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The Spatial Patterning of Wealth and Poverty in the Montréal Region, 1971–2006: A Literature Review

Amy Twigge-Molecey

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Abstract

This report reviews the abundant literature on the spatial distribution of wealth and poverty in Montréal over the 1971–2006 period. It serves as a companion document to *A City-Region Growing Apart? Taking Stock of Income Disparity in Greater Montréal, 1970–2005*, by Rose and Twigge-Molecey (2013), which was the Montréal component of a larger public outreach project titled: “Neighbourhood Trends in the Toronto, Montréal, and Vancouver City-Regions.”

This report reviews the literature to highlight how our work builds upon this rich body of existing scholarship and identifies research gaps our report could address. Additionally, this report makes accessible for the first time two significant sets of studies examining the spatial patterning of wealth in poverty in the Montréal area to non-French reading audiences.

Author

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1. Introduction

This report reviews the abundant literature on the spatial patterning of wealth and poverty in the Montréal region between 1970 and 2005. The report serves as a companion document to *A City-Region Growing Apart? Taking Stock of Income Disparity in Greater Montréal, 1970–2005* (Rose and Twigge-Molecey 2013), a component of the Public Outreach Project called “Neighbourhood Trends in the Toronto, Montréal, and Vancouver City-Regions.” The goal of this project was to examine, compare, and foster public discussion about the spatial distribution of wealth and poverty in Toronto, Vancouver, and Montréal over the 1970–2005 period.

This report is divided into two main sections. The first explores existing studies on the spatial distribution of wealth and poverty in the Montréal region. Detailed information on methodology and indicators used to measure wealth and poverty in the various studies can be found in Appendix B. The second section examines the major explanatory factors for both change and stability in the spatial patterning of poverty over time. The report concludes with a brief discussion of the strengths and limitations of the literature reviewed and addresses how the Public Outreach Project report addresses these limitations and some of the research gaps identified.

2. The “big picture”: Trends over the long-term in the spatial patterning of wealth and poverty (1970s–2006)

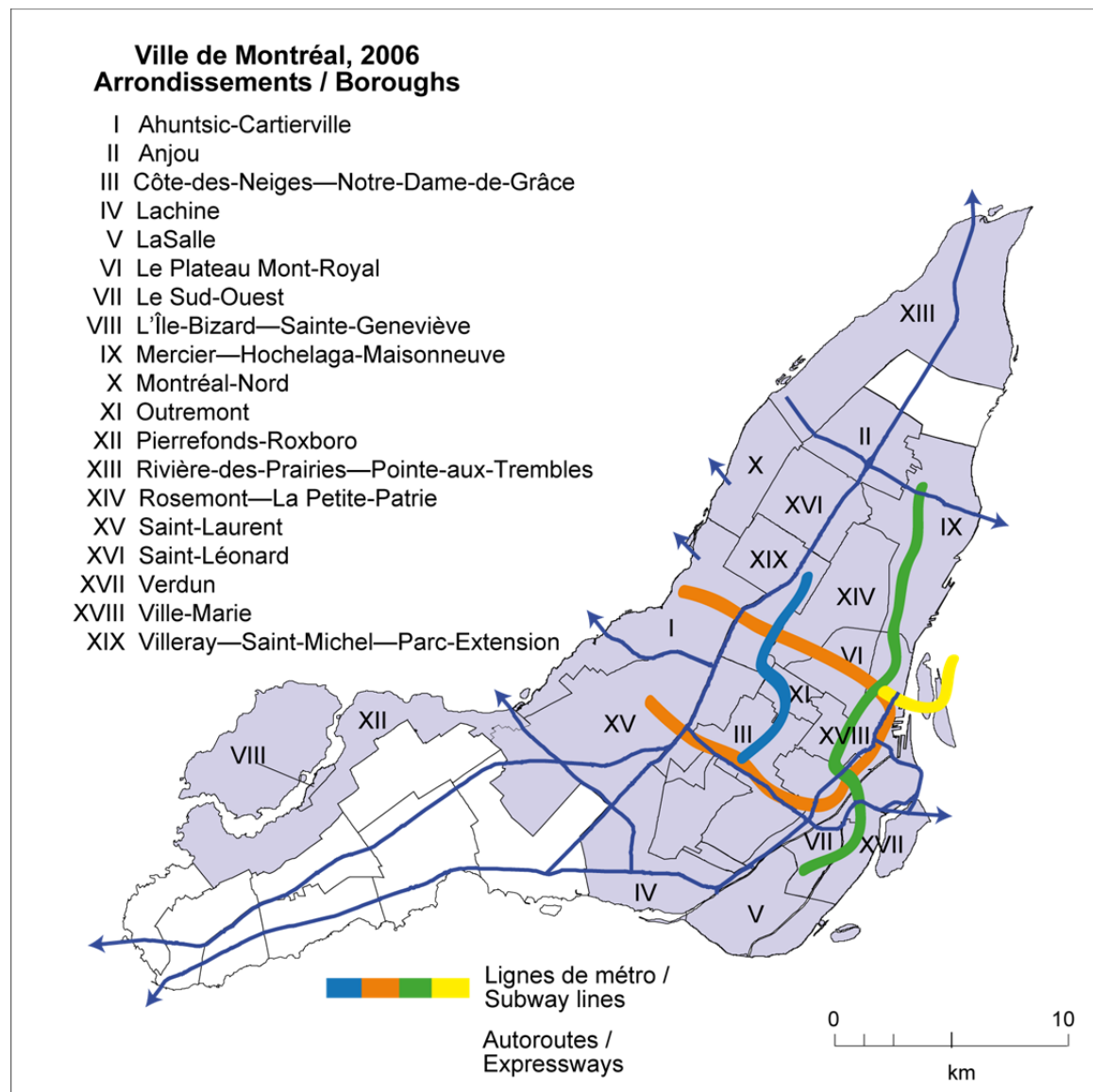
We begin by examining the key findings of two sources: Comité de gestion de la taxe scolaire de l'Île de Montréal (CGTSIM) and Centre de services sociaux du Montréal métropolitain (CSSM). These findings focus on change over 15 years or more, which allows the reader to examine the situation at a beginning and an end-point. Readers unfamiliar with the Montréal region's geography should refer to Figures 1 and 2 below, although not all the districts referred to in this report are labelled on these maps. To examine in detail any of the maps by the CGTSIM and CSSM referred to in the following pages, please see Appendix A.

For the Island of Montréal, a consistent body of research carried out by the CGTSIM has documented the spatial distribution of poverty at frequent intervals from the 1970s onwards. This work, however, does not cover the entire Montréal Census Metropolitan Area (CMA). This organization's mandate is to distribute, among school boards on the Island of Montréal, funds from the school taxes collected and the investment income earned to implement educational catch-up measures in underprivileged areas on the Island of Montréal (CGTSIM 2008, 5). To carry out this responsibility, the Comité produces a poverty map of families with children under the age of 18 on the Island of Montréal.¹ For information on the methodology, see Appendix B. The data sources for this set of studies are the Canadian census.

The second set of studies were conducted by Mayer-Renaud for the Centre de services sociaux de Montréal (CSSM). Mayer-Renaud undertook a series of studies that used factorial analysis to examine the spatial distribution of both wealth and poverty on the Islands of Montréal and Laval from 1976 to 1996 using census data. Overall, the methodology for these four studies is much more consistent than for the CGTSIM studies mentioned above, because

1 Before 1999, this same mandate was carried out by its predecessor organization, the Conseil Scolaire de l'Île de Montréal (CSIM). Overall, the CGTSIM studies use Unités de planification scolaire or UPS (school planning districts) for their analysis, whereas the CSSM Mayer-Renaud studies use census tracts for their analysis. However, the first CSIM (1974) report used census tracts and the most recent CGTSIM (2008) report used Dissemination Areas rather than UPS. A UPS roughly corresponds to a census tract, though in some cases census tracts that cover a large geographic area are subdivided into several UPSs. For more information, see Appendix B.

Figure 1: City of Montréal, 2006, Boroughs (Arrondissements)



Source: Rose and Twigge-Molecey 2013.

Source: Rose and Twigge-Molecey 2013.



the same principal researcher undertook all four studies (for more information on the methodology, see Appendix B). The socioeconomic status for each census tract is defined in terms of five levels – high, medium-high, medium, medium-low, and low. In the last study (1996), the scale of analysis is extended to include the entire Montréal CMA (rather than just the Islands of Montréal and Laval), the Québec CMA, and other cities in Quebec.

The key findings of these two sets of longitudinal studies will be compared with other research that examines the spatial patterning of wealth and poverty in particular census years for the Montréal CMA or areas within it, to create as complete a portrait as possible of existing knowledge on the subject.

2.1 The 1970s: The inverse “T” and the east/west divide

During the 1970s, the most significant spatial concentration of poverty on the Island of Montréal was described as an inverse “T” concentrated along Boulevard St-Laurent (its north-south axis), the historic immigrant corridor often referred to as “the Main,” and to the south of rue Sherbrooke (the east-west axis), where Montréal’s oldest working-class neighbourhoods are located (CSIM 1993, 17) (see Figure 3). There were also dispersed zones of poverty farther to the east and west, in the southern part of the City of Lachine, in Côte-des-Neiges, and in the northern part of Ville Saint-Laurent (Mayer-Renaud 1980, 61) (refer to Figure 4).

At this time, wealth was concentrated the most noticeably in the western portion of the Island (CSIM 1993, 17). Avenue du Parc is the historic dividing line between the east (generally impoverished) and west (generally affluent) neighbourhoods. High-status municipalities include Pointe-Claire, Dollard-des-Ormeaux, Dorval, Côte St.-Luc, Montréal-Ouest, Westmount,² and Ville Mont-Royal. Areas with a mix of medium-high status and high status are found in Hampstead, the north of the city of Lachine, and the southern portion of Ville Saint-Laurent (Mayer-Renaud 1980, 61). There are some impoverished zones in the western half of the Island, however, such as (1) neighbourhoods adjacent to the Lachine Canal; (2) the Côte-des-Neiges neighbourhood; and (3) the northern part of Ville Saint-Laurent and on Île-Bizard (Mayer-Renaud 1980, 61) (see Figure 4).

While not a study of wealth and poverty per se, the detailed analysis of gentrification undertaken by Walks and Maaranen (2008) helps us understand and interpret change in areas of Montréal that have become less poor over time. According to their analysis, gentrification began as early as the 1961–1971 period in Montréal in areas adjacent to existing middle and upper-income districts (such as Lower Westmount, Outremont, and Old Montréal) and a few census tracts within the Plateau-Mont-Royal. At this time, these areas were in a state of “complete” gentrification, that is, average personal incomes were above the CMA average (Walks and Maaranen 2008, 27). Between 1971 and 1981, gentrification spread in areas abutting environmental amenities such as Mont Royal, Carré St-Louis, and Parc LaFontaine, with many census tracts in the Plateau and Lower NDG already in a stage of “incomplete” gentrification.³ Moreo-

2 Except for one CT with medium status adjacent to Saint-Henri (a working-class neighbourhood).

3 “Incomplete” gentrification, as defined by these authors, is found in areas in the process of gentrifying but where average personal incomes are still below the CMA average.

ver, by this time “complete” gentrification was observable in some parts of the Plateau, northern Outremont, and in parts of Little Burgundy.

On the Island of Laval, the spatial distribution of census tracts according to their socioeconomic status is more heterogeneous and harder to describe (see Figure 4). However, a pattern can be discerned in relation to the placement of the former municipalities that were merged to form the City of Laval. Affluent areas are located to the west of the City of Laval in the old municipality of Laval-sur-le-Lac and most of the length of the Rivière-des-Prairies in the south, as well as in the former municipalities of Chomedey and Duvernay-Ouest (Mayer-Renaud 1980, 60). The most impoverished area is located in the north of the City of Laval, in the former municipality of Sainte-Rose. Impoverished census tracts (those with medium-low status) are also located in the former municipalities of Laval-Ouest in the northwest, Pont-Viau, and Laval-des-Rapides in the south, and Saint-François in the east. Census tracts with a medium status or slightly above-average status are in the former municipalities of Sainte-Dorothée and Fabreville in the west, in Vimont and d’Auteuil in the north, and Saint-Vincent-de-Paul and Duvernay-Est in the south-east (Mayer-Renaud 1980, 60). In general terms, the most affluent census tracts are found beside Rivière-des-Prairies and the most impoverished sectors are found beside Rivière-des-Mille-Îles (Mayer-Renaud 1980, 62).

2.2 1980s to early 1990s: From the inverse “T” towards the “S”

In the 1980s, the inverse “T” pattern is still evident, with some outliers. Impoverished zones are located mainly in inner-city working-class neighbourhoods such as Little Burgundy, Griffintown, Centre-Sud, Hochelaga, Plateau-Mont-Royal, Petite-Patrie, Saint-Henri, Pointe-Saint-Charles, and parts of Verdun. However, dispersed impoverished zones are growing in inner suburbs where modest postwar rental housing predominates, such as Côte-des-Neiges and what is now the borough of Villeray-Saint-Michel-Parc-Extension as well as in parts of Ville Saint-Laurent, Montréal-Nord, Saint-Léonard, LaSalle, and Lachine (CSIM 1984, Mayer-Renaud 1986, 66) (see Figures 5 and 6). Further, in the extreme east of the Island, some sectors are medium-low status, separated from areas of concentrated poverty by sectors that are more well-off, located in Rivière-des-Prairies and Pointe-aux-Trembles (Mayer-Renaud 1986, 67).

There are also islands of wealth in otherwise impoverished areas. For example, in the east end of the Island there are a few medium-high- and high-status sectors, although the majority of sectors surrounding them have low, medium-low, or medium status (Mayer-Renaud 1986, 69). Similarly, sectors with medium-high status are found in Pointe-aux-Trembles, Rosemont, and Montréal-Nord (Mayer-Renaud 1986, 70). Further, Île-des-Sœurs [Nun’s Island] is a high-status sector within the City of Verdun, whose adjacent mainland sectors are of medium-low status (Mayer-Renaud 1986, 70). Once again, from Avenue du Parc eastwards, census tracts are generally impoverished (low or medium-low status), occasionally medium status, and in exceptional cases high status (medium-high or high). To the west, however, the opposite phenomenon is observed with census tracts of high and medium-high status, and only in exceptional cases low and medium-low status (Mayer-Renaud 1986, 63) (refer to Figure 6).

