Statistics: experiences of a lawyer

"There are more things in heaven and earth, Horatio,
Than are dreamt of in your philosophy."

William Shakespeare, "Hamlet", Act 1 scene 5

"We recognize that lawyers and judges in particular have an inbred suspicion of statistics and the term is often construed in a pejorative sense."

Sir Ralph Kilner Brown, Mauldon v BT plc [1987] ICR 450

EC Treaty

1) Articles 2 and 3(2) EC Treaty establish that equality between men and women is one of the fundamental principles of EC law. Only Article 141 actually provides a (horizontally and vertically) directly effective right – that of "equal pay for male and female workers for equal work or work of equal value". Although para (3) of Article 141 refers to the principle of equal treatment for men and women, it does not go as far as to confer individuals with a right to equal treatment – it merely provides a specific legal basis for the adoption of further measures to ensure the application of the principle of equal treatment. As a result, the issue of sex discrimination and gender equality has largely been dealt with by way of Directives.

Equal Treatment Directive

2) The Equal Treatment Directive (No.2006/54) (ETD) relates to the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation. The ETD consolidated 7 Directives dealing with gender equality and came into force 15 August 2006. It must be implemented by member states by 15 August 2008.

3) Art 2(1) ETD deals with definitions

- "direct discrimination": where one person is treated less favourably on the ground of sex than another is, has been or would be treated in a comparable situation;

- "indirect discrimination": where an apparently neutral provision, criterion or practice would put persons of one sex at a particular disadvantage compared with persons of the other sex, unless that provision, criterion or practice is objectively justified by a legitimate aim, and the means of achieving that aim are appropriate and necessary

- "harassment": where unwanted conduct related to the sex of a person occurs with the purpose or effect of violating the dignity of a person, and of creating an intimidating, hostile, degrading, humiliating or offensive environment

- "sexual harassment": where any form of unwanted verbal, non-verbal or physical conduct of a sexual nature occurs, with the purpose or effect of violating the dignity of a person, in particular when creating an intimidating, hostile, degrading, humiliating or offensive environment.

Indirect Discrimination in UK Law

- New Test (since 1/10/2005): S 1(2)(b) Sex Discrimination Act 1975 (SDA): the Claimant (C) must establish a provision, criterion or practice (PCP) has been applied which, although ostensibly gender –neutral, has a disparate adverse impact on one gender and has thereby placed him or her at a disadvantage.

- 2001 test: PCP which is detrimental to a "considerably larger" proportion of women than men.

- Prior to 2001: Requirement or condition which meant that a "considerably smaller" proportion of women than men could comply.

Use of statistics

4) Establishing disparate impact often involves a statistical comparison of the proportions of men and women who can comply with the PCP at issue.

Dangers of statistics

Distortion: over-analysis

5) One problem inherent in the use of statistics is that they can be over-analysed so that their significance is exaggerated or misunderstood, and Tribunals must be wary of drawing inferences from minor statistical variations: see Appiah and anor v Governing Body of Bishop Douglas Roman Catholic High School [2007] EWCA Civ 10 . Appiah was about a student's claim that her exclusion from School was discriminatory on the ground of race. The Court's judgment on the usefulness of statistical evidence in proving direct

discrimination is relevant to the comparable provisions outlawing sex discrimination in employment. The statistics in Appiah showed that black Caribbean students made up 15% of the school roll but accounted for 27% of exclusions; black African students accounted for 20% accounted for 20% of the roll and 26% of exclusions and white students accounted for 26% of the roll and 17% of exclusions. The CA held that the County Court judge, who had rejected the claim, had been right to conclude that there was little, if any, probative value in the statistics. Although there was a stark imbalance in the figures in respect of black Caribbean students, this was not true of the figures in respect of black African students, C's racial group. The figures being reasonably close, the statistics could only gain probative force if it could be shown that a significant number of the previous exclusions of students in the racial group in question were or might have been discriminatory.

Distortion: percentages can mask large or small differences in actual numbers

6) A difficulty with relying on percentage figures is that they may distort the true story. Small differences between the percentages might represent large differences in the actual numbers of men and women. Conversely, apparently large differences in the percentages may only represent small differences in the actual numbers.

