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Measuring workforce segregation: religious composition of private-sector employees at individual sites in Northern Ireland

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Abstract. In this paper I examine the scope of publicly available information on the religious composition of employees in private-sector companies in Northern Ireland. I highlight the unavailability of certain types of monitoring data and the impact of data aggregation at company as opposed to site level. Both oversights lead to underestimates of the extent of workplace segregation in Northern Ireland. The ability to provide more-coherent data on workplace segregation, by religion, in Northern Ireland is crucial in terms of advancing equality and other social-justice agendas. I argue that a more-accurate monitoring of religious composition of workplaces is part of an overall need to develop a spatial approach in which the importance of ethnically territorialised spaces in the reproduction of ethnosectarian disputation is understood.

The murder of Danny McColgan, a Catholic postal worker, as he entered his place of work in a predominantly Protestant area in 2002, was a poignant reminder of the link between violence and the desire to discourage workplace mixing via the use of force. Given the context of peace-building it is expected that the reduction in such violence will encourage the crossing of ethnosectarian boundaries in the search for work. Indeed the Belfast Agreement, the template for building democracy and political inclusion within Northern Ireland, endorses the capacity for conflict transformation through fashioning institutions and legislation, which reconcile order with personal, communal, and spatial liberty.

Evidence presented, on a yearly basis, by the Equality Commission for Northern Ireland (ECNI), has shown that over the past decade there has been a decline in the overall level of religious segregation within the monitored labour market. This it is argued is a result of increased mixing, employment decline within highly segregated companies, equality legislation, and a reduction in workplace choice being predicated upon fear, discrimination, and ethnosectarian competition (Osborne, 1996; 2003). As noted by Harbinson (2002), the Chief Commissioner of the ECNI:

> "The Annual Monitoring Reports also show that there has been a reduction in the degree of segregation in the workplace. Companies with an under-representation of either Catholics or Protestants have both shown improvement."

However, there is a problem in terms of this interpretation of workplace desegregation in that it is based upon a monitoring process that has constantly disguised the extent of religious segregation. Without the type of analysis presented below it is difficult to accurately determine the extent of workplace segregation and thus the depth, form, and reality of existing ethnosectarian polarisation (Shirlow et al, 1998).

The central problem in relation to the monitoring data presented by the ECNI is that it does not provide information on all workplaces. At present, the proportions of Protestant and Catholic employees working within multisite companies are aggregated, or averaged across all site locations. Aggregate figures suffer from the ecological fallacy by tending to dilute, for instance, the impact of segregation at the individual site scale. In other words, the mix of employees for a hypothetical two-site company, which has one

site with a predominantly Catholic workforce and another site with a predominantly Protestant employment base, will be reported as an average of more-or-less equal proportions.

The existence of this internal segregation is accepted but beyond that no serious analyses of it have been advanced. As a result of this lack of analytical endeavour, one of the most contentious issues, within Northern Irish politics, remains acknowledged but unaccounted for. This failure to provide a rigorous examination of workplace segregation permits the articulation of strong ethnosectarian discourses on labour-market segregation and discrimination to be advanced without any serious critique or challenge. Moreover, the presentation of data that suggest a shift towards a more-shared labour market undermines the reality of continued division, chill factors, and the impact of residential segregation upon labour-market outcomes.

Space and workplace composition

Space matters in terms of interpreting 'choice' and access to workplaces within societies that are influenced by ethnic and/or racial differences. Within ethnically segregated societies links between ethnicity and workplace composition can be tied to wider discourses that evoke racist and discriminatory practices that seek to maintain the labour-market dominance of a particular group at the national, regional, and local levels (Bradley, 1996; Du Gay, 1997). Of importance in understanding workplace segregation is an interpretation of how the relationships between polarised groups are played out via the mediums of employment and politics, and through various spatio-temporal constructions. Without doubt the need to examine the extent of ethnic segregation is crucial, not only in terms of understanding social marginalisation but also in terms of determining why the general process of ethnic or religious segregation has alternative effects in different places due to localised cultures, structures, and ethnic exclusions.

Within highly segregated societies, force, suspicion, and mistrust can influence the choice of work, especially among those whose lives are directly influenced by living within segregated environments (Crowder, 2000). Space and the interpretation of place represent the crucial categories for understanding the connections between all sorts of multiple oppressions and the possibility to mobilise around agendas framed by place (Moody, 2001; Murtagh, 2002; Neill, 1999). As noted by Soja:

> "We and 'they' are dichotomously spatialized and enclosed in an imposed territoriality of apartheids, ghettos, barrios, reservations, colonies, fortresses, metropoles, citadels and other trappings..." (1999, page 68).

Within such circumstances communities are conscious of the nature of boundary maintenance and the threats and prejudices that are set against them (Archer, 1995; Bradley, 1996; Du Gay, 1997; Keat, 2000; Parker, 2001). Heikkila (2001) argues in terms of policy recognition that the key challenge for spatial planners and urban managers is to acknowledge that:

> "Space matters because it mediates the experiences of people in places, and further, it shapes the structure of the opportunity set available to them" (Heikkila, 2001, page 266).

