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Testing a Typology of Homelessness Across Welfare Regimes: Shelter Use in Denmark and the USA

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ABSTRACT *This article compares patterns of homeless shelter use in Denmark and the USA. Combining data from homeless shelters in Denmark with population registers, we find that the prevalence of shelter use is substantially lower in Denmark than in the USA. A cluster analysis of shelter stays identifies three types of users similar to findings from US research: the transitionally, episodically and chronically homeless. However, the transitionally homeless in Denmark have a higher tendency of suffering from mental illness and substance abuse than the transitionally homeless in the USA. The results support Stephens and Fitzpatrick's hypothesis that countries with more extensive welfare systems and lower levels of poverty have lower levels of homelessness, mainly amongst those with complex support needs, whereas in countries with less extensive welfare systems homelessness affects broader groups and is more widely associated with poverty and housing affordability problems.*

KEY WORDS: Homelessness, shelter user, welfare state, poverty, typology, cluster analysis

Introduction

Homelessness is closely associated with welfare policies. Through social welfare and housing policies and by providing specialised social housing and support for individuals with specific needs, the welfare state mediates the risk of homelessness. To describe this relation between welfare policies and homelessness, Stephens & Fitzpatrick (2007) have formulated a dual hypothesis. The first part of their hypothesis is that countries with extensive welfare systems and a lower level of poverty and social inequality tend to have a lower level of homelessness than countries with less extensive welfare systems and a higher level of poverty and inequality. The second part is that homelessness in countries with extensive welfare systems is more likely to be concentrated amongst individuals with complex support needs, such as mental illness or substance abuse, whereas homelessness in countries with less extensive welfare systems is more likely to result from poverty and

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housing affordability problems. Whilst other scholars have put forward similar hypotheses (Shinn, 2007; Toro, 2007), these hypotheses have not yet been fully tested.

The challenges in comparing the extent and profiles of homelessness across different welfare regimes entail both the lack of consensus on the definitions of homelessness and the absence of comparable high-quality data. Attempts at testing Stephens and Fitzpatrick's hypothesis have been conducted only on very disparate data (Stephens *et al.*, 2010) or restricted to specific subgroups (Milburn *et al.*, 2007).

An important contribution to the understanding of the composition of the homeless population and underlying dynamics is Kuhn & Culhane's (1998) study of the typology of homelessness amongst shelter users in the USA. They identified three different subgroups amongst shelter users in New York City and Philadelphia: the transitionally, episodically and chronically homeless. The transitionally homeless were in the shelter system for only a shorter period, i.e. they were characterised by relatively few and short experiences of shelter use, and they seldom returned to the shelter system. A relatively low proportion in this group had either mental illness or substance abuse problems. In contrast, the episodically homeless had repeated and frequent shelter stays of relatively short length. A very high proportion in this group had mental illness, substance abuse problems or both. They are an extremely marginalised group that often circulates in and out of shelters, rough sleeping, hospital stays and incarceration. The third group—the chronically homeless—also had a high occurrence of mental illness and substance abuse problems, but their pattern of shelter use was very different from that of the episodically homeless, as they had few but very long stays. For the chronically homeless, the shelters often became a substitute for long-term institutional accommodation.

While the episodically and chronically homeless with complex support needs are those groups often perceived to be the majority of the homeless population, the results from Kuhn and Culhane's study showed that, in the USA, the transitionally homeless constituted the largest group amongst the shelter users, at about 80 per cent of the people who use shelters, measured over a longer period. In contrast, the episodically and chronically homeless each constituted only about 10 per cent of the homeless population. The different profiles of these groups led Kuhn and Culhane to conclude that the transitional homeless are likely to be homeless mainly from poverty and lack of affordable housing, not from complex support needs. The presence of this large group of homeless poor people can be related to general characteristics of the USA, with its relatively high level of poverty, a weak welfare system without universal access to support and services, and only very limited provision of social housing.

According to Stephens and Fitzpatrick's hypothesis, we would expect the pattern of homelessness to be much different in countries with relatively lower levels of poverty and more intensive welfare systems. Previous analyses have shown a high level of complex support needs amongst the homeless in countries with some of the most extensive welfare systems, namely in the Scandinavian countries—Denmark (Benjaminsen & Lauritzen, 2013), Norway (Dyb & Johannessen, 2013) and Sweden (Socialstyrelsen, 2011). However, Kuhn and Culhane's typology of shelter users has not previously been tested on similar data in these countries.

This article tests Stephens and Fitzpatrick's dual hypothesis by analysing the prevalence of shelter use and the characteristics of shelter users in Denmark (a social-democratic welfare state) and comparing the results with those from research and official statistics in the USA (a liberal welfare state). The analysis is based on data from a nationwide client

registration system in Danish homeless shelters from 1999 to 2009, combined with individual administrative population data. First, we test the part of Stephens and Fitzpatrick's hypothesis about the relation between welfare regimes and the overall level of homelessness by estimating the risk of shelter use in Denmark for different time intervals for comparison with results from the USA. Second, mirroring Kuhn and Culhane's analysis in the USA, we test the part of the hypothesis about the relation between welfare regimes and the composition of the homeless population by conducting a cluster analysis of the patterns of shelter use in Denmark.

As Denmark is the only country in Europe with a nationwide client registration system on homeless shelters and the possibility of attaching data on shelter use to individual population data, our analysis is unique. For the first part of Stephens and Fitzpatrick's hypothesis we expect the overall level of homelessness to be lower in Denmark than in the USA. For the second part, we expect the composition of the homelessness population to be different. Whereas Kuhn and Culhane find a large group of transitionally homeless who have low support needs and who are likely to be homeless mainly due to poverty and housing affordability problems, we expect this group to be smaller in Denmark. Moreover, we expect a high proportion of the homeless in Denmark to have complex support needs.

The following section discusses theories and empirical studies of how welfare systems are related to homelessness. The third section presents the context of homelessness in Denmark and the USA, whilst the fourth section describes data and methods. The fifth section analyses the prevalence of shelter use, identifies different types of shelter users in Denmark, and compares the findings to results from research in the USA. The sixth section discusses the policy implications, and the final section concludes.

Homelessness and Welfare Regimes

Contemporary theories on homelessness have been influenced by the general synthesising trend in social theory. Whilst previous theories stressed either a microsociological focus on individual vulnerabilities and marginalisation processes, or structural factors such as poverty and housing affordability, more recent theories emphasise that homelessness is produced through complex mechanisms in interplay between both structural and individual factors (Busch-Geertsema *et al.*, 2010; Fitzpatrick *et al.*, 2013). From a critical realist perspective, Fitzpatrick argues that homelessness is shaped by factors on the structural, institutional, interpersonal and individual levels. She also emphasises how these factors and the mechanisms interlinking them may vary both between and within countries due to differences in socioeconomic circumstances, housing markets and welfare systems (Fitzpatrick, 2005, 2012). Therefore, not only the extent and profiles of homelessness, but also the mechanisms generating it, may vary across welfare systems.

Although, as Stephens & Fitzpatrick (2007) note, housing and health problems are not considered part of Esping-Andersen's (1990) typology of welfare regimes, his typology is nevertheless useful for explaining the spread and variety of homelessness across countries. Esping-Andersen classifies western welfare states into three welfare regimes: liberal, social-democratic and corporatist. The differences are described by two key concepts: decommodification and stratification. Decommodification 'refers to the degree to which individuals, or families, can uphold a socially acceptable standard of living independently of market participation' (Esping-Andersen, 1990, p. 37). Stratification refers to the extent to which the welfare state reinforces patterns of social status that the labour market

confers—as opposed to ‘social solidarity’, whereby social welfare rights are enjoyed universally, independent of labour market position (Stephens & Fitzpatrick, 2007, p. 202).

Liberal welfare states are characterised by a liberalised labour market, producing a high level of commodification that is only to a limited extent moderated by the social welfare system. Social benefits tend to be restricted and to provide only a minimal safety net. In contrast, social-democratic welfare states have a high level of income redistribution, a relatively low level of income poverty, a high expenditure on social welfare and a social safety net based largely on universal rights to benefits and social services. Similar to the liberal welfare states, the social-democratic welfare states have a relatively liberalised labour market but with a corporatist structure of wage setting. The corporatist structure reduces earnings differentials, and combined with the extensive welfare system based on high taxes and universal social benefits, produces a high level of de-commodification and a low level of social stratification. The third type of welfare state, the corporatist regime, is characterised by a high degree of labour market protection and less emphasis on redistribution. Benefits are earning-related and depending on participation in the labour market (Busch-Geertsema *et al.*, 2010; Esping-Andersen, 1990; Stephens & Fitzpatrick, 2007).

Esping-Andersen’s typology has since been extended, with other variants of welfare regimes, as scholars have suggested a ‘southern European’ or ‘Mediterranean’ welfare regime, distinguished by the crucial role of the family and rudimentary social benefit systems (Leibfried, 1992; O’Sullivan, 2010). Moreover, the incorporation of the post-socialist countries of Central and Eastern Europe into the typology has been debated (Draxler & Van Vliet, 2010; Whelan & Maître, 2010).

In a comparative analysis of homelessness in EU countries, Stephens *et al.* (2010) emphasise that no comparable data exist amongst the European countries and that making robust cross-country comparisons is not possible (p. 195). Given very disparate data sources (and not including Denmark in their selection of countries), Stephens *et al.* conclude that

welfare regimes were clearly relevant to outcomes for homeless people—the strongest mainstream protection to those at risk of homelessness was offered in the social democratic/hybrid regimes we studied (Sweden and the Netherlands), and the weakest protection was to be found in the Mediterranean regime (Portugal) and even more so, in the transition regime (Hungary). (p. 257)

Another comparison of overall prevalence rates of homelessness is found in a study by Toro *et al.* (2007). Using telephone surveys in five countries, they conclude that ‘lifetime homelessness’ in the USA and the UK are considerably higher than in Belgium, Germany or Italy, a finding possibly attributable to the higher levels of poverty and income inequality in the USA and the UK (Fitzpatrick, 2012; Shinn, 2007; Toro, 2007).

However, no simple relation exists between welfare regimes and the risk of homelessness. Variation in the level of homelessness also exists within welfare state clusters, particularly for the characteristics and role of the housing system. According to Malpass (2008), the housing system has its own dynamics, which can act relatively independently of the welfare system. Stephens & Fitzpatrick (2007, p. 208) argue that the ‘housing system can produce powerfully de-commodifying influences, and these may run counter to influence of the welfare regime’. In particular, they argue that targeted

allocation schemes of social housing to socially vulnerable groups appear to be more important to reducing homelessness than the size of the social housing sector. Furthermore, housing systems interact with other parts of welfare systems such as different models of social support. The use of 'staircase systems', in which access to housing for socially vulnerable groups is conditioned on adherence to treatment and behavioural rules, may pose significant access barriers to housing (Sahlin, 2005). In contrast, proponents of the 'Housing First' approach emphasise that early access to permanent housing with adequate social support and without requirements of adherence to treatment increases the chances of a sustained exit from homelessness (Busch-Geertsema *et al.*, 2010; Tsemberis, 2004).

Even within the Nordic social-democratic welfare states, considerable differences in housing systems exist, ranging from the largely homeowner countries (Finland, Iceland and Norway) to Denmark and Sweden, with their substantial public and private rental sectors (Bengtsson *et al.*, 2006). In Sweden in particular, a liberalisation of the public housing sector has involved the widespread abolition of housing allocation systems targeted at socially vulnerable groups, whereas Denmark has maintained such systems. At the same time, the use of the staircase model is more widespread in Sweden than in Denmark or Norway. A higher level of homelessness in Sweden is likely attributable to this difference in housing systems and support models (Benjaminsen & Dyb, 2008).

Homelessness in Denmark and the USA

Whilst theories on convergence amongst welfare systems have been widely debated (Kautto *et al.*, 2001), Denmark is still largely characterised as a social-democratic welfare state, whereas the USA is classified as a liberal welfare state (Fouarge & Layte, 2005; O'Sullivan, 2010). A comparison from the OECD shows that the share of Danes living with less than 50 per cent of median equalised household income in 2010 was only 6 per cent compared to 17 per cent for the USA (OECD, 2014). Total public social expenditure in 2010 was 31 per cent of GDP in Denmark, compared to 20 per cent in the USA (OECD, 2013).

While a substantial group of homeless people in the USA have relatively low support needs and are likely to be homeless mainly due to poverty and housing affordability problems (Kuhn & Culhane, 1998), previous analyses of homelessness in Denmark have found that a large proportion of the homeless have complex support problems. National mappings of homelessness, based on 1-week-counts, show that about 80 per cent of the homeless in Denmark have either mental illness, substance abuse problems or both (Benjaminsen, 2009; Benjaminsen & Christensen, 2007; Benjaminsen & Lauritzen, 2013; Lauritzen *et al.*, 2011). Moreover, a previous analysis of Danish shelter data has shown a high occurrence of both mental illness and substance abuse amongst shelter users (Nielsen *et al.*, 2011), although that study did not include any further analysis of underlying types of shelter users.

An important structural factor in determining the risk of homelessness for socially vulnerable individuals is access to affordable housing. In Denmark, a key pillar of the welfare state has been the build-up of a large public housing stock over many decades (Skifter Andersen *et al.*, 2012). In total, there are about 550 000 dwellings in public housing compared to a total population in Denmark of 5.6 million, and the public housing sector constitutes 21 per cent of the total housing stock (Statistics Denmark, 2012).

The public housing sector is non-profit, subsidised and open to everyone, regardless of income level, through general waiting lists (Skifter Andersen, 2010). Individuals on transfer incomes pay rent directly from their benefit, and supplementary housing benefits are available to a wider group of individuals with low income. According to the Act on Social Housing, municipalities have the right to allocate 20 per cent of all flats in public housing that become vacant each year to individuals in acute housing need. In the capital, Copenhagen, where the demand for public housing is high, allocation of one-third of vacancies has been negotiated between the municipality and public housing organisations. This allocation mechanism is crucial for local authorities in providing housing for homeless people (Rambøll and SFI, 2013a).

Despite the housing allocation system and housing benefits, barriers of access to housing remain for vulnerable individuals in Denmark. In larger cities demand exceeds supply, and homeless people compete with other priority groups, such as lone mothers and individuals with physical handicaps, for priority housing. Furthermore, even with the availability of supplementary housing benefits, the rent in newer public housing is often too expensive for individuals on cash benefits (Rambøll and SFI, 2013a). Such barriers notwithstanding, the large public housing stock and the priority allocation system in Denmark is likely to reduce the overall risk of homelessness.

In comparison, the public housing stock in the USA is (relatively) much smaller than in Denmark, comprising only about 1 per cent of the total occupied housing stock (U.S. Census Bureau, 2012; U.S. Department of Housing and Urban Development [HUD], 2009). In addition to providing public housing through units owned and managed by local public housing agencies, the U.S. Department of Housing and Urban Development (HUD) provides rental housing assistance through two other key programmes. The first is project-based assisted housing, which provides assistance to 1.3 million families living in privately owned rental housing. The assistance is attached to the units, which are reserved for low-income families, who pay 30 per cent of their income for rent. The second is tenant-based rental assistance, by which the Section 8 voucher programme supplements rent payments for about 2.0 million families in the private rental market. The programme is administered through state and local housing agencies (HUD, 2009, p. 59).

Both in Denmark and the USA, large-scale national homelessness programmes have been implemented over the past decade, reflecting the perception of homelessness as a significant policy issue in both countries. In the national programmes in both Denmark and the USA, a considerable influence of the Housing First paradigm is noticeable.

In 2008, a Danish national homelessness strategy was adopted for 2009–2013 (Ministry of Internal and Social Affairs, 2009). The strategy followed a series of other programmes aimed at socially vulnerable groups. Housing First was the main principle of the strategy and key elements were the provision of permanent housing in combination with individual social support in housing, following evidence-based methods: Assertive Community Treatment (ACT), Intensive Case Management (ICM) and Critical Time Intervention (Hansen, 2010).

In the USA, the 'Homelessness Prevention and Rapid Re-Housing Program' from 2009 provided funds for direct financial assistance to keep at-risk individuals and families from becoming homeless and to move homeless households into housing and other permanent living situations as quickly as possible (American Recovery and Reinvestment Act of 2009, Pub L. No. 111–5; Culhane *et al.*, 2011). Furthermore, the HEARTH act (Homeless Emergency Assistance and Rapid Transition to Housing Act), also from 2009, was a

reauthorisation of the 1987 McKinney-Vento Act, which regulates the provision of services for homeless individuals. The HEARTH act involved more prevention and rehousing activities, and mandated the U.S. Interagency Council on Homelessness to produce a national strategic plan to end homelessness. The 2010 strategy plan—‘Opening Doors. Federal Strategic Plan to Prevent and End Homelessness’—was aimed at strengthening existing programmes and creating new initiatives and partnerships (United States Interagency Council on Homelessness, 2010).

Whilst the Housing First approach emphasises the reorientation of interventions from emergency and temporary services to permanent housing and support, the shelter system remains the backbone of service provision for individuals in an acute homelessness situation in both countries.

In Denmark, the Social Assistance Act obliges municipalities to provide temporary accommodation (homeless shelters) to individuals who have no dwelling or cannot use the dwelling they have. Most large- and medium-sized municipalities have one or more homeless shelters. In 2011, 66 homeless shelters with a total of 2100 beds were operated under section 110 of the Social Assistance Act (Ankestyrelsen, 2012, p. 3).

In the USA in 2010, there were 422 233 beds in emergency shelters and transitional housing for the homeless. In addition, although there were 236 498 beds in permanent supported housing (PSH), individuals placed in PSH were not considered homeless because they had a permanent residence (U.S. Department of Housing and Urban Development [HUD], 2010, p. 12).

In Denmark, the average occupancy rate of homeless shelters was 91 per cent in 2011 (Ankestyrelsen, 2012, p. 33). In the USA, the occupancy rates for homeless emergency shelters in 2010 were 87 per cent in principal cities and 84 per cent in suburban and rural areas, and for transitional housing 81 per cent and 84 per cent, respectively (HUD, 2010, p. 30).

Method

The comparison of the extent and composition of homelessness across different countries is generally challenged by a lack of consensus on definitions of homelessness and the lack of comparable data sources (Busch-Geertsema, 2010; Fitzpatrick & Stephens, 2007; Minnery & Greenhalgh, 2007). However, in Europe considerable definitional progress has been made with the ETHOS typology of homelessness and housing exclusion, distinguishing between rooflessness and houselessness and between insecure and inadequate housing (Edgar *et al.*, 2007). In Denmark, the national mappings of homelessness are based on an adapted subset of the categories in the ETHOS typology and include rough sleepers, shelter users, people in short-term transitional housing, people staying temporarily with family or friends, and individuals due to be released from hospitals and prisons without a housing solution (Benjaminsen & Christensen, 2007).

Data

We measure homelessness with data from the national client registration system for homeless shelters in Denmark. Since 1999 the Danish Social Appeals Board has collected data on shelter use in a database through a client registration system in all Danish homeless shelters, which are run under the Social Assistance Act. The Social Appeals Board has

made these data available for this study. When enrolling in a shelter, the individual must register his or her unique Central Personal Register (CPR) number, a personal identifier. From the shelter data we obtain information on the number and length of shelter stays. The CPR number enables us to control for duplicates and to match data on shelter use to individual administrative data.

We include a range of background variables—gender, age, ethnicity, mental illness, alcohol and drug abuse problems, and imprisonment. Data on background variables has been obtained from Statistics Denmark. Data has also been obtained from the Psychiatric Central Research Register (Mors *et al.*, 2011) and from the Register of Treatment for Substance Addiction, which has been provided by from Statens Serum Institut, a public agency under the Danish Ministry of Health. Mental illness, alcohol or drug abuse problems, and imprisonment are measured from 1994 to 2009. All data are individually linked through anonymised CPR numbers and accessed through Statistics Denmark's register research system. Permission for the study was granted from the Danish Data Protection Agency.

Rough sleepers or individuals staying temporarily with family or friends and who never use the shelter system are not included in the data. Thus, as we base our analysis on data on shelter use, we leave out those rough sleepers and individuals staying temporarily with friends or relatives and who never use the shelter system. However, data from the national mappings show that even during the count week, many of the individuals recorded as rough sleepers also use homeless shelters (Lauritzen *et al.*, 2011). Thus, when obtaining data on shelter use over a long period, we assume that a considerable proportion of rough sleepers will be included in the data at some point.

The prevalence of shelter use in Denmark is determined over an 11-year period from 1999 to 2009 and for a number of sub-periods of 1, 3 and 5 years, for comparison with similar sub-periods in studies in the USA. A total of 30 250 individuals have used Danish shelters from 1999 to 2009. For the prevalence of shelter use over the 11-year period we restrict the analysis to individuals who were at least 18 years old in 1999 and for the annual and 3- and 5-year prevalence rates, we use the population 18 years or above in the given years as a base, because homeless shelters are not allowed to accommodate individuals under age 18. The national homelessness counts show very few homeless children (fewer than 150 under age 18 in the latest count from 2013 and almost all were staying with a homeless parent in temporary family institutions, transitional housing, or with family or friends). Individuals who die or emigrate during the period are included in the analysis, whereas individuals who immigrate are excluded.

Comparability

We compare the prevalence rates of shelter use for Denmark to results by Culhane *et al.* (1994) on similar administrative shelter data from New York City and Philadelphia and results by Metraux *et al.* (2001) for a wider set of jurisdictions. We also compare the Danish results to recent estimates of overall shelter use in the USA in the government's Annual Homeless Assessment Reports, based on a combination of actual registrations for jurisdictions with registration systems and estimations for jurisdictions not covered by such registration systems. Finally, we compare the composition of the homeless population by mirroring Kuhn & Culhane's (1998) analysis on the Danish data and comparing the results.

Social service provision may vary considerably across welfare regimes, possibly affecting the very nature of the shelter system itself in terms of availability, quality of services, etc. For example, the number of shelter users may reflect the availability of shelter beds. Even though our data do not include a small number of emergency shelters with anonymous access, the Danish section 110 shelters generally provide emergency services that can be accessed directly from the street without prior referral. At the same time, a number of residents have relatively long stays in individual rooms, and the shelters widely fulfil the same function as transitional housing facilities in the USA. However, in Denmark there are also minor transitional housing units not covered by the shelter statistics. In both Denmark and the USA, long-term accommodation is not included in the data and statistics we compare. Despite these differences, we find a high degree of comparability for the part of the homeless population covered by Danish shelter statistics, and by the US statistics on emergency shelters and transitional housing.

Cluster Analysis

Following Kuhn & Culhane (1998), we apply a cluster analysis to construct the typology of subgroups amongst the homeless. The measurement of distances between cases is based on the differences in how many days and episodes they have been registered at a homeless shelter. As in Kuhn and Culhane's analysis, the preset number of clusters is based on a theoretical assumption and are, after the cluster analysis, described in terms of days and episodes. Both the episode and days variables are standardised to have a mean equal to zero and a variance equal to one. Finally, the clusters are compared in cross tabulations with variables measuring demographic and vulnerability characteristics (e.g. psychiatric problems, alcohol and drug problems, prison sentences).

However, whilst Kuhn and Culhane use a measurement of Euclidian distances to classify the individuals into the clusters, we use a measurement of dissimilarities, which are calculated by the distances from the case to the medoid (the average dissimilarity to all the cases within the same cluster) compared to the distances between the medoids of the other clusters. According to Rousseeuw (1987), this method gives a more robust estimation of the clusters than the method of minimising the sum of squared Euclidean distances.

For the cluster analysis, we censor the data on shelter users at both the beginning and end of the data collection period. We apply a less restrictive criterion than Kuhn & Culhane (1998), who construct an exposure period of 3 years by discarding all cases registered in the shelter system in the 3 years both before and after this exposure period. They argue that including these cases in the analysis could 'depict cases which may have had a chronic or episodic pattern as transitional cases, by missing unrecorded days and episodes' (p. 213). However, applying their criterion to our data would not only eliminate a large part of cases but also reduce the number of cases with long and repeated periods of shelter use, thereby underestimating the number of cases with episodic or chronic patterns. Instead, we eliminate 295 left-censored cases who were already in the shelter system on 1 January 1999, but who did not return to the shelter system during the observation period. We also eliminate 459 right-censored cases who were in the shelter system on 31 December 2009, and who had no previous episodes of shelter use in the observation period. In total, the data for the cluster analysis consist of 25 326 individuals.

We also apply a criterion different from that of Kuhn and Culhane's in the definition of multiple episodes. Their analysis considers multiple episodes to be distinct from previous episodes only if the two stays are separated by a minimum of 30 days. Our analysis separates episodes on the basis of only one night out of shelter, although one stay may include the use of multiple shelter facilities. We apply this criterion because we do not consider it possible to infer separate underlying homeless spells from the data on shelter stays. The episodically homeless in particular presumably have frequent moves between shelter stays, rough sleeping, hospitalisation and incarceration. Artificially lowering their number of shelter stays by imposing a longer period as an exit criterion may not only depict their pattern of shelter use as being more stable than it actually is but also make distinguishing this group in the statistical analysis more difficult.

Results

Prevalence of Shelter Use

Table 1 shows the annual, 3- and 5-year prevalence of shelter use in Denmark. The annual prevalence remains relatively constant around 0.15 per cent, whereas the 3-year

Table 1. Prevalence of shelter use in Denmark and city of Copenhagen

Year	Denmark			Copenhagen		
	Per cent shelter users of total adult population	Shelter users, <i>n</i>	Total adult population (base year)	Per cent shelter users of total adult population	Shelter users, <i>n</i>	Total adult population (base year)
1999	0.13	5501	4 237 451	0.18	743	418 524
2000	0.14	6067	4 240 987	0.24	1000	420 895
2001	0.16	6615	4 243 568	0.24	1027	422 218
2002	0.15	6307	4 247 978	0.22	910	421 718
2003	0.15	6306	4 252 965	0.22	915	421 090
2004	0.15	6367	4 258 971	0.22	939	420 180
2005	0.15	6307	4 266 798	0.23	965	420 328
2006	0.14	6177	4 280 468	0.21	898	419 202
2007	0.14	5951	4 298 568	0.20	832	421 082
2008	0.13	5772	4 327 756	0.19	800	425 888
2009	0.13	5861	4 362 243	0.19	817	432 888
<i>Three year period</i>						
1999–2001	0.27	11 542	4 237 451	0.41	1698	418 524
2003–2005	0.28	12 086	4 252 965	0.42	1752	421 090
2007–2009	0.26	11 107	4 298 568	0.35	1473	421 082
<i>Five year period</i>						
1999–2003	0.38	16 022	4 237 451	0.56	2346	418 524
2005–2009	0.37	15 656	4 266 798	0.52	2171	420 328
<i>Eleven year period</i>						
1999–2009	0.62	26 080	4 237 451	0.90	3743	418 524

Source: Own calculations.

prevalence is about 0.27 per cent and the 5-year prevalence about 0.38 per cent. Even over the 11-year period from 1999 to 2009, only 0.60 per cent of the adult Danish population used a homeless shelter one or more times. The prevalence of shelter use in the Danish capital, Copenhagen, was higher than the national average, although falling slightly from 0.24 per cent in 2000 to 0.19 per cent in 2009. We assume the lower prevalence for Copenhagen in 1999 is due to measurement error, as the registration system was introduced in 1999. The 3-year prevalence for Copenhagen is about 0.40 per cent, and the 5-year prevalence is about 0.50 per cent. Over the 11 year period the prevalence for Copenhagen is 0.90 per cent.

As previously mentioned, a total prevalence rate for the entire USA can only be estimated, based on a combination of actual data for some jurisdictions and estimates for others. 'The 2010 Annual Homeless Assessment Report to Congress' estimates that 1.59 million people including children stayed in a shelter over a 1-year period from October 2009 to September 2010 (HUD, 2010, p. 11). This figure is equivalent to 0.51 per cent of the total US population, and has remained almost constant from 2007 to 2010, albeit with an increase in family homelessness outweighed by a decrease in homelessness amongst single individuals (HUD, 2010, p. 29).

Culhane *et al.* (1994) found that the prevalence of shelter use in 1992 was 1.2 per cent of the total population in New York City and 1.0 per cent in Philadelphia. In a 3-year period from 1990 to 1992 the prevalence was 2.2 per cent in New York City and 2.8 per cent in Philadelphia and over a 5-year period from 1988 to 1992 the prevalence was 3.3 per cent in New York City (p. 122). One may argue that such very large cities cannot easily be compared to a relatively small country like Denmark, or to the Danish capital, Copenhagen. However, Burt (1994) argues that New York and Philadelphia have neither the highest nor the lowest annual rates of homeless people amongst American cities, and she also reports annual prevalence rates from a number of other jurisdictions, ranging from 0.3 per cent in New Hampshire to 1.97 per cent in Los Angeles County. Another study by Metraux *et al.* (2001) shows considerable variation in annual prevalence rates across nine jurisdictions from which comparable data could be collected. For example, the annual prevalence rates of shelter use were 0.3 per cent in Montgomery County, MD, and 0.4 per cent in Rhode Island, compared to 1.3 per cent in Columbus, OH and 2.1 per cent in Washington, DC.

With the general reservation about comparing data across different countries and welfare systems, a comparison of the prevalence of shelter use between Denmark and USA supports the first part of Stephens and Fitzpatrick's hypothesis that a welfare system with a relatively low level of poverty and inequality produces a lower level of homelessness than in a country with a higher level of poverty and inequality. The annual prevalence of shelter use in Denmark is one-third the level of that in the USA, and the annual prevalence of shelter use in Copenhagen, is also much less than the level in large US cities.

Composition of Homelessness

Following the second part of Stephens and Fitzpatrick's hypothesis, we expect a higher share amongst the homeless in Denmark to have complex support needs such as mental illness or substance abuse problems. As previously mentioned, by using cluster analysis on shelter data from New York City and Philadelphia, Kuhn & Culhane (1998) have shown that the largest group amongst the homeless in these cities is the transitionally homeless,

with relatively few and short shelter stays, and with a relatively low occurrence of mental illness and substance abuse. The two other clusters are the episodically homeless, with a high number of stays but each of a relatively short duration, and the chronically homeless, with a small number of stays of long duration. Both the episodically and chronically homeless have a much higher prevalence of mental illness, substance abuse problems or both, than the transitionally homeless. Kuhn & Culhane (1998) argue that the episodically homeless 'move in and out of the shelters frequently, possibly alternating shelter stays with bouts of street homelessness, hospitalisation, and incarceration' (p. 226) whereas the chronic stayers rarely leave the shelter for long periods.

To test whether similar subgroups amongst the homeless can be found in Denmark, we apply a three-cluster model on the Danish shelter data. The results appear in Table 2.

We find clusters of almost the same relative size and with a similar pattern in number and length of stays as in the US data (Kuhn & Culhane, 1998, p. 219). We find that 77.2 per cent of Danish shelter users belong to the largest cluster. They have on average 2.2 episodes each, with an average length of 31.5 days, a finding that largely resembles the figures for the transitionally homeless in Kuhn and Culhane's analysis. For New York City, Kuhn and Culhane found that 81.0 per cent of clients had on average 1.4 episodes, with an average length of 42.4 days (Kuhn & Culhane, 1998, p. 219). For this group, the average number of episodes is somewhat higher in Denmark. However, the Danish data cover an 11-year period, whereas the time span for the data for New York City is 3 years.

The second cluster consists of 7.0 per cent of Danish shelter users, with an average number of stays as high as 24.8 and an average length of stays of 19.5 days. For New York City the episodically homeless are 9.1 per cent of clients, with an average of 4.9 episodes and an average length of 54.4 days (Kuhn & Culhane, 1998, p. 219). The difference in the average number of stays is explained by the longer time span and our less restrictive criterion for measuring separate stays. The third cluster consists of 15.8 per cent of the Danish shelter users, with on average 4.6 stays, with an average length of 174.8 days. For New York City the chronically homeless are 9.8 per cent of clients, with an average of 2.3 episodes and an average length of 280.9 days (Kuhn & Culhane, 1998, p. 219). Similar to the US results, the chronically homeless in Denmark consume a large share, 59.5 per cent, of total shelter days, compared to 46.9 per cent in New York City.

Despite variation in the size of clusters and in the average number and length of stays, the overall pattern with three distinctly different clusters is strikingly similar between the two countries. In Denmark, the largest group amongst the shelter users has relatively few

Table 2. Cluster statistics for three-cluster model, Denmark

	Transitional	Episodic	Chronic	Total
<i>Denmark</i>				
Sample size	19 543	1774	4009	25 326
Percentage of clients	77.2	7.0	15.8	100.0
Average no. of episodes	2.2	24.8	4.6	4.1
Average no. of days	68.3	483.3	802.4	213.6
Average days per episode	31.5	19.5	174.8	51.6
Client days	1 334 744	857 287	3 216 871	5 408 902
Percentage of client days	25.0	15.8	59.5	100.0

Source: Own calculations.

and short stays, thereby mirroring the same pattern of number and length of stays as the transitionally homeless in the USA. The second cluster mirrors the pattern of the episodically homeless, with many shorter stays, and the third cluster resembles the chronically homeless with fewer but very long stays. This similarity in the patterns of the three clusters is surprising, as we would expect the group of transitionally homeless to be relatively smaller in Denmark, given the extensive welfare system with relatively low levels of poverty and a large public housing sector reducing housing affordability problems.

However, an analysis of the profiles of the each cluster (Table 3) reveals important differences.

Table 3 provides a basic demographic profile of the three groups amongst the Danish shelter users. The large majority in each cluster are males. The share of males is highest amongst the episodically and chronically homeless where 83.1 per cent and 86.4 per cent, respectively, are males. The age groups refer to age at the beginning of the 11-year measurement period. Whilst one of five shelter users was recorded for those individuals who were 18–29 years in 1999, the majority were recorded in the middle-aged group between 30 and 49 years old. Although ethnic minorities appear amongst the shelter users, the large majority are ethnic Danes, especially amongst the episodically homeless, where ethnic Danes are 94.4 per cent. In this pattern of ethnicity amongst the homeless, Denmark diverges sharply from the USA, where a large part of homelessness affects ethnic minorities, especially African-Americans (Kuhn & Culhane, 1998).

A very important difference is found for the profile of the transitionally homeless. Table 3 shows that the transitionally homeless in Denmark have very high levels of mental illness or substance abuse, with 82.7 per cent having either mental illness, substance abuse problems or both. This figure is even marginally higher than amongst the chronically homeless, of whom 80.5 per cent have a mental illness, a substance abuse problem or both.

Table 3. Background characteristics by cluster, Denmark.

	Pct. transitional	Pct. episodic	Pct. chronic	<i>P</i> -value, three-way	<i>P</i> -value episodic versus chronic	<i>P</i> -value transitional versus chronic
<i>Demographic</i>						
Male	76.2	83.1	86.4	0.000	0.001	0.000
< 30 years	23.7	20.4	22.9	0.005	0.035	0.249
> 50 years	16.7	15.1	14.6	0.002	0.002	0.001
Ethnic minority background	12.6	5.6	13.4	0.000	0.000	0.139
<i>Vulnerabilities</i>						
Mental illness (MI)	51.8	62.4	50.9	0.000	0.000	0.314
Drug abuse (DA)	35.5	54.1	40.5	0.000	0.000	0.000
Alcohol abuse (AA)	60.3	83.4	56.9	0.000	0.000	0.000
DA and/or AA	74.1	94.5	72.6	0.000	0.000	0.055
MI and/or DA and/or AA	82.7	96.2	80.5	0.000	0.000	0.001
MI and DA	22.6	37.4	26.0	0.000	0.000	0.000
Prison sentence	30.3	47.9	32.8	0.000	0.000	0.002

Note: Percentage of cluster in given category.

Source: Own calculations.

The transitional shelter users in Denmark have levels as high as the chronic shelter users on all the vulnerability characteristics.

In contrast, Kuhn & Culhane (1998) find that only 31.8 per cent of the transitionally homeless in New York City suffer from a mental illness or substance abuse problem, a figure significantly lower than amongst the chronically homeless, where 45.4 per cent have a mental illness or substance abuse problem (p. 223). Kuhn and Culhane point out that the health indicators for New York City are based on self-report and interviewer determination, and therefore likely under-identify the presence of health conditions. By contrast, the data for Philadelphia are based on public health records for a 9-year period, and a larger difference is found between the transitionally homeless and the chronically homeless, with, respectively, 44.0 per cent and 74.9 per cent (p. 224) with mental illness, substance abuse problems or both. This difference leads Kuhn and Culhane to conclude that homelessness amongst the transitionally homeless is more widely caused by poverty and housing affordability problems than by complex support needs.

Both in Denmark and the USA high rates of vulnerabilities are found amongst the episodically and chronically homeless. Amongst the Danish shelter users, the highest level of vulnerabilities is found amongst the episodic shelter users, as 96.2 per cent in this group have a mental illness or substance abuse, and as many as 47.9 per cent have a prison record, compared to 32.8 per cent amongst the chronically homeless and 30.3 per cent amongst the transitional shelter users.

Discussion

The comparison of patterns of shelter use in Denmark and the USA supports Stephens and Fitzpatrick's hypotheses about the association between welfare systems and homelessness. Whilst recognising that shelter use does not measure the total extent of homelessness, our analysis—based on highly comparable data and research from Denmark and the USA—indicate that the homeless population in a relatively extensive welfare system as in Denmark is not only smaller but also more greatly consists of individuals with complex support needs such as mental illness or substance abuse problems than in the USA. The overall annual prevalence of shelter use in Denmark is only about one-third that in the USA.

However, when applying a cluster analysis based on number and length of shelter stays, we find subgroups amongst the shelter users similar to those found on US data. The largest group of shelter users in both countries are the transitionally homeless, who experience homelessness only for a short period and then re-exit the shelter system. At first glance this finding is surprising, as we would expect the group of transitionally homeless to be relatively smaller in Denmark, as a consequence of its lower level of poverty and higher availability of public housing. The analysis of the profile of this group reveals that whereas the transitionally homeless in the USA have a relatively lower prevalence of mental illness and substance abuse, the group with a similar shelter use pattern in Denmark has a very high occurrence of mental illness and substance abuse, equal to the high levels we find for the chronically homeless. Thus our findings remain consistent with the second part of Stephens and Fitzpatrick's hypothesis that homelessness in countries with more extensive welfare systems is likely to be mainly concentrated amongst individuals with complex support needs.

On a macrosociological level the findings show a strong relation between differences in welfare systems (such as the level of poverty, housing systems and social support systems) and differences in homelessness—both in the scale of homelessness and whom it affects. The widespread income poverty and lack of social housing for poor people in the liberal welfare system in the USA produces a much larger extent of homelessness affecting wider segments of poor households than in the Scandinavian welfare system, with its higher level of income equality, mass-scale subsidised public housing and more extensive social support systems.

Despite these fundamental differences in the extent and profiles of homelessness, commonalities between the two countries also exist. Not only do we find a group of long-term severely marginalised homeless people in both countries, but also we have identified the same two groups—the episodically and the chronically homeless—in both countries. In both countries the episodic shelter users are likely to be a group of very chaotic substance abusers, often with mental illness, who have difficulties in utilising any support systems and even in using the shelters with some consistency. The group identified as chronic shelter users also usually has severe mental illness and substance abuse problems, but they may have a less chaotic pattern of substance abuse, one that at least enables them to have longer and more stable stays in shelters.

A common challenge in both welfare systems is the provision of holistic and coherent solutions that meet both the housing needs and support needs of homeless people with complex support needs. In this regard, even the extensive Scandinavian welfare system has not succeeded in preventing these groups from falling through the social safety net. In their study, Kuhn and Culhane drew implications on the needs for specific interventions for the groups they identify (Kuhn & Culhane, 1998). They argued that the transitionally homeless should be targeted by ‘preventive and resettlement assistance’ (Kuhn & Culhane, 1998, p. 207), involving a broader focus income, employment, health and housing supports (Kuhn & Culhane, 1998, p. 229), whereas the episodically homeless could be targeted with ‘transitional housing and residential treatment, and the chronically homeless with supported housing and long-term care programs’ (Kuhn & Culhane, 1998, p. 207).

Since then, major progress has been achieved from Housing First programmes, where the USA has been in the forefront, showing that the majority of the chronically homeless people can be housed, even in ordinary housing (Tsemberis, 2010). The key principle in the Housing First approach is to provide a permanent housing solution early in an intervention, and to give intensive social support through evidence based methods, such as ACT and ICM. Randomised controlled trials of these methods show that even people with highly complex needs are capable of becoming housed and maintain their housing (Coldwell & Bendner, 2007; Nelson *et al.*, 2007; Tsemberis *et al.*, 2004). However, an ongoing debate is whether the Housing First approach can provide adequate solutions to the episodically homeless, who often display very chaotic behaviour, due to massive addiction problems (Kertesz *et al.*, 2009; Pleace, 2011). The question of how to provide adequate interventions for the episodic shelter users is an area where more research is needed.

The Housing First approach was adopted in Denmark in the national homelessness strategy from 2008. The experiences are in line with the results from the USA, showing that most homeless people receiving these interventions were capable of exiting homelessness (Rambøll and SFI, 2013a). However, the Danish strategy programme was

experimental in scale (though relatively large, with about 1000 participants), as it did not cover the entire target population. The potential to extend this programme to a wider part of the homeless population clearly exists (Benjaminsen, 2013).

A challenge on the policy level is that scaling up Housing First interventions initially requires a substantial social investment from central or local governments. However, the (relatively sparse) literature on the cost-effectiveness of these interventions suggests a high return on this investment, as long-term homelessness is very costly to public budgets, not only in terms of shelter use but also in terms of the use of hospitals, emergency wards, psychiatric facilities and the criminal justice system (Culhane, 2008; Culhane & Metraux, 2008; Poulin *et al.*, 2011; Rambøll and SFI, 2013b; Zaretzky *et al.*, 2013). Given that in times of economic crisis governments need to use scarce resources most effectively, one way of so doing is to ensure that the long-term homeless are rehoused.

Conclusion

This article has provided a comparative analysis based on strong data of the scale and profiles of homelessness in two very different welfare systems—the liberal welfare system in the USA and the social-democratic welfare system in Denmark. Our study shows that these two different types of welfare systems produce homelessness on a very different scale and of a very different type. The overall level of shelter use relative to population size is about three times higher in the USA than in Denmark, and the level of homelessness in larger cities likewise diverge.

Given a combination of a high level of income poverty, a lack of social housing and a weak welfare system, homelessness in the USA not only concerns people with highly complex problems but also affects broader segments of poor populations. In contrast, in Denmark, with a much lower level of income poverty, a large public housing sector, and an extensive welfare system, homelessness is widely concentrated amongst groups with complex support needs due to mental illness and substance abuse problems. These results show that the overall macroeconomic and social structures have a deep impact on the level of social marginalisation and exclusion, with severe implications for the people it affects.

Despite these strong differences, the analysis has also shown similarities, as groups of episodic and chronic shelter users have been identified in both countries. Whilst substantially reducing the overall level of homelessness, even the extensive welfare systems in Scandinavia have clearly not succeeded in solving the problem of chronic, long-term homelessness. Our results reveal a severe gap in the welfare system for the most marginalised people in Denmark. These findings point to a continued need for developing social interventions aimed at this group and expanding coverage to all homeless people who need them. With such interventions and expansion, one of the most severe gaps in the welfare safety net in the otherwise extensive Scandinavian welfare system can be significantly narrowed.

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