Solomon - A neo-apartheid city? Labour market inequalities and residential segregation in Cape Town, South Africa

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Abstract

South Africa’s cities make for an interesting focus when studying urban inequalities and segregation. Not only is the country among the most unequal countries (based on the Gini index calculations), but the Apartheid-era of the 20th century also created a severely segregated racial hierarchy through wide-reaching legislation. Although that and its legislation was dismantled in the final decade of the last century, the impact of those years is still evident across the country, not least of which on its cities. Cape Town is known as a beautiful city, as well as a tourist hotspot, however, it has also been referred to as the most segregated city in this already unequal and segregated country. This study focuses on the demographic and labour market changes, both in terms of the occupational distribution, as well as the racial composition of the most prominent and fastest growing occupational groups. What is apparent is that Cape Town has remained an unequal and segregated city, with levels of racial segregation significantly higher that socioeconomic segregation (even when accounting for occupational class differences). Additionally, although previously disadvantaged groups (e.g. Black Africans and Coloureds) have made gains in more prominent occupations, they continue to be under-represented among high-income earners and comprise the largest proportion of the unemployed in the city.
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ABSTRACT:

South Africa’s cities make for an interesting focus when studying urban inequalities and segregation. Not only is the country among the most unequal countries (based on the Gini index calculations), but the Apartheid-era of the 20th century also created a severely segregated racial hierarchy through wide-reaching legislation. Although that and its legislation was dismantled in the final decade of the last century, the impact of those years is still evident across the country, not least of which on its cities. Cape Town is known as a beautiful city, as well as a tourist hotspot, however, it has also been referred to as the most segregated city in this already unequal and segregated country. This study focuses on the demographic and labour market changes, both in terms of the occupational distribution, as well as the racial composition of the most prominent and fastest growing occupational groups. What is apparent is that Cape Town has remained an unequal and segregated city, with levels of racial segregation significantly higher that socioeconomic segregation (even when accounting for occupational class differences). Additionally, although previously disadvantaged groups (e.g. Black Africans and Coloureds) have made gains in more prominent occupations, they continue to be under-represented among high-income earners and comprise the largest proportion of the unemployed in the city.

KEYWORDS:

South Africa, Cape Town, segregation, professionalisation, inequity, urban

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**Introduction:**

South Africa has a legacy of colonial and Apartheid legislation that enforced racialised spatial segregation and racialised unequal access to public spaces, public amenities, homes, as well as educational and employment opportunities. Despite the political and socioeconomic changes that have taken place since the 1990s, this legacy and its persistent impact cannot be ignored.

In the years leading up to South Africa’s first democratic (i.e. non-racial) national elections in 1994, numerous pieces of the key Apartheid-era legislation that enforced segregation and unequal opportunities were repealed, including the *Group Areas Act* (1966) and the *Reservation of Separate Amenities Act* (1953), while others like the *Industrial Conciliation Act* (1956), also known as the Labour Relations Act, would be repealed in the ensuing years.

South Africa is also regarded as one of, if not the most unequal country in the world, with The World Bank (2023) reporting the country’s Gini index at 63.4 in 201 and 63 in 2014. Furthermore, Cape Town is regarded, by some (McDonald, 2008, Turok et al., 2021), as the most unequal and or most segregated city in South Africa. While debates about the extent of inequality and/or segregation in South Africa and its cities are ongoing (Christopher, 2005b, Christopher, 2005a, Seekings and Nattrass, 2005, Crankshaw, 2022, Lombard and Crankshaw, 2017, Crankshaw, 2017, Crankshaw and Borel-Saladin, 2014, Crankshaw, 2012, Borel-Saladin and Crankshaw, 2009, Crankshaw, 2008), this study aims to focus on data collected through the national censuses of 2001 and 2011. The reason for this timeframe is that the latter census is the most recent data available that has the requisite low-level geographical detail for this kind of analysis.

While no single approach or method can provide a complete picture of the extent of segregation in a city, the dissimilarity index will be used to calculate city-level measurements of segregation. While this method has been the focus of considerable criticism (Crankshaw, 2012, Cortese et al., 1978, Cortese et al., 1976), even those in favour of its use acknowledge that it has its limitations and should be combined with other methods for a clearer understanding of segregation (Massey et al., 1996, Massey and Denton, 1988, Van Ham et al., 2021). For example, a widely cited paper discusses that the dissimilarity index is just one of at least twenty segregation indices and measures, spread across five distinct axes or dimensions of segregation (Massey and Denton, 1988).
Because of the demographic and socioeconomic changes that have taken place in Cape Town, especially in the years following the official end of the *Apartheid* era, this study utilises three applications of the dissimilarity index. Firstly, it will be applied to measure inter-racial segregation in Cape Town in 2001 and 2011. This is perhaps the most common use of this measure and has been applied to South Africa’s towns and cities before (Parry and van Eeden, 2015, Turok et al., 2021, Ballard and Hamann, 2021, Christopher, 2005b, Christopher, 2005a). Secondly, it will be applied to the question of socioeconomic segregation, using grouped occupations from the *International Standard Classification of Occupations* or ISCO (International Labour Office, 2012) as a proxy for economic status. While this is not a new application, because it has recently been applied to both Cape Town and Johannesburg, it forms an essential part of this study. Thirdly, the aforementioned studies on socioeconomic segregation and comparable studies on other cities around the world logically lead to the question of intra-group socioeconomic segregation. After all, it is possible that in a context where personal means and market forces are key predictors of where someone will live, this is worth raising where there is evidence of shifts in the racial composition of certain more lucrative occupations.