The Island of Laval is generally well off (medium-high), but does include four census tracts with medium-low status, located in south-central Chomedey, bordering Boulevard des Laurentides, and in Laval-Est (Mayer-Renaud 1986, 65-68) (see Figure 6).

Following Carlos and Polèse (1978)⁴, Mayer-Renaud (1986) concludes that populations of adjacent socioeconomic strata tend to live in the same sectors, but that people of significantly different (non-adjacent) strata tend not to live in the same sectors (Mayer-Renaud 1986, 107). Therefore, social proximity translates into spatial proximity, and social distance into spatial distance (Mayer-Renaud 1986, 108). As of 1981, the same patterns visible in earlier analyses were evident in terms of: (1) the differences already documented previously between the generally impoverished east and the generally affluent western portion of the Island; and (2) the continuing visibility of the inverse “T” pattern of impoverished zones.

This finding, however, does not imply that the socio-spatial patterning of Metropolitan Montréal is static. On the contrary, over the past 10 years some areas have become increasingly well off, while others have become impoverished or have experienced contradictory tendencies (Mayer-Renaud 1986, 108). The Montréal region (which Mayer-Renaud defines as the Island of Montréal and Laval, thus excluding the North and South Shores) distinguishes itself from other urban regions in Québec by having a high contrast between rich areas and poor areas and by having fewer middle-class areas (Mayer-Renaud 1986, 108).

Analysis of the 1986 census reveals that the inverse “T” is still a good overall descriptor, but also highlights the continuing consolidation of poverty in more peripheral areas of modest post-war rental housing in Côte-des-Neiges, southwestern Notre-Dame-de-Grâce (widely known as NDG), Lachine, and Saint-Léonard (CSIM, 1989; Mayer-Renaud 1989, 23) (see Figures 7 and 8). This extension of impoverished zones to more peripheral areas is described in the CSIM literature as a mutation from an inverse “T” towards an “S” shape. The “S” starts in the north of the Island, at the eastern limit of Montréal-Nord, and extends west between the district of Rivière-des-Prairies and the northern limit of Saint-Léonard. It then descends towards the south of the Island between rue Papineau and the western limits of Saint-Léonard to Jarry and then extends and encompasses a larger area between Boulevard Pie IX in the east and the boundary line between the Town of Mont-Royal (TMR) and Parc-Extension⁵ in the west, and descends the length of Avenue du Parc all the way to rue Sherbrooke (Mayer-Renaud 1989, 23). South of rue Sherbrooke, the band of concentrated poverty extends to the east to the Canadian Pacific railway tracks, but above all to the southwest, including Pointe-Saint-Charles and sections of Verdun, Saint-Henri, the west of Chemin de la Côte-des-Neiges and south of the Canadian

4 Carlos and Polèse (1978) conducted a factorial analysis to measure socioeconomic status based on 1971 census data, which ultimately showed that citizens with the same socioeconomic characteristics cluster in the same place of residence and that a geographic distance establishes itself between citizens of different levels of economic status, with certain levels more at a distance than others.

5 TMR was a planned garden suburb aimed at the wealthy, whereas Parc-Extension was a lower-middle class suburb that became increasingly working-class and impoverished from the 1970s on with the construction of low-quality apartment blocks and the arrival of low-income immigrants. In the late 1950s the municipality erected a fence, in the form of a tall hedge, separating its eastern boundary, Selwood Road, from boulevard l'Acadie that adjoins it on the Montréal side, when the latter was widened to accommodate arterial traffic flows. The fence soon became a powerful symbol of one of Montréal's sharpest socioeconomic gradients.

National railway line to the river, where it then turns north into Ville Saint-Pierre and Lachine (Mayer-Renaud 1989, 23).

Impoverished sectors are still located mainly east of Avenue du Parc and south of rue St-Antoine in the southwest, while well-off areas are found in the west of the Island of Montréal. Laval, while not as wealthy as the western portion of the Island of Montréal, is still generally above the average (Mayer-Renaud 1989, 45) (see Figure 8). As noted earlier, despite these general patterns, there are islands of poverty in the western half of the Island and in Laval, as well as islands of wealth in the east. The Montréal area is thus a complex mosaic. Between 1981 and 1986, zones that became wealthier include the Old Port and a zone in Mile End south of Boulevard St-Joseph between Boulevards St-Laurent and St-Denis, the site of luxury housing development. Zones that became poorer during the same period include a zone west of rue St-Hubert in Ahuntsic bordering the Metropolitan Autoroute and another in the southwest of the Chomedey district in Laval (Mayer-Renaud 1989, 45).

2.2.1 Persistent concentrations of poverty in 1991

In 1991, almost all of the CMA's census tracts with low socioeconomic status are on the Island of Montréal, as are the large majority of those with medium-low socioeconomic status (Renaud et al. 1996, 86). Overall, on the Island of Montréal the traditional delimitation between the east and west in terms of socioeconomic status persists in 1991, with high and medium-high status areas predominantly in the west, and low and medium-low status areas predominantly in the east of the Island (Renaud et al. 1996, 87) (see Figure 9).

The 1991 census shows continuation of the progressive mutation of the inverse "T" towards an elongated "S" that now extends from the north of the Island, starting in the eastern portion of Montréal-Nord and the western portion of Saint-Léonard and advancing south through the southwest of Montréal all the way to Lachine (CSIM 1993, 18) (see Figure 10). During this period, areas of poverty are getting larger and new zones of poverty are appearing in more far-flung parts of the Island. Simultaneously, gentrification is under way in Plateau-Mont-Royal, the north and eastern parts of Outremont, and certain parts of the Sud-Ouest around the Lachine Canal (CSIM 1993, 21; Ley 1996, 101).

Renaud et al. (1996), however, distinguish three different groupings of impoverished census tracts on the Island of Montréal, rather than referring to a mutation from "T" to "S" pattern. These zones are: (1) the north-south corridor (which corresponds roughly to the stem on the inverse "T"); (2) the east-west corridor (which corresponds roughly to the base of the inverse "T"); and (3) isolated islands of poverty outside these zones (see Figure 9).

In their analysis, the authors identify a north-south concentration of impoverished census tracts forming a swath through the Island, including parts of Montréal-Nord, Saint-Léonard, Saint-Michel, Parc-Extension, Rosemont-Petite-Patrie, and the Plateau-Mont-Royal (although this area is more mixed-income than the other neighbourhoods). The east-west corridor includes the City of Montréal-Est and the neighbourhoods of Hochelaga-Maisonneuve and Centre-Sud. At this point, the east-west corridor is interrupted by the well-off sectors of Old Montréal, which gentrified during this period (Renaud et al. 1996, 88; see also Ley 1996, 101). It continues, however, on the other side of rue Peel and includes the Saint-Henri, Côte-Saint-Paul, and Ville-

Émard neighbourhoods, as well as the eastern parts of Verdun and Pointe-Saint-Charles, before extending north into parts of LaSalle and Lachine (Renaud et al. 1996, 88; see also Séguin and Termote 1997, 145).

The three groupings of impoverished census tracts identified above correspond to what Ley and Smith (2000) found when they examined the relationship between urban deprivation and the immigrant population in Montréal. The largest incidence of census tracts experiencing some form of deprivation occurred in the deindustrialized zone northeast of downtown and along the St. Lawrence River (Hochelaga-Maisonneuve) and a further concentration in the southwest (the “city below the hill”).⁶ Smaller clusters of impoverished census tracts were also located in post-war suburbs, such as Côte-des-Neiges (Ley and Smith 2000, 47).

Importantly, there was not much evidence of immigration to the two deprived zones mentioned above (the northeast and southwest of downtown), since almost all census tracts in these areas had populations that were more than 85 percent native-born (Ley and Smith 2000, 53). The key conclusion reached is that extensive zones of deprivation in Montréal and their persistence over time seem to be primarily associated with the Canadian-born rather than with the immigrant population (Ley and Smith 2000, 60).

According to the 1991 census, more peripheral neighbourhoods such as Pointe-aux-Trembles, Rivière-des-Prairies, Mercier, Cartierville, Ahuntsic, and Notre-Dame-de-Grâce all present more average-intermediate profiles (Séguin and Termote 1997; Séguin 1998).

At the census tract level, 18 percent of census tracts contain more than 40 percent low-income people and 5 percent of census tracts contain more than 50 percent low-income people. The census tracts with a strong concentration of low-income people are overwhelmingly in the City of Montréal, and only 15 census tracts in this category are situated outside it, in Verdun, LaSalle, Montréal-Nord, Lachine, and Saint-Laurent (Séguin 1998, 226).⁷ Within the City of Montréal, certain neighbourhoods are distinguished by their poverty, including Côte-des-Neiges, Parc-Extension, Centre-Sud, Saint-Michel, Little Burgundy, and Hochelaga-Maisonneuve. Further, rich zones sometimes occur alongside impoverished areas, for example, Town of Mont-Royal, which is adjacent to poor areas, including Côte-des-Neiges and Parc-Extension (Séguin 1998, 228).

In terms of the sociodemographic characteristics of residents of the poorest zones in 1991, impoverished zones were, above all, characterized by a strong presence of adults with a low level of education (i.e., fewer than nine years). Further, such zones have high unemployment rates; a high rate of non-participation in the labour force among both men and women 25 years and older; a high proportion of youth 15–24 not attending school; an elevated proportion of non-standard⁸ male employment; and last, an elevated proportion of single-person households or

6 The “city below the hill” refers to the historic working-class neighbourhoods south of Montréal’s early elite enclaves on the flanks of the mountain (Mont Royal), including Griffintown, Little Burgundy, and Saint-Henri. Herbert Ames (1897) coined the term with his sociological investigation of housing conditions in the district.

7 All of these inner suburbs would eventually be merged into the City limits during the municipal reorganization in the early 2000s.

8 Non-standard employment includes four types of employment: “part-time employment; temporary employment, including term or contract, seasonal, casual, temporary agency, and all other jobs with a specific predetermined

female-headed single-parent families (Séguin and Termote 1997, 146). Séguin (1998) adds that some such areas have higher proportions of immigrants and especially new immigrants, compared with the metropolitan area as a whole (Séguin 1998, 229).

2.2.2 Places that are no longer impoverished in 1991

Gentrification is observable between 1986 and 1991 in the Plateau-Mont-Royal (notably in the north and east, and in the areas surrounding Carré St-Louis), in Mile End, the northern sections of Centre-Ville, and even in part of Pointe-Saint-Charles. These areas also underwent the effects of gentrification in variable ways during this period (CSIM, 1993, 47). For example, a number of areas became less impoverished between 1986 and 1991, including some school planning districts in Mile End and the Plateau, which had been among the most impoverished zones in 1986, and were no longer in this category in 1991. A similar shift was observed in the other gentrifying areas. By 1991, aside from Chinatown, the former immigrant corridor (the length of Boulevard St-Laurent) no longer had any census tracts with more than 45 percent immigrant population. The gentrification of the Plateau-Mont-Royal district had removed much of the area from its original low-income residents (Ley and Smith 2000, 53). However, in these same neighbourhoods, many sectors remain impoverished, despite a certain degree of gentrification.

Other areas that were no longer impoverished in 1991 are spread throughout the urban region, in certain parts of Longue-Pointe and Tetreaultville in the city's east end, Montréal-Nord, Rosemont, and Ville Saint-Laurent (CSIM 1993, 47).

2.2.3 New concentrations of poverty in 1991

Those displaced by gentrification, as well as new immigrants, gravitate to neighbourhoods where rents are still affordable (usually where there is old non-renovated housing stock or subsidized housing) (CSIM 1993, 48). The principal places where these migrations created new zones of poverty in 1991 are (1) within Montréal in Saint-Michel, Rosemont, Côte-des-Neiges,⁹ Hochelaga, and, to a lesser extent, Maisonneuve in the east, and Bordeaux-Cartierville in the NW and (2) outside of the City of Montréal, above all in Ville Saint-Laurent (notably in the Chameran district adjacent to Autoroute 15¹⁰) and in Saint-Léonard (CSIM 1993, 48) (see Figure 10). Census tracts with more than 45 percent immigrant population were limited to districts west and northwest of downtown, in Côte-des-Neiges, Parc-Extension, and adjacent districts. Parts of these areas experienced multiple forms of deprivation (Ley and Smith 2000).

end date; own-account self-employment (a self-employed person with no paid employees); and multiple jobholding (two or more concurrent jobs) (Krahn 1995)."

9 In particular, in the northwest part of Côte-des-Neiges (between Boulevard Décarie and Avenue Darlington, north of Côte-Saint-Catherine and south of the railway tracks), there is now a small group of census tracts of low and medium-low status (Mayer-Renaud et al. 1996, 89).

10 More specifically there are two low-status sectors in a quadrilateral formed by Boulevard Saint-Germain, Boulevard Laurentien, and Poirier and Rochon Roads; and an additional sector in the north (Mayer-Renaud et al. 1996, 89).

2.2.4 Zones of wealth

In terms of the distribution of wealth, Renaud et al. (1996), distinguish between clusters of wealthy census tracts and islands of wealth in otherwise impoverished zones (Renaud et al. 1996, 87).

There are two main zones of wealth in the western portion of the Island (see Figure 9). The first extends from Chemin Selwood/Avenue du Parc/rue de Bleury westward to Ville Saint-Laurent (delimited by Boulevard Laurentien and Boulevard Cavendish). This group of census tracts is somewhat heterogeneous. While most areas within it are high status, some census tracts have medium-high or medium status. High-status areas with some heterogeneity include the municipalities of Outremont, Westmount, the western portion of the downtown core, Mont-Royal, Hampstead, Côte-Saint-Luc, Montréal-Ouest, and, to the south, Île-des-Sœurs (Renaud et al. 1996, 89).

The second group extends west from Ville Saint-Laurent and is more homogeneous, with almost exclusively zones of high and medium-high socioeconomic status including the western part of Ville Saint-Laurent and the West Island municipalities of Dorval, Dollard-des-Ormeaux, Roxboro, Pointe-Claire, Kirkland, Pierrefonds, Beaconsfield, Baie d'Urfé, Sainte-Anne-de-Bellevue, Senneville, and Saint-Raphaël-de-l'Île Bizard (Renaud et al. 1996, 89). There were two census tracts of medium status in the otherwise fairly homogeneous high and medium-high status area, in Pierrefonds and in Sainte-Anne-de-Bellevue.