Example 1	Example 2
Total Pool = 10,000	Total Pool = 20
Men = 9,000 Women = 1,000	Men = 12 Women = 8
Number of men who can comply = 700	Number of men who can comply = 9
Number of women who can comply = 50	Number of women who can comply = 7
Proportion of men who can comply = 7.7%	Proportion of men who can comply = 75%
Proportion of women who can comply = 5%	Proportion of women who can comply = 87.5%

7) It is important for tribunals therefore to look behind the percentages and consider the actual differences in the proportions. To take another example, when very large populations in a

pool are compared, and the gender ratio of the pool is roughly equal, then small percentage differences between the proportions of men and women can mask considerable differences in the actual numbers. For example, where the total population of economically active men is 15 million, if 2% of men can comply and only 1% of women can comply with a PCP, although the percentage difference is only 1%, this can mask a difference, in real figures, of 150,000 more men being able to comply than women. By contrast, if the total pool is small (for example just 16 people equally divided between men and women) then, if 62.5% of men can comply but only 37.5% of women, that means that 5 men and 3 women can comply. The 25% difference may seem substantial but it would only take one of the "complying" men to leave and one "complying" woman to be recruited and the differential impact would have been entirely eradicated.

Contexts: cases where using statistical evidence has had probative value

... as part of a "reality" argument

8) In the context of unfair dismissal proceedings, statistics are a relevant factor in showing the most common retirement ages: Mauldon[1]

- In Mauldon, M was dismissed shortly before age 63 due to health reasons. M's assertion was that he had a reasonable expectation of staying on until 65. M put forward statistical evidence showing that over a period of 5 years, 90% of those in M's grade were retained past 60, 50% of those stayed on past 64. The Employment Tribunal (ET) said there was no jurisdiction because he was passed the normal retiring age (NRA). The ET rejected the statistical evidence without analyzing it on the basis that it was irrelevant. They, instead, looked at previous Employment Appeal Tribunal (EAT) decisions which took the view that retention past 60 under BT's procedure was purely discretionary, so that the contractual retirement age (CRA) remained as the NRA despite that fact that it was not frequently applied. M appealed to the EAT on the basis that the statistics showed actual

[1] Mauldon v British Telecommunications PLC [1987] ICR 450

patterns of retirement. The EAT held that, when determining NRA, ETs should "undertake an assessment of a reasonable expectation" having regard to the statistical situation as well as the contractual one." They opined that neither criterion was "decisive" but the ET was mistaken in rejecting the statistical evidence in its entirety. It was specifically found that the ET misdirected itself or was perverse when it said that the statistical evidence could be ignored. In the EAT's view, there was probative value in the fact that the statistical evidence showed that 54 out of 60 employees had retired at ages past 60 and this legitimately fueled M's "reasonable expectation" that he could work until 65.

… as part of a direct discrimination argument

9) Statistical evidence is logically probative of, and therefore relevant to, the issue of whether direct discrimination occurred: Singh[2].

- In, Singh, S sought disclosure of a summary of white and black applicants for posts of traffic supervisor in 1984 and 1985 plus a breakdown of those appointed in order to support his contention that, over a long period, no black applicants had been successful/or only a minority had. The Respondent Employer objected on the basis that the statistics had no probative value (and were irrelevant) because they did not go to the issue of whether S had been personally discriminated against. The Court of Appeal (CA), in a landmark decision, set out the special features of discrimination cases and noted:
    - The difficulty facing claimants in proving their case since there is normally no evidence of overt discrimination. It is left to ETs to infer discrimination from the facts.
    - Direct discrimination involves less favourable treatment on the basis of being a member of a particular group. Statistical evidence may show a discernible pattern

[2] West Midlands Passenger Transport Executive v Singh [1988] ICR 614, CA

in the treatment of that group: if the pattern demonstrates that members of that group regularly fail to gain promotion and that they are under-represented in such jobs, it may give rise to an inference of discrimination against the group. It is for that reason that the Commission for Racial Equality's (CRE) Code of Practice recommends ethnic monitoring.