**Urban Inequality and Segregation:**

**Around the World:**

The world’s population has, in recent decades, become increasingly urbanised, with approximately half the global population currently living in towns and cities (Xu and Spatolisano, 2021). They are also the sites of both extreme wealth and severe impoverishment, which can be found in relatively close proximity to one another. Additionally, the global and societal importance of cities are deemed so significant that the United Nations’ (UN) Sustainable Development Goals (SDGs) has one that specifically focuses on “sustainable cities and communities” (Department of Economic and Social Affairs, 2023a, Department of Economic and Social Affairs, 2023b).
It should therefore be no surprise that questions on inequality, segregation, and related topics are particularly pertinent topics of research. One of the central topics regarding urban changes in recent decades is the changes that have taken place, particularly in so-called “global cities” following the increased deindustrialisation of the second half of the 20th century. A global city is generally regarded as an important and/or strategic site that contributes to the oversight or control of the global economy. However, their importance does not exist in isolation, because they are nodes in global networks of trade, politics, migration, finance, and information (Sassen, 2002, Sassen, 2000, Castree et al., 2013, Lemanski, 2007).

There is a some consensus, that one of the dominant changes regarding the occupational structures of global cities is the growth employment in highly-skilled, high-income occupations, such as Managers, Professionals, Technicians (Van Ham et al., 2021). However, there is less agreement regarding what other kinds of changes accompany this growth. Some, like Sassen, have argued that a significant growth in unskilled, low-income employment accompanies the expansion of high-income employment, leading to a polarisation of the occupational structure (Sassen, 2002, Sassen, 2000). One of the reasons given is that the lifestyles of those in high-income professions require an increased amount of personal services (including domestic workers, laundromats, as well as hospitality services). This theory has also been claimed to be applicable in other contexts like Australia and Hong Kong (Chiu and Lui, 2004, Baum, 1997).

In contrast to the polarisation theory, others (e.g. Hamnett, 1994) have argued that this growth of low-income employment is limited to cities where large number of workers with limited skills, at times migrants, already live, thus leading to the possibility of the expansion of low-income employment. Consequently, they have argued that the dominant trend is the professionalisation and overall upgrading of the occupational structures of these cities (Hamnett and Cross, 1998, Hamnett, 1996, Hamnett, 1994, Butler et al., 2008). Because some (or many) residents do not have the credentials, education and/or skills to enter those fast-growing occupations, professionalisation can often be accompanied by an increase in unemployment. Nevertheless, more recent research has found evidence of professionalisation of numerous cities, including Tokyo and London, while others have found evidence of other trends (Van Ham et al., 2021).
While the relationship between socioeconomic or occupational change and the geography of cities is not a simple one, there is considerable evidence of causal links between socioeconomic changes and shifts in segregation. There is a considerable amount of literature on the urban United States of America (USA), where discussions focused on the increased urbanisation of various ethnic minorities, the suburbanisation of some in the White population, as well as the suburbanisation of jobs, as well as the circumstances in the inner-city ghettos following the mass suburbanisation (Kasarda, 1989, Wilson, 2012, Wilson, 2011). This urbanisation was not a single mass event but was sometimes ongoing, particularly in cities on the East Coast of the USA. A major contribution to the growth of those cities was the arrival of migrants from other parts of the world and the tendency of some to live in specific neighbourhoods known to be home to their compatriots. Depending on the group, as well as the timing, some of them would create economic opportunities centred on their ethnic enclaves (Kasarda, 1989).

That said, socioeconomic segregation, as well as ethnic/racial segregation, is obviously not unique to the USA, but the history of the context, as well as the role played by the government in issues pertaining to housing, shape the extent to which similar patterns are evident in other parts of the world (Hamnett, 1996, Hamnett, 1994, Marcuse and Van Kempen, 2000b, Kesteloot, 2000, Marcuse and Van Kempen, 2000a, Ribeiro and Telles, 2000, Chakravorty, 2000). Additionally, the mass migration of emancipated slaves northward after the Civil War in the USA also played a major role in changing the demographics of cities in the Northeast and elsewhere. This migration would continue until the Great Depression, but it would be followed by further mass migration of African Americans between the 1940s and 1970s. A major attraction in these industrialised cities was the potential for employment, but the changing demographics of the inner cities (as well as the poverty experienced by many) made the inner cities undesirable for those who could afford better. However, suburbanisation was usually limited to White families, while others were prevented from making similar moves to the suburbs through various discriminatory housing and banking practices (Marcuse and Van Kempen, 2000b, Wilson, 2012).
In a few decades, the urban USA, changed drastically, with a large number of White families moving out of the inner cities to the suburbs; this was made easier thanks to the expansion of private car ownership and better connections, like freeways between the suburbs and the cities, where many still worked (Gobillon et al., 2007, Wilson, 2012). Although many businesses (and the jobs they offered) stayed in the cities, a significant amount of semi-skilled employment opportunities (particularly blue-collar jobs) also moved away to the suburbs, further disadvantaging those in the inner city who needed those jobs (Gobillon et al., 2007, Wilson, 2012, Wilson, 2011).

**Labour Market Inequalities in Cape Town:**

While certain events in and/or characteristics of South Africa certainly make it distinct in some ways, there are nevertheless important lessons to be learned from other countries that contribute to a better understanding of what is happening there. It cannot be denied that the Apartheid regime of the 20th century, including its various machinations aimed at social engineering, as well as the current levels of inequality, set it apart but there are still worthwhile comparisons to be made.

Although Apartheid officially came to an end in the 1990s, there are those who suggest that, rather than living in a post-Apartheid period, South Africans are experiencing a neo-Apartheid, where the previous discriminatory legislation has been replaced by market inequities that continue to disadvantage many of the same people (Seekings, 2011, Pilger, 2007).

The occupational changes brought on by deindustrialisation have been evident in South African cities too. The work of Owen Crankshaw, and others, has focused on better understanding these changes in three of South Africa’s largest cities, or metropolitan municipalities, namely eThekwini, Johannesburg, and Cape Town.
A study focused on Cape Town demonstrated how, during the remainder of the 20th century, after World War 2 (which included the entire Apartheid period), the most significant employment growth was in service-oriented economic sectors, including: Community, social, and personal services; Wholesale and retail trade, catering and accommodation services; Finance, insurance, real estate, and business services. While there was also growth in the Manufacturing sector, it was significantly less than the service sectors. In terms of occupational changes between 1980 and 2001, the most significant growth was among the highly skilled, high-income (HSHI) occupations (including Managers, Professionals, and Associate Professionals). There was also a net increase in employment among semi-skilled non-manual occupations (e.g. Clerks, Salespeople), as well as elementary or unskilled employment (e.g. domestic workers), but this was considerably lower than the growth in HSHI employment. This was interpreted as a confirmation of a professionalisation trend leading to an upgrading of the occupational structure (Borel-Saladin and Crankshaw, 2009). The changes in the subsequent decade will be addressed at a later stage. Similarly, neither the eThekwini nor Johannesburg studies demonstrated evidence of a polarising trend but also found occupational structure dominated by growth in HSHI employment, as well as growth in the semi-skilled non-manual occupations. A subsequent study (Crankshaw, 2012), incorporated data on the racial composition of the occupational distribution and found that black Africans and Coloureds (combined with Indians/Asians) had increased their presence among HSHI employment between 1980 and 2007, as well as in the SSMI-NM occupations. That said, the decision to combine Coloureds with Indians/Asians lacks a justification, which should have been provided considering the differences in culture and experience with the colonial and Apartheid powers.

However, in contrast to the arguments by Sassen and others, the data, at least in these South African cities, suggest that those should be regarded as middle-income, not low-income occupations, since the remuneration was found to be comparable to, if not better, than semi-skilled blue-collar employment (Sassen, 2002, Sassen, 2000, Crankshaw, 2017, Borel-Saladin and Crankshaw, 2009, Lombard and Crankshaw, 2017, Crankshaw and Borel-Saladin, 2014).
While the issue of racialised differences in these labour markets was not addressed in the aforementioned Johannesburg study (Crankshaw and Borel-Saladin, 2014), a study that preceded all of these indicated that the racial composition of the middle class (regarded as synonymous with employment in HSHI occupations) had shifted from being just 15% Black\(^2\) in 1960 to 23% in 1991, but then increased to 50% just ten years later. While the changes in that last decade are significant, it should be noted that Black Africans, Coloureds and Indian/Asian residents accounted for significantly more than half the population of the city at the time (Crankshaw, 2008).

On the other hand, a study focused on eThekwini demonstrated considerable growth in the absolute numbers of Black Africans, as well as Indians/Asians in HSHI employment between 1980 and 2014, as well as significant growth in Black African employment in semi-skilled middle-income non-manual (SSMI-NM) occupations. Nevertheless, it was also found that Black Africans accounted for 85% of the unemployed population (Lombard and Crankshaw, 2017).

**PERSISTENT SEGREGATION IN SOUTH AFRICA:**

As previously stated, Cape Town “is widely considered to be South Africa’s most segregated city” (Turok et al., 2021, p. 71), as well as “one of the most – if not the most – unequal cities in the world” (McDonald, 2008, p. 42). These are damming descriptions of a coastal city that is a popular destination.

Although segregation in South Africa might be most closely associated with the *Apartheid* era, at least in popular memory, legislated racial segregation in what is present-day Cape Town preceded the *Apartheid*-regime by decades. In the 1880s, certain areas were set aside “by law” solely for the use of Whites. Additionally, around the start of the 20\(^{th}\) century, when Black Africans accounted for a growing proportion of the population, thousands of Black Africans at the Cape were forcibly removed to an encampment close to present-day Ndabeni under the guise of preventing the spread of bubonic plague. However, on other occasions, different justifications were provided (Bickford-Smith, 2001, Field, 2001).

\(^2\) A category comprising all Black Africans, Coloureds and indians/Asians.
In time, Coloureds were included in forced removals from areas where many White residents had purchased property and/or preferred to live. These removals would continue under the provisions of the various versions of the *Group Areas Act* (1966), and in many towns and cities across the country (Graham, 2007, Crankshaw, 2012).

Although legislation such as the *Group Areas Act* (1966) would be repealed in the early 1990s, there was no guarantee that, after the efforts of the *Apartheid* regime to create a racially segregated society, that the consequences of those actions would be undone without considerable stated intervention (Christopher, 2005b, Christopher, 2005a). Consequently, there was little evidence of significant racial desegregation in South Africa’s towns and cities, whereas in Cape Town there was some degree of desegregation in the former Whites-only group areas, but the overall impact of that desegregation, was not clear (Christopher, 2005b, Christopher, 2005a, Crankshaw, 2012, Graham, 2007).

**DATA SOURCES AND SEGREGATION MEASURES:**

As stated, this study utilises the dissimilarity index to provide a city-level measure of segregation. It is only one of dozens of different methods that have been used, debated, and criticised to measure segregation. Despite years of debate, there have been developments regarding the utility of certain measures or indices, as well as how they might differ.

Following years of debate regarding the efficacy of various segregation measures, five axes or dimensions of segregation were identified, as well as the measures or indices associated with each dimension. A total of 20 different measures were identified and associated with the five dimensions of segregation, which are (Massey and Denton, 1988):

i. **Evenness:** “… refers to the differential distribution of two social groups among areal units in a city.”

ii. **Exposure:** “Residential exposure refers to the degree of potential contact, or the possibility of interaction, between minority and majority group members within geographic areas of a city.”

iii. **Concentration:** “… refers to relative amount of physical space occupied by a minority group in the urban environment.”

iv. **Centralization:** “… the degree to which a group is spatially located near the centre of an urban area.”

v. **Clustering:** “the extent to which areal units inhabited by minority members adjoin one another, or cluster, in space.”
One response to this taxonomy of segregation measures included the suggestion that concentration and centralization are subcategories of the evenness dimension, and have also queried whether there is a significant difference between evenness and clustering (Reardon and O’Sullivan, 2004, Parry and van Eeden, 2015). However, the authors of that evaluation still drew a distinction between spatial evenness and spatial exposure/isolation. Nevertheless, this particular study focuses solely on the evenness dimension by using the dissimilarity index, but future studies using other methods to analyse segregation should be expected.

The dimension of “evenness” focuses on “differential distribution of two social groups among areal units in a city”, where those units could be a neighbourhood, census tract, or enumerator area. Furthermore, a group is regarded as being segregated when it is unevenly spread across the area in question. According to its explanation, evenness is “maximized and segregation minimized when all units have the same relative number of minority and majority members as the city as a whole” (Massey and Denton, 1988).

Arguably one of the most prominent measure of evenness is the dissimilarity index \((D)\), which has not only been used for decades (Duncan and Duncan, 1955, Massey and Denton, 1988) but has also come under scrutiny (Cortese et al., 1976, Cortese et al., 1978). Despite this, numerous studies have demonstrated the benefits of its use in research conducted in South Africa (Christopher, 2005b, Christopher, 2005a, Horn, 2012, Parry and van Eeden, 2015, Schensul and Heller, 2011, Schensul, 2008, Schensul, 2009) and elsewhere.

The dissimilarity index can be understood as a measure of the average deviation of subplaces from the city’s overall racial composition. It is calculated using the following formula (Farley and Taeuber, 1968, Farley and Taeuber, 1974, Taeuber and Taeuber, 1976, Duncan and Duncan, 1955):

\[
D = \frac{1}{2} \sum_{1}^{k} \left| \frac{A_i}{A} - \frac{B_i}{B} \right|
\]
In this dissimilarity calculation, \( A \) refers to the race or social category that is the focus of the calculation (e.g. Black Africans or Coloureds), while \( B \) refers to the rest of the population (or another group, such as the White population). This reveals one of the limitations of the formula – it can only be used to calculate the dissimilarity between two specific groups, or one group and the sum of all other groups in the population. Furthermore, “\( A_i/A \)” is the total of \( A \) in the suburb or census tract \( i \), divided by the total of \( A \) in the population. One way of interpreting the result is that it is the “proportion of \( A \) who would have to change their tract of residence to make \( q_i = q \) for all \( i \)” (Duncan and Duncan, 1955).

In simplest terms, an index of 0 would be the result if every group was represented in every areal unit (e.g. neighbourhood) at the same proportion as they are found in the larger area (e.g. city). On the other hand, if the groups in question are never found to coexist in the same aerial unit, then they would be completely segregated and the calculation would return a result of 1. That said, as others have done, the results will be multiplied by 100, so the range will be from 0-100, rather than 0-1.

**DATA:**

In order to conduct this type of analysis, it is essential to have data at the lowest possible level of geographical detail. In the census datasets, the smallest geographical unit (of land) is known as the “enumerator area”, however, data at that level is not made available to the public due to concerns about confidentiality (Statistics South Africa, 2023, Statistics South Africa, 2010).

That said, the second-lowest level is referred to as a “subplace” (Statistics South Africa, 2010). One of the challenges working with subplaces is that they can differ quite significantly, both in terms of population, as well as in the amount of area it covers. In terms of size, the shapefiles provided by Statistics South Africa indicate that the smallest subplace was 0.0065 square kilometres or 6,500 square metres, whereas the largest was 497 square kilometres. In terms of the size of the working-age population (WAP), there were a few subplaces that had a WAP of zero because they were industrial areas or nature reserves, whereas the largest was 50,616 people, but they lived in an area of just 3.4 square kilometres.

While it is certainly preferable to keep the units of analysis relatively consistent and to limit the size, this problem is not unique to this study, but it something that needs to be accommodated in studies on numerous contexts globally (Van Ham et al., 2021).
**FINDINGS:**

**DEMOGRAPHIC AND LABOUR MARKET CHANGES:**

Cape Town’s working-age population and occupational distribution underwent significant changes between the 1980 and 2022. During the decade in question, there was a positive shift in the proportion of the WAP that was employed, as well as decreases in the proportion that was unemployed and discouraged work seekers (see figure 1).

Additionally, the high-skilled high-income (HSHI) occupations grew as a proportion of the occupational distribution (from 27% to 30%), but employment grew even faster in the semi-skilled middle-income non-manual (SSMI-NM) occupations. Consequently, while they accounted for 26% of the city’s jobs in 2001, this increased to 31% by 2011.

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**Figure 1: Working-age population, by employment status, 2011**

- **2001:**
  - Employed: 47%
  - Unemployed: 20%
  - Discouraged work-seekers: 6%
  - NEA: 27%

- **2011:**
  - Employed: 55%
  - Unemployed: 17%
  - Discouraged work-seekers: 3%
  - NEA: 24%
Table 1: Absolute number of people employed in Major Occupation Groups in Cape Town, 1980-2022³

<table>
<thead>
<tr>
<th>Occupation Category</th>
<th>1980</th>
<th>2001</th>
<th>2011</th>
<th>2022</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Legislators, senior official and managers</td>
<td>33,169</td>
<td>65,402</td>
<td>145,654</td>
<td>238,874</td>
<td></td>
</tr>
<tr>
<td>2 Professionals</td>
<td>53,651</td>
<td>84,621</td>
<td>104,291</td>
<td>176,229</td>
<td></td>
</tr>
<tr>
<td>3 Technical and associate professionals</td>
<td>41,377</td>
<td>99,068</td>
<td>133,351</td>
<td>187,640</td>
<td></td>
</tr>
<tr>
<td>4 Clerks</td>
<td>80,937</td>
<td>132,284</td>
<td>186,950</td>
<td>189,954</td>
<td></td>
</tr>
<tr>
<td>5 Service workers, shop and market sales workers</td>
<td>68,443</td>
<td>108,437</td>
<td>218,390</td>
<td>217,374</td>
<td></td>
</tr>
<tr>
<td>6 Skilled agricultural and fishery workers</td>
<td>8,808</td>
<td>7,590</td>
<td>10,002</td>
<td>3,091</td>
<td></td>
</tr>
<tr>
<td>7 Craft and related trades workers</td>
<td>42,718</td>
<td>110,781</td>
<td>151,627</td>
<td>131,758</td>
<td></td>
</tr>
<tr>
<td>8 Plant and machine operators and assemblers</td>
<td>151,136</td>
<td>74,057</td>
<td>64,170</td>
<td>102,726</td>
<td></td>
</tr>
<tr>
<td>9 Elementary Occupation (incl. domestic workers)</td>
<td>116,297</td>
<td>188,975</td>
<td>277,782</td>
<td>265,711</td>
<td></td>
</tr>
<tr>
<td>10 Occupation unspecified</td>
<td>17,916</td>
<td>68,290</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

However, while this study does focus on socioeconomic segregation, it is necessary to understand the racial composition of these occupational categories, especially the rapidly growing expanding categories (e.g. HSHI and SSMI-NM) that, by 2011, accounted for 61% of the city’s employed.

**PERSISTENT INEQUALITIES IN LABOUR MARKET ACCESS IN CAPE TOWN:**

Despite the gains made by the Black African and Coloured populations in HSHI employment between 1980 and 2011, they remained under-represented in this category, when compared to the composition of the WAP.

Figure 2 shows that while Coloureds accounted for 41% of the WAP in 2011, and Black Africans 39%, they accounted for just 37% and 17% of HSHI employment, respectively. On the other hand, Whites accounted for just 16% of the WAP, but 41% of HSHI employment. Unfortunately, this is a pattern that has persisted for more than a decade after this, with little change.

³ HSHI = highly-skilled high income occupations; SSMI-NM = semi-skilled middle income occupations; SSMI-M = semi-skilled middle income occupations; LSLI = low-skill, low income occupations
On the other hand, the gains were more significant in semi-skilled middle-income non-manual (SSMI-NM) employment, but it is worth keeping in mind that the differences in income compared to some HSHI occupations can be considerable (Borel-Saladin and Crankshaw, 2009). Coloureds were slightly over-represented in this category and Whites more so, as they accounted for 43% and 24% of SSMI-NM employment, respectively. On the other hand, the Black African population had made more considerable gains in these occupations but still accounted for just 35% of employment in this category.

Figure 2: Percentage of racial composition of those employed in highly-skilled high-income occupations compared with the working-age population, 1980-2022

Figure 2: Percentage of racial composition of those employed in highly-skilled high-income occupations compared with the working-age population, 1980-2022

*Managerial, Professional, Associate Professional and Technical occupations.*
As previously stated, a professionalisation trend can be expected to be accompanied by an increase in unemployment, especially among those who do not have the requisite skills and/or education in the upgraded job market (Hamnett, 2021, Borel-Saladin and Crankshaw, 2009, Hamnett, 1994).

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5 Clerical, Sales and Service occupations.
However, what has also been evident in Cape Town is that Black Africans and Coloureds have carried the heaviest burden in terms of unemployment in Cape Town, although the circumstances are considerably worse for the former. Figure 4 presents data on the racial composition of the unemployed population, once again including a comparison to the composition of the WAP. In both years, Black Africans comprised the majority of the unemployed population (58% in 2001 and 57% in 2011) despite being only 33% of the WAP in 2001 and 39% in 2011.

![Figure 4: Unemployment rate for the working-age population by race, 1980-2011](image)

So, considering the changes in demographics and occupational composition, the focus shifts to querying whether there is evidence of improvements or acceleration in racial desegregation, as well as whether there is evidence of socioeconomic segregation in Cape Town in 2011.

**Racial Segregation:**

As a starting point, it was worth determining the dissimilarity between each race and the rest of the WAP, followed by specific inter-group dissimilarity indices. When comparing the results for Cape Town, presented in Table 2, with the median urban indices across South Africa in 2001 (Christopher, 2005b), there are some interesting observations.
The Black African and Coloured populations in 2001 were more segregated in Cape Town, with indices of 87 and 82, than they were at a national level, where the indices were 84 and 73, respectively (Christopher, 2005b). One way of interpreting the dissimilarity index results is that, in the case of Black Africans when the index is 87, the index represents the percentage of that group that would have to move in order to reduce segregation to zero (Duncan and Duncan, 1955). On the other hand, both the other groups were less segregated in Cape Town, than at the national level. The index for the Indian/Asian population was 63 in Cape Town, but considerably higher at 86 nationally. Additionally, Whites were slightly less segregated in Cape Town, with an index of 89, compared to 92 nationally (Christopher, 2005b). Nevertheless, they remained the most segregated group in Cape Town in 2001, despite the desegregation that had been identified in some of the Apartheid-era Whites-only neighbourhoods (Graham, 2007, Crankshaw, 2012).

When comparing the inter-group dissimilarity in Cape Town (see Table 3) with the median indices nationally in 2001, there are a few observations that are worth highlighting. Firstly, the Black African to Coloured dissimilarity index of 86 in Cape Town is higher than the national median at the time, which was 74. Secondly, the index between Whites and Black Africans, as well as between Whites and Coloureds, in Cape Town, were seemingly the same as the national indices (at least when rounded off to zero decimal places). Both nationally (Christopher, 2005a) and in Cape Town (Table 3), the index for Whites and Coloureds was 88, whereas for Whites and Black Africans, it was 93. Lastly, the Indian/Asian population dissimilarity indices were lower in Cape Town for Whites (73, but 74 nationally), Coloureds (66, but 79 nationally), and Black Africans (89, but 92 nationally).

<table>
<thead>
<tr>
<th>INTERRACIAL DISSIMILARITY</th>
<th>2001</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black African</td>
<td>87</td>
<td>77</td>
</tr>
<tr>
<td>Coloured</td>
<td>82</td>
<td>76</td>
</tr>
<tr>
<td>Indian or Asian</td>
<td>63</td>
<td>58</td>
</tr>
<tr>
<td>White</td>
<td>89</td>
<td>85</td>
</tr>
</tbody>
</table>

Table 2: Dissimilarity index by race (working-age population only), 2001 and 2011
When comparing the 2011 findings to 2001, it could be summarised that there is evidence of racial desegregation, albeit limited, with each of the indices measured here, but even the lowest index (i.e. between the White and Indian/Asian populations) still represents a significant level of segregation. Furthermore, the greatest levels of segregation were, once again, involving the White population. Despite the marginal improvements, and the aforementioned desegregation of Apartheid-era Whites-only neighbourhoods (Graham, 2007, Crankshaw, 2012), the index for Whites and Black Africans was 87, whereas with the Coloured population it was 86.

**Socioeconomic Segregation:**

While the labour market data points to gains having been made in Cape Town by previously disadvantaged groups, as well as the evidence of some racial desegregation in this study and elsewhere (Graham, 2007, Crankshaw, 2012), this could logically lead to questions being raised about socioeconomic segregation. That being said, the initial data being presented here (in Table 4) was not only presented by this author in a different format in a previous study (Solomon, 2019), the format used here is comparable to previous studies on both Cape Town (Turok et al., 2021) and Johannesburg (Ballard and Hamann, 2021). However, all calculations were done independently by the author for the purposes of this study.
Nevertheless, in the context of this particular study, the question of socioeconomic segregation is an essential second of three parts of this study and provides a bridge from the first to the third. Since the precursors to this study were centred on whether the polarisation or professionalisation theories were most applicable to South Africa’s cities, it was a logical choice to continue using the grouped occupations presented in the *International Standard Classification of Occupations* or ISCO (International Labour Office, 2012) and which were used in those preceding studies (Solomon, 2019, Crankshaw, 2022, Lombard and Crankshaw, 2017, Crankshaw, 2017, Crankshaw and Borel-Saladin, 2014, Crankshaw, 2012, Crankshaw and Goetz, 2009, Borel-Saladin and Crankshaw, 2009, Crankshaw, 2008).

Consequently, as with the previously mentioned study on socioeconomic segregation in Cape Town (Turok et al., 2021), Table 4 presents the dissimilarity indices for segregation between the occupational groups as defined in the ISCO document (International Labour Office, 2012). Not surprisingly, the greatest levels of segregation in 2001 were between the highly-skilled high-income occupations (e.g. MAN, PRO, and TEC), on the one hand, and the unemployed (i.e. UNE), as well as discouraged work-seekers (i.e. DIS).

Unsurprisingly, in 2001, the dissimilarity indices for socioeconomic segregation were highest between the two highest occupational groups, Managers and Professionals, on the one hand, and two groups in the most precarious positions, the unemployed and discouraged work-seekers. The indices for the unemployed were 72 with the Managers and 76 with Professionals, whereas for the discouraged work-seekers it was 64 and 68, respectively. The indices for the unemployed and discouraged work-seekers were also high for a number of other occupations, include Associated Professionals (TEC), Clerks (CLE), and to a slightly lesser extent the remainder of the semi-skilled middle-income (manual and non-manual) occupations.

Conversely, for Managers and Professionals the indices were particularly high among the Elementary (ELE) occupations, as well as among the semi-skilled middle-income manual occupations (TRA and MAC), and to a less extent the semi-skilled middle-income non-manual occupations. One possibly anomalous finding involves domestic workers (DWK), however, this could possibly be explained by the tendency for some higher earning households to have live-in domestic workers, or for them to live in a room on-site (Crankshaw, 2008).
These findings suggest that the lower levels of segregation were not only between residents in similar income brackets and/or occupations, but even between those in highly skilled high-income occupations and those in semi-skilled middle-income non-manual occupations.

By 2011, the socioeconomic segregation had mostly decreased, but for the discouraged work-seekers (DIS) the segregation increased by at least for in relation to move occupations. however, the indices remained very high for all the highly skilled high-income occupations (i.e. MAN, PRO and TEC) in relation to a number of occupations, as well as the categories not in employment i.e. UNE and DIS). Nevertheless, these indices are not as high as the racial segregation indices, apart from some involving the very small Indian/Asian population.

<table>
<thead>
<tr>
<th>SOCIOECONOMIC DISSIMILARITY</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAN</td>
<td>PRO</td>
</tr>
<tr>
<td>MAN</td>
<td>16</td>
</tr>
<tr>
<td>PRO</td>
<td>15</td>
</tr>
<tr>
<td>TEC</td>
<td>22</td>
</tr>
<tr>
<td>CLE</td>
<td>33</td>
</tr>
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<td>SER</td>
<td>38</td>
</tr>
<tr>
<td>AGR</td>
<td>62</td>
</tr>
<tr>
<td>TRA</td>
<td>55</td>
</tr>
<tr>
<td>MAC</td>
<td>64</td>
</tr>
<tr>
<td>ELE</td>
<td>65</td>
</tr>
<tr>
<td>OTH</td>
<td>45</td>
</tr>
<tr>
<td>UNE</td>
<td>72</td>
</tr>
<tr>
<td>DIS</td>
<td>64</td>
</tr>
</tbody>
</table>

Table 4: Socioeconomic segregation by grouped occupations, the unemployed and discouraged work-seekers, 2001 and 2011

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\* MAN = Legislators, senior official and managers; PRO = Professionals; TEC = Technical and associate professionals; CLE = Clerks; SER = Service workers, shop and market sales workers; TRA = Craft and related trades workers; MAC = Plant and machine operators and assemblers; ELE = Elementary Occupation; OTH = Other occupations (not used in the 2011 data); DIS = Discouraged work-seekers
So, the findings point to some level of racial desegregation and socioeconomic segregation in a city where the racial composition of the fastest growing occupations is becoming more representative (albeit slowly) of the city’s demographics. Might this suggest that changes in the relationship between socioeconomic position (using occupation as a proxy) and race are contributing to decreasing levels of socioeconomic and racial segregation? While not making a direct causal argument, these processes clearly coincide. While the use of the dissimilarity index does not indicate where people of different races and/or occupations live, there is one last of set of calculations that could shed some light on additional characteristics of these changes.

**INTRA-OCCUPATIONAL RACIAL SEGREGATION:**

It was decided to return to the question of inter-group segregation, but only focusing within the skill-income categories previously used (refer to tables 7-11 in the addendum for inter-group dissimilarity grouped occupations, rather than these broader categories). After all, it was deemed a question worth asking in order to determine whether there is evidence of racial desegregation more closely associated with the evident socioeconomic changes.

When focusing on HSHI occupations a number of important findings were immediately apparent when comparing these indices (in Table 5) to the results presented in Table 3. Firstly, the indices demonstrated high levels of racial segregation even when only focusing on those in HSHI occupations. Secondly, other than the unchanged index for the Coloured and Indian/Asian populations, there were improvements along all axes. Thirdly, considering the indices for socioeconomic segregation between the individual grouped occupations in this HSHI category (refer to the indices for MAN, PRO, and TEC in Table 4), one might be forgiven for assuming that inter-group dissimilarity indices within this category would be considerably lower. Additionally, the arguments in some literature on suburban racial desegregation in South African cities might also encourage this assumption (Crankshaw, 2012, Crankshaw, 2008, Graham, 2007).
When focusing on those in SSMI-NM occupations, similar trends are evident, with at least two important distinctions. Although the indices point to decreased inter-group segregation among those in these occupations, the indices are consistently higher than the inter-group indices for those in HSHI occupations. Additionally, when comparing these results to the inter-group indices presented in Table 3, the differences are marginal, at best.

**CONCLUSION:**

South Africa's racially segregated and unequal past was stated from the outset, as well as Cape Town's reputation, among some, of being the most unequal and/or segregated city in South Africa. Rather than focusing too much on the various arguments in the literature, or even reducing the segregation question to a single measure of measures, the focus here was to use a single index, but to apply it to a number of possible forms of segregation, including inter-group racial segregation and socioeconomic segregation, with difference levels of improvement seen in most instances.
However, changes in the racial composition of the fastest growing (i.e. highly skilled high-income and semi-skilled middle-income non-manual) occupations, the considerably high levels of racial segregation compared to socioeconomic segregation, as well as the limited changed in both, was a catalyst to add another approach.

The extent to which racial segregation appears to be persistently higher than socioeconomic segregation, including when only focusing on certain grouped occupations or skill-income categories, suggest that racial segregation is still the more dominant of the two.

One might point out that there are high levels of segregation between the HSHI occupations and the unemployed or discouraged workers, but unlike the HSHI occupations the latter categories are mostly comprised of Black African and Coloured residents. But this does not distract from the high levels of racial segregation within those skill-income categories.

While this is not indisputable proof of those claims made at the outset, the findings of this study suggest that Cape Town has continued to be a very unequal city (in terms of employment and occupation), as well as a very segregated in terms of race, even among those who have made in-roads into the more lucrative occupations.

ACKNOWLEDGEMENTS:

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