As well, some small pockets of wealth appear in the otherwise impoverished East Island, for example, the Cité-Jardin, in the section of Rosemont delimited by Viau and Lacordaire between rue Sherbrooke and Boulevard Rosemont. Further, at the eastern extremity of the Island are two high-status sectors along the waterfront as well as a few sectors with medium-high status in Anjou and Saint-Léonard (although most census tracts in these two areas were medium or medium-low status at this time). Third, areas of medium-high status are found along the south-east extremity of the Island, the length of Rivière-des-Prairies to the east of Boulevard Bombardier, north of rue Sherbrooke, and west of rue Duquesne (Renaud et al. 1996, 89).

2.2.5 A brief glance at the CMA in 1991

The Renaud et al. (1996) study differs from her earlier work in that the scale of previous analyses was the Islands of Montréal and Laval, while this work extends the scale of analysis to explore the spatial distribution of wealth and poverty (among other things) for the Montréal CMA compared with the Québec CMA. The information pertaining to the Montréal CMA will be addressed here. This brief snapshot of 1991 is the only point within these two series of reports for which data is provided that examines wealth and poverty at the scale of the CMA. This information will be complemented by that of Séguin and Termote (1997) and Séguin (1998), which examine changes at the CMA level for the same census year.

In 1991, at the CMA level, the sectors with medium-low or low socioeconomic status are mostly concentrated on the Island of Montréal (Renaud et al. 1996, 83). In 1991 poverty is not evenly distributed over metropolitan space. At the scale of large zones, a particular partitioning of space is observable.

Generally speaking, parts of the City of Montréal¹¹ and Communauté urbaine de Montréal – Est (CUM-Est)¹² and to a lesser degree Longueuil, were qualified as the most impoverished zones (Séguin and Termote 1997; Séguin 1998). Conversely, the Communauté urbaine de Montréal – Ouest (CUM-Ouest)¹³ and to a lesser degree the rest of the South Shore (excluding Longueuil) are characterized as more well off (Séguin and Termote 1997, 145; Séguin 1998, 225).

Overall, Laval and the North Shore share a more medium-status profile. There are however, some small pockets of poverty off-Island (see Figure 9). In Laval, only two census tracts have low socioeconomic status, those located along Boulevard Laurentien in the Chomedey neighbourhood. There are however, six census tracts with medium-low status: one in Laval-Ouest; two in the centre-west close to Boulevard Curé-Labelle; and three others in the south of the Island in Laval-des-Rapides (Renaud et al. 1996, 86).

On the South Shore are pockets of poverty in Longueuil, including the area situated to the south of Île Sainte-Hélène (immediately to the west of the exit for the Jacques Cartier Bridge), and in the interior of the city (Renaud et al. 1996, 84).

On the North Shore are three census tracts with low socioeconomic status: two in the centre of the city of Sainte-Thérèse and one at the southwest extremity of Pointe-Calumet. Additionally, medium-low status sectors are found in the northeast in La Plaine and Terrebonne, in the northwest in the municipality of Mirabel, and in the south in the interior of Sainte-Marthe-sur-le-Lac, Saint-Eustache, and Terrebonne (Renaud et al. 1996, 85).

An important caveat, however, is at this scale no zone is without a low-income population (Séguin 1998, 225). Even within large well-off zones (such as CUM-Ouest which included 13 pre-merger municipalities in the western part of the Island) there are impoverished census tracts, including certain parts of Saint-Laurent, a sector within Lachine, and numerous sectors within Verdun. Overall, on the east side of the Island of Montréal, incomes are more modest. Also noteworthy are zones that stand out because of their more marked poverty, for example, certain parts of Montréal-Nord and to a lesser degree the City of Montréal-Est.

2.3 1996: The enlarged “S”

By 1996, the “S” pattern previously identified on the Island had extended, and poverty gained ground in the City of Montréal with new concentrations appearing in Côte-des-Neiges and Carrierville (an inner suburb in the northwest of the City of Montréal), as well as in Saint-Laurent and Lachine (CSIM 1999, 19) (see Figure 11). Areas where 30 percent or more families have low incomes are concentrated in Montréal's former industrial neighbourhoods including

11 Within the City of Montréal, Saint-Michel, Parc-Extension, Côte-des-Neiges, Centre-Sud, Villeray, Hochelaga-Maisonneuve, Plateau-Mont-Royal, and the South-Ouest Borough were characterized as poor or mostly poor (Séguin and Termote 1997, 145).

12 CUM-Est included the following pre-merger municipalities in the eastern part of the Island: Montréal-Est, Anjou, Saint-Leonard, and Montréal-Nord.

13 CUM-Ouest included the following pre-merger municipalities in the western part of the Island: Outremont, Westmount, Town of Mont-Royal, Hampstead, Verdun, LaSalle, Montréal-Ouest, Lachine, Ville Saint-Laurent, Dorval, Pointe-Claire, Dollard-des-Ormeaux, Roxboro, Pierrefonds, Kirkland, Beaconsfield, Île-Bizard, Sainte-Geneviève, Senneville, Sainte-Anne-de-Bellevue, and Baie d'Urfé.

Hochelaga-Maisonneuve, Centre-Sud, Little-Burgundy, Pointe-Saint-Charles, Saint-Henri, and Côte-Saint-Paul, as well as in parts of Mile End, Plateau-Mont-Royal, Villeray, and Petite-Patrie. However, there are also significant concentrations of poverty in neighbourhoods with modest-income postwar rental housing such as Côte-des-Neiges, Parc-Extension, and Saint-Michel. Further, a significant decrease in the proportion of low-income families living in the Plateau-Mont-Royal is due to gentrification, although there is still considerable social mix in the borough (CSIM 1999, 22). Outside the City of Montréal, Montréal-Nord is the only area that has a significant number of impoverished census tracts, but increasing numbers of poor sectors are emerging in Ville Saint-Laurent, Lachine, LaSalle, and Saint-Léonard (CSIM 1999, 23).

A significant shift occurred between 1991 and 1996 in zones of concentrated poverty. According to the CSIM studies, by 1996 a number of areas (UPS) were no longer classed among the most impoverished school district zones, as they had been in 1991. However, no longer being among the *most* impoverished school districts does not necessarily imply that they became more affluent. For example, five sectors were removed from the most impoverished category, even though they had a higher score on the index of impoverishment in 1996 than they had in 1991.¹⁴ Several others were no longer listed in the *most* impoverished category in 1996, although their index score was only marginally lower than in 1991, including parts of Côte-Saint-Luc, the eastern tip and southern central part of the Plateau, parts of Rosemont, and part of Saint-Michel. This was the case because poverty was deepening elsewhere, changing the threshold for the most impoverished category (see below). However, other areas no longer in the most impoverished category became more affluent, such as the heart of Mile End, which was already experiencing gentrification. Other sectors that left the most impoverished category were the Gay Village in Centre-Sud, Hochelaga-Maisonneuve, and the downtown core (CSIM 1999, 34).

However, in 1996 numerous new areas (school districts) in the most impoverished category were often situated adjacent to areas that were already among the most impoverished in 1991, such as in Côte-des-Neiges and in Ville Saint-Laurent (adding to already established core areas of new immigrant settlement), as well as in Verdun. This suggests a spatial expansion of impoverished pockets. New sectors of poverty appeared in Cartierville (an important area of immigrant settlement), and in Saint-Henri (due to an increase in single-parent families), as well as in parts of Saint-Michel, Saint-Léonard, Rosemont, and Nouveau Rosemont (CSIM 1999, 35). While some of these sectors were already relatively poor in 1991 (that is, close to the dividing line), others underwent a marked impoverishment between 1991 and 1996, notably in Saint-Henri, Verdun, Nouveau Rosemont, Ville Saint-Laurent, Cartierville, and Saint-Michel (CSIM 1999, 35).

Additionally, school districts that were close to the demarcation line in 1991 crossed over in 1996, but unlike those in the previous group, they are not adjacent to school districts already classified as impoverished in 1991. These new areas of concentrated poverty were located in Mile End (from rue Waverly Ouest to Avenue du Parc between rue Bernard and Boulevard St-

14 These five sectors included part of Mile End between Boulevards Saint-Denis and Saint-Laurent, south of Boulevard Saint-Joseph, part of the McGill Ghetto in Plateau-Mont-Royal, as well as parts of Rosemont, Nouveau-Rosemont, and Montréal-Nord.

Joseph)¹⁵, Mercier-Est, and Ahuntsic (CSIM 1999, 35). Further, there is an area in Pointe-aux-Trembles, in Lachine, and in the downtown area (CSIM 1999, 35).

2.4 2001: From “S” to leopard print?

The general theme that guides the overall trends observed from 1996 and 2001 is that socio-economic space in Montréal is characterized by ethnocultural and socioeconomic mix (CGTSIM 2003, 27). When analyzed according to the evolution of median income between 1996 and 2001, the number of well-off sectors on the Island has increased or at least spread out. Wealth is still concentrated in the West Island, Westmount, Hampstead, Montréal-Ouest, Town of Mont-Royal, Upper Outremont, Nun’s Island, and Old Montréal, as well as in the west of Ville Saint-Laurent. However, concentrations of wealth have spread in some eastern portions of the Island, for instance in parts of Rivière-des-Prairies and Pointe-aux-Trembles (see Figure 12). In 2001, it is also in these areas that we find an elevated proportion of people with university degrees (CGTSIM 2003, 23).

The clear improvement in many areas leads the CGTSIM researchers to question whether the “S” of poverty previously identified is transforming into a leopard print pattern. In areas such as Rosemont-Petite-Patrie, Villeray, Côte-des-Neiges, Hochelaga-Maisonneuve, Centre-Sud, and particularly the Plateau-Mont-Royal, there has been a notable shrinking of concentrations of poverty over the 1996–2001 period (CGTSIM 2003, 24). In some areas, however, such as Montréal-Nord, concentrations of poverty have expanded (CGTSIM 2003, 41). Further, in many cases there is a correlation between zones of concentrated poverty and zones in which there is an elevated rate of low-income families, as in Parc-Extension or certain parts of Côte-des-Neiges (CGTSIM 2003, 24). By way of contrast, however, in parts of the Island there are relatively high absolute numbers of low-income families, but they live near families that are better off and are thus not as concentrated (CGTSIM 2003, 24). The highest concentrations of poverty remain in areas with high concentrations of municipal public housing (including the eastern fringe of downtown, which includes the large Habitations Jeanne-Mance public housing complex, parts of Little Burgundy and Lachine, Saint-Henri, Centre-Sud, and Hochelaga-Maisonneuve, although such areas also include more well-off sectors), as well as in Côte-des-Neiges, Parc-Extension, Saint-Michel, Montréal-Nord, which are all characterized by high concentrations of low-income immigrant families.

Compared with concentrations of poverty elsewhere in North America, Montréal’s impoverished neighbourhoods are unusual in a number of ways. First, in Montréal, community resources (such as community organizations) are more abundant in impoverished neighbourhoods compared with more privileged neighbourhoods (Centraide et al. 2007, 50). Second, the social fabric is more mixed at a fine spatial scale than in the case of impoverished U.S. neighbourhoods and spread throughout the metropolitan area. Third, impoverished areas are not stable over time; many places that were poor in 1971 were no longer poor in 2001 (Centraide et al. 2007, 51). For example, in 1986, the low-income population was strongly concentrated in neighbour-

15 Although the wider Mile End neighbourhood was experiencing gentrification over this period, this particular sector includes the city blocks in which the concentration of Hasidic Jewish families with large numbers of children is increasing at this time; many of these families have low incomes.

hoods located around the downtown area. Over time, a shift took place as the neighbourhoods with concentrations of poverty in the central city were farther from the central business district but were also found in zones on the periphery (Ades, Apparicio, and Seguin, 2012).

Heisz and MacLeod (2004) identify two distinct areas where census tracts (a surrogate for “neighbourhoods” in their study) changed from “in low income”¹⁶ in 1980 to “not in low income” in 2000: (1) the east–west corridor of neighbourhoods adjacent to Boulevard Saint-Denis and Boulevard St-Laurent, including parts of Old Montréal, Centre-Sud (particularly the Gay Village), the Plateau, Mile End, and Little Italy; and (2) a large group of neighbourhoods, including parts of Griffintown and Little Burgundy adjacent to the Lachine Canal, because of gentrification (Heisz and McLeod 2004, 56).

Gentrification processes continued during the 1981–1991 period, extending to a large part of Plateau-Mont-Royal Borough, and spilling over into parts of Rosemont and the Little Italy sector of Petite-Patrie, as well as parts of Centre-Sud, and a growing swath of the old industrial district to the southwest of downtown: Griffintown, Little Burgundy (along the Lachine Canal), and the northern portion of Saint-Henri (Westmount adjacent) (Walks and Maaranen 2008, 27). Overall, however, between 1980 and 2000, the percentage of census tracts in Montréal with low-income rates greater than 40 percent increased slightly from 13.1 percent in 1980 to 14.2 percent in 2000 (Heisz and McLeod 2004, 85).

2.4.1 Persistent concentrations of poverty in 2001

Concentrations of poverty persisted on the Island of Montréal between 1996 and 2001 in:

- the southwestern part of the Island of Montréal (corresponding to the South-West and Verdun Boroughs);
- the north part of the Ville-Marie Borough;
- the south part of the Mercier-Hochelaga-Maisonneuve Borough and parts of Centre-Sud, known to have a high student population as well as traditional poverty indicators such as high levels of lone parents and unemployment;
- the entire Borough of Villeray-Saint-Michel-Parc-Extension;
- the Côte-des-Neiges neighbourhood;
- the centre of the Ahuntsic-Cartierville Borough;
- the Petite-Patrie neighbourhood;
- the northern part of the Montréal-Nord Borough;
- the northern part of the Lachine Borough;
- the northeast part of the Saint-Laurent Borough (CTGSIM 2003, 41; Heisz and McLeod 2004, 54).

However, while only the north part of Montréal-Nord was impoverished in 1996 and 2001, this borough has seen a spreading of poverty, with a new concentration of impoverished families at the centre of its territory (CGTSIM 2003, 41).

16 “In low-income” refers in this study to sectors where 30 percent or more of residents have low incomes (Heisz and MacLeod 2004).

Khun et al. (2008)¹⁷ created indexes of poverty to assess material deprivation and social deprivation separately, as well as to explore where both types of deprivation coincide. Overall, within the Région socio-sanitaire de Montréal (Montréal Health District) the most *materially*¹⁸ impoverished conditions occur in the east of the Island and the southwest. When examined strictly in terms of material poverty, the territories covered by the CSSS (Centres de santé et de services sociaux, or Health and Social Service Centres) Saint Léonard and Saint-Michel stand out with 64 percent of population experiencing material deprivation, while in those of CSSS Ahuntsic and Montréal-Nord, CSSS de la Montagne (including parts of Côte-des-Neiges and Plamondon), and CSSS Pointe-de-l'Île, approximately 30 percent of the population are experiencing material impoverishment.