There is a distinct link between the ethnic segregation of workplaces and the reproduction of social inequality (Sorensen, 2003). Reskin et al's (1999) work in the United States has indicated that minorities are underrepresented in over half of all sites of employment. Similar work, in both the United States and the United Kingdom has shown that nonwhites tend to be ghettoised into workplaces which provide lower-than-average wage rates, low levels of union representation, and insignificant opportunities for promotion (Barnett et al, 2001; Becker, 1980). Within the

Northern Irish context a central focus is upon the impact of fear and associated chill factors. Chill factors refer to the avoidance of sites of employment or other arenas due to fears concerning personal security and/or the wider patterns of hostility that emanate from a defined or perceived threatening group. As noted by Osborne and Shuttleworth:

> "... there is no doubting that residential segregation in Northern Ireland does impact on equality issues in terms of access to jobs and the chill factor" (2004, page 11).

However, as Muow (2002) and Sorensen (2003) contend, most analyses of employment segregation tend to be undertaken via determining the underrepresentation of minority populations in terms of aggregate national or regional employment. A more precise analysis of segregation at workplace level is less evident. As noted by Sorensen:

> "One reason for this is that there has been little data available on racial segregation at the establishment or workplace level" (2003, page 2).

The ability to explore the religious, racial, or ethnic construction at workplace level encourages a more coherent examination of the link between ethnicity and workplace construction. More spatially sensitive analyses, especially at site level, could also permit a more valid examination of how the meaning of segregation structures the mediations, which constitute the signification processes that create, modify, and reflect thoughts, ideas, and feelings through and into ethnicised space (Massey and Fischer, 2000; Portugali, 2000; van Kempen and Ozuekren, 1998).

'Interpreting' the Northern Ireland labour market

The relationship between religion and/or political opinion and employment or unemployment within Northern Ireland is generally based upon the measurement of the unemployment differential between Catholics and Protestants. The level of Catholic unemployment has been consistently higher (between 1.7 and 2.5 times higher) than that of Protestants during the 1970s, 1980s, and 1990s, although it must be noted that the rate of unemployment has more than halved during the same period (Breen, 2004). Debates are also attached to varying interpretations concerning why more adult Catholics (16%) live in households where no one works, compared to Protestants (11%), or why more than half of all Protestants live in two-earner households, compared to just over a third of Catholics (Breen, 2004). In addition to this, is an ongoing debate over access to work in terms of threat and personal safety.

Both Sinn Fein and the main Unionist parties have argued that sections of their community are penalised in their search for work by the existence of employment within highly segregated places that are dominated by the 'other' community. In such instances the fear of working in places dominated by the 'other' community and the experience of being intimidated in such places is of concern. Sinn Fein has continually argued that the greater concentration of employment within predominantly Protestant places has reduced the capacity of Catholics to work there. In more recent times Unionists have argued that the creation of new sites of employment within Catholic areas has undermined the ability of some Protestants to locate safe environments within which to work.

An example of these claims and counterclaims of spatial discrimination and chill factors was evident in October 2004, when Sinn Fein and the two main Unionist parties became embroiled in a dispute over religious imbalances evident within the Royal Victoria Hospital in Belfast. Unionists claimed that over 90% of all 'security and cleaning' staff within the hospital were Catholics and that Protestants had been 'frozen out' by unfair employment practices and intimidation. Sinn Fein countered these arguments by contending that within professional posts the share of Catholic employment was a third of that for Protestants (Breen, 2004).

The Ulster Unionist Party tend to make several arguments regarding allegations of discrimination. They contend that claims of discrimination, made by Sinn Fein in particular, are both imagined and exaggerated. It is argued that there is "no reason to doubt the overall fairness of the labour market" (Ulster Unionist Party, 2004). Ulster Unionists generally agree that "the unemployment differential has not narrowed significantly" and that this proves that rigorous antidiscrimination laws are ineffective (Ulster Unionist Party, 2004).

For Ulster Unionists the inability of antidiscrimination practices to narrow these differentials is seen as proof that the reason for such disparities must emanate from other sources. This is usually couched around arguments that concern higher Catholic birth rates, low levels of out-migration, benefit traps, and low skill levels (Ulster Unionist Party, 2004). The overall argument that the Ulster Unionists use follows the logic that labour-market growth is more effective than antidiscrimination policies in creating more-equitable shares of employment. However, a more vociferous Unionism, attached to the Democratic Unionist Party, provides an ethnically driven discourse, in which it is argued that equality legislation favours the employment of Catholics and that the Protestant community is losing out in terms of access to jobs. Gregory Campbell, a prominent member of the Democratic Unionist Party, has argued that the decline over the past decade in Protestants in full-time employment (a fall of around 5000) is directly linked to the growth in Catholic employment (a growth of around 22 000). According to Campbell (2003):

> "... action is required to ensure that more Protestants get jobs, because it is they who have been losing out. This can only mean that, as I have argued for many years, new jobs are being allocated disproportionately to Roman Catholics."

Republicans and Irish nationalists counter these arguments through asserting that the employment differential between Catholics and Protestants is based upon the impact of previous and present discriminatory practices. It is also noted that the 'inability' of antidiscrimination legislation to actively pursue employers who operate highly segregated workplaces is an example of ineffective antidiscrimination policies. As noted in an editorial in *An Phoblacht*, a prominent Republican newspaper:

> "There are commitments in both the Good Friday Agreement (Belfast Agreement) and Programme for Government to eradicate such inequality. We now need to see concerted action so that this legacy of discrimination can become a thing of the past. Attempts to claim that the differential is unconnected to discriminatory practise and policy needs to be challenged by all those responsible for the implementation of the Agreement. Rhetoric and words count for nothing unless we see resources specifically targeted against the sectarian inequality in workplaces" (2001, page 1).

These arguments over policy and representativesness are historically based, especially with respect to the collapse of the Stormont regime in 1972 and subsequent legislative reforms. These reforms aimed, through the 1976 and 1989 Fair Employment Acts, to weaken the authority of discriminatory practices that aided the reproduction of workplace segregation. In 1987 the Standing Advisory Commission on Human Rights (SACHR) critically examined the impact of the fair-employment legislation and at that time provided a detailed set of proposals both for legislative change and a series of policy initiatives (SACHR, 1987). The report shifted the terms of the debate from a concentration upon the eradication of prejudiced discrimination towards a stronger emphasis upon reducing unjustified structural inequality in the employment market, whether caused by discrimination or not.

The combination of state-led strategies of political 'normalisation', the SACHR study and international pressure arising as a result of the MacBride campaign in the

United States, led to the passage of the Fair Employment Act of 1989 (see Osborne and Shuttleworth, 2004). This act was intended to provide a more active approach to the practice of fair employment and was to be backed by strong enforcement bodies. Affirmative action was a key feature of the 1989 Act and involved adopting practices that encouraged fair participation while stopping practices which restricted it. There were three major forms of affirmative action covered in the Act and these related to:
(1) training in order to achieve fair participation;
(2) the encouragement of job applicants in the interest of fair participation;
(3) the negotiation of agreed redundancy schemes in order to maintain fair participation.

A significant body of legislation now constitutes a broad swathe of actions which constitute sectarian harassment as illegal, in the context of fair employment legislation, via the provisions which make it unlawful to treat people 'less favourably' than others or to cause them 'detriment'. Employers, even if they are unaware of sectarian harassment within their workplace, remain liable for any unlawful acts of sectarian harassment committed by them or their employees (DETI, 2002a; 2002b). Employers are also responsible for the prohibition of all offensive materials, such as sectarian paraphernalia, and acts that give offence or cause apprehension amongst employees (McCrudden et al, 2004).

In 1997 the SACHR identified that antidiscrimination legislation could only be part, though a necessary part, of the process of government addressing the problem of employment inequality. In relation to publicly funded job creation SACHR argued that the government should acknowledge that the Industrial Development Board ignored the impact of chill factors. SACHR also recommended a public review of chill factors within certain areas. Unfortunately, this issue did not feature in future policymaking initiatives. This was lamentable in that the failure to measure the link between religious affiliation and the recognition of workplaces that were deemed to be unsafe undermined a more rational interpretation of how violence and sectarianised prejudice impacted upon workplace choice. Moreover, the failure to pursue the link between workplace location and wider patterns of segregation undermined a key factor that encouraged labour-market inequality and spatially produced forms of social marginalisation.

A chill-factor-influenced labour market

An extensive body of work undertaken by Borooah (1996), Sheehan and Tomlinson (1996), Shuttleworth et al (1996), and McVeigh and Fisher (2002) has indicated that chill factors are affiliated to experiences and perceptions of both fear and risk. Survey work conducted by Sheehan and Tomlinson (1996) and McVeigh and Fisher (2002) has shown that around a third of identified respondents had experienced threats at work because of their religion and/or political opinion. These surveys, which were conducted within highly segregated communities, showed that anywhere between a half and two thirds of respondents were reluctant to work in places that were dominated by the 'other' ethnosectarian group.

Despite political change and the paramilitary ceasefires, the reality of enduring sectarian intimidation within the workplace was recorded in 1998 by the Fair Employment Commission (FEC). At that time the FEC stated that around 10% of complaints brought to their attention on a yearly basis had been based upon exposure to sectarian harassment, a figure that rose to 22% in 1998 (Power, 1998). More telling was the conclusion that complaints concerning sectarian harassment:

> "... may considerably understate the extent of harassment and little research has been done to assess how widespread the experience of sectarian harassment at work is among the adult population in Northern Ireland" (Power, 1998, page 4).

This evidence presented by the FEC supported the supposition that chill factors are not merely based upon community insularity and perception, but were also influenced by a rational assessment of risk (McVeigh and Fisher, 2002). It is evident that the crossing of ethnosectarian boundaries, despite the reduction of political violence, still creates phobias, insecurity, and harm among a noticeable section of the Northern Ireland workforce. The recognition that fear and avoidance are influenced by ethnosectarian practice indicates that the abnormal structure of the labour market, especially within segregated areas, can be based upon an understanding of the realities of everyday life within which the ideological role of ethnosectarian disputation influences the naturalisation and appearance of social and productive relationships. Perceptions and realities of insecurity are thus understood as being tied to a perceived or actual lack of security when entering a workplace within which a person will be part of a 'powerless' and ultimately 'unprotected' minority.

For some the crossing of ethnosectarian boundaries is understood by wider ethnosectarian impressions within which the 'other' community is cast as a menacing and unwelcoming ethnosectarian construct. In this sense, fear and avoidance of the 'other' community connects with debates concerning the rationality and irrationality of decisionmaking behaviour. Loathing and a desire to avoid places where the 'other' community is dominant are also tied to an ethnosectarian logic and connections between anthropologies of purity and deviance, and debates centred on the concept of 'otherness'. In certain instances the desire to locate employment within areas dominated by the ethnosectarian 'self' or in places that are shared is based upon the identification of places that are understood as safer, trusted, and secure.

Other factors that may intensify the pattern of religious segregation include the availability of suitable work in terms of wage levels, car ownership, skills, and educational requirements. There are workplaces which are dominated by a particular ethnosectarian group and this dominance reflects their location in those parts of Northern Ireland where the travel-to-work area tends towards the predominance of a particular community. Where the issue of segregation is problematic is within those sites of employment within which the religious composition of the travel-to-work area does not reflect the religious composition of that workplace. Despite these caveats it is clear that academic and government-sponsored research has shown that workplace segregation is based upon understandings of threat from intimidation and other behavioural responses that are linked to perceived hazards, dangers, and various environmental stimuli.

The problems with religious monitoring of private companies

As noted previously the religious monitoring of workplaces has been interpreted as indicating that there is a more equitable share of employment by religion due to a reduction in workplace segregation. However, Russell has argued that the religious monitoring of workplaces, undertaken by the ECNI, does not provide for a "detailed examination of workplace segregation" and that the present measurement techniques are a "rather crude proxy for segregation" (2004, page 42). Despite such criticism there has been no examination of how more effective means of analysis could be advanced in terms of measuring workplace-based religious segregation.

The analysis presented here is based upon the yearly monitoring of the Northern Ireland workforce undertaken by ECNI. However, there are several difficulties in terms of using the data supplied by the ECNI in terms of accurately gauging religious segregation and religious underrepresentation. These difficulties include:

(1) data collection on companies employing between 11 and 26 employees only beginning in 1992;
(2) the exclusion of the data collected on companies which employ between 11 and 26 employees from the published list of monitored companies;
(3) the noncollection of data from companies that employ fewer than 11 employees;
(4) the nonsubmission of data on part-time employees until 2001;
(5) the nonpresentation of employment totals for companies that employ fewer than 10 Catholics or Protestants;
(6) the nonpresentation of any information regarding the overall level of religious segregation;
(7) the exclusion of information on monitored and nonmonitored companies that usually constitutes a fifth of all private-sector employment.

The ECNI argue that the withholding of data on companies that employ between 11 and 26 employees is based upon presenting an unbroken longitudinal analysis from the original monitored dataset. This is peculiar given that the collection of data regarding part-time employees in 2001 was included within the monitoring statistics with no regard for the sanctity of the dataset.

Osborne (2003) and Shuttleworth and Anderson (2002) have contended that it is the small-scale employers, who do not fall within the published monitoring requirements, which are most likely to be religiously segregated. However, the accuracy of such a supposition is difficult to gauge as a result of the lack of available data. It was found from the data from the sample study that was collected by the author in 2001 that the share of all employment that was above 80% Catholic or Protestant among companies employing fewer than 26 employees was 58.6%, a figure that was over four times higher than that of monitored companies employing more than 26 employees within the same year.

The nonlisting of companies that employ fewer than 10 Catholics or Protestants also disguises workplace segregation. In 2001, for example, 288 private-sector companies with fewer than 10 Protestants and 638 companies with fewer than 10 Catholics were identified by the ECNI. In the data there are no details, as for other companies, of the exact number of Catholic and Protestant employees within each company. If, for example, the 638 companies that employed fewer than 10 Catholics merely employed 1 Catholic each then the share of Protestant employment within such firms would be 97.7%. If they employed 9 Catholics each the maximum share held by Protestants would fall to 78.2%. The reason given for excluding data on these small-scale employers and those with fewer than 10 Catholic or Protestant employees is that the detailing of such information could lead to the targeting of small groups of spatially vulnerable employees. In reality any desire to target civilians would come from local knowledge held by paramilitaries and other ethnosectarians.

As noted previously, the major weakness in using the data available to measure the religious composition of companies is that of internal segregation. The data provided by the ECNI on each company include only monitoring data at the company level as opposed to the workplace or site level. The analysis of companies with multisite locations is key to revealing a more accurate picture of religious segregation within the labour market.

Alternative measurements

The determination of community underrepresentation, at the Northern Ireland level, is based upon the overall share of employment held by each respective community. Within private-sector employment monitored in 2001, the majority of employees were Protestants (60.7% compared to 39.3% Catholic). This Protestant-majority status did not

simply reflect population composition but an overrepresentation of Protestants (~3%) and an underrepresentation of Catholics (~3.5%). Thus it is acknowledged that there is an inequality in terms of community representation at the Northern Ireland scale, even though the reasons for this inequity are contested. What is being explained here is the nature of that inequity especially when it is reproduced via a mismatch between a workplace's religious composition and the religious composition of its travel-to-work area.

In addressing the failure to publicly examine the complexities of the religious monitoring of workplaces and the extent of internal segregation, I now turn my analysis to an examination of official measured segregation and an example of what the extent of internal segregation may be. The analysis presented is based upon two groups of employee records. One group is based on ECNI monitoring data on employees for 2001, whereas the other group is a sample of companies identified as operating across multisites. To test the theory of averaging (internal segregation), the following analysis initially compares the mix of Protestant and Catholic employees working for all 1403 companies included within the ECNI monitoring statistics for private companies in 2001.

Both figure 1 and table 1(a) (see over) reveal the level of workplace segregation within the monitored workforce. Nearly 40% of all monitored employment is based upon companies with a Catholic or Protestant share above 70%. As shown in table 1(a) the majority of these jobs are held by those designated as Protestants. Furthermore, 37.8% of all Protestant employees work in places that are at least 70% Protestant [table 1(b)]. This compares to 18.0% of all Catholic employment being located within Catholic-dominated companies [table 1(c)]. Tables 1(b) and 1(c) also indicate that the share of total Protestant employment within predominantly Catholic companies is only 3.6%, whereas 14.3% of total Catholic employment is within companies that are predominantly Protestant. Over a third (35.3%) of all employment is within companies that have a Catholic : Protestant split between 50.0% and 59.9%.

In testing the impact of averaging employment upon measures of religious segregation I analyse data on a sample of companies from within the manufacturing, retail, and service sectors. The sample is based upon those companies that were prepared to

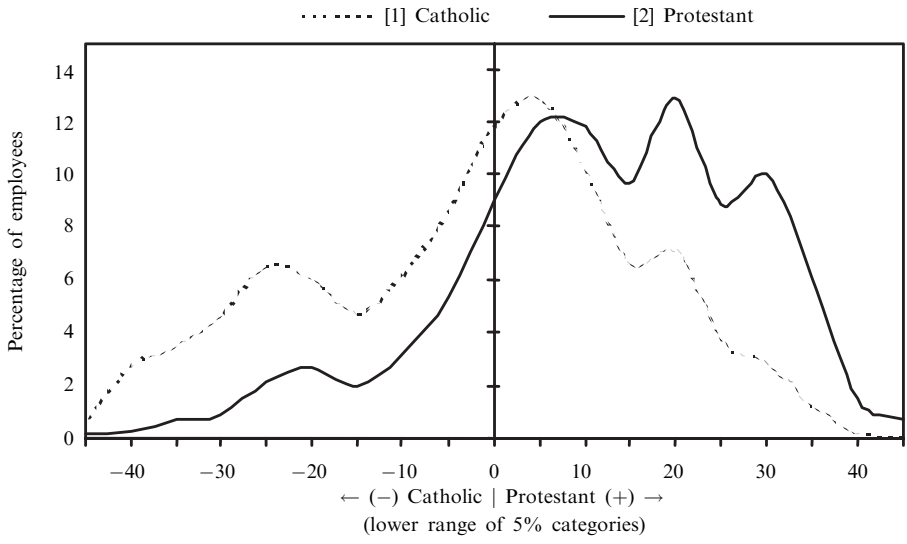

Figure 1. Northern Ireland private-sector employees by Catholic and Protestant distributions (2001).

Table 1. (a) Percentage share of all monitored employment within: (a) the private sector by segregation and religion; (b) predominantly Protestant companies; (c) predominantly Catholic companies (data supplied by Equality Commission for Northern Ireland).

(a)

Percentage share Catholic or Protestant	Percentage Protestant share	Percentage Catholic share	Percentage share of all employment
90.0+	73.3	23.2	1.5
80.0–89.9	64.9	32.0	11.5
70.0–79.9	59.1	36.6	24.2
60.0–69.9	54.9	40.3	27.2
50.0–59.9	49.2	45.2	35.3

(b)

Percentage share of Protestant in predominantly Protestant companies	Percentage share of all Protestant employment	Percentage share of all Catholic employment
90.0+	1.90	0.2
80.0–89.9	12.70	3.1
70.0–79.9	23.20	11.0
60.0–69.9	23.00	17.0
Total	60.80	31.3

(c)

Percentage share of Catholic in predominantly Catholic companies	Percentage share of all Protestant employment	Percentage share of all Catholic employment
90.0+	0.04	0.7
80.0–89.9	0.84	6.1
70.0–79.9	2.70	11.2
60.0–69.9	4.00	10.4
Total	7.58	28.4

provide data to the researchers. The response rate from a random sample of employers was 42.6%. Within this analysis the selection of data is solely from those companies that employed 26 or more employees and that are multisited. Companies employing fewer than 26 employees were excluded as the data used needed to match the publicly available data released by the ECNI. These companies constituted 49.9% of the total sample. Each of these companies appears in the ECNI monitoring report as being relatively mixed in terms of its religious profile.

An issue relevant to determining the representation of the data collected is the inability to locate information on the number of employees located within multisited companies in Northern Ireland. These data are collected every 2 years via the Census of Employment but is not released publicly, the reason for which is not explained. Access to such data can be gained through requests being made by Members of the Legislative Assembly. However, the suspension of the Northern Ireland Assembly over the past 2 years has removed this particular outlet. The emphasis here is thus on illustrating the impact of factoring in the sample of multisited companies upon the official monitoring statistics for 2001.

In relation to the multisited sample, data were obtained on the religion and nondetermination of a workforce that totalled 26 787 employees. After removing the nondetermined from the analysis, in order to measure the relationship between identified Catholic and Protestant workforces, total employment fell to 24 772. Despite the inability to determine the representativeness of these data, as noted above, it should

be stressed that the sample covered 10.9% of all monitored private-sector employment in Northern Ireland in 2001. The sample size is certainly within the statistical margins of population testing. The number and names of companies who supplied data are anonymised at the request of each company. Data were provided for over 40 sites throughout Northern Ireland. Total employment for the companies surveyed was as low as the high 20s through to 2000 plus. The share of the sample by company size was similar to the shares of employment by monitored-company size within Northern Ireland.

The data collected covered all travel-to-work areas as recognised by the ECNI. Within the sample 78.2% of all employment was tied to an employment profile within which either Catholic or Protestants were overrepresented by at least 15% given their respective travel-to-work areas. 12% of all sites of employment contained religious-composition profiles that were within 10% of what would be expected given the composition of these travel-to-work areas. The remaining workplaces were within 11% to 14% of the religious profile of their travel-to-work areas. In effect the majority of sample sites contained religious profiles that contained an overrepresentation or underrepresentation of either Catholic or Protestant employees when measured against the religious composition of each travel-to-work area.

The descriptive statistics provided by the ECNI reveal a limited degree of variability of the Northern Ireland workforce between employees labelled as Protestant or Catholic (figure 1). In the proceeding analysis complete distributions of Protestant and Catholic employees are statistically compared with and without the multisite sample. All results are linked between table 2 and figures 1 through 4 by labels [1 through 6]. From the outset, the levels of segregation are plainly apparent in figure 1 and table 1(a) and the

Table 2. Distribution statistics of companies with and without multisites (data supplied by Equality Commission for Northern Ireland and author's survey).

	Number of companies	Number of employees	Mean[b] (%)	Mean[c] +Protestant −Catholic 0 = equal	Std. dev.	Skew	*p*-values[d]
[1] Catholic (without multisites)	1403	92 605	52.11	−2.11	2.23	0.07	0.062*
[2] Protestant (without multisites)		134 122	61.46	+11.46	3.19	−0.40	
[3] Catholic (multisite sample)	+40[a]	11 773	63.32	−13.32	2.61	1.14	0.018**
[4] Protestant (multisite sample)		12 999	65.26	+15.26	6.82	−2.77	
[5] Catholic (including multisites)	1403	92 605	53.64	−3.64	1.95	0.11	0.041**
[6] Protestant (including multisites)		134 122	62.30	+12.30	3.35	−0.73	

*Significant at the 0.1 level; ** significant at the 0.05 level.
Std. dev.—standard deviation.
[a] Multisites, not number of companies.
[b] Mean calculated with respect to Protestant and Catholic employees, where mean → 100% represents increasing Protestant : Catholic segregation; 50% indicates parity.
[c] Mean calculated as balance between Protestant and Catholic employees, where positive values indicate protestant prevalence above 50%, negative values represent Catholic prevalence below 50%, and 0 is equal balance at 50%.
[d] *p*-values based on transformed noncategorised employee data using a two-tailed paired samples *t*-test.

cumulative percentage of Catholic [1] and Protestant [2] distributions from existing religious monitoring data for 2001. For clarity, the distributions were measured with respect to 5% intervals, where +45 indicates 95% of the company's employees as Protestant, −45 as 95% Catholic, and 0 represents equal Catholic and Protestant proportions. Note these intervals denote the lower limits of the 5% categories.

Statistically, the difference between the Protestant and Catholic means is significant with the standard *t*-test. The means of the two distributions are calculated with respect to the parity level for each respective community, where, for instance, 61.46% is 11.46% beyond parity for the Protestant distribution and 52.11% is 2.11% beyond parity for the Catholic distribution. The skew is an indication of asymmetry in the distribution; a left-sided tail is measured by a negative value, a right-sided tail by a positive value, and 0 indicates symmetry. For the 2001 data a moderate negative skew is calculated for the Protestant distributions, representing a 'reasonable' level of segregation, whereas a skew close to 0 is indicative of much more symmetrical, hence less segregated, Catholic distributions.

The next stage was to evaluate the Protestant and Catholic distributions based purely on the sample companies that operate across each location. These are illustrated, in figure 2, by the high peaks for both Catholic [3] and Protestant [4] distributions, indicating high levels of segregation. Statistically, mean values are highly dissimilar (15.26% and 13.32% beyond parity for Protestant and Catholic, respectively) and skew levels are much more extreme than in the [1 and 2] previous distributions (higher negative skew for Protestant and a greater-than-0 skew for Catholic). In terms of statistical significance, the two distributions are now more dissimilar, at the $p = 0.05$ level. In all, the Protestant and Catholic distributions, representing employees at the multisite locations, are highly dissimilar, indicating a highly segregated labour force with only a small proportion of sites reporting mixing.

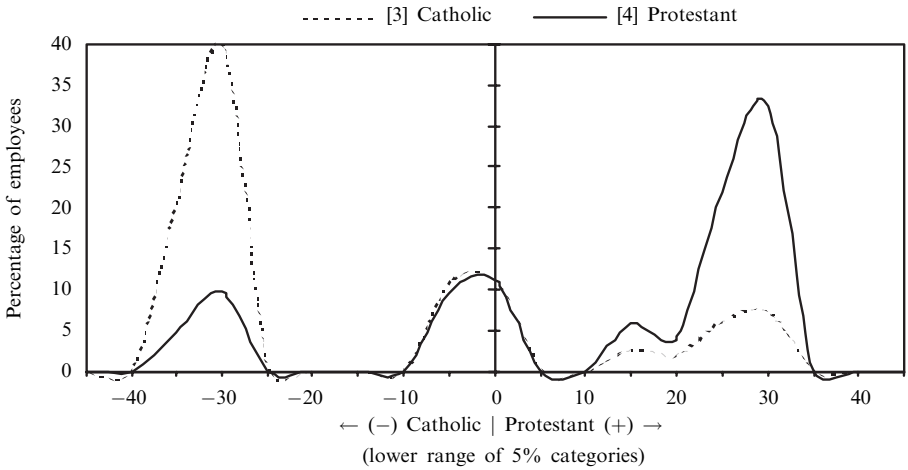

Figure 2. Distributions of Catholic and Protestant employees working within multisite companies in Northern Ireland (2001).

With this in mind, a more realistic analysis of the impact of multisite locations on Catholic and Protestant differentiation would be to incorporate the multisite distributions of [3] and [4] into the previous 2001 distributions [1] and [2]. In other words, to insert the Catholic and Protestant proportions from the 40+ multisites into the entire workforce as defined by monitoring statistics in 2001. The adjustment produces the Catholic [5] and Protestant [6] distributions illustrated in figure 3 (see over).

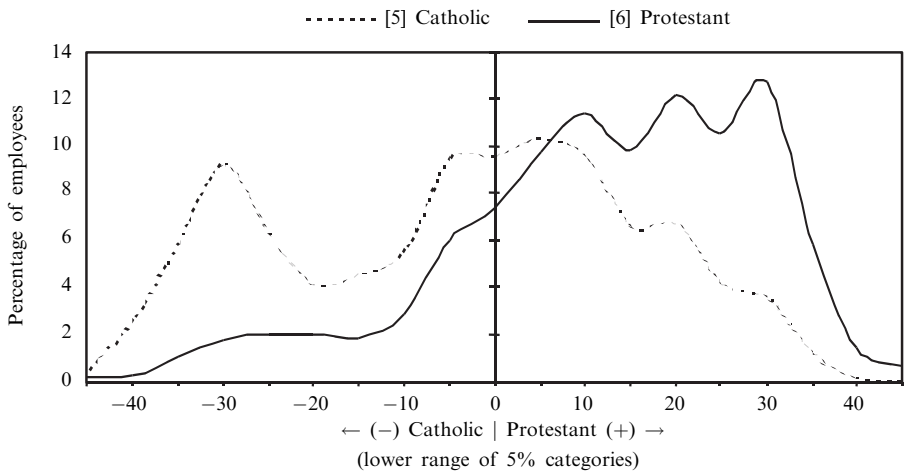

Figure 3. Distributions of Catholic and Protestant employees after the inclusion of multisite data (by religion) in Northern Ireland (2001).

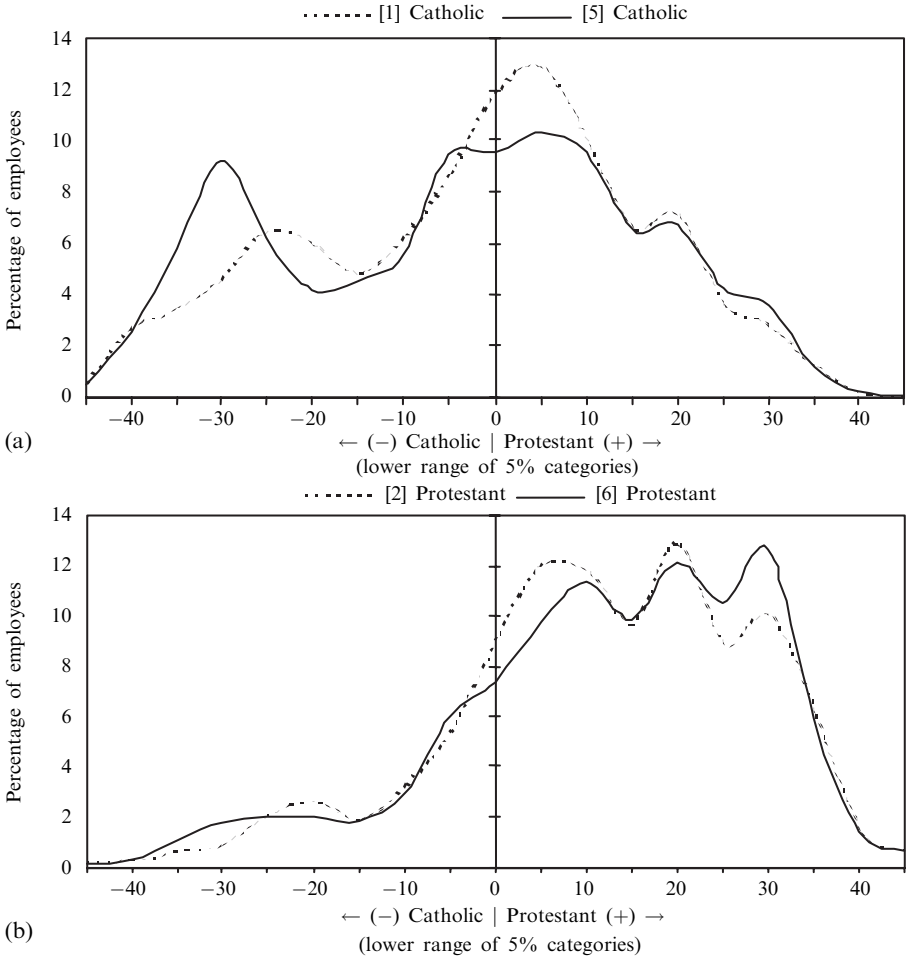

Figure 4. Comparison of single-sited against modifications based on multisited samples of Northern Ireland employees by (a) Catholics and (b) Protestants (2001).

Visually the curves are quite similar to the official distributions in figure 1, but on closer inspection they reveal a considerable level of divergence. The means are now further apart; 12.30% and 3.64% beyond parity as opposed to 11.46% and 2.11% previously. This may not seem overly diverse but is enough to strengthen the statistical significance of difference for the [5] and [6] distributions to $p > 0.05$ from the previous $p > 0.1$ for the [1] and [2] distributions. The increased divergence in the distributions also results in higher skew values; -0.73 for Protestant and 0.11 for Catholic, compared to -0.40 and 0.07 calculated for the single-sited distributions.

The inclusion of the multisite data indicates a flattening in the share of Catholic employment within the range of 50 – 60% segregation which is paralleled by a small decline in predominantly Protestant workplaces and a growth in the share of Catholic employment within which the share of Catholic employment is between 80.0% and 89.9% [figure 4(a)]. This indicates that there are more Catholic-dominated workplaces than are recorded in the data presented by the ECNI. It is not surprising given the Protestant domination of segregated workplaces that the rise in highly segregated Protestant workplaces is less dramatic than is the case for predominantly Catholic worksites. However, there is a significant growth in companies that are between 80% and 85% Protestant [figure 4(b)].

As indicated within the sample, the issue of internal segregation is exposed when employment at each site of employment is taken into consideration. It is with some caution that it is noted that the sample provided may have higher segregation at each of its respective sites than is the case for most multisited companies. However, there is no doubting that the measurement of segregation at site or workplace level would show that the private sector is more segregated than is presently reported. Moreover, given the limitation of the data provided by the ECNI it is impossible to conclude whether sites of employment have become less or more segregated.

Conclusion

My aim in this paper is not to undermine the role that the ECNI are playing in developing a more equitable and fair labour market but to determine more adequate ways in which debates on religious segregation could be advanced. It is probably the case that there is greater workplace mixing, but the level at which mixing exists and has grown cannot be determined by present monitoring processes. The lacuna in the work dedicated to the issue of workplace segregation also means that we do not know if there are new and emerging forms of segregation or if deindustrialisation has a more significant impact upon levels of segregation than does the emergence of new industrial sectors.

The key requirement is to understand and measure segregation, in its many forms, and how it precludes the development of a more equitable and just society within Northern Ireland. The nature of residential segregation still, despite political change, drives disputes over housing allocation, cultural parades, and the development of a valid equality agenda. The disguising of workplace segregation reduces the capacity to undertake a rational and informed policy debate around the related themes of equality and social and religious discrimination (Ellis, 2001). This failure to provide verifiable and accurate information creates the opportunity for political entrepreneurs to promote ethnosectarian interpretations of the labour market, which in some instances provides the catalyst for further dissent between oppositional political discourses. At times this dissent is tied to wider ethnosectarian perceptions that encourage alienation and mistrust between the two main political traditions.

The recent electoral growth in the Democratic Unionist Party and Sinn Fein, testifies to an ever-increasing link between electoral outcomes and the capacity of these political parties to mobilise electorates that are influenced by living within

highly segregated communities. Somewhat ironically the decline in political violence has led to a growth in the political fortunes of those political parties who advance the strongest narratives of ethnic identification and who contend that employment discrimination remains ever present.

The point being made is not simply that there is a need for a greater commitment upon government and other agencies to explore the link between all forms of segregation and locational decisionmaking in a more coherent and transparent manner. Equally important is the need to encourage wider debates on how segregation impacts upon the geography of social marginalisation. Such a debate, which is at the very heart of conflict transformation in Northern Ireland, is simply not possible without the availability of accurate data. Northern Ireland remains as a society within which secrecy and the nondisclosure of public information remains embedded within wider state discourses of power and authority.

The work presented here is only one strand in developing the research tools needed in order to ensure that the issue of segregation is not disguised and that the politics of segregated places is rendered unproblematic or reducible to narrow technical decisions. The construction of space and the way it shapes opportunity and conceptions of 'otherness' are part of a much broader research and conflict-resolving programme.

Equality legislation and social-need policy contain the potential to radicalise space, produce understandings of the way in which inequality and exclusion interlock to deepen social marginalisation, and create new possibilities for local mobilisation around material concerns, such as the access to work, in segregated areas. Siting places of production, facilities, and community services clearly affects quality of life and life chances of the most marginal people within Northern Irish society. We still require a wider discussion on the sensitivities of space and the way in which ethnic territory shapes movement and certain interaction patterns.

Space, as a starting point, is crucial in terms of interpreting how equality and poverty fuse to deepen social exclusion. Space, as a variable for understanding injustice has value beyond the United Kingdom, especially given the appearance of new forms of ethnosectarian segregation in places such as the former Yugoslavia, and those Western societies that are increasingly dependent upon in-migration to uphold economic growth. It is worthy of note that, despite globalisation and the homogenisation of mass cultures, loyalty to place and the resistance dedicated to an ethnosectarian or racial 'other' can still drive the geography of segregation and the production of place-bounded identities.

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