- If a practice is being operated against a group then it is reasonable to infer (in the absence of a satisfactory explanation) that the claimant, as a member of that group, has been treated less favourably on the grounds of race. Evidence of discriminatory treatment against the group may be more persuasive of discrimination in a particular case than previous treatment of that individual.
- Evidence is regularly accepted from employers that they employ white and black employees and so have a policy of non-discrimination. If such evidence is accepted as having probative force, then the converse is also true.
- As suitability of candidates can rarely be measured objectively, subjective judgments are often made and a high rate of failure for members of a particular group may indicate conscious or unconscious racial attitudes involving stereotyped assumptions.
- Having regard to the above, statistical information is relevant since it may assist the Claimant in establishing a positive case that the discrimination was the cause of the treatment of the individual and the group and may also assist in rebutting the Employer's contention that they operated an Equal Opportunities Policy (EOP) which was applied.
- "Relevance" is not the only criterion for disclosure. It has to be shown that disclosure is necessary to dispose fairly of the proceedings. It can be refused if it is a "fishing expedition" or is oppressive with regard to difficulty and cost.
- Lord Justice Balcombe said:

> "However, there remains the root problem that, by any normal statistical standard, the only statistical evidence laid before the industrial tribunal is in fact inadequate. It is based on a very small sample from a very small

number of non-typical offices. Is it therefore right to hold that the complainant has proved his case? We have found this a very difficult point. On the one hand, the burden is on the complainant to prove his case and, viewed in isolation, the statistics produced do not prove it. On the other hand it is most undesirable that, in all cases of indirect discrimination, elaborate statistical evidence should be required before the case can be found proved. The time and expense involved in preparing and proving statistical evidence can be enormous, as experience in the US has demonstrated. It is not good policy to require such evidence to be put forward unless it is clear that there is an issue as to whether the requirements of S.1(1)(b)(i) are satisfied. With some hesitation, we have come to the conclusion that in this case the complainant has proved his case. He put forward evidence as to the Southall office alone. If the employers wished to attack that evidence, they could either themselves have put in rebutting statistics showing the true position or, without putting in such evidence, demonstrated that the statistics put forward by the complainant distorted the picture in a relevant way. In this case, they did neither..".

He went on to say that, in fact, the statistical evidence that was put, far from rebutting, supported the evidence in question.

10) However, Tribunals do not have the power to require a party to create evidence in the form of statistical information: Carrington[3]. The EAT held that there was no power requiring the employer to prepare a schedule disclosing details of ethnic composition where this information did not already exist in records or documents from which the required evidence could be compiled. The power to order disclosure is limited to those documents already in existence.

[3] Carrington v Helix Lighting Ltd [1990] IRLR 6

... as part of an indirect sex discrimination argument

11) A prima facie case of indirect sex discrimination is established if valid statistics disclose an appreciable difference in pay between two jobs of equal value, one of which is carried out almost exclusively by women and the other predominantly by men: Enderby[4]

> "It is for the national court to assess whether it may take into account those statistics, that is to say, whether they cover enough individuals, whether they illustrate purely fortuitous or short-term phenomena, and whether, in general, they appear to be significant."
>
> Judge O'Due

12) A Tribunal was correct to use a statistical approach to determine whether there has been prima facie discrimination provided that they were satisfied as to the validity of the statistics and the appropriateness of their use: Bailey[5]

13) Compelling statistics can demonstrate an irrebuttable presumption of indirect sex discrimination: Villalba[6]

> "where cogent, relevant and sufficiently compelling statistics demonstrate that women suffer a disparate impact when compared with men, there is an irrebuttable presumption that sex has indirectly tainted the arrangements even though it may not be possible to identify how that has occurred, and the differential needs to be objectively justified."
>
> Mr Justice Elias

[4] Enderby v (1) Frenchay Health Authority (2) Secretary of State for Health [1993] IRLR 591
[5] Home Office v Bailey and ors [2005] EWCA Civ 327
[6] Villalba v Merril Lynch and Co Inc and Ors [2007] ICR 523

Big pools and small pools

... narrow statistical base is ok

14) In proving indirect race discrimination (in which the relevant test then was whether a "considerably smaller proportion of black civil servants" can comply with a "requirement or condition") what matters is the proportions within the compared groups. Elaborate statistical evidence is not relevant nor is the actual numbers nor ratio between them: Perrera[7].