Within the Région socio-sanitaire de Montréal (RSS), areas with the most profound *social deprivation* are found in the central and southwest parts of the Island (Khun et al. 2008, 8). The most disadvantaged areas in terms of social impoverishment are CSSS Lucille-Teasdale (37 percent of its population), Jeanne-Mance (51 percent), and Sud-Ouest-Verdun (22 percent) (Khun et al. 2008,10).

When the spatial distribution of those who score highly on both indices of deprivation is examined, half of the most impoverished members of the Montréal population are concentrated in three of the CSSS catchment areas¹⁹: CSSS Lucille-Teasdale, which includes Hochelaga-Maisonneuve and Rosemont (17 percent), CSSS Sud-Ouest-Verdun, which includes Little Burgundy, Saint-Henri, Cote St-Paul, Verdun, Pointe-St-Charles, and Ville-Émard (16 percent), and CSSS Ahuntsic-Montréal-Nord (14 percent). Within these territories, the proportion of residents experiencing both social and material deprivation oscillates between 27 percent and 40 percent, compared with 17 percent for Montréal overall (Khun et al. 2008, 10).

Apparicio, Séguin, and Leloup (2007) use a different approach to explore spaces of poverty on the Island of Montréal, hypothesizing that poor neighbourhoods are heterogeneous, in other words, impoverished areas have various socioeconomic and demographic profiles. Their approach is based on exploring the particular characteristics of poor people in space rather than just the spatial geography of poor neighbourhoods, with the underlying goal of targeting specific interventions in particular neighbourhoods more effectively to address particular needs (Apparicio et al. 2007, 415). To explore local geographies of poverty on the Island of Montréal, they use a geographically weighted regression (GWR) model to examine the spatial distribution of poverty and explore variation in local geographies of poverty (Apparicio et al. 2007, 414).

17 This study completed by the Direction du Santé Publique uses 2001 census data to map poverty. Each Dissemination Area is given a score in terms of material deprivation and social deprivation. This information is aggregated into CSSS and CLSC catchment areas in the Region Socio-Sanitaire de Montréal (RSS) compared to the situation elsewhere in Québec (Khun et al. 2008, 4). The authors create an index of poverty composed of two primary dimensions: the material environment and the social environment. Please see Appendix B for more information.

18 The index of material deprivation comprises the following indicators: proportion of residents without a secondary school diploma; proportion of employed residents; average personal income (Khun et al. 2008, 4).

19 The index of social deprivation is composed of the following indicators: proportion of one-person households; proportion of people separated, divorced, or widowed; proportion of single-parent families. (Khun et al. 2008, 4).

Overall, they found that in 2001, classic factors leading to poverty were at work in the Montréal territory. In order of importance they are: unemployment, single parenthood, living in a one-person household, being a recent immigrant, atypical work, and non-attendance at school by youth aged 15 to 24 (Apparicio et al. 2007, 425). The indicators most often used to measure poverty (low education levels, high unemployment levels, high dependence on government transfers, and high rates of single-parent families) are not all present in all poor sectors in Montréal (Centraide 2007; see also Ley and Smith 2000; Apparicio et al. 2007).

There is, however, local variation in the factors associated with poverty. For example, the unemployment rate was particularly significant in explaining poverty in the centre of the Island of Montréal (Apparicio et al. 2007, 422). The variable “percentage of single-parent families” is even more significant in explaining local sources of variation than the unemployment rate. It was particularly significant in the central and southern parts of the Island, the length of the axis from Hochelaga-Maisonneuve in the east through to Verdun and Ville-Émard in the south-west, i.e., Montréal’s former working-class neighbourhoods (Apparicio et al. 2007, 423). In the central portion of the Island, living in a one-person household is particularly important in terms of explaining poverty. In the zone that extends the length of an axis from the northeast of Côte-des-Neiges to Mercier-Ouest in the east end, passing through the Plateau-Mont-Royal, the “atypical work” variable is particularly significant. However, recent immigrant status is very significant in explaining poverty in many sectors in the central portion of the Island along an axis that runs from Pierrefonds to Rivière-des-Prairies. Last, non-attendance at school is a significant factor in the central and southern portions of the Island (in a triangle with three points: Parc-Extension and the former municipalities of Verdun and LaSalle) (Apparicio et al. 2007, 424).

2.4.2 Spatial patterning of social and material privilege in 2001

Overall, Khun et al.’s (2008) analysis confirms trends already documented elsewhere; that is, areas in which residents experience both socially and materially favourable conditions are found predominantly in the west of the Island, with the exception of the southwest (Khun et al. 2008, 9). The CSSS L’Ouest de l’Île²⁰ distinguishes itself from the rest of Montréal, with the majority of its residents living in favourable conditions both socially and materially (62 percent of the total population of this CSSS and 37 percent Montréal-wide (Khun et al 2008, 10)).

In addition to these more affluent areas in the western portion of the Island, by 2001, “incomplete” gentrification continued to spread in areas of the inner-city core²¹ and was also observable in other more peripheral Montréal neighbourhoods including Vieux-Rosemont, Pointe-Saint-Charles, Villeray, and Hochelaga-Maisonneuve (Walks and Maaranen 2008, 27).

20 This CSSS includes most of the West Island: Kirkland, Pointe-Claire, Beaconsfield, Baie D’Urfé, Sainte-Anne-de-Bellevue, Île-Bizard, Pierrefonds, Roxboro, Cloverdale [a low-income neighbourhood within Pierrefonds], Dollard-des-Ormeaux, and Sainte-Geneviève.

21 Such as the Plateau-Mont-Royal Borough, parts of Centre-Sud, Rosemont, Griffintown, Little Burgundy (along the Lachine Canal), the northern portion of Saint-Henri (Westmount adjacent), and Little Italy.

2.5 The situation in 2006

Between 2001 and 2006, the percentage of low-income families in the Montréal CMA remained steady (31.3 percent and 31.1 percent, respectively) (CGTSIM 2008, 16). However, there has been significant change in the CGTSIM methodology since the report based on 2001 data was released, so caution is needed in interpreting the results. In particular, both the way of constructing the base map and the weighting of the indicators used in constructing the index have changed since the previous (2003) report (see Appendix B).²² Of particular note is the finer spatial scale of analysis in used in 2008, which is based on dissemination areas rather than on school districts, as it was in the previous analyses, allowing identification of concentrations of poverty as well as social mix at a more detailed spatial scale.

In 2006, when analysed at the scale of census tracts or neighbourhoods, some former industrial neighbourhoods (including Centre-Sud, Hochelaga-Maisonneuve, Little Burgundy, Pointe-St-Charles, and Saint-Henri) still have significant concentrations of poverty. However, concentrations of poverty are also found in neighbourhoods of modest-income postwar rental housing, such as Parc-Extension, St-Michel, and Montréal-Nord, some of which appear to be expanding (CGTSIM 2008, 22) (see Figure 13).²³ Concentrations of poverty are still firmly rooted in the former municipalities of Verdun and Lachine, which have also lost their old industrial base (Apparicio et al. 2008, 8). Many places indicate a social mix, in which micro-zones of wealth are found next to small underprivileged areas, for example in the Petite-Patrie (CGTSIM 2008, 25). Equally, some privileged blocks are found within largely underprivileged sectors (for example, in Saint-Henri along the Lachine Canal). However, recourse to a finer spatial scale (Dissemination Areas) for analysis allows identification of micro-pockets of poverty in Laval as well as on the North and South Shores (Apparicio et al. 2008, 17).

In 2006, within the Montréal CMA, peripheral zones of poverty include parts of the North and South Shores (in Sainte-Thérèse and Longueuil, respectively). Additionally, gentrification continues to gain momentum in Montréal's central neighbourhoods through the processes of displacement and gradual exclusion because of rising housing costs. As concentrations of poverty diminish in central neighbourhoods, they are increasing in more peripheral neighbourhoods (Ades, Apparicio, and Séguin 2012).

Further, when examining areas in which 40 percent or more of the population is low-income, Apparicio et al. (2008) found that in 2006 a substantial portion of low-income people do not live within areas of concentrated poverty: in the Montréal Metropolitan Region, 22.28 percent of low-income population live in macro-zones (municipalities) of poverty, 9.12 percent in meso-zones (census tracts), 13.15 percent in micro-zones (dissemination areas), whereas 55.45 percent live in areas with no poverty concentration. These results illustrate the importance of scale for identifying impoverished areas, and also have implications for research on social inequalities and area effects (Apparicio et al. 2008, 1).

22 "Although the current map was designed differently than the preceding version, it reveals a similar distribution of underprivilege on the Island of Montréal. It nevertheless differs from the earlier map in its more precise geographic divisions, making it possible to detect small underprivileged sectors and better distinguish the social mix" (CGTSIM 2008, 23).

23 For example, in the case of Montréal-Nord.

Moreover, in Montréal's impoverished areas (those in which 40 percent of residents are part of low-income families) residents do not tend to reside for long periods of time (see Frenette et al. 2004), as in the case of those that function as areas of reception and initial settlement of low-income immigrants.

In terms of the spatial distribution of visible minorities in Montréal, until recently they were dispersed exclusively in white-dominated neighbourhoods, increasing from 0 percent living in minority enclaves in 1991 to 1.7 percent in 2001 (Walks and Bourne 2006, 291).²⁴ As of 2006, most members of visible minorities are again living in white-dominated neighbourhoods with only 4 percent of the visible minority population living in minority enclaves (Hiebert 2009).²⁵ Hiebert (2009, 17) notes that “those who live in more concentrated residential environments face significant economic challenges” and points out that it is in Montréal, “the city where enclaves are the least developed, [that] living in enclave areas appears to be associated with the greatest economic penalty.” Areas in Montréal where there is an intersection between visible minority enclaves and poverty²⁶ include parts of Côte-des-Neiges, Little Burgundy, and Ville Saint-Laurent, as well as an isolated pocket in Ville-Marie east of downtown, where the large public housing complex Habitations Jeanne-Mance is located (Hiebert 2009, 42).

With regards to the relationship between immigrant status and poverty, Apparicio et al. (2008) and Ley and Smith (2000) have found that not all areas associated with extreme poverty in Montréal house a high proportion of immigrants. The low-income population in Montréal is very large and many areas with extreme poverty in Montréal are white (Hiebert 2009, 22; see also Ley and Smith 2000).

24 The neighbourhood typology utilized by Heibert (2009) was first used in a Canadian context by Walks and Bourne (2006), who used it to explore the distribution of visible minorities across the different neighbourhood types (among other things) in various Canadian CMAs, using 1991 and 2001 census data. This neighbourhood typology (found in Appendix B) is based upon the earlier work of Johnston et al. (2002, 2003), which explores ghetto formation in U.S. and English cities.

25 For a neighbourhood typology, see Appendix B.

26 Where a census tract below the low-income cut coincides with Neighbourhood Type 4 or 5, as outlined in the neighbourhood typology in Appendix B.

3. Summary and Major Explanatory Factors

In sum, there seems to be consensus between the two key sources that have examined the distribution of wealth and poverty on the Island of Montréal over time and the more sporadic, “one-off” studies, despite differences in methodology and in the exact indicators assessed from year to year. With deindustrialization, poverty has persisted in many traditional working-class neighbourhoods, including Hochelaga-Maisonneuve, Centre-Sud, Little-Burgundy, Saint-Henri, Pointe-Saint-Charles, and Côte-Saint-Paul, as well as in parts of the Plateau-Mont-Royal, Villeray, and Petite-Patrie. However, even within such neighbourhoods there is now a greater degree of social mix observable than when these areas suffered the brunt of deindustrialization during the 1990s. This increase in social mix is partly attributable to the effects of gentrification, and may or may not be transitory, depending, among other things, on the presence of social housing.

Areas that have become distinctly poorer over time include a ring of inner suburbs with modest-income postwar rental housing including parts of Côtés-des-Neiges, Montréal-Nord, Saint-Léonard, Lachine, Cartierville, Ville Saint-Laurent, and Lachine, as well as in Parc-Extension and Saint-Michel (CSIM 1989, 1999; CGTSIM 2003, 2008). Such areas also house large immigrant populations (Germain and Rose 2000, 239).

Areas that have become distinctly wealthier over time because of gentrification include a large portion of the Plateau-Mont-Royal, the north and eastern parts of Outremont, and parts of the Southwest Borough (particularly along the Lachine Canal) (CSIM 1993). Additionally, concentrations of poverty have shrunk most prominently in the Plateau-Mont-Royal, in sections of Rosemont-Petite-Patrie, and in Villeray, which seems to be associated with overspill gentrification from the Plateau Mont-Royal, as well as in the southwest inner suburb of Côte-Saint-Paul, and even in Hochelaga-Maisonneuve, one of the areas hardest hit by deindustrialization (CGTSIM 2003; Walks and Maaranen 2008).

The literature analysed here indicates that while poverty gained ground into the mid-1990s, since then there has been relative retreat or dilution of the impoverished zones associated with decline of traditional industries. However, we also see the emergence of a number of lower-income inner-suburban neighbourhoods with significant immigrant populations, notably to the northwest and northeast of the old urban core. The newly emerging lower-income zones are not, however, homogenous or fully contiguous. Indeed, the Island of Montréal is on the whole

increasingly characterized by socioeconomic mix at a micro scale. Finally, large areas of concentrated wealth are still located in the west of the Island.

We now turn to the major explanatory factors outlined in the literature for the changes and stability in the spatial patterning of poverty over the 1970–2006 time period. This section draws upon the explanations put forward in the reviewed literature (most of which is albeit essentially descriptive), supplemented by other sources where necessary.

3.1 Employment and labour force changes

In the 1970s, Montréal's economy was in a perilous position as the prominence of traditional manufacturing was coming to an end and the effects of deindustrialization were beginning to be felt. For example, in the southwest part of the City of Montreal (in the areas surrounding the Lachine Canal), more than 20,000 manufacturing jobs disappeared between the late 1960s and the late 1980s (Germain and Rose 2000, 147).

The recession of the late-1980s had a devastating effect on households. The decline of the traditional industries left its mark in terms of poverty indicators, especially in the old working-class neighbourhoods of the southwest and the east, including areas such as Pointe-Saint-Charles and Côte-Saint-Paul, the City of Verdun, Hochelaga-Maisonneuve, Tetreaultville, Pointe-aux-Trembles, and the City of Montréal Est (CSIM 1993, 19). This decline in areas touched by deindustrialization contrasts starkly with the growth of tertiary-sector employment, particularly in the downtown area, but also providing numerous employment opportunities on the North and South Shores and in the east of the Island, forming poles of commercial activity on major road arteries or axes (Germain and Rose 2000, 135).

Indeed, beginning in the 1990s, Montréal began renewing its economic growth, carried substantially by the growth of specialized “knowledge-based” clusters as well as the arrival of the Internet and other information technologies, which, overall, has largely compensated for the loss of traditional manufacturing industries (Polèse 2009, 30-36). These changes in the employment market also imply employment bipolarization, whereby employment opportunities are divided between high-paying jobs requiring significant qualifications, and precarious employment, which is poorly paid and requires little to no education or training (CSIM 1993, 19; Shearmur and Rantisi 2011). Interestingly, the two types of workers who occupy these differing employment categories sometimes find themselves living within the same neighbourhoods, for example in Mile End (prior to its gentrification) or in Côte-des-Neiges (CSIM 1993).

In part because of these economic changes, from the late-1990s onwards Montréal has been experiencing sustained economic growth. This growth has translated into a general improvement for households on the Island of Montréal, but contrasting situations among different groups and among different neighbourhoods persist (CGTSIM 2003, 21). The period between the 1996 and 2001 censuses was one of strong economic growth that seems to have marked a break with the difficult years of the 1990s. Certain indicators showed an improvement all over the Island. For example there was an overall increase in the labour force participation rate (especially among women); an increase in the median income of families; a disproportionate increase in university graduates with at least a bachelor's degree (compared with the metropoli-

tan area as a whole); and an increase in homeownership in certain sectors of the Island (CGTSIM 2003, 22).

Gentrification in Montréal started in areas adjacent to existing middle- and upper-income districts (such as Westmount, Outremont, and parts of Notre-Dame-de-Grâce) and in areas abutting parks and open space, such as Mont Royal, Carré Saint-Louis, and Parc LaFontaine, eventually extending to all of Plateau-Mont-Royal Borough (Ley 1996; Germain and Rose 2000; Walks and Maaranen 2008). Beginning in the early 1980s, the spread of gentrification in Montréal was assisted by municipal programs such as the Programme d'Intervention dans les quartiers anciens (PIQA), a revitalization programme that designated 11 sectors in the Plateau-Mont-Royal and elsewhere where the housing stock was of architectural merit by providing renovation subsidies (Germain and Rose 2000, 185). Thus, initially, this process involved renovation (with or without subsidy) of housing stock, accompanied by demographic transformation of the population.

The first waves of newcomers to these neighbourhoods were artists and students, later followed by more well-off populations. In the process, more educated, economically fortunate residents replaced the traditional working-class population. Gentrification may thus involve the displacement of traditional population as new, more well-off tertiary-sector workers move in and work in the central city. The gentrifiers of Plateau-Mont-Royal, the eastern and northern parts of Outremont, and parts of the Sud-Ouest are overwhelmingly couples without children or one-person households (CSIM 1993, 21; Belanger 2008; Rose 2010, 419).

Anglophone involvement in gentrification has been significant, and has contributed to an increasing permeability of the traditional linguistic divide along Boulevard St-Laurent. For instance, while some Anglophones settled in the Mile End and Saint-Louis districts (the traditional immigrant corridor), others headed east into the Plateau-Mont-Royal or the Gay Village (Germain and Rose 2000, 249). For a more detailed discussion of the timing of gentrification in specific Montréal inner-city neighbourhoods over the 1961–2001 period, see Walks and Maaranen (2008) and the sections of this report examining the spatial patterning of wealth and poverty in the 1970s and in 2001.

3.2 Demographic changes

3.2.1 Suburbanization of the middle class: Return to or exodus from the city?

There has been a “return” of middle-class households (gentrifiers) to the inner city as certain inner-city neighbourhoods have been transformed by the employment changes mentioned above, combined with housing supply changes (see below). Overall, however, the exodus of middle-class households towards suburban areas remains a predominant demographic trend, although it has perhaps changed form over time.

During the 1960s, a major exodus towards suburban areas led to major population decline in inner-city neighbourhoods. By the 1980s, however, the inner-city population was relatively stable (see Filion et al. 2010). In 1986, the exodus was mainly to the western and eastern extremities of the Island, Laval, and the South Shore, since young families preferred more peripheral areas (CSIM 1993, 22). More recently, the North Shore is the main beneficiary of the out-

migration of young families (Communauté métropolitaine de Montréal 2010, 2). City of Montréal municipal policies are geared towards increasing homeownership in the inner city but have shifted away from targeting “traditional” family households, towards non-traditional households, which are more likely to embrace inner-city lifestyles (Germain and Rose 2000, 165).

3.2.2 The lifecycle of households

The lifecycle of households is an important variable that can be associated with the degree of impoverishment in a residential zone. For example, an aging population is part of the life course, but we often forget that this trend is associated with one-person and mainly female-headed households (particularly remarkable in the central city as families move to the periphery).

Apparicio et al. (2007) have revealed that living in a one-person household is very important to explaining poverty in the central part of the Island of Montréal. There are also an increasing number of single-parent households. Single mothers are among the most impoverished of all Montréal residents. Apparicio et al. (2007) found that single parenthood was extremely important in explaining poverty, particularly in the central part of Montréal and further south along the east-west axis, which includes many of Montréal’s former working-class neighbourhoods. However, the association between high proportions of single parents and high concentrations of poverty is not universal. For example, in certain gentrifying neighbourhoods we find highly educated single mothers with modest incomes who cannot be classified as poor (CSIM 1993, 24; see Rose 1996).

3.2.3 More multi-ethnic neighbourhoods

There has been a major acceleration of immigration to Canada, and many newcomers settle in Montréal, Canada’s second-largest immigrant gateway city. Of these new immigrants, many are from developing countries and some are refugees; a significant number experience substantial difficulties inserting themselves into the employment market in spite of their educational and other credentials. Indeed, Apparicio, Séguin, and Riva’s (2011) analysis explored the factors influencing the differing trajectories among low-income census tracts in Montréal and found that recent immigration was one of three major factors (the others being low education and unemployment) influencing whether census tracts are experiencing increases or decreases in terms of their relative concentrations of poverty.

In terms of the spatial distribution of immigrants, the situation has changed significantly in recent years. In addition to the traditional immigrant corridor (Boulevard St-Laurent), other central neighbourhoods have been added, such as Côte-des-Neiges, but also sectors of peripheral cities/boroughs such as Saint-Laurent, Saint-Michel, Montréal-Nord, and Saint-Léonard. Recent analyses have revealed that recent immigrants who experience difficulty in terms of labour and housing markets are increasingly concentrated in more peripheral neighbourhoods composed of postwar rental housing of modest quality, albeit housing that remains affordable (Rose, Germain, and Ferreira 2006).

There has also been an explosion of multi-ethnic neighbourhoods (neighbourhoods with residents representing more than 20 different ethnocultural origins) in the centre of the Island, such as in the Saint-Louis and Mile End neighbourhoods (although we should add that their diversity

declined later in our study period due to school closures and gentrification), as well as in more peripheral areas such as LaSalle. This spreading of multi-ethnic neighbourhoods has taken place in well-off and impoverished areas alike, for example in well-off areas like Brossard, and less well-off areas such as Montréal-Nord, Parc-Extension, Saint-Michel, and north Côte-des-Neiges. These multi-ethnic areas have an elevated proportion of families with children (CSIM 1993, 20).

3.3 Changes in housing supply

The social composition of neighbourhoods depends also on the supply of housing available. For example, in Hochelaga-Maisonneuve, the adaptive reuse of old factories by newly arrived wealthier households provided new opportunities for that segment of the population to make inroads into the neighbourhood. Similarly, in Little Burgundy there has been significant conversion of industrial buildings along the Lachine Canal.

Municipal housing programs such as Opération 20 000 Logements have also had a huge impact in certain neighbourhoods (Germain and Rose 2000). For example, in Little Burgundy, this program enabled the large-scale implantation of suburban housing forms (such as townhouses with garages) in the city centre, while many other districts have seen large-scale townhouse or condominium development. Another example is the Domaine Saint-Sulpicien in Ahuntsic. Over time, the City of Montréal has become increasingly involved in stimulating infill condominium development (for example, in the Saint-Henri neighbourhood) which typically has had the effect of attracting more well-off people to inhabit former working-class neighbourhoods (CSIM 1993, 22; Rose 2010).

In addition, certain neighbourhoods have undergone remarkable urban growth. For example, in Rivière-des-Prairies and Pointe-aux-Trembles changes in housing supply and the proliferation of new residential developments have attracted new young families (CSIM 1993, 22).

Since the mid-1990s, unprecedented growth in real estate markets has led not only to a rapid increase in real estate transactions, but also to marked increases in property values, notably in Plateau-Mont-Royal, Côte-des-Neiges, and Notre-Dame-de-Grâce (CGTSIM 2003, 22). Increasing construction costs are certainly at play here, as are the increasing ability of buyers to pay higher prices, historically low interest rates, and the drop in vacancy rates (CGTSIM 2003, 22). Two sectors of the market have had particular success: high-end single-family homes and co-ownership units. This increase in co-ownership units was facilitated by the loosening of regulations after 1993 on the conversion of the rental stock to homeownership, including new tax breaks for purchasers of converted units to encourage them to stay in the city (Germain and Rose 2000, 177).

Programs put in place by the City of Montréal to encourage new construction (Opération Habiter Montréal) and to encourage property ownership for first-time property owners (Crédit-Proprio, Domicile) have also had an impact. In addition to these areas, new construction of housing has affected Plateau-Mont-Royal and Ville-Marie, as well as in the eastern portion of the Island (Rivière-des-Prairies and Pointe-aux-Trembles), where family housing is available at reasonably affordable prices (CGTSIM 2003, 5). Certain parts of neighbourhoods have also been targeted for revitalization in Cartierville, Côte-des-Neiges, Notre-Dame-de-Grâce, Parc-Extension, Pe-

tite-Patrie, Pointe-Saint-Charles, Saint-Michel, and Sainte-Marie. Such efforts at revitalization are aimed at improving the living conditions and economic opportunities of low and modest-income people, with a focus on existing residents.

Elsewhere, the recent development of major residential projects has had an impact. For example, the second phase of the Angus project (created on the site of the Angus Yards, a former locomotive manufacturing plant) was created for planned social mix among different social classes and tenure types, while the vast Bois-Franc project in Ville Saint-Laurent offers a mix of private housing types catering to middle- to upper-middle-income groups. Countless infill developments in inner-city neighbourhoods, as well as adaptive reuse of many industrial buildings to housing in the South-West Borough (in Little Burgundy and on the shores of the Lachine Canal) (CGTSIM 2003, 23) have also added to the housing stock, along with new construction in affluent neighbourhoods, such as in parts of the West Island, Outremont, Île-des-Soeurs, and the faubourgs of Old Montréal.

This proliferation of new construction has been accompanied by an increase in the proportion of owner-occupiers, even in neighbourhoods where renters are still by far the majority, such as Rosemont-Petite-Patrie, Plateau-Mont-Royal, Mercier-Hochelaga-Maisonneuve, and Centre-Sud. As a result, the social fabric of these neighbourhoods is changing and becoming more diverse, characterized by increasing social mix (CGTSIM 2003, 5). The Côte-des-Neiges neighbourhood is another example of very diverse residential fabric, in that some streets are enclaves of condos, while other nearby streets have high concentrations of more modest housing (CSIM 1993, 24).

3.4 Research gaps and the contribution of the Public Outreach Project

This review of the literature on the spatial distribution of wealth and poverty in Montréal reveals that researchers have a very good picture of how the poverty map on the Island of Montréal has changed over time, despite having examined different indicators from year to year. Moreover, this literature allows us to gain a better understanding of and sensitivity to the multi-causality of poverty on the Island of Montréal.

However, this vast literature does have notable limitations. First, there is no CMA-wide portrait of the changes in the spatial distribution of poverty over the 1971–2006 period. This is important for a number of reasons. We need to track poverty in outer suburban areas that were not included in the scale of many of these preceding studies. Further, with the massive suburbanization to the South and North Shores that has occurred over this period, our vision of the changing geography of affluence is distorted if we examine only the central part of the region (the Island or, in some studies, Laval), considering the growth of upper-income suburbs on the South and North Shores.

A second limitation of previous work is that there is little or no attention paid to the middle-income groups. The relative absence of discussion on the changing spatial distribution of middle-income households over the long-term could be due in part to the distinct lack of attention to the off-Island suburbs. The presence of these households in urban neighbourhoods is important for a number of reasons. First, middle-income groups form the backbone of the municipal tax base. Second, in the case of Canadian gentrification, many newcomers to gentrifying

working-class neighbourhoods in the 1970s and 1980s were affiliated with progressive urban reformism and fought actively for publicly funded local amenities in their neighbourhoods, which may have benefited all residents (Ley and Mills 1986; Ley 1996). Third, having a strong middle-income presence at a fine spatial scale in urban neighbourhoods is important for the maintenance of mainstream, ordinary commercial services such as supermarkets due to the purchasing power of these households, and such services also benefit low-income people (see Blokland and Eijk 2010). However, the benefits of environmental and commercial amenities that gentrifiers have tended to lobby for may be short-lived for incumbent residents, as such amenities contribute to increasing property values, in turn increasing pressures for residential displacement (Atkinson and Bridge 2005). Equally, gentrification may lead to a changing commercial landscape with the eventual disappearance of long-established commercial services serving the incumbent population (Lehman-Frisch 2002, 2008). Finally, middle-income groups are important to maintaining good-quality local neighbourhood services because such services usually rely heavily on volunteers who help to run them despite their “public” nature (see Reed and Selbee 2000), and middle-income residents have historically been major contributors to local pools of volunteer labour.

The study conducted under the Public Outreach project (Rose and Twigge-Molecey 2013), to which this literature review paper is a companion, responds to some of these limitations and fills some of these gaps. In that study, we focus on inequality, which enables equal attention to be paid to both affluence and poverty. Moreover, unlike previous analyses we use a consistent methodology over a long time frame (1970 to 2005). Furthermore, the scale of our analysis is that of the Census Metropolitan Area, which includes the rapidly suburbanizing North and South Shores, as well as the Islands of Montréal and Laval. Nonetheless, the work reviewed here has been invaluable to the interpretations of the findings in our report in addition to making available for the first time to an English-speaking audience the findings of detailed studies on the changing patterning of poverty in Montréal previously accessible only to French-language readers.

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Appendix A: Figures 3 to 13

Figure 3: Impoverished Census Tracts According to a Comprehensive Index

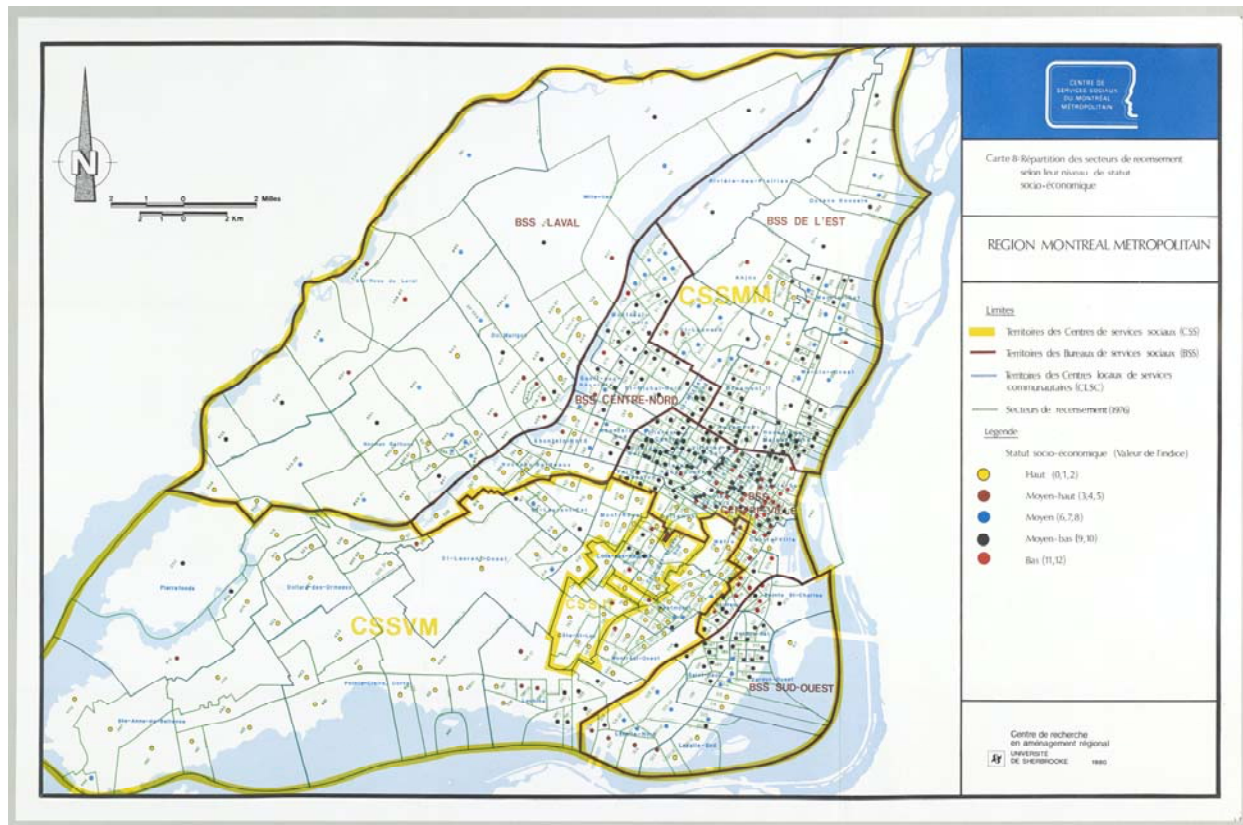
This map expresses the index value of the census tract compared to the average index score for the entire Island of Montréal in 1971. The index is composed of 13 socio-economic and cultural variables. Squares indicate a standard deviation lower than -2; Circles indicate a standard deviation between -1.5 and -2; and Triangles indicate a standard deviation between -1.5 and -1.



Source: Conseil scolaire de l'Île de Montréal (CSIM) (1974)

Figure 4: Socio-Economic Status of Census Tract in the Montréal Metropolitan Region

This map shows the socio-economic status of census tracts in 1976: Yellow = High status; Dark red = Medium-high status; Blue = Medium status; Black = Medium-low status; Light red = Low status.



Source: Mayer-Renaud (1980)

Figure 5: Comprehensive Index of Poverty According to School Planning Districts of the Conseil scolaire de l'île de Montréal

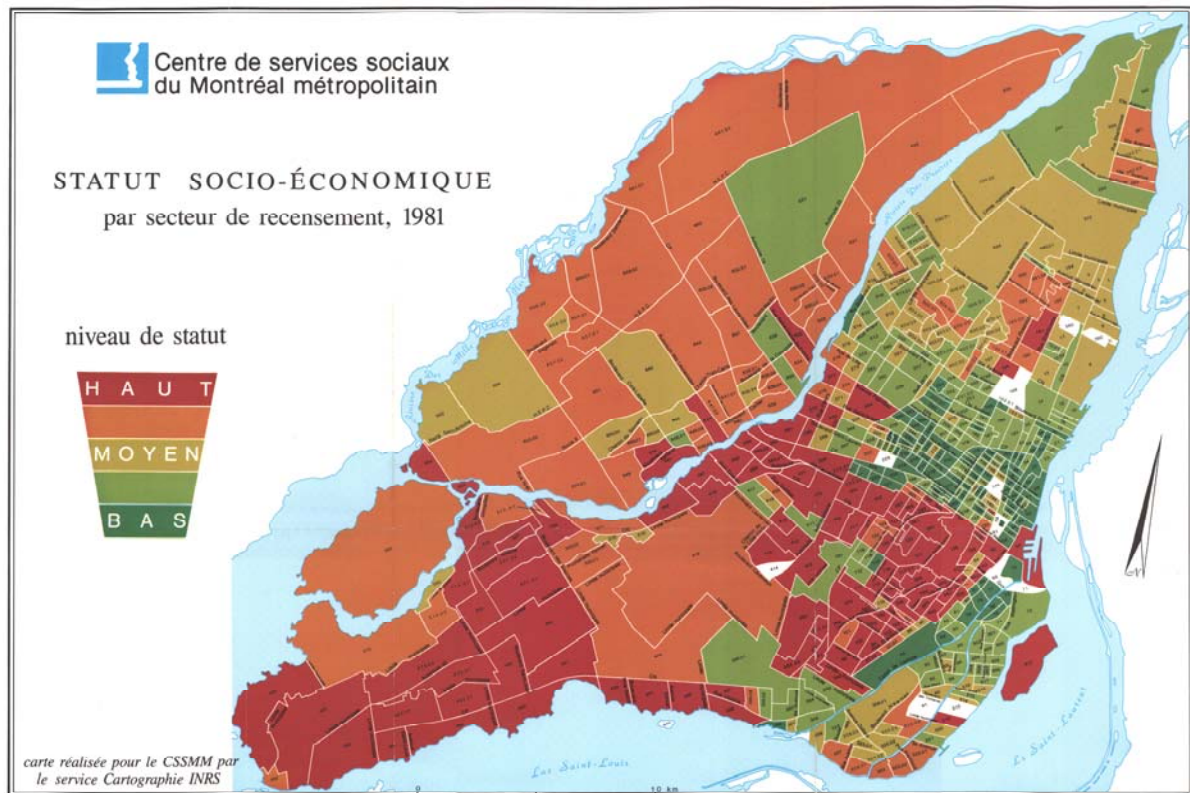
This map plots the comprehensive index of poverty by school planning districts on the Island of Montréal in 1981. High scores indicate the most impoverished areas. Pink circle = 60 and over; Purple circle = 50-59; Green circle = 40-49; Blue circle = 30-39; White circle = 20-29; White square = 10-19; White triangle = < than 10; X = School planning districts for which it was impossible to establish score on the comprehensive index of poverty.



Source: CSIM (1984)

Figure 6: Socio-Economic Status by Census Tract, 1981

This map shows the socio-economic status of census tracts in 1981. Red: High-status; Orange: Medium-high status; Olive: Medium status; Light green: Medium-low status; Dark green: Low status.



Source: Mayer-Renaud (1986)

Figure 7: Comprehensive Index of Poverty According to School Planning Districts of the Conseil scolaire de l'île de Montréal

This map plots the comprehensive index of poverty by school planning districts on the Island of Montréal. High scores indicate the most impoverished areas. Large red dot = 56.26+; Medium red dot = 48.61 to 56.25; Small red dot = 43.98 to 48.60; Large white dot = 30.61 to 43.97; Medium white dot = 18.66 to 30.60; Small white dot = < 18.66.

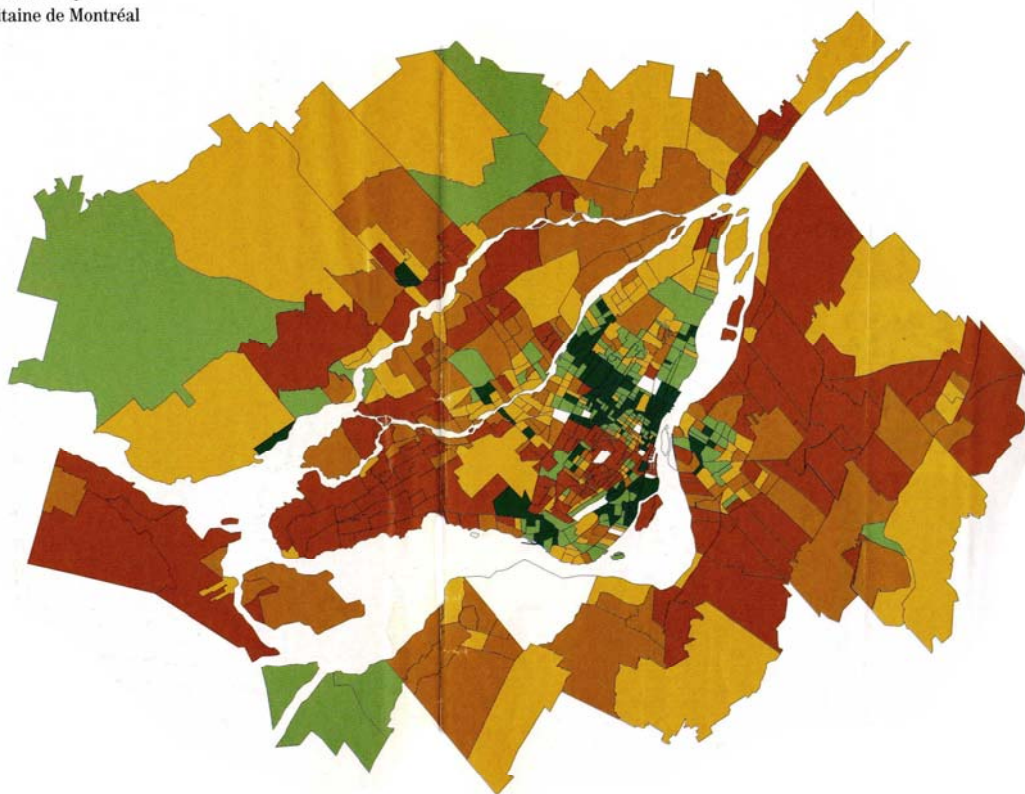


Source: CSIM (1989)

Figure 9: Socio-Economic Status Index – Montréal Metropolitan Region, 1991

This map shows the socio-economic status of census tracts in 1991. Red = High; Orange = Medium-high; Yellow = Medium; Light green = Medium-low; Dark green = Low.

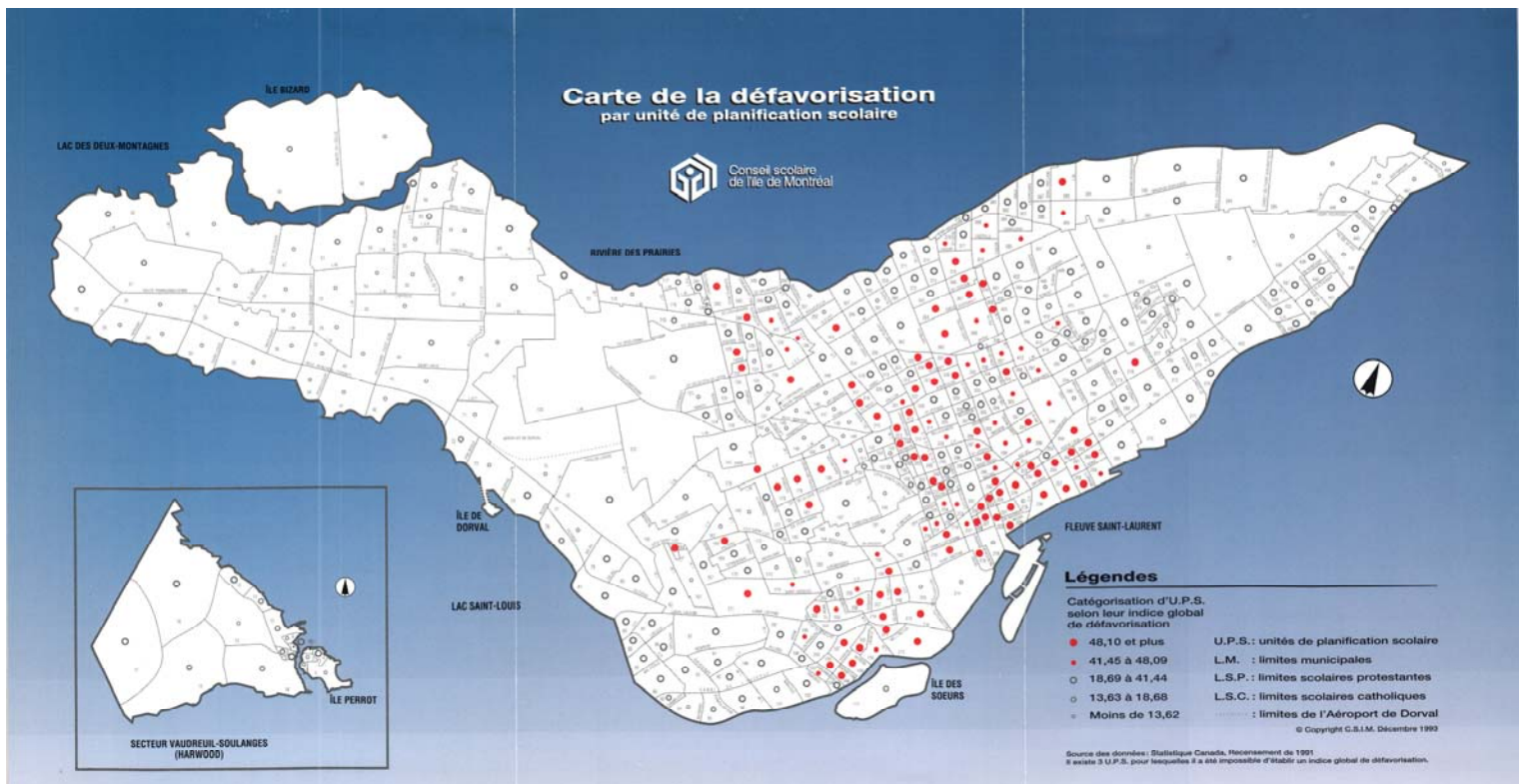
Indice de statut socio-économique
Région métropolitaine de Montréal



Source: Renaud et al. (1996)

Figure 10: Poverty Map by School Planning Districts - Conseil scolaire de l'île de Montréal

This map categorizes School Planning Districts (SPD) by their comprehensive poverty index score in 1991. High scores indicate the most impoverished areas. Big red dot = 48.10 and up; Small red dot = 41.45 to 48.09; Big white dot = 18.69 to 41.44; Medium white dot = 13.63 to 18.68; Small white dot = < 13.62.

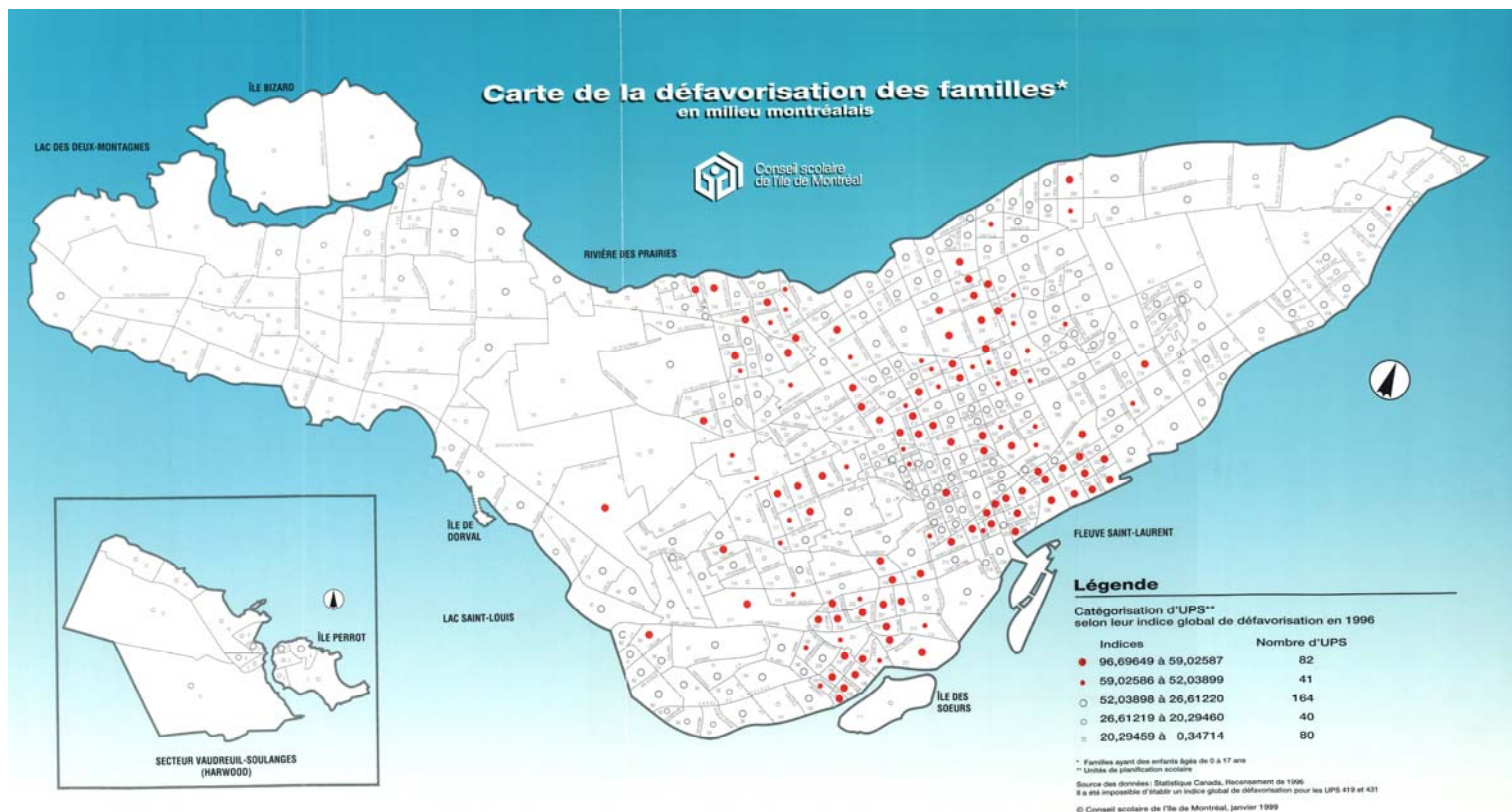


Source: CSIM (1993)

Figure 11: Poverty Map of Families in the Montréal Milieu, 1996

This map categorizes School Planning Districts (SPD) by their comprehensive poverty index score in 1996. Families are those with children aged 0–17 years old. High scores indicate the most impoverished areas.

Big red dot = 96.69649 to 59.02587 (82); Small red dot = 59.02486 to 52.03899 (41); Big white dot = 52.03898 to 26.61220 (164); Medium white dot = 26.61219 to 20.29460 (40); Small white dot = 20.29459 to 0.34714 (80).

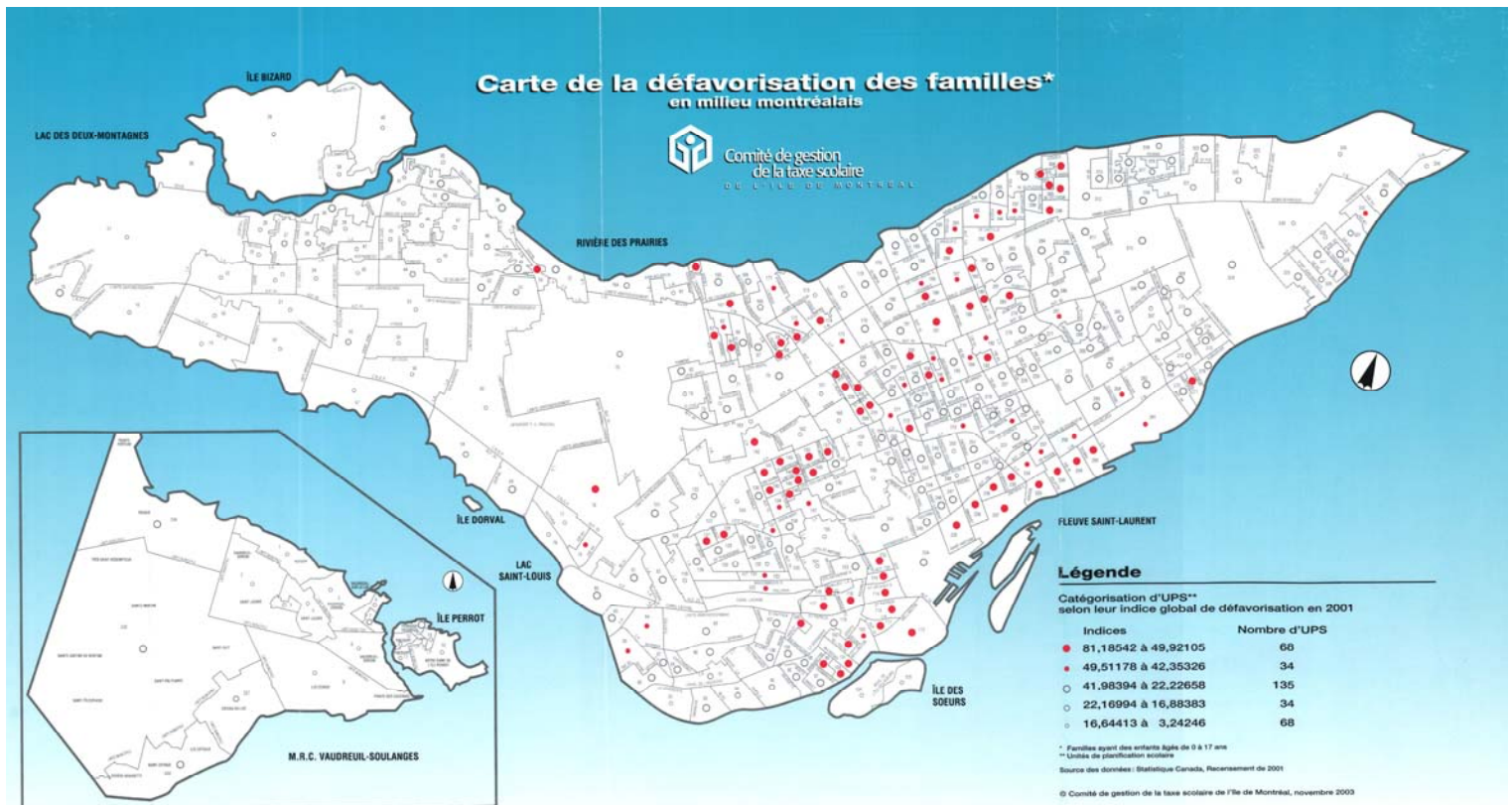


Source: CSIM (1999)

Figure 12: Poverty Map of Families in the Montréal Milieu, 2001

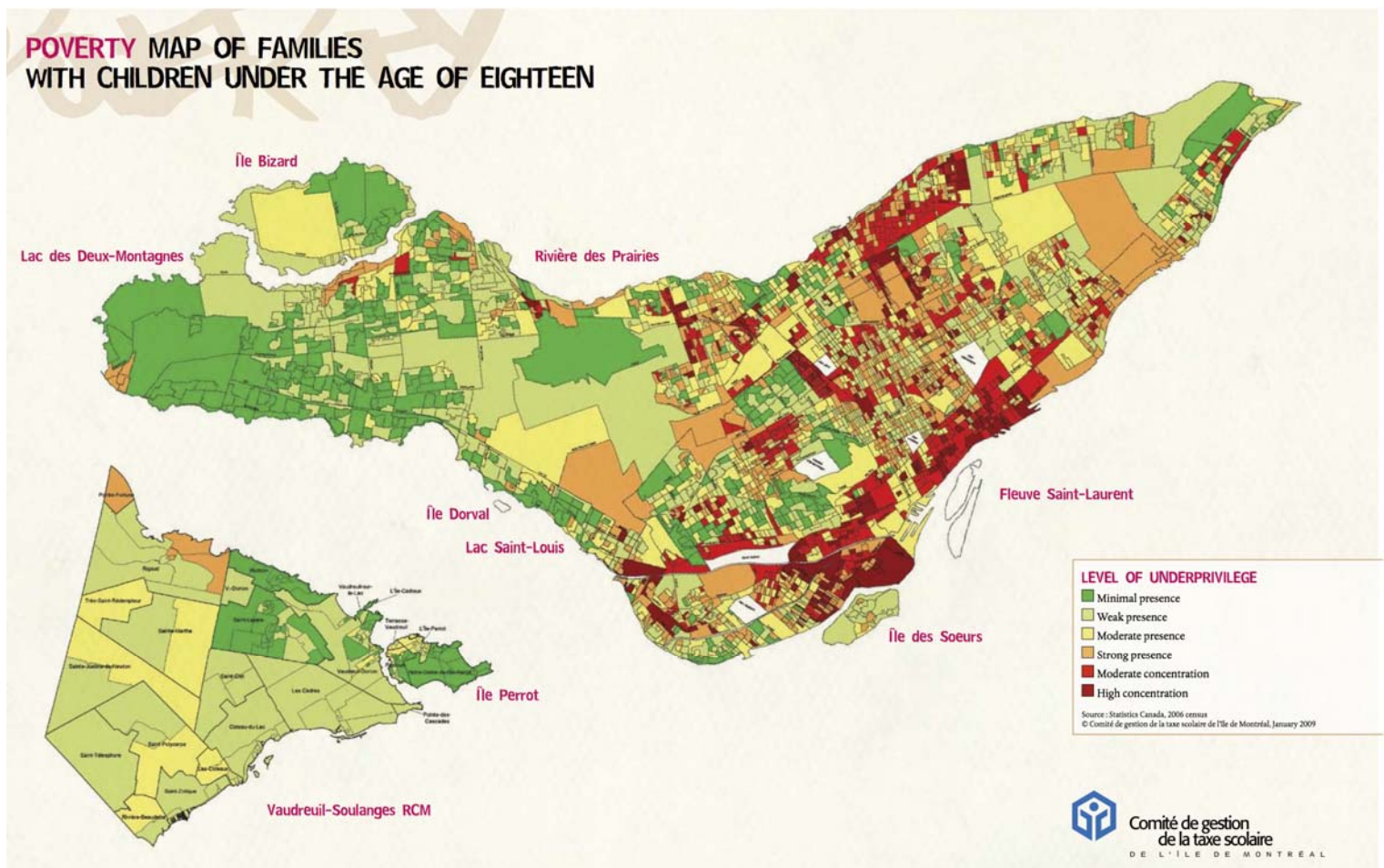
This map categorizes School Planning Districts (SPD) by their comprehensive poverty index score in 2001. Families are those with children aged 0–17 years old.

Big red dot = 81.18542 to 49.92105 (68); Small red dot = 49.51178 to 42.35326 (34); Big white dot = 41.98394 to 22.22658 (135); Medium white dot = 22.16994 to 16.88383 (34); Small white dot = 16.64413 to 3.24246 (68).



Source: Comité de gestion de la taxe scolaire (2003)

Figure 13: Poverty Map of Families with Children Under the Age of Eighteen, 2006



Source: Comité de gestion de la taxe scolaire (2008)

Appendix B: Methodology and Tables of Variables

Table 1: CSIM/CGTSIM Studies

CSIM studies: for info provided by census tract (CT)							
Year of publication	1974	1984	1989	1993	1999	2003	2008
Census year	1971	1981	1986	1991	1996	2001	2006
Variables chosen for info by CT: 13 variables chosen, with their relative weight in brackets (CSIM 1974, 43)	% of families with school aged children with an income less than \$5000 (8.8%)	No info provided by CT in this document	No info provided by CT in this document	No info provided by CT in this document	Census tracts where 30% or more families are low-income	Changes in median income	No info provided by CT in this document
	% of families with school-aged children and income of more than \$10 000 (8.7%)				Census tracts where 30% or more families are single-parent	Changes in proportion of low-income families	
	% of families without school-aged children and income of less than \$3,000 (7.5%)				Census tracts where 10% or more of population immigrated 1991-1996	Labour force participation rate	
	% of housing units without bathroom or shower (5.0%)				Census tracts where 50% or more workers are unemployed	Increase in university grads	
	% of families with 5 children or more (6.7%)					Increase in property owners	
	% of single-parent families (7.9%)						
	% of children aged 15-18 that are no longer in school (7.2%)						
	% of families where mother has 7 years or less education (8.9%)						
	% of families where mother has 12 years or more education (7.5%)						
	% of families where father is unemployed (8.5%)						
	% of housing units with one or more people per room (7.1%)						

	% of fathers with children who have a manual occupation (8.4%)						
	% of fathers with children who have administrative, professional, or technological occupation (7.8%)						
CSIM studies: For info provided by UPS (school districts)							
Year of publication	1974	1984	1989	1993	1999	2003	2008
Census year	1971	1981	1986	1991	1996	2001	2006
Variables	No information provided by UPS in this document	Pivot variable: low-income rate (but not adjusted as in 1989 study)	Pivot variable: low-income rate (% of families with children 0–17 who are below the low-income threshold, but adjusted to include families just above the LICO – “corrected low-income rate”	Pivot variable: low-income rate, that is, % of families with children 0–17 who are below the low-income threshold (as in 1989 “corrected low-income rate”) so also includes families just above low-income cut-off	Pivot variable: low income rate (% of families with children (0–17) considered low-income	Percentage of low-income families	Low-income rate
		Adjustment variables: (1) % of mothers with fewer than 8 years’ schooling	Adjustment variables: (1) % of mothers with fewer than 8 years’ schooling	Adjustment variables: (1) % of families with children 0–17 where mother has fewer than 8 years’ schooling	Adjustment variables: (1) % of families with kids (0–17) with mother with 8 years or less education	% of female-headed single-parent families	% of female lone-parent families

	(2) % of female-headed single parent families	(2) % of female-headed single-parent families	(2) % of female-headed single-parent families with children 0–17	(2) % of families with children 0–17 where father has never worked or last worked before 1995	% of families where mother has no diploma	Mother's education
	(3) % of fathers who have never worked or last worked before 1980	(3) % of fathers who have never worked or last worked before 1985 (p.4)	(3) % of families with children 0–17 where the father has never worked or last worked before 1990 (p.59)	(3) % of female-headed single parent families	% of families where father is unemployed (p.38)	Parent's economic activity corresponds to the % of families where neither parent works full-time among families with children
	(4) % of housing that requires major repairs					NB: for 2001 report it was the % of families where the father is unemployed (p.20)
	(5) % of drop-outs aged 15-17 (p. 5)					

CSIM/CGTSIM Studies: notes on comparison between years						
1974	1984	1989	1993	1999	2003	2008
n/a	n/a	n/a	n/a	n/a	Weighting of variables: low-income rate 98–99%; all other variables 1–2%	Weighting of variables: not all variables are weighted equally; low-income rate (50%), other variables 16.7% each
n/a	n/a	n/a	n/a	n/a	Base map: Data from the 1996 Canadian census; Enumeration areas adjacent; Number of families per UPS about 600; Number of UPS: 339	Base map: Data from the 2006 Canadian census; Dissemination areas not necessarily adjacent, but located in the same sector (neighbourhood, municipality); Number of families per zone about 400; Number of zones: 470
n/a	n/a	n/a	n/a	n/a	Levels of socioeconomic disadvantage: indicated through 5 levels (a series of red dots -2 sizes) to indicate differing degrees of poverty concentration, or 3 different sizes of transparent dots to indicate lack of concentration of disadvantage	Six levels of socioeconomic under-privilege: high concentration, moderate concentration, strong presence, moderate presence, weak presence, minimal presence (p.22). Brick red for strong concentration to dark green for minimal presence of disadvantage (22). N.B. A break with how information was presented in past maps

Table 2: Mayer-Renaud (CSSM) Studies

Year of publication	1980	1986	1989	1996
Socioeconomic Index: Variables chosen	Family income	Family income	Family income	Household income - as opposed to family income - had no effect on the results, but assured that the totality of forms of habitation were considered
	Level of education	Level of education	Education	Education
Construction of the Index	For family income, categories were: \$15,000 and over (high); \$10,000-14,999 (medium-high); \$6,000-9,999 (medium-low); less than \$6,000 (low) (p.9)	Same method as in 1980	Difference between 1986 and 1980 methods: Difference in construction of index is in estimation of profile accorded when one of the two base variables of index is absent or does not conform to model. Improvement in methodology for revealing atypical sectors where many inhabitants are marginal populations, but there is a contradiction between their disadvantaged financial situation and their elevated education levels. These people cannot be confused with those impoverished both financially (income) and socially (education) (p.5). Allows identification of sectors in a period of evolution where social discontinuity observed comes from movement or replacement of undereducated by highly educated and low-income by higher-income through gentrification (p.17).	Same principles used as in previous years with 2 key improvements: (1) past construction of index made it dependent on territorial boundaries used, so to make index independent, authors attributed scores directly to individuals rather than sectors, according to position among the different status levels. Index is created by weighting the status level of individuals by their proportion in a sector for two variables (income and education). Information aggregated without error to different spatial groupings (by CLSC districts, census tracts, cities); (2) this change makes it no longer necessary to break down into 4 categories of income to harmonize with 4 categories of education.
	Education, categories: university (high); post-secondary (medium-high); secondary (medium-low); and elementary (low)			N.B. Six income categories used as opposed to four in previous analyses (p.45)

Table 3: Séguin and Termote (1997)

Census year	1991
Variables chosen	Average and median household income
	Employment income according to employment status
	Frequency of low-income among total population, among non-family households, among family households
	Proportion of household incomes of a zone coming from government transfers (p.62)
	Information on population and households on welfare
	Growth in average income by zone between 1980 and 1990
	Unemployment rate, non-participation rate of men and women 25 years and up, percentage of men and women workers that have a non-standard employment
	Education variables - percentage of the population 15 and up that have not attained 9 years of schooling, percentage of population 15-24 who are no longer in school
	Socio-demographic characteristics - proportion of one-person households out of total households, proportion of people 65+, percentage of female-headed single parent families, percentage of immigrants, quality of housing - percentage of housing units requiring major repairs

Table 4: Séguin (1998)

Census year	1991
Variables chosen	Subsistence budgets
	Budgets of minimal comfort
	Low-income cut-offs (p.223)

Table 5: Ley and Smith (2000)

Census years	1971 and 1991
Indicators of deprivation	(1) Lack of a high school diploma (the population 15 years or older whose highest level of education is lower than a high school diploma)
	(2) Male unemployment
	(3) Government transfer payments (relative to total tract income)
	(4) Female lone-parent families (p.43)
	(5) Percentage of low-income families in a tract
N.B. to qualify as deprived in this study, a census tract had to exceed twice the CMA median for the preceding indicators.	

Table 6: Apparicio et al. (2007)

Census year	2001
Variables chosen	Dependent variable: Percentage of low-income people among private households
	Independent variables:
	Unemployment rate among people 15 and older
	Percentage of people who have part-time employment or work only part of the year
	Percentage of single-parent families among the total families
	Percentage of one-person households
	Percentage of population 20 years and older with 13 years or less of schooling
	Percentage of youth 15-24 not in school
	Percentage of immigrants who arrived between 1996-2001
	Percentage of population who declared belonging to a visible minority
	Percentage of population 65+ (p. 418)
	N.B.: Three variables chosen later excluded as being non-significant: percentage of elderly (65+); percentage of people with 13 years or less education; and percentage of the population claiming visible minority status.
Methodology: Geographically Weighted Regression (GWR) Model	Allows geographers to analyse locally the relationship between the dependant variable and the independent variables, as well as to counter the problem of spatial instability of regression models (p.418).

Table 7: Khun et al., Direction de Santé Publique Study (2008)

Index of poverty that examines both social and material deprivation	
Census year	2001
Variables - indicators of material environment	Proportion of people without secondary school diplomas
	Proportion of people currently employed
	Average personal income (p.4)
Variables - indicators of social environment	Proportion of one-person households
	Proportion of people separated, divorced or widowed
	Proportion of single-parent families
Construction of the Index: 3-Step Methodology	(1) Deprivation index used to determine the level of deprivation of a dissemination area (DA) either on material dimension or social dimension. All DAs in a given reference area first divided according to their values of material deprivation, then grouped into five classes (called quintiles) each comprising 20% of the population, ranging from the most favoured (quintile 1) to the most deprived (quintile 5). Same operation repeated for the social dimension. Each DA then associated with a material quintile and a social quintile for the studied reference area (Khun et al., p.5).
	(2) To characterize the deprivation of a DA simultaneously considering its material and social deprivation, cross the quintiles of the two components to create a grid of 25 cells and situate each DA within it.
	(3) To describe conditions of deprivation, DAs grouped into five patterns according to their position on the grid: physical and social conditions more favourable (green); average conditions (yellow); more adverse social conditions but not material conditions (blue); more adverse conditions materially but not socially (orange); and most materially and socially adverse conditions (mauve).

Table 8: Heisz and MacLeod (2004), Statistics Canada

Census years	1980 and 2000
Variable chosen	Low-income rate
Definition of a high low-income area	Neighbourhood in which more than 40% of residents are low-income
Definition of a low-income area	Neighbourhood may have 30%-40% of residents low-income

Table 9: Apparicio et al. (2008)

Census year	2006
Variables chosen	Low-income rate before tax of private households (p.7)
Two-step methodology	(1) ANOVA multi-level analysis (2) Identified macro (districts), meso (census tracts), and micro (dissemination areas) concentrations of poverty (p.10)

Table 10: Ades, Apparicio and Séguin (2012)

Census years	1986, 1991, 1996, 2001, 2006	
Variable chosen	Population in private households below the poverty line	Low-income household defined as those who consecrate 20% more than the average of before-tax income to food, housing, and clothing
Dimension of segregation	Index chosen	Interpretation of Index
Evenness	IS : Segregation Index (Duncan et Duncan 1955)	Index varies between 0 and 1 and measures over-representation or under-representation of group in spatial units of reference. Value of index expresses the proportion of a group that would have to move to obtain a perfect distribution.
Exposition	xPx : Isolation Index (Bell 1954)	Index measures probability that a member of a group shares the same spatial unit with another member of the same group. It varies between 0 and 1; maximum value signifies that the group is totally isolated in spatial units of urban space considered.
Concentration	ACO : Index of Absolute Concentration (Massey and Denton, 1988)	Index explores physical space occupied by a group. The smaller the area of the metropolitan area it occupies, the more it is concentrated. Index varies from 0 to 1, values which correspond to a minimum concentration (residential location of members of group in the larger spatial units of the metropolis) and maximum concentration (residential location of members in group the smallest spatial units of the metropolis).
Clustering	ACL : Absolute Clustering Index (Massey and Denton, 1988)	Index measures contiguity or proximity of spatial unit where the group is present. The more the group occupies adjacent or proximate spaces, the more it is aggregated, forming an enclave. Index ranges from 0 to 1 and expresses the proportion of group residing in adjacent units.
Centralization	ACE : Absolute Concentration Index (Massey and Denton, 1988)	Centralization refers to the tendency of a group of people to reside in or near downtown. Index measures the share of the group that would have to move to obtain a uniform density of the group around the city centre. Values are negative when the group members tend to reside far from the city centre and positive when members tend to live near downtown. A value of 0 means the group is distributed across city.

Table 11: Hiebert (2009)

Identifying enclaves - Typology developed (Based on Johnston et al. (2003, 2002) and Walks and Bourne (2006).	Type I: White areas, or Isolated host communities (where Visible Minorities constitute less than 20 percent of the population)
	Type II: White-dominant areas, or Non-isolated host communities (where Visible Minorities constitute between 20 and 50 percent of the population)
	Type III: Mixed, Visible Minority-dominant areas. Or Assimilation-pluralism enclaves (where Visible Minorities constitute 50 to 70 percent of the population)
	Type IV: Mixed Minority Enclaves (where Visible Minorities constitute 70 or more percent of the population without a dominant group)
	Type V: Minority Group Enclaves, or Polarized enclaves (same as the above, but with a single group that is at least twice the size of any other)
	Type VI: Ghettos (where a single Visible Minority group constitutes at least 60 percent of the population; at least 30 percent of the group lives in these types of areas; and the incidence of low income is double that of the larger metropolitan population) (p.9)
Census years	1996, 2001, 2006
Variables of population chosen	Percentage employed
	Percentage unemployed
	Percentage immigrants
	Percentage recent immigrants
	Average individual income
	Average household income
Special Tabulations: For each Census Tract in MTV, the following variables have been cross-tabulated	Immigration status
	Visible minority status
	Incidence of low income
	Sex
	Age
	Home language
	Educational attainment
Methodology	
Step 1	Use standard census statistics from 1996, 2001, and 2006 to classify each census tract in Montréal according to the neighbourhood typology outlined above
Step 2	Basic statistical profile of members of visible minority groups living in different neighbourhood types with particular attention to comparison of those inside vs. outside enclaves.
Step 3	An investigation of the relationship between enclaves and economic marginalization. Employs the special tabulation and based on the logic of a two-by-two table, with one dimension defined by residence inside / outside an enclave, and the other by residence inside / outside a high-poverty area (defined as having twice the population experiencing low income compared with the total metropolitan area). On one diagonal of this table, we find areas fitting the widespread assumption that enclaves coincide with marginalized opportunities (i.e., places that are not enclaves, and not in the high-poverty category in one cell, vs. places that both enclaves and have a high proportion of low-income residents in the other cell). The two off-diagonal cells of the table represent more complex situations: places that are either enclaves without high ratios of low-income populations, or areas of the city that are economically marginalized, but not associated with large visible minority populations. If most census tracts are on diagonal, relationship between enclaves and marginalization is clear and direct; if not, other factors at play.