The Patterns of Unemployment and the Geography of Social Housing

Sónia Alves

Abstract—During the last few decades in the academic field, the debate has increased on the effects of social geography on the opportunities of socioeconomic integration. On one hand, it has been discussed how the contents of the urban structure and social geography affect not only the way people interact, but also their chances of social and economic integration. On the other hand, it has also been discussed how the urban structure is also constrained and transformed by the action of social actors. Without questioning the powerful influence of structural factors, related to the logic of the production system, labor markets, education and training, the research has shown the role played by place of residence in shaping individual outcomes such as unemployment. In the context of this debate the importance of territory of residence with respect to the problem of unemployment has been highlighted.

Although statistics of unemployment have already demonstrated the unequal incidence of the phenomenon in social groups, the issue of uneven territorial impact on the phenomenon at intra-urban level remains relatively unknown.

The purpose of this article is to show and to interpret the spatial patterns of unemployment in the city of Porto using GIS (Geographic Information System - GIS) technology. Under this analysis the overlap of the spatial patterns of unemployment with the spatial distribution of social housing, allows the discussion of the relationship that occurs between these patterns and the reasons that might explain the relative immutability of socioeconomic problems in some neighborhoods.

Keywords—Unemployment, area effects, urban planning, Porto.

I. INTRODUCTION

In recent years, there has been an increasing interest in the material and non-material effects of unemployment on individuals and families affected by the phenomenon. Studies on the topic have emphasized the heterogeneity of experiences associated with the unemployment, depending on variables such as social belonging, academic and vocational skills or the relational or economic resources that people can mobilize during time. The regulation role that can be provided by the State, families and institutions of civil society has been seen as fundamental to mitigate the main effects caused by this period of economic deprivation on the access of goods and services that are considered fundamental in society (such as the access of housing, education, health, etc.).

The social representation of unemployment also seems to be dependent on variables such as the business cycle [1], since the stigma effects, that imply that unemployed individuals face systematically lower chances of being hired because employers interpret their unemployment as a negative signal, tends to be higher in times of low unemployment and lower in times of high unemployment [1]. The social perception of the phenomenon also depends on those who are more affected by the problem, which explains that it is, in certain cases, considered as voluntary. The perception about those who are unemployed also affects their chances of economic reintegration. For example, it is well known that there is prejudicial treatment towards some individuals or groups based on elements as race, age, gender or place of residence (which has been known as a post-code discrimination).

Arguing that the territory is an active variable in the processes and social phenomena [2], several authors have been considering the effects of the contexts of residence on human activities and practices, for example in terms of opportunities of access to goods and services, networks of solidarity or employment opportunities [3]. In the debate about the influence of the contexts of residence on the opportunities of individuals and communities, several types of area effects or impacts have been identified [4]–[5]. Among a wide range of effects, that result from the mere fact of living in an area, it has been considered those which are related to the physical and geographic features of 'space' and those which are related to the 'social composition' of the territories.

The first group of effects is related to the characteristics of the local context and does not depend on the attributes of the social composition of areas: i) the location of the neighbourhood in the city and its connection to other areas; ii) the level of quality housing (in terms of type, density, architectural and construction quality, tenures of housing) and public space (land use, structure, design and urban form, levels of integration / isolation in relation to urban surroundings), and iii) the opportunities of access to collective resources (education, health, or leisure). For these authors [4], the most obvious 'neighbourhood effects' are those arising from lower quality and availability of services in some areas, because they constrain the possibilities of access to goods and services that are considered essential in society as well as the normal coexistence of groups in space. In this regard, the physical isolation of some groups in certain areas is criticized, since it can aggravate the conditions of social isolation and segregation of some social groups.

