had very little to say on this subject, even though geographers widely accept that 'we are now said to be living in a post-Fordist era, marked by flexibility and characterised by deepening social divisions of labour' [Bondi and Christie, 2000, 330].

In this paper, we seek to address some of these questions through an ethnographic study of 42 inner-city households in the northern Polish port of Gdansk, in many ways a typical post-socialist city undergoing multiple changes in both its organisational structures and the fabric of the housing environment. We have interviewed a wide range of households with the aim of investigating how they negotiate their everyday lives through the complex maze of the requirements of their job, mobility constraints and domestic tasks in the inner city. Our main objective in the paper is to assess how households perceive and implement flexibility in their everyday housing environments, be it through spatial mobility in the city, or via the relationship to the domestic spaces in which they live. We have also looked at how structurally rigid housing structures may be adapted to the socially fluid everyday needs of different household members. The paper examines the rootedness of new patterns of urban social inequality and exclusion in these 'geographies of flexibility' within the inner city.

Research methods and locations

As noted earlier, the empirical basis of the paper consists of an ethnographic study of 42 households in the inner-city of Gdansk, divided equally between the districts of Wrzeszcz and Nowy Port. We focused exclusively on households living in collective apartment buildings, because it was felt that this type of housing stock reflects both the specific historical and spatial trajectories of the given districts and the complex structural and technical issues associated with any attempts to change the use and function of the housing environment in response to altered socio-economic conditions. The households, who belong to different so-

cial strata, were surveyed on a number of points, including: age, gender, education and employment structures, housing biographies and investment, structure of the home, relationship to the neighbourhood, mobility patterns and housing preferences. In the interviews, we paid particular attention to the way in which households dealt with the multiple challenges of everyday life, such as the reconciliation of obligations of work and care and the need to adapt the home to the housing needs of its occupants. Access to the interviewees' homes was gained through informal personal networks. The interviews were tape-recorded with permission and later transcribed.

The decision to rely on ethnographic methods stems from the nature of the research subject itself, as the relationship between housing flexibility, spatial mobility and socio-demographic structures remains largely unexplored at the household level. It was felt that a biographical approach would be the most appropriate method for unravelling the multiple connections among, and mutual interdependencies of, different household decisions about the articulation of everyday life through structures of their housing environment [Halfacree and Boyle, 1993; Kvale, 1996]. In addition, we consulted a range of secondary literature in Polish – including statistical data at the city level, laid out in the section below – with the aim of placing our analyses in a broader socio-spatial framework.

Post-communist Poland and the city of Gdansk provided an ideal geographical setting for the study. Poland has undergone a series of deep-seated social and economic transformations after 1989, in its movement from a centrally planned to a market system. The general neo-liberalisation of the economy and subsequent flexibilisation of the labour market have been accompanied by a major shift in the economic structure of employment, which is now dominated by services rather than industry [GUS, 2005a; 2005b]. Many of these processes are easily visible in Gdansk – the main port of the country, known for its role in the Solidarity protests of the 1980s. In this city, the downsizing of one of the biggest shipyards in the Baltic, and the general de-industrialisation of the economy, has resulted in growing rates of unemployment, social inequality and exclusion. This is particularly pronounced in some of the inner-city quarters near the port and a number of prefabricated panel housing estates, where former industrial workers were usually housed.

We decided to locate our research in the inner-city districts of Nowy Port and Wrzeszcz, as they are a microcosm of the processes happening on a wider geographical scale. Both neighbourhoods have a mixed social structure, consisting of different types of family households and pensioners. This is now being supplemented by a new demographic layer of incoming artists, single professionals, and young couples with children, who

are seeking to benefit from the combination of the low price of housing and locational advantages of the area. In general, however, Wrzescz has an older demographic structure than Nowy Port, while the latter is generally considered to be poorer. The districts also have different structures of the housing environment. On the one hand, Wrzeszcz is a true inner-city quarter in terms of both location and history: it has a compact housing stock, mainly consisting of late 19th and early 20th century multi-storey terraced tenement buildings interspersed with some detached homes. Nowy Port, on the other hand, is less densely built up, combining early 20th century terraced tenement blocks with some industrial uses and even agricultural allotments. The western part of Nowy Port is a prefabricated panel housing estate constructed in the 1970s.

Subject and scope of this study

The *Oxford American Dictionary* defines the property of 'flexibility' as the 'ability to bend easily without breaking'. Thus, a flexible object is 'one that is able to respond to altered circumstances or conditions', while a flexible person is 'ready and able to change so as to adapt to different circumstances'. Beyond such generalised understandings, however, the concept of flexibility has taken very different meanings and interpretations across different socio-economic contexts and its usefulness has been stated by a wide range of social scientists [see, for example, Pollert, 1988; 1991; Sennett, 1998].

As noted above, this paper focuses on the relationship between the spatial arrangement of household infrastructures and the changing structures of society as a whole. But, faced with the task of formulating a clear definition of flexibility in the housing environment, we encountered a paucity of sufficiently well-focused conceptual understandings, mainly as a result of the lack of studies in this field. We thus decided to develop our own conceptualisation, in direct correspondence with the type of evidence analysed in the paper: household articulations of flexibility in the housing environment are understood as 'the degree of facility with which a household is able to change its use of, or movement through, the housing environment, in response to altered social, economic or political circumstances'. Seen through such a lens, socio-spatial flexibility may be comprised of changes in the residential circumstances of a household (including various types of housing mobility), as well as the shifting spatial patterns of its everyday life in the city. In the paper, we mainly focus on the relationship between spatial flexibility and urban mobility, both in the long and short terms. Less attention is paid to other, more subtle, uses of the housing environment, due to the small size of the interview sample.

2. A city in flux

A strategic Baltic city that has seen deep political shifts during its 1000-year history, Gdansk is a complex, multi-layered metropolis with a varied urban structure. A mediaeval core lies at its centre that is functionally connected to the port area, traditionally the main source of capital and employment for the city. These areas are surrounded by a combination of industrial uses and densely-built up quarters with tenement buildings from the nineteenth and early twentieth centuries. The more peripheral zones tend to be composed of socialist-era housing estates, or districts with detached family homes – either newly-built, or from former villages that were incorporated into the urban fabric as the city expanded beyond the immediate surroundings of the port area.

Gdansk forms a continuous urban zone with the adjoining cities of Sopot (population 41,000) and Gdynia (population 255,000), as well as a few smaller towns. As such they are usually referred to as the 'TriCity' agglomeration. Although the three cities have separate local authorities, they share common movements of goods, people and capital between them. The cities also have separate pubic transport systems, except for an integrated light railway which cuts across the agglomeration from north to south. This, together with the shared motorway system, is a key basis for the common movement of workers and goods throughout the entire conurbation.

The post-communist transition has had a deep impact on the economic and social features of Gdansk. For example, although its total population remained practically the same from 1988 to 2003, the number of employed persons fell from 193,027 to 130,391 during the same period. Although this is, to some extent, a result of the general ageing of the population, it also reflects the rising rate of unemployment and the economic shift from industry to services: while the former accounted for 43% of total employment in 1988, it had fallen to 26.6% in 2003. At the same time, the share of employment in services grew from 49.2% to 72.5% [GUS, 2005a; 2005b; 1989].

A closer look at the structure of population change between 1988 and 2000 reveals the strength of processes of suburbanisation in Gdansk, as the total number of inhabitants in some of the western suburbs of the city increased by more than 500% during this period. Furthermore, although the total population of Gdansk has remained unchanged since the mid-1980s, the total number of households nevertheless increased from 149 thousand in 1988 to160 thousand in 2002 [GUS, 2005b]. This can be attributed to the overall ageing of the population, as well as the chang-

ing lifestyles and family decisions of younger inhabitants of the city, who are increasingly choosing to live on their own, or outside of 'traditional' nuclear families.

As a result of such trends, the share of one-person households in Gdansk reached 31.3% in 2002. Although this percentage is significantly higher than the national average of 24.8%, it is still lower than in other large Polish cities, particularly Warsaw where the same figure now exceeds 45% [GUS, 2005b]. The proportion of one-person households is highest in the city centre and the inner-city – including Wrzeszcz – due to the simultaneous concentration of elderly one-person households and young professionals in these areas. These districts also possess distinctively high shares of 'non-nuclear' families, well beyond the city-wide average of 23.6%. Conversely, recipients of social assistance tend to be concentrated in the inner-city districts around the port – mainly to the east of the city centre – and in the urban core itself. In some of these districts, the total number of individuals receiving social help exceeds 1% of the total population, against a city-wide average of 0.4%. The geography of employment follows a similar spatial pattern, as the entire eastern part of Gdansk has significantly above-average unemployment rates, reaching nearly double the city-wide mean of 17.4% in some places. Both Wreszcz and, in particular, Nowy Port belong to the set of districts with high shares of non-nuclear families and above-average rates of unemployment and beneficiaries of social assistance.

Although their current housing structures are rather similar, the two study districts have followed markedly different paths of urban development in their history. Wrzeszcz was a prosperous suburban vilage until the second half of the eighteenth century, when it was connected to the city of Gdansk via a four-lane paved road. This, together with its administrative incorporation into Gdansk in 1807, marked the beginning of the district's rapid urban and social transformation. It soon became a fashionable place of residence for some of the most affluent residents of Gdansk. However, Wrzeszcz also began to attract workers who were employed in local breweries, distilleries and retail. A clear spatial division began to emerge within the district, whereby its southern part (also known as Upper Wrzeszcz) was dominated by luxurious villas and tenement houses, while the northern section (Lower Wrzeszcz) contained mainly collective working-class housing [Samp, 1992; Stankiewicz and Szremer, 1959; Orłowicz, 1921]. The main axis of transportation – consisting of a road and railway track – formed a clear-cut boundary between these two zones. Lower Wrzeszcz nowadays consists mainly of densely-concentrated brick tenement houses with a regular street plan and a substantial amount of green space. Having suffered little damage in World War II, this part of

Gdansk is now registered as an urban monument under a preservation order [Rada Miasta Gdańska, 2005].

The first historical references to Nowy Port can be traced back to the thirteenth century, when it was a fishing village at the mouth of the Vistula river. The settlement began to expand under Prussian rule, following the excavation of the new waterway (*Neufahrwasser*) in 1675. The first school was established in 1785 – with the first road to the city centre of Gdansk being constructed 20 years later – although it was only in 1814 that Nowy Port officialy became a district of Gdansk. Inhabited mostly by seamen and workers from the large industrial plants situated by the river, the area flourished in the 1920s and 1930s, attracting as many as 30 000 tourists per year, due to its seaside location. Most of Nowy Port's richly-ornamented Secession-style tenement buildings date from this era.

The district saw one more period of demographic growth in the 1960s and 1970, with the construction of prefabricated panel blocks of flats (some of which contained more than 2 000 tenants per building). However, it has undergone a gradual decline since then [Tusk, 1996]. Today, Nowy Port is polarised into two zones: a northern one with carefully planned streets and late nineteenth/early twentieth tenement housing interspersed with family homes and the prefabricated panel housing estate from the socialist era in the south. Despite the unquestionable architectural value of the older quarters and the recent building of the socialist housing estate, both types of dwelling are in a poor state of preservation.

3. Articulations of flexibility and mobility in the built environment

It was not easy to synthesise a set of coherent analytical threads out of the myriad life stories and housing biographies of residents of Nowy Port and Wrzeszcz. It is without doubt, however, that the interviews illustrate the complexity of household behaviour and life experience in the housing environment. They demonstrate that flexibility and mobility in the city are closely intertwined, multi-faceted processes with diverse reflections in residential choices and activities. It also transpired that households and individuals value socio-spatial flexibility and mobility in different ways and may not necessarily behave in predictable ways when it comes to changing their residential location, environment or daily movement patterns. Spatial flexibility and mobility are also linked to the emergence of social exclusion, because socio-political changes in production and governance systems can lead to the 'entrapment' of disadvantaged households in

non-flexible spaces that embody the mismatch between social and built infrastructures.

In the sections that follow, we summarise some of the key trends that emerged from the housing and life histories of the interviewed households.

Mobility and flexibility: a square of oppositions

The interviews indicated that spatial flexibility and long-term residential mobility play parallel and mutually complementary roles in shaping the duration of housing episodes (an episode is the period of time in which a family live in a dwelling without a change in the household members, their residential needs or significant adaptation of the dwelling etc.). and the flow of housing histories. The interaction between mobility and flexibility in the housing environment produces different types of housing arrangements and processes. We have used a square of opposition [originally an Aristotelian idea, see Strawson, 1952], to illustrate the relationships between the two concepts, and their reflections in the everyday lives of the interviewees. We were able to identify four types of household situations, depending on the relationship between housing needs, long-term mobility and the housing fabric of the city (Figure 1). These four types can be distinguished along two axes, depending on the propensity for continuity or change, on the one hand and the attachment to place or incorporation within a flow, on the other:

– *Inflexible and immobile:* many of the interviewees (listed in Table 1) from Nowy Port fall into this category. They have not changed their residential location and are not planning to move in the near future. Even though some of them have undergone several housing episodes in

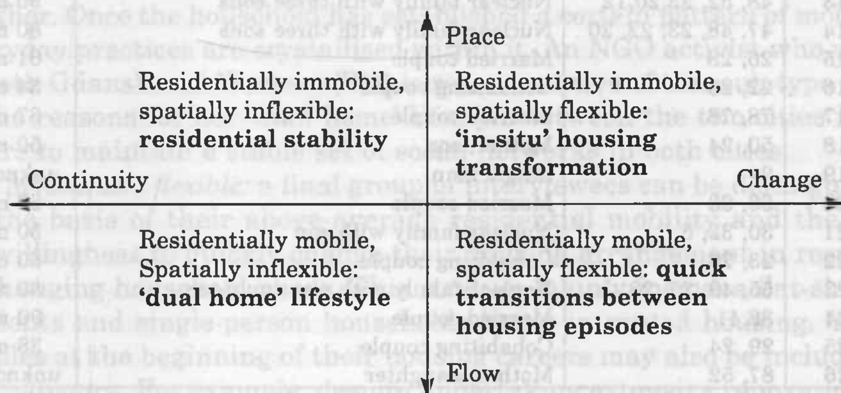

Fig. 1. A square of oppositions between flexibility and mobility

Table 1. List of interviewees

Number	Ages of household members	Household arrangement	Size of dwelling
N1	50,17	Mother, son	40 m²
N2	83, 86	Married couple	40 m²
N3	84, 49	Mother, daughter	37 m²
N4	53	Single man	40 m²
N5	48, 48, 23, 17	Nuclear family with two daughters	unknown
N6	49, 52, 25	Nuclear family with one daughter	58 m²
N7	58, 27	Mother, son	54 m²
N8	52, 24, 23	Mother with two sons	unknown
N9	46, 50, 23, 18	Nuclear family incl. daughter and son	87 m²
N10	51, 56, 24	Nuclear family with one daughter	41 m²
N11	62,65,14	Married couple with grandson	49 m²
N12	52,55, 18	Nuclear family with son	37 m²
N13	30, 33, 4	Nuclear family with one daughter	50 m²
N14	28, 28	Cohabiting couple	30 m²
N15	47, 48, 24, 23	Mother, father, two daughters	55 m²
N16	30, 34	Married couple	65 m²
W1	21–22	Three unrelated female friends	60 m²
W2	69, unknown	Single woman, unrelated female tenant	85 m²
W3	27, 27, 7	Nuclear family with one daughter	100 m²
W4	54, 27	Mother, son	69 m²
W5	63, 66, 38, 36, 12	Married couple, son, daughter-in-law, grandson	65 m²
W6	68, 64	Married couple	50 m²
W7	39	Single woman	42 m²
W8	57, 66	Married couple	55 m²
W9	'both over 80'	Married couple	65 m²
W10	40, 45, 18, 16, 12, 11, 10, 7	Nuclear family incl. four daughters and two sons	unknown
W11	'both over 60', 93	Married couple with mother-in-law	60 m²
W12	47, 25, 21, 2	Mother, son, and daughter with grandson	unknown
W13	48, 52, 23,20,12	Nuclear family with three sons	90 m²
W14	47, 48, 23, 22, 20	Nuclear family with three sons	80 m²
W15	26, 28	Married couple	61 m²
W16	22, 23	Cohabiting couple	34 m²
W17	78, 78	Married couple	67 m²
W18	50, 24	Mother, son	50 m²
W19	24	Single man	unknown
W20	60, 63	Married couple	67 m²
W21	30, 32, 5	Nuclear family with son	50 m²
W22	23, 26	Cohabiting couple	50 m²
W23	55, 49, 25, 23	Nuclear family with one daughter	80 m²
W24	38.41	Married couple	90 m²
W25	29, 24	Cohabiting couple	38 m²
W26	87, 52	Mother, daughter	unknown

Source: Authors' own research.

the same dwelling, they have not made any modifications to the home in response to changing family needs. In addition to low-income households in Nowy Port, this group also includes most of the pensioner households in Wrzeszcz (W6, W9, W17 and W20), as well as extended families in which the addition of new household members did not lead to relocation or housing transformation (W11, W12, W15 and W26). For example, W5, whose two-bedroom apartment is shared by three generations, 'do not plan to move' in the near future, mainly as a result of their limited income. Aside from changing the heating system and the windows, they have not implemented any structural changes to the dwelling.

– *Flexible and immobile:* a number of households have transformed their dwellings as a result of the entry into a new housing episode, an improvement in household income or other assets, as well as the need to introduce a new function into the domestic domain (such as fusing home and work). Although they have not changed their residential location, such households are nevertheless experiencing housing dynamism in relational terms, because the shifting spatial arrangement of the home is also transforming the quality and organisation of their everyday lives. Such is the case, for example, with interviewees W23, who have undertaken extensive renovations of their three bedroom flat in a 100-year old terraced building in the centre of Wrzeszcz, in order to adapt it to the needs of their growing daughters. A facilitating factor in this regard has been the fact that both the husband and wife are architects, although they have not been able to undertake all the changes they want because of 'the unclear ownership structure of the home'.

– *Inflexible and mobile:* it is also possible for a household to be unwilling or unable to switch from one spatial arrangement to another, despite being subject to a high degree of housing mobility. Within this stratum of interviewees, flexibility is constrained by a flow from one location to another. Once the household has established a certain pattern of mobility, everyday practices are crystallised within it. An NGO activist who works in both Gdansk and Warsaw (W7) is representative of this sub-type – one of the reasons for her 'dual home' lifestyle between the two cities is the desire to maintain a stable set of social networks in both cities.

– *Mobile and flexible:* a final group of interviewees can be distinguished on the basis of their above-average residential mobility and the ability/willingness to quickly change their housing arrangement in response to changing household needs. This stratum mainly includes flat-sharing students and single-person households living in rented housing. Young couples at the beginning of their housing careers may also be included in this category. For example, despite undertaking extensive renovations to their one-bedroom flat on the second floor of a 130-year old terraced build-

ing – including the addition of a toilet, as 'previously we had to share one with the neighbours' – W25 would nevertheless like to relocate in the near future, as 'there is not enough green space in this neighbourhood'. Their desire to move may be related to the fact that 'all decisions about investment in the apartment have to be approved by the housing co-operative'. This group of households also includes families who have moved or are planning to move to a different apartment in response to a new housing episode: W24 purchased their present three-bedroom flat only three years ago, 'with the aim of increasing the size of their living space'. Their previous apartment was only '200 metres away, on the same street'.

At this point, it is important to underline that most of the interviewed households fall somewhere between these four types – the aim of the classification provided here is simply to point to the underlying processes that shape housing choice, transformation and relocation, rather than to provide an all-encompassing typology. One of its main advantages, we believe, is that it allows for the unambiguous definition of housing mobility in the built environment. Residential flexibility can provide a key stepping stone in this direction, because it encapsulates not only the ability to respond to a new set of social, economic or demographic circumstances by moving from one dwelling to another, but also the capacity to easily transform a dwelling to suit changing household needs. The definition of residential relocation can thus be expanded to include a wider set of social dynamics, including the interaction of households with the housing environment and the temporal dimension of housing careers. Residential dynamism without relocation is conceptualised by this process as housing mobility across time.

The importance of the 'non-market'

One of the most striking themes to emerge from the interviews is the extent to which the post-socialist 'marketisation' of housing operations has reduced the residential mobility of households with low incomes. Unlike in the socialist past, when housing transactions were dominated by barter and exchange-based mechanisms, the housing sector has now become almost entirely marketised and financialised. This means that households without the necessary monetary means for relocation to a new apartment may not be able to respond to a new housing episode by long-term spatial mobility. However, 'in-place' housing transformations can be implemented outside the market, with the aid of a wider variety of non-financial and non-market 'self-help' survival strategies. These approaches rely on informal household skills and knowledge and networks of kin and friendship that can provide the necessary labour and materials for housing adaptations. The interviews in both Wrzeszcz and Nowy Port

highlighted the importance of non-market activities in the articulation of such practices. Indeed, as pointed out by Mandič [2001, 70] 'While 'non-market options' might have only a minor, yet varying, impact on what constitutes the basic situation for housing choice in the most developed industrialised societies, they might be quite significant in transition, when market options are not well developed'.

This situation embodies a paradox, because although flexibility and choice are some of the key tenets of market economics, it is the non-market that actually provides a source of spatial flexibility for low-income households in the given context. Having been squeezed out of the formal – and recently financialised – housing domain, many interviewees resorted to informal mechanisms of coping as a means of improving the structural quality or changing the functional make-up of their homes. This trend underscores that practices of inter-household exchange and reciprocity are 'important and occur 'outside' of the formal economy'. Hence, it is necessary to develop 'a more nuanced, open and less essentialist understanding of economic forms than one which posits the centrality of emergent capitalism in Eastern and Central Europe' [Smith, 2002, 234].

Linked flexibilities

The housing choices and strategies of some of the interviewees pointed to a desire to link spatial flexibility and mobility to other kinds of fluid social relations, especially with respect to employment and/or kin and friendship networks. This 'multiplication of flexibilities' allows some households to 'bend' Euclidean space to their advantage, by creating socio-spatial matrices that can diminish the physical constraints of the housing environment through increased mobility in space and time. The fact that not all households have access to such 'flexibility chains' points to one of the reasons for the emergence of social inequality and deprivation. The flow of everyday life is experienced differently by different social groups not only because they may possess different assets – a car, a better quality house, a dwelling that has a wider choice of heating systems – but also as a result of the fact that networked service provision has a specific geographical distribution within the city.

One of the most potent examples of 'linked flexibilities' is provided by the households who have managed to increase job flexibility by turning their homes into workplaces, such as a freelance photographer from Nowy Port (N7), or an artist (W3) and a fund manager (W20) from Wrzeszcz. In all three cases, the transfer of professional tasks to the domestic domain would have been impossible without a certain degree of physical alteration of the home. For them, the flexibility of the domestic residential environ-

ment enables the attainment of work flexibility through 'in-situ' housing mobility. However, we also found examples of the opposite situation: the NGO activist who lives in both Gdansk and Warsaw would be unable to maintain her residentially mobile lifestyle without a high degree of work flexibility. In her case, the ability to simultaneously live in two cities and two homes is contingent on the spatial freedom allowed by her job. It can also be argued that one of the reasons for the migration of such 'flexible' household structures to the centre of the city is the desire to supplement their socio-demographic flexibility with spatial flexibility, as the social, economic and cultural density of the inner city offers a wider choice of amenities and lifestyle options.

The provision of networked infrastructures has multiple reflections in the relationship between households, mobility and spatial flexibility. If a household has some degree of housing mobility, its residential decisions may be driven by the desire to acquire spatial flexibility through mobility in either time or space. The link between long-term residential flexibility and daily mobility are most pronounced in the cases of households who live in districts with good transport connections, such as Lower Wrzeszcz. Relocating to the area, or deciding to stay in it – sometimes by modifying the home to suit a new housing episode —means that a household has a wider palette of daily mobility options (light railway, trams and buses, in addition to good road links), while being situated within walking distance of the city centre.

The interviews also revealed that the proximity of the workplace is a key factor for households who decided to stay in, or relocate to, Nowy Port, as the area has much poorer public transport connections. Even though many of them do not own cars – which limits their ability to quickly switch between modes of transport in response to altered circumstances and conditions – they are nonetheless trying to develop a 'linked flexibility' relationship with their built environment, by living in a location that gives access to a wider variety of modes of movement. The issue of linked flexibility and infrastructure provision also emerges in the case of energy services. Here, household decisions may be governed by the desire to switch to heating systems that are best-suited to the requirements of the current housing episode. Discomfort, deprivation and hardship may occur in cases where the housing stock or socio-economic circumstances specific to the household do not allow for a sufficiently elastic shift.

Internal and external flexibilities. 'Actant' cities

Thinking about human-environment relations in the domain of residential mobility raises a number of questions about the interaction between

'internal' and 'external' spheres of flexibility. The interviews revealed that the everyday lives of inner-city residents are constrained or enhanced by a variety of social, economic, cultural, and spatial contingencies. Some of these circumstances are entirely personal: even when a household has the financial or technical means to be spatially flexible, decisions about spatial mobility and/or housing transformation may be limited by psychological factors such as attachment to place, social capital, or personal preferences and fears. However, internal constraints are not always subjective: in several cases, the spatial proximity of kin and friendship networks was crucial in aiding the development of coping strategies (for example W21 or N12).

As a whole, the stories of these Nowy Port and Wrzeszcz residents presented a variegated and 'messy' picture of the boundaries between subjective and objective influences on the internal aspects of flexibility. It is difficult to evaluate the level of rationality involved in decisions about relocation, urban transformation, or everyday mobility in response to a new housing episode or a broader re-alignment of the social and economic forces that shape everyday life. Indeed, this is a common theme in the literature [see Murie et al., 1976; Baer, 1990; Littlewood and Munro, 1997; Strassmann, 2001; Mandič, 2001]. One specific issue, however, that emerged from the interviews is the almost complete absence of spatial flexibility in the value systems of some households. In their case, the ability to transform or move through space in a fast and dynamic manner is far from'a powerful commodity, something scarce and highly valued' [Martin, 1994, xvii], as they choose to give priority to social capital or tradition, or, in many cases, are completely indifferent towards it (as evidenced by the case of N7, a freelance photographer from Nowy Port). The diverse perceptions and understandings of flexibility within the group of interviewees point to the different meanings that may be attached to this concept in various contexts and situations.

Within the 'external' domain, spatial flexibilities hinge on economic and social circumstances, such as income or education, in addition to the structures of the housing environment. Urban tissues play multiple roles in shaping the ability of households to switch from one form of everyday organisation to another. The structural qualities of buildings may affect the ease with which a household is able to adapt its dwelling to changing socio-demographic, cultural and economic requirements; inflexible heating systems that are mismatched with household requirements may raise heating costs and worsen the quality of life. The position of a home and structure of transport infrastructure may restrict a household's capability to shift from one form of mobility to another. Such contingencies allow the fabric of the city to exert an influence over social processes at the

household scale, and more generally over the experience of urban life. They are additional to the influence vested in buildings by the planners who designed them. It can be argued that they enable the establishment of a relation of transitivity between human and non-human objects, through which spatial flexibility becomes an interactive process, rather than a one-directional set of responses to an external event.

5. Conclusion: pluralising flexibility

Returning to the research questions posed at the onset of this paper, it can be stated that the reviewed evidence has illuminated some of the complex relationships between household requirements, housing structures and changing socio-economic circumstances in the given context. It has emerged that the increasing flexibility of cities, homes, and flows is fragmenting the inner city fabric of Gdansk, resulting in a diverse patchwork of patterns of everyday mobility and consumption. This process interacts with the uneven geographical distribution of economic development and infrastructure provision to favour some social groups over others, some spatial horizons over others and some time frames over others. The variegated interactions between household requirements and socio-economic change are one of the reasons for the multiple meanings and reflections of this term in different spatial contexts.

In response to the first question posed at the end of Section 4, it can be stated that households may articulate mobility and flexibility in city in at least three ways: by changing their residential location, by transforming the structure and function of their dwelling or by shifting to a different mode of daily mobility. The first two types of change fall within the domain of residential mobility, which, from the point of view of flexibility, can be conceptualised as mobility in space (relocation to a different house) or in time (in situ alterations of the present dwelling). In the interviews, we found a direct correspondence between both types of processes and the onset of new housing episodes, which may be related, among other things, to demographic events (births, deaths, marriages, effects), changes in professional demands (affecting the temporal distribution of household tasks and housing needs) and/or changes in household incomes (a shift in the economic situation of the household and/or the level of aspiration).

In this context, it is especially important to stress the importance of housing dynamism without relocation, where households 'achieve satisfaction by changing the physical characteristics of their environments to create more adaptable and flexible spaces' [Altas and Öszoy, 1998, 315]. Such alterations embody the interaction between human and non-human

objects in the most direct possible manner, because they accentuate the ability of buildings to restrict or enable particular types of household decisions and actions. Social exclusion and marginality arise at the nexus of such relations when they express a mismatch between household requirements and the structures of the built environment. Such conflicts can extend beyond the domestic domain, as households are constantly forced to negotiate their requirements for mobility and consumption through a rigid maze of urban infrastructures: streets, buildings, utility networks, etc. The inability to reconcile daily mobility patterns with the temporal and spatial requirements of the 'infrastructures of everyday life' may also lead to hardship and deprivation.

As for the second research question, the interviews pointed to a plurality of perceptions and understandings of flexibility among the households interviewed. While some individuals see the ability to change or adapt their everyday spaces to new circumstances as a key priority in everyday life, others emphasise the attachment to place, habit and stability. We also found cases where flexibility simply does not figure as an 'asset' in systems of aspiration. As indicated by the experiences of Nowy Port residents, the lack of socio-spatial flexibility may be countered by conscious efforts at spatial appropriation, encompassing public spaces within the neighbourhood. Through this process, local inhabitants are able to build a fluid, elastic relationship with their everyday space without having to accept the dominant logic of capitalist consumption. To a certain extent, this appropriation strategy is mirrored within the domain of 'in-place' residential modifications implemented outside the market. Such approaches allow households without access to the financialised housing sector to mobilise informal support networks to alleviate poverty and exclusion.

As a result of these findings – and in response to the third research question about the flexibilisation of urban landscapes – it becomes evident that temporal and spatial residential mobilities in the built environment are leading to deep transformations in the 'heart of the city'. This 'co-construction of spaces and social actions' [Jarvis, 2001, 160] arises from the mediation of fluid household actions through the rigid spatial formations of the inner-city. The perpetual contradiction between fluid social requirements and fixed housing structures is 'liquefying' the city. It is leading to a loss of order and hierarchy in the built environment, while fragmenting, splintering, and 'fluidising' its social landscapes. The process of 'liquefaction' is exemplified by the presence of flexible household arrangements, such as single professionals or flat sharing adults, in the inner-city – as this location also gives them residential, transport and work flexibility – or the transformation of the internal structures of dwellings in response to new housing episodes. These innumerable, and not easily perceptible,

changes are leading to a fundamental reorganisation of the social and spatial tissues of the city. They underscore the need for a comprehensive, multi-faceted theory of flexibility in the housing environment, one that would recognise the joint agency of human and non-human structures in transforming the city 'from within'.

Literature

Altas, N.E., Özsoy, A., "Spatial Adaptability and Flexibility as Parameters of User Satisfaction for Quality Housing", *Building and Environment*, 33, pp. 315–323,1998.

Baer, W.C., Myers, D., *Housing Demography*. Madison: University of Wisconsin Press, 1990.

Bondi, L., Christie, H., "The Best of Times for Some and the Worst of Times for Others?" *Gender and Class Divisions in Urban Britain Today*, 31, pp. 329–343, 2000.

Bongaarts, J., "Household Size and Composition in the Developing World in the 1990s", *Population Studies*, 55, pp. 263–279, 2001.

Geraedts, R.P., *Upgrading the Flexibility of Buildings*. Wellington: CIB World Building Congress, 2001.

GUS, *Rocznik Statystyczny Województwa Gdanskiego*. Warszawa: GUS, 1989.

GUS, *Rocznik Demograficzny*. Warszawa: GUS, 2005a.

GUS, *Rocznik Statystyczny Województwa Pomorskiego*. Warszawa: GUS, 2005b.

Halfacree, K.H., and Boyle, P.J., "The Challenge facing Migration Research: the case for a biographical approach", *Progress in Human Geography*, 17, pp. 333–348, 1993.

Harvey, D., "Flexible Accumulation through Urbanization: reflections on 'post-modernism' in the American city", *Antipode*, 19, pp. 260–286, 1987.

Harvey, D., "From Managerialism to Enterprenurialism: the transformation in urban governance in late capitalism", *Geografiska Annaler B*, 1, pp. 3–17, 1989.

Jarvis, H., Pratt, A.C., Cheng-Chong, W., *The Secret Life of Cities: the social reproduction of everyday life*. Harlow: Prentice Hall, 2001.

Killick, T., *The Flexible Economy: causes and consequences of the adaptability of national economies*. London: Routledge, 1994.

Kvale, S., *Interviews: an introduction to qualitative research interviewing*. London: Sage, 1996.

Mandič, S., "Residential Mobility Versus 'In-Place' Adjustments in Slovenia: viewpoint from a society 'in transition'", *Housing Studies*, 16, pp. 53–73, 2001.

Markus, T.A., *Buildings and Power: freedom and control in the origin of modern building types*. London: Routledge, 1993.

Markusen, A., "Sticky Places in Slippery Space: a typology of industrial districts", *Economic Geography*, 7, pp. 293–313, 1996.

Martin, E., *Flexible Bodies: the role of immunity in American culture from the days of polio to the age of AIDS*. Boston: Beacon Press, 1994.

Murie, A., P. Niner and C. Watson Housing Policy and the Housing System. London: George Allen and Unwin, 1976.

Orłowicz, M. Przewodnik po Gdańsku, Oliwie i Sopotach [Guidebook to Gdańsk, Oliwa and Sopot]. Warsaw: Polskie Towarzystwo Krajoznawcze, 1921.

Phelps, N.A., "External Economies, Agglomeration and Flexible Accumulation", *Transactions of the Institute of British Geographers*, 17, pp. 35–46, 1992.

Piore, M.J., Sabel, C.F., *The Second Industrial Divide: possibilities for Prosperity*. New York: Basic, 1984.

Pollert, A., "Dismantling Flexibility", *Capital and Class*, 34, pp, 42–75, 1988.
Pollert, A. (Ed.), *Farewell to Flexibility?* Basingstoke: Macmillan, 1991.
Rada Miasta Gdańska, C. o. G. *Studium Uwarunkowań i Kierunków Zagospodarowania Przestrzennego Miasta Gdańska*, 2005.
Samp, J., *Wrzeszcz: 'Kościół Na Czarnej'*. Gdańsk: Parafia Najświętszego Serca Jezusowego, 1992.
Schneider, T., Till, J., *The Opportunities of Flexible Housing. European Network for Housing Research*, International Housing Conference. Reykavik, June 2005.
Scott, A.J., "Flexible Production Systems and Regional Development: the rise of new industrial spaces in North America and Western Europe", *International Journal of Urban Research*, 12, pp. 171–186, 1988.
Sennett, R., *The Corrosion of Character: the personal consequences of work in the new capitalism*. London: Norton, 1998.
Smith, A., "Culture/Economy and Spaces of Economic Practice: positioning households in post-communism", *Transactions of the Institute of British Geographers*, 27, pp. 232–250, 2002.
Stankiewicz, J., Szremer, B., *Rozwój Urbanistyczny i Architektoniczny Oraz Powstanie Zespołu Gdańsk–Sopot–Gdynia*. Warszawa: Arkady, 1959.
Storper, M., "The Transition to Flexible Specialisation in the U.S. Film Industry: external economies, the division of labour, and the crossing of industrial divides", *Cambridge Journal of Economics*, 13, pp. 273–305, 1989.
Strassmann, P.W., "Residential Mobility: contrasting approaches in Europe and the United States", *Housing Studies*, 16, pp. 7–20, 2001.
Strawson, P.F., *Introduction to Logical Theory*. London: Methuen, 1952.
Wallace, C., *Work and Flexibility in European Countries: a cross-national comparison*. Vienna: Institute for Advanced Studies, 2003.
Watters, E., *Urban Tribes: a generation redefines friendship, family, and commitment*. London and New York: Bloomsbury, 2003.
Wood, P.A., "Flexible Accumulation and the Rise of Business Services", *Transactions of the Institute of British Geographers*, 16, pp. 160–172, 1991.