15) In Perrera, P applied for a promotion but was turned down because the upper age limit was 32. P contended that the age limit was a "requirement or condition" which a "considerably smaller" proportion of black civil servants could comply with and was therefore indirectly discriminatory. P produced statistical evidence showing that there were no black executive officers under 32 in the VAT office where he worked. The Civil Service produced statistical evidence showing that there were no black executive officers under 32 in two other London VAT offices either. The Tribunal rejected P's claim because there was not enough evidence to prove that a similar number of black executive officers compared to white executive officers could comply. The evidence about the VAT offices was not typical of the Civil Service as a whole because there was a special scheme which admitted entrants up to age of 55. The EAT allowed P's appeal and concluded that the ET were wrong in calling for statistics about the proportion of blacks and whites among the 60,000 executive officers in the Civil Service – the correct question is what proportion of blacks and what proportion of whites are under the age of 32. The proportion of black employees who could comply (i.e. those who were less than 32) was 0% and the EAT held that was "considerably smaller". The EAT opined that the statistical evidence was unsatisfactory because it consisted of a very small sample from a very small number of non-typical offices. However, it is undesirable that elaborate statistical evidence should be put forward in all cases of indirect discrimination because of the time and expense involved. It should be noted that P won his case because the Civil Service had not put forward any rebutting statistics or attempted to show that P's

[7] Perrera v Civil Service Commission [1982] IRLR 147

statistics represented an incorrect picture (i.e. by distorting it). P had put forward evidence about the Southall office alone.

... wide statistical base is ok

16) In Lea (see below) the statistical base was very wide because it included people who did not possess the right qualifications and also those who were over-qualified. The EAT held the pool was appropriate because a pool for comparison does not have to be a perfect match: statistics dealing with the entire pool of economically active people were appropriate.

17) It was common to both Perrera and Lea that part of the Claimants' success was that the Respondent did not put forward any contrary statistical evidence.

Small pools and "fortuitous statistics"

18) Tribunals need to ensure that the statistics they are considering are not merely fortuitous or short-term: Enderby.

> "It is also for the national court to assess whether the statistics concerning the situation of the workforce are valid and can be taken into account, that is to say, whether they cover enough individuals, whether they illustrate purely fortuitous or short-term phenomena, and whether, in general, they appear to be significant."
>
> Judge O'Due

19) The national court must satisfy itself that the applicants and their comparators' groups encompass all the workers who, taking account of factors such as the nature of the work, the

training requirements and working conditions, can be considered to be in a comparable situation and that the groups cover a relatively large number of workers, thereby ensuring that the differences are not due to purely fortuitous or short-term factors or to differences in the individual output of the workers concerned: Royal Copenhagen[8]

20) Where the pool is very small (a few employees at a relatively small workplace) then figures taken solely from the pool may present an inaccurate picture: White[9] and see also Nelson (below). In White, the ET found that the correct pool was the telemarketing department, comprising 4 workers: the claimant, two other women and a man. Everyone in the pool, apart from C, could comply with the requirement to work full-time. The ET said that there was no indirect discrimination because it did not want to conclude, on this basis, that there was a "considerably smaller" proportion of women than men who could comply. The EAT held that the ET should not have restricted its assessment to the an analysis of the way in which the numbers fell within the particular pool because the pool was too small and the alteration of one person's circumstances would have fundamentally altered the figures. Instead, the ET should have considered the national statistics, its knowledge of women in society generally as well as the statistics in the pool.

21) In Venkatasamy[10], the tribunal found that the employer had applied a PCP that fee earners work until 5pm. The selected pool was 8 fee earners (five women and three men). All men and four of the women could comply (100% v 80%). In holding that such disproportionate impact was more than merely fortuitous, the ET took account of the 2003 statistics from the Equal Opportunities Commission showing that 82% of part-time workers were women and that more women with children work part-time than men. The ET also applied its judicial knowledge to conclude that the PCP to work until 5pm would be to the detriment of a considerably larger proportion of women than men.