A second type of effect, known in literature as 'class effects' [6], is related to the social composition of the territories and to the socialization processes which affect the adoption of norms, values and behaviour, through the processes of "social inheritance" that are transmitted from generation to generation, and through the contact with peer role models [7]–[8]. The interest for these matters has justified the analysis of social networks -its structural complexity, network density and
II. DIFFERENT LEVELS OF VULNERABILITY

Several authors have been discussing the way socio-economic inequalities are expressed in urban space. In the review of these studies, it is possible to identify two opposing views. On one side are those who argue that the polarization of the structures of occupation and income are reflected in the increasing division and dualization of the city [10]. On the other side stand those who question the theories of socio-spatial polarization, saying that it is not so much a bias based on socio-professional income, but more the evolution of the production structures that have been showing a growing diversity and complexity in terms of occupation and income. From this perspective it has been argued that the structuration processes are characterized by the combination of different situations rather than the creation of spaces of homogeneity or social polarization [11]–[12]. Studies carried out in Portugal about the issues of differentiation and socio-spatial segregation in metropolitan areas have confirmed the existence of segregation and fragmentation in the most recent socio-economic processes of structuring and restructuring [13], as well as the permanence of poor living conditions in neighborhoods marked by poverty and unemployment [14].

In what is related to the effects of losing a job, Gallie & Paugam who interpreted the results of the European Community Household Panel [15], concluded that the transition from employment to unemployment wasn’t responsible for significant effects in any of the analysed indicators of sociability (regularity of contacts with neighbours and friends or the participation in clubs and other voluntary organizations). Analysing the relationships of the sociability of individuals in different spheres of sociability: primary (within the domestic group), secondary (within the extended family, friends and neighbours) and tertiary (in associational life), these authors highlighted the influence of other contextual factors such as the social composition of households to explain the different sociability investments of individuals. In this regard they noted that the households consisting of one person tend to exhibit more frequent patterns of sociability with friends and community associations (sports, leisure, ...) than households composed of two adults and children, whose investments tend to be more focused in the sphere of primary sociability. From a geographical point of view, the results have shown that in the Northern European countries, with a higher proportion of households consisting of one person, the transition from employment to unemployment tends to mean greater social isolation of the individual by comparison with southern European countries where individuals most often share housing with relatives or friends.

The conclusion that unemployment has a negligible influence on the changing patterns of individual sociability is supported by Loison with regards to the Portuguese context [16]. This author, whose study was based on 94 interviews with unemployed people living in rural and urban areas, concluded that the status of the unemployed is less stigmatized in Portugal and may even encourage more frequent contacts within households, extended family and in the sphere of friendship. The tenuous boundaries between employment and unemployment or between formal and informal work might explain the lower level of stigmatization in Portugal [16].

One different conclusion of this study relates to the strong normative obligation that exists in Portugal for families to help their unemployed members, as a way to minimize the negative
effects of unemployment [16]. In a country characterized by a weak welfare state, with low welfare provisions, the families develop several strategies to reduce the costs of the family with housing. Some of the strategies that have been used are: i) the prolonged cohabitation of young people in their parents’ house: in Portugal, about two-thirds of young adults, aged between 20 and 29 years, live in their parents’ home, a proportion that increases to values of around 74% for unemployed youths; ii) the housing construction: about a third of households in Portugal participated in the construction of their own house and over 17% of Portuguese households have accessed housing through inheritance or donation [17].

It is nevertheless important to notice that the material and emotional support of family and friends is constrained by their economic capabilities. Thus, in a society with high levels of social and economic inequality among the population, the support levels can also be much differentiated. For example, studies show how in certain cases unemployment may lead to the deterioration of living conditions of families with scarce financial and social resources. In these cases, the family support mechanisms constitute a reason for the impoverishment of the household [18]. This is, for example, the case for households consisting of pensioners with a low state pension, who have to help unemployed adults or children (sometimes divorced and with children). In these cases the family role can be not only insufficient to compensate the shortage of resources, but can also cause additional economic hardship and lead to deterioration of their living conditions.

In a recent document on the “spiral of precariousness”, Paugam and Duncan [19] consider the existence of different situations in relation to the labour market, distinguishing those who have a job (stable and unstable) from those who do not and have been unemployed for different lengths of time. Taking into account the social relationship of the individuals with family, social activities and networks of support they identify different situations of economic and social vulnerability. At the end, articulating the two above mentioned approaches, it is distinguished, from a vulnerability point of view, the situation of i) the individuals who have a stable job, a regular income and a solid cultural and social background; ii) of individuals with an insecure connection to the labour market and with unstable social relations, characterized, for example, by a permanent delay in the conjugal relations due to the lack of professional stability; e iii) the individuals without a job and without a solid social and family environment, that show higher difficulties of socio-economic integration. The unemployed population without economic and social support networks are included in this last group, characterized by a greater precariousness [19].

The vulnerability is higher and more harmful for those who have more unstable and precarious situations in the labour market in times of greatest economic transformation. In these times the employment structure tends to change as well as the methods of working, for example due to the incorporation of new technology. For instance, in Portugal, according to the national action plan for employment, technological change has been generating an increasing demand for skilled labour and contributing to a broadening of the range of wage workers, increasing the differences between classes of higher and lower income.

The analysis of the statistical information over the past few decades, allows the identification of a range of economic and demographic transformations in Portugal. Gaspar, Henriques & Vale [20] notice how in the 70s the Portuguese economy was still marked by the relative importance of the primary sector (with 32.8% of active employment in 1970) and by one of the lowest levels of urbanisation in western Europe (only 26.5% of the population lived in urban areas). In the last two decades a huge reduction of employment was observed in the primary sector and the rapid urbanization process, which was responsible for the expansion of the tertiary sector (with the creation of new employment in services, ranging from retailing, community services, etc.).

![Fig. 1 Employed population by sector of economic activity](image)

Analysing the evolution of demographic indicators, Barreto [21] identifies the trends of rapid ageing of the population due to an increase in average life expectancy and declining birth rate. The increase in the number of divorces, the birth of children outside of marriage and new families or households consisting of people living alone and single-parent families, expresses well the social and economic vulnerability of these social groups in Portugal.

The evolution of the statistical data has been showing the “semi-peripheral” condition of the Portuguese society, characterized, simultaneously, by the presence of features that are typical of countries with lower levels of development (such as low productivity, low levels of education and social protection), but also by characteristics that are typical of the advanced societies (such as a greater flexibility in the labour market or an increasing number of households consisting of a single individual). Transformations have become particularly obvious in the metropolitan areas, where the effects of the social and economic changes are much faster.
The next section, exemplifies the previous sentence to some extent, by describing the main changes that affected the metropolitan area of Porto.

III. TRENDS OF UNEMPLOYMENT

A. Evolution and Social Incidence of Unemployment

Before 2010, and over the past 25 years, the unemployment rate, that can be defined as the number of unemployed people actively looking for a job as a percentage of the labour force, never exceeded the value of 10% in Portugal. There was, nevertheless, high and low periods of the phenomenon. In the beginning of the 90’s, Portugal had one of the lowest unemployment rates in the European Union [22], equivalent to 3.9% in 1991. Since then the unemployment rate continuously increased in a steady way: to 7.3% in 1996, 9.5% in 2009, 10.8% in 2010 and 14.9% in 2012 (the highest value ever). In about two decades Portugal stopped being one of the countries with the lowest unemployment rate in the European Union to become one of the countries with highest values. Fig. 2 shows how the unemployment rate more than doubled from 2000 to 2010.

The National Institute of Statistics (INE) has estimated that Portugal has around 819,300 unemployed workers in 2012. The unemployment rate has increased more in the south of the country in the Algarve region where it has reached 20%. The unemployment rate in the northern region of Portugal in early 2012 stood at 15.1%.

The groups most affected by unemployment are young people aged between 15 and 24 years old (where the unemployment rate corresponds to 36.2%) the population with low skills (below the 9th grade) and women.

The values of long-term unemployment (unemployed for more than 12 months) increased the intensification of the difficulties of integrating people into the labor market. In 2005, when the level of long-term unemployed was about 53% of the total registered unemployment in Porto, a more disaggregated analysis on its social incidence by level of qualification and by age, confirmed the major difficulties of economic reintegration of those with lower levels of education and of older individuals.

Although the data shows that the poorly qualified are the most affected by the phenomenon and a higher rate of schooling has a positive influence on access to employment, in the last decades Portugal has experienced an increasing number of unemployed graduates.

Even in the ’90s unemployment was not considered to be one of the main causes of poverty and social exclusion in Portugal, because the values of the unemployment rate were low and the rate of poverty among the highest in Europe, with the following cycle of rapid growth of unemployment rate after 2001, this began to be an increasingly important explanatory factor.

In the ’90s, during a period of low unemployment, the main causes of poverty were the existence of low-wage jobs and weak welfare state that did not protect the risk of poverty of vulnerable groups within the population (such as the elderly, disabled, etc.).

Even today, the analysis of the social composition of poverty in Portugal shows a broad and heterogeneous group of people that includes not only those who are unemployed but also those who are working in unproductive companies (dominated by low wages and poor working conditions) or those who are retired but dependent on low pensions.

Poverty is still a widespread and intense problem in Portugal. In 2001, Portugal had the lowest monetary value of the poverty line in the European Union, which at the time represented only about 60.2% of the average of these 15 countries [23]–[24]. In 2007, Portugal found itself in a group of ten European Union Member States with a poverty risk rate higher than the European average (16%). In the same year, the Gini coefficient corresponded to 35.8%, more than 5.2% when compared to the coefficient of all the 27 countries that make up the European Union (30.6%).

The analysis of registered unemployment at Job centers in Porto between 1985 and 2010 (Fig. 4), shows a remarkable increase in the values of unemployment. Nevertheless, the comparison of the data registered at the employment centers with the data collected by the censuses, shows that about 8% from a total of 13,000 residents living in the municipality of Porto, did not record their situation at Job centres. Part of the
population prefers to choose other forms of job seeking.

The population loss was not distributed uniformly throughout the city. It was the most central and historical districts as well the eastern district of Campanhã that lost the most population. In absolute terms, the easternmost parish of Campanhã recorded the most relevant demographic break, having lost more than 10,000 inhabitants between 1991 e 2001. In relative terms, Fig. 5 shows, how the largest decreases were recorded in the districts of the historical centre (-41.1% in Miragaia, -36.3% in Vitória and -35.3% na Sé).

Fig. 4 Evolution of registered unemployment in Job Centres

B. Patterns of Unemployment

In addition to the above-mentioned social selectivity of the unemployment, it is worth analyzing its uneven spatial incidence. Regarding its regional distribution in Portugal, it is worth noting that the North Region recorded one of the highest unemployment rates (equivalent to 12.5% in 2010) and the largest amount of unemployed people in absolute values. Statistical data on distribution of the employed population in the Northern Region shows that the destruction of employment was particularly intense in the manufacturing industry [25] and that affected particularly the Porto Metropolitan Area and the region of Vale do Ave, where the presence of traditional industrial companies (of clothing, footwear) is higher. The increasing worldwide competition observed in these economic sectors, in particular generated by emerging Asian economies, appeared to be responsible for the bankruptcy of some companies and for their reorganization through the introduction of new technologies and of new ways of production.

Where Porto is concerned, it is important to keep in mind some general demographic and economic information. Thus in 2001, the six central municipalities of Porto, that from now on will be referred to as “Porto Region”, counted a population of about 381 thousand families and about 1 million people. About half of this population was living in two of its six municipalities: Gaia and Porto, which show, however, very different demographic trends. Since the 80’s, the municipality of Porto has shown a continuous population loss, whereas the municipality of Gaia has sustained an increase in the number of inhabitants. In absolute terms, the easternmost parish of Campanhã recorded the most relevant demographic break, having lost more than 10,000 inhabitants between 1991 e 2001. In relative terms, Fig. 5 shows, how the largest decreases were recorded in the districts of the historical centre (-41.1% in Miragaia, -36.3% in Vitória and -35.3% na Sé).
The next stage is marked by a new abandonment phase of the historic centre by initiative of i) the public authorities that developed several plans for the eradication of illegal housing, and for the relocation of the residents in the new social housing neighbourhoods built in the outskirts of the consolidated city; ii) the private initiative, by the relocation of industrial employment and transport activities outside the city.

It should be noted that until the mid-50’s centralized industrial model located in Porto was dominant, with exception to the poles of Matosinhos and Gaia specialized in sea-related industries (as the sardine or tuna industry). Afterwards, industrial activities were relocated to the new business and industrial parks created in the suburbs with more space, lower costs and better accessibility. This process of deindustrialisation was accompanied by new investments in the commercial and tourism sectors which contributed to the increasing supply of tertiary activities. In the last decades, the activities located in this area have been facing strong competition with the new commercial forms created meanwhile in the suburbs. Many abandoned houses and commercial spaces have attracted a new immigrant population who seek affordable solutions for housing or commercial purposes. The urban redevelopment strategies initiated by the public authorities have shown results very limited to some blocks of higher quality [27].

The analysis of educational levels of the resident population allows the identification of important spatial social divisions in the Region. Firstly, it is observed that the Municipality of Porto has a higher level of education compared to the suburban municipalities. In the western part of the city there is a larger concentration of population with higher levels of schooling compared to the eastern and central parts where the worst results have been recorded.

The analysis of the variation of the number of buildings over the last decades confirms the rapid suburban growth observed in the region, with the population progressively living in more remote areas, instead of urban spaces already consolidated.

As regards to the forms of occupation of buildings, the 2001 Census data shows a wider variety of functions in the areas of older and consolidated urbanization, where the city was slowly structured through a greater mixture of residential and commercial functions (e.g. Boavista or downtown); unlike the suburban areas where the concentration of exclusively residential buildings is larger.

In 2001, the town of Porto concentrated about 218,000 jobs, of which 133,000 corresponded to people who lived in other municipalities.

The 2001 Census identified 46,000 unemployed individuals in Porto; which is about 39% of unemployment in the Northern Region and 14% of Portugal.

Prior to the description of the patterns of unemployment by subsection statistic of the Porto Region (Fig. 6), it is important to retain the following information: i) the existence of similar unemployment rates can be associated with very different absolute values, which may be related to the social or functional characteristics of the territories (constructive density, demographic or functional structure). For example, in territories where the residential function is residual, the presence of high unemployment can be associated with a reduced number of unemployed people; ii) the representation of unemployment rates in the territories of very different sizes, can cause visual confusion. For example, small patches, with little visual significance, may have associated high levels of unemployment, because of their high population density and construction. Unlike large patches, associated with high unemployment rates, which despite their apparent size may be associated with a reduced proportion of active and unemployed residents per km² (for example in rural areas).
The analysis of the distribution of unemployment rates, shows a higher incidence of the problem in the Historic Center of Porto and in the parish of Campanhã, located in the eastern part of the city (with an average unemployment rate of about three times that of the western parishes). The small districts of Porto's historic center shows the highest rates of unemployment within Porto (about 17% of the total labor force), but these high figures are associated to low absolute values due to the loss of population and ageing of this area during the last decades. The parish of Campanhã shows high absolute and relative values of unemployment, equivalent to 14 unemployed individuals on average for every 100 active people, which corresponds to about 2500 unemployed people calculated in 2001. Outside the municipality of Porto, the highest unemployment rate was recorded in the parish of St. Pedro da Cova, in Gondomar municipality, due to the process of the extinction of mining activities.

In order to identify the areas with a statistical representation on unemployment by sub-section in Porto municipality, it was decided to represent the absolute and relative values of unemployment on a map by using opposing lines. This way, in areas where the two patterns intersect, the map shows the construction of a kind of 'network' that corresponds to higher (absolute and relative) values of unemployment. In a metaphorical way, the network draws attention to the existence of 'unemployment blackspots', that symbolically represent territories where the objective and symbolic conditions of life may be marked by deprivation and by 'trapping' forces that limit human opportunities. From this perspective the territory is interpreted as a constitutive element of social relations, influencing its contents and characteristics.

The map shows the existence of different types of pockets of unemployment in terms of location, size and functionality of the territories associated to them. Some general impressions can be underlined from the analysis of the map:

- The existence of strong inequalities between the eastern and western part of the municipality. The western parishes of Nevogilde and Foz do Douro show a low total and relative value of unemployment. The fact that it is one of the most prosperous and expensive parts of the city of Porto explain almost total absence of networks of unemployment in those parishes;
- the presence of pockets of unemployment in the Historical Center, in areas where the degraded private rental buildings continue to exist. This pattern draws attention to the problems that persist in private rental tenure, which concentrates people with weak and unstable connections to the labour market due to structural problems in the educational domain.
- the strong coincidence between the peripheral pockets of unemployment and the location of the largest social housing estates of the city, which outlines the role of the State in the construction of communities with higher levels of vulnerability. The application of zoning models (that assign to each part of the territory a distinct function and social group) and the production of housing to fixed and previously defined clientele explain these patterns. It is important to note that various plans and projects resulted in the concentration of the population with a precarious relationship with the labour market in the same social housing neighbourhoods. For example the Plan of “Salubrização de Ilhas e de Melhoramentos” of Porto that in the 50’s led to the destruction of illegal and overcrowded housing in the center of Porto and to the construction of 6,000 new social housing. This plan was responsible for the relocation of about 20% of the population living in the centre of Porto to large social housing estates located in suburban areas.

IV. CONCLUSION

The article was structured in several parts with the aim to identify and discuss the patterns of unemployment in the city of Porto. It started with the identification of the steady cycle of unemployment which increased after 2001, and with the identification of the main groups and areas affected by the phenomena. The spatial variation of unemployment, across the parishes and neighborhoods of Porto, is explained from two main theoretical perspectives: i) the one that considers the social and occupational structure of the population, noticing the coincidence between territories with higher concentrations of low-skilled adult population and patterns of unemployment; ii) the one that ponder the effects of the social and economic restructuration of territories on the spatial mismatch between the demand and offer of employment.

The black spots of unemployment identified in Porto in 2001 (at the time of still relatively low unemployment figures) show two types of territories, considering dimension and spatial distribution of the pockets of unemployment:

- The areas of the historic center with diffused distribution of unemployment: This area is populated by families with low levels of schooling and a structural precariousness in the labor market that find an economical solution to housing in the old and degraded houses of the historic center.
- The suburban neighborhoods of large social housing estates that were built to rehouse thousands of inhabitants with poor housing conditions several decades ago. The fact that these neighborhoods remained places of inactivity and
unemployment and in many cases became spaces of insecurity and crime [28] represents an unquestionable evidence of negative effects of spatial concentration of poverty in contexts of marginalization and exclusion.

In both cases, these areas of unemployment and inactivity constitute the spatial expression of the socio-economic inequality and disadvantage that exists in society. Most of all it is also a manifestation or an expression of a specific way of thinking and acting towards poverty and inequality. A specific way of thinking and acting in the domains of planning and housing policies that in close connection with broader social, economic and political forces produces and reproduce a disadvantaged society.

Although the provision of social housing can raise the standards of housing, it does not necessarily mean it will improve living conditions of inhabitants in the new neighborhoods. Options taken at the level of size, location, social and institutional characteristics can conversely feed dynamics of social and economic vulnerability, reinforcing mechanisms of exclusion. Grant [29] designates these spaces as “urban spatial poverty traps”, since they reproduce the disadvantaged conditions existing in different spheres and sectors of society: cultural, social and symbolic, educational, economic.

In the city of Porto, according to official data [26] of a total of 12,500 people living in the 3,700 units of social housing provided by the municipality, about 30% of the workforce was unemployed in 2001. Even before the rise of unemployment the poverty risk rate was already 43% in the social estates of Campanhã. This means that almost half of the residents were already living with a value of income below the poverty line. In this respect it is important to notice the insidious and intergenerational relationship that poverty often establishes with education and unemployment. On one hand, families with lower economic resources tend to invest less in themselves and in their children’s education, which tends to reverberate in poorer school results and sometimes in early school dropout. On the other hand, are the families with lower educational resources that tend to show a more unstable professional trajectory (marked by periods of unemployment). This population tends to remain poor throughout their life cycle and the life of their descendants.

This article tried to underline the interconnections between neighborhood conditions and opportunities and life-chances of their inhabitants through various mechanisms such as the possibilities of social interaction, or the provision of jobs, services and equipment in the geographic space.

Since the ‘opportunity structure’ of the neighborhoods is not the same everywhere, some affecting their inhabitants positively while others restricting their opportunities, a key recommendation of this study is the development of further research at the level of policies that can contribute to the formation of more diverse and sustainable communities and at the level of those who can increase the quality of life in urban areas with higher levels of inactivity and unemployment.

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Sónia Alves was born in Mozambique in 1973. She graduated in Geography from Porto University in 1997. She took her Master in Urban Planning at the Engineering and Architecture Faculties of Porto in 2002 (dissertation: Collaborative planning in context of Urban Regeneration), and her PhD in sociology from the University Institute of Lisbon (with the PhD dissertation: Social, Space and Politics in Poverty and Exclusion: Evaluation of urban regeneration initiatives in urban deprived areas in Porto city). Since 2011 she maintained an affiliation with the Centre for Socioeconomic Change and Territorial Studies (Dinâmia-CET) at the University of Lisbon. In September 2012 started a postdoctoral project, founded by the Portuguese “Fundação para a Ciência e e a Tecnologia”, “High Hopes for Mixed Communities” at the Danish Building Research Institute, Aalborg University Copenhagen, Denmark.