[8] Specialarbejderforbundet I Danmark v Dansk Industri, acting for Royal Copenhagen A/S [1995] IRLR 648
[9] White v Timbnet EAT 1125/99
[10] Venkatasamy v Dhillon and Co Solicitors ET Case No.32303381/04

Appropriate pools

22) The choice of the appropriate pool is ultimately a matter for the tribunal. But it is not in the Claimant's interests to allow a decision on this issue to be left too late, for example until as late a stage as the full merits hearing. It is preferable for the issue to be decided at a preliminary stage in the proceedings, for example at a Pre Hearing Review. Once the Tribunal has identified the pool, the Claimant will be in a position to know the precise nature of the case she will be expected to meet.

23) An example of where the Tribunal disregarded the Claimant's choice of pool and imposed its own view of what constituted the appropriate pool was in Jones[11] (see also Lea below). In Jones, statistical evidence showing that a significantly higher proportion of female mature students were unable to comply with an upper age limit of 35 was held not to be indirectly discriminatory on the ground of sex because the correct pool for comparison should not have been confined just to mature students (as the Claimant had contended) but, in the ET's view, to all graduates:

- J (46) saw an advert for a post of careers adviser in the UM Careers Advisory Service. The advert stated that the person appointed "will be a graduate, preferably aged 27-35 years with a record of successful experience" and applied.
- J claimed that the age bar adversely affected mature students and this was discriminatory because women who were mature students tended to enter further education later than their male counterparts so that a considerably higher proportion of female mature students compared with male would be unable to comply with the requirement that they should be 35 or less.
- J backed up her assertion with statistics of first-year entrants to university which showed that the overwhelming majority of undergraduate students graduated before 25 and were not adversely affected by the age bar. But, in relation to mature students (i.e. those graduating from 25 plus), the evidence demonstrated that, of male applicants to

[11] Jones v University of Manchester [1993] IRLR 218

university, 3.3% of men entered upon their degree course between 25-29, whereas only 2.8% of women did so. When looking at those who entered upon a degree course at the age of 30 or more, the evidence showed that 3.7% of women graduates did so compared to only 2.1% of men. Men who were mature students therefore were considerably more likely to commence their degree courses between the ages of 25-29. As such they were more likely to come within the stipulated age range of the job. Women who were mature students, on the other hand, were more likely to have begun their course at the age of 30 or more, and so would not in many cases have had the chance even to graduate before reaching the age limit for the job, let alone gain the post-graduation work experience required.

- The EAT allowed the employer's appeal and said that the ET had erred in selecting the pool. The advertisement had been directed at all graduates aged between 27 and 35, whereas the approach of the Tribunal had the effect of rewriting the advertisement as requiring a mature student graduate. S.5(3) SDA required there to be a comparison of like with like and this did not authorise J to 'subdivide her sex' and thereby select as the pool for comparison those individuals who had obtained their degrees as mature students. The only permissible pool was all graduates aged between 27 and 35.
- The CA agreed with the EAT and said that the pool was all those graduates with relevant experience and said that it was not open to the applicant to select a smaller pool that consisted solely of mature students in order to compare the number of female mature students who could comply with the number of male mature students able to do so.

The advantage-led and disadvantage-led approaches

24) When making a statistical comparison, it is necessary to focus on the advantaged group: Rutherford[12]:

- R had been selected for redundancy by his employer, HTC Ltd, when he was 67.

[12] Secretary of State for Trade and Industry v Rutherford and anor [2006] [UKHL] 19

- He sought to claim unfair dismissal and a statutory redundancy payment.

- The crucial matter was whether the relevant pool embraced the entire national workforce or merely part of it and, if the latter, which part. If, as R contended, the pool was to be defined only by reference to those who are or might be adversely affected by the upper age limit (i.e. older employees) (the "disadvantaged group"), the available statistical data revealed that a significantly greater proportion of men than women in that pool were unable to meet the eligibility requirement of being under 65. On the other hand, if, as the Secretary of State contended, the appropriate pool was all those in the workforce between 16 and 79 who, apart from the age limit, qualified to claim the statutory rights at issue (i.e. the entire workforce) (the "advantaged group"), then the data showed that there was no significant disparate impact on men compared with women.

- The ET concluded that the appropriate pool was those in the workforce aged 55-75, the disadvantaged group, since retirement had some "real meaning" for such persons.

- The EAT, CA and HL held that the correct pool was the advantaged group. In Lord Walker's view, the pool for comparison should be taken as it is and the relevant statistics analysed without regard to underlying sociological or economic factors (which only become relevant at the stage of objective justification). For that reason, the employment tribunal was in his view wrong to ask itself, when identifying the pool, who had a real interest in retirement by 65.

- In deciding whether the "advantage-led" or "disadvantage-led" approach should be applied, Lord Walker advocated the 'advantage-led' approach. He cited a number of domestic authorities which he felt provided 'a little support for' this view. However, he continued, there may be circumstances in which some element of 'disadvantage-led' analysis might be helpful. Even so, the more extreme the majority of the advantaged in the relevant pool, the more difficult it will be to pay much attention to the result of a 'disadvantage-led' approach.

- Lord Walker could imagine some improbable cases in which a disadvantage-led approach would serve as an alert to the likelihood of objectionable discrimination. If (in a pool of one thousand persons) the advantaged 95% were split equally between men and women, but the disadvantaged 5% were all women, the very strong disparity of disadvantage would make it a special case, and the fact that the percentages of the advantaged were not greatly different (100% men and 90.5% women) would not be decisive. But this was not the case here. The proportion for the disadvantaged group (men to women) was 1.44:1, whereas the proportion for the advantaged was 1:1.004. The latter figure did not reveal a significant disparity between men and women, and the former did not reveal such an extraordinary disparity as to make it necessary to resile from focusing on the advantaged group.

25) A tribunal is entitled to focus on a disadvantaged group: Grundy[13]

- G began working for BA in 1987 on a part-time 'Support Cabin Crew' (SCC) contract. The SCC part-time working scheme was wound up in 2003, and G started to work under a part-time 'Cabin Crew' (CC) contract. At that point she was placed on BA's incremental pay scale but, owing to rules relating to the SCC arrangements, was credited with only five years' continuous service. She thus found herself significantly lower on the pay scale than W, a male employee who was employed on 'like work' but who had never worked under an SCC contract. G brought an equal pay claim before an employment tribunal.

- Upholding the claim, the tribunal found that the proportion of women who were SCC was much higher than of those who were CC, and that the difference in pay could not be justified. BA appealed to the EAT, which ruled that the tribunal had fallen into error in focusing on the disadvantaged group.

- The Court of Appeal held that, when assessing whether there is a difference in pay which has a disparately adverse impact on women, there is no principle of law which requires a

[13] Grundy v British Airways plc CA 23/10/2007

tribunal to only focus on the advantaged cohort. Accordingly, the Employment Tribunal had not erred in focusing on the disadvantaged cohort.

Recent ET cases under the new rules re pools

26) In Savva v Hillgate Travel (ET Case No.2200525/2006), C, worked fixed shifts to fit in with her childcare responsibilities and her employer wanted her to work flexible shifts. She complained of indirect sex discrimination. The ET limited the pool to the employer's workforce, of which 75% were Account Executives doing the same job as C nad of these, 75% were women and 25% were men. Only 4 of the Account Executives worked fixed shifts and were women with childcare responsibilities. The ET concluded that these figures showed that any request to work flexible shifts would put women in the workforce at a particular disadvantage.

27) In Bradley v West Midlands Fire and Rescue Authority (ET Case No 13047//06), B found it difficult to work new shifts because of her childcare responsibilities. The ET noted that the pool should be that sector of the workforce affected or potentially affected by the PCP, which in this case was operational staff.

How much disparity is enough?

28) The old case law did not lay down a benchmark. It depends on the facts of each case. The "four fifths" rule adopted by the US Equal Employment Opportunity Commission[14] has not been favoured in UK or European courts: McCausland v Dungannon Distict Council [1993] IRLR 583.

[14] The EEOC's Uniform Guidelines on Employee Selection Procedures, 29 C.F.R. §1607 et seq. ("Uniform Guidelines"), finds an adverse impact if members of a protected class are selected at a rates less than four-fifths (80 percent) of that of another group.

29) Ultimately it is a question of fact for the ET to decide and the EAT will not readily interfere unless there is an error of law or unless the decision is perverse: Edwards

- A difference of 4.1% in the context of statistics showing that 95.3% of men compared with 99.4% of women could not comply with a condition was sufficient to prove a claim of indirect sex discrimination because the statistics showed that a "considerably smaller" proportion of men than women could comply: Lea[15]
    - L, who was in receipt of an occupation pension scheme, claimed indirect sex discrimination when his employer imposed a condition preventing recruitment of those in receipt of occupation pension schemes in respect of the post to which L was appointed. L relied on statistics dealing with the entire pool of economically active people (i.e. omitting consideration of children, unemployed or those in receipt of occupational pensions) so that 99.4% of women but only 95.3% of men could comply with the condition of not being in receipt of an occupational pension.
    - The ET accepted the pool of people from whom a comparison could be made and concluded that the proportion of men who could comply was "considerably smaller" and upheld L's complaint.
    - The Employer appealed on the basis that the pool was too wide because it included people who did not possess the right qualifications and also those who were over-qualified and this distorted the statistics.
    - The EAT held that the pool was appropriate because a pool for comparison does not have to be a perfect match of the persons who would be capable of and interested in filling the post. It was relevant that the employer did not suggest an alternative pool or put forward alternative statistics nor did they adduce any evidence to show that the L's stats were a distortion.

[15] Greater Manchester Police Authority v Lea [1990] IRLR 372

- However, a difference of 7.5% between the proportions of women and men who could comply with a requirement of being full time at the date of retirement was too small to be a "considerably smaller proportion": Black[16]

    - Before the tribunal, it was common ground between the parties that women part-time teachers outnumbered men part-time teachers by 756 to 45. It was also accepted that, of the pool of part-timers who were over the age of 50, 19 were men and 120 were women, and that there were also more full-time female teachers than male teachers - 5,178 compared to 3,062. Of the 1,141 women teachers over 50 years of age, 1,021 were full-time (89.5 per cent), and of the 631 male teachers over 50 years of age, 612 were full-time (97 per cent).

    - In respect of B's claim of indirect discrimination under the Sex Discrimination Act 1975 (SDA), the Tribunal noted that the condition or requirement applied to B was that, in order to qualify for the maximum additional service credit, a teacher had to be a full-time employee at the date of dismissal. The ET noted that there was a difference of 7.5 percentage points between the proportion of women teachers over 50 who were full-time and the proportion of male teachers over 50 who were full-time. They did not consider this difference was such that it could be said that a 'considerably smaller' proportion of women could comply with the requirement within the meaning of S.1(1)(b).

    - The EAT held: (1) The industrial tribunal had not erred in dismissing the applicant's claim of indirect discrimination under the SDA. What is or is not a 'considerably smaller' proportion within the meaning of S.1(1)(b) SDA is a matter for the tribunal to decide on the facts of the case. In the instant case, there were more women than men teachers over 50 working full-time, although proportionately there were slightly less full-time women teachers in that age bracket. In that context, the difference of 7.5 percentage points between the

[16] Staffordshire County Council v Black [1995] IRLR 234

proportions of women and men who could comply with the requirement of being full-time at the date of retirement was very small.

- Note that the EAT's approach in Black appears to be out of line with later authority.

- A difference of one person (or 4.8%) can constitute a "considerably smaller proportion" for the purposes of Indirect Sex Discrimination: Edwards[17].

  - The main issue for the tribunal was whether the requirement could be complied with by a 'considerably smaller' proportion of female train drivers than male drivers. There were 2,023 male drivers, all of whom could work the new system, and 21 female drivers, of whom E was the only one who could not work the new system.

  - The CA held that:

    - 'considerably smaller' proportion of women than men could comply with the employers' requirement to work a new shift system, notwithstanding that, out of a pool of 2,023 male train operators and 21 female train operators, the applicant herself was the only person unable to comply with the requirement. In percentage terms, 95.2% of women could comply with the requirement, compared with 100% of men. Whilst a percentage difference of no more than 5% is inherently likely to lead an Tribunal to the conclusion that the requirements of S.1(1)(b) SDA have not been made out, it was not possible to say that such a conclusion must follow in every case.

    - The comparatively small size of the female component indicated both that it was difficult or unattractive for women to work as train operators and that the percentage of women unable to comply was likely to be a minimum rather than a maximum figure. In the event of the statistics

[17] London Underground v Edwards (No.2) [1998] IRLR 364

regarding the pool being for any reason inaccurate or incomplete, an unallowed-for addition of one extra woman unable to comply would raise the proportion of women who could not comply to 10 per cent whilst the addition of one further male employee who could not comply would scarcely alter the proportional difference at all.

- It would not be appropriate to lay down a rule of thumb or to draw a line defining the threshold beyond which, in relation to small percentage differences, the lower percentage should not be reasonably regarded as considerably smaller than the higher percentage. Since the disparate impact question will require to be resolved in an infinite variety of different employment situations, an area of flexibility is necessarily applicable to the question of whether a particular percentage is to be regarded as considerably smaller in any given case.

"Further, if for any reason fortuitous error was present or comprehensive evidence lacking, an unallowed-for increase of no more than one in the women unable to comply would produce an effective figure of some 10 per cent as against the nil figure in respect of men; on the other hand, one male employee unable to comply would scarcely alter the proportional difference at all."

Potter LJ

- A difference of 8.5% did not constitute a "considerably smaller proportion in the context of Indirect Sex Discrimination: Seymour Smith[18]
    - Statistics covering 1985 - the year in which the requirement of two years' employment was introduced - showed that 77.4% of men and 68.9% of women fulfilled the condition of two years' qualifying service. The ECJ held that those

[18] R v Secretary of State for Employment ex parte Seymour Smith & Anor [1999] IRLR 253

statistics did not appear, on the face of it, to show that a considerably smaller percentage of women than men was able to fulfil the requirement imposed by the disputed rule.

  - The approach of the ECJ, that an 8.5% difference did not constitute a "considerably smaller" proportion, appears to be out of line with a number of rulings of the UK courts in which such a difference has been held to establish indirect discrimiation.

- A requirement which affects 22 specialised medical practitioners (14 or 63.6% of which were women) out of a total of 1,680 specialists (302 or 17.9% of which were women) is not statistically significant: Jorgensen[19]

- A 2.26% difference in the proportions of men and women who can comply with shift working, although not significant, is enough to demonstrate indirect sex discrimination, particularly where the Tribunal adopts a flexible approach and takes judicial notice of the fact that the overwhelming burden of childcare responsibilities fall on women: Chew[20]

  - C contended that the Employer Constabulary had applied a 'requirement or condition' to the effect that, in order to be eligible to work part-time, she had to comply with the shift patterns adopted in her department.

  - The Tribunal selected the whole Constabulary, i.e all officers to whom the requirement/condition in question applied, as being the appropriate pool for comparison. On that basis, the pool consisted of 2,581 men and 435 women. Unfortunately, reliable statistics as to who in the selected pool was able to comply with the requirement/condition were not available. In the final analysis the tribunal found that at least 11 officers could not comply with the requirement to work shifts, and this group was made up of ten women and one man. That meant that 97.7% of female officers could comply with the requirement/condition as opposed to 99.96% of male officers - a percentage difference of 2.26. The

[19] Jorgensen v Foreningen af Speciallaeger & Anor [2000] IRLR 726
[20] Chief Constable of Avon & Somerset Constabulary v Chew EAT 503/00

Tribunal concluded that the disparate impact of the requirement/condition was significant, was not fortuitous and was explicable in terms of sex discrimination - the majority of the people who could not comply had childcare responsibilities and the Tribunal accepted that, as a general rule, the overwhelming burden of childcare responsibilities falls on women. On that basis they concluded that, for the purposes of S.1(1)(b) SDA, a considerably smaller proportion of women than men could comply with the requirement/condition. The Tribunal also noted that, had they chosen a different pool for comparison, such as C's own district of West Somerset, their conclusion would have been the same.

- The EAT held that the ET were right and that they had not been obliged to look solely at the percentages of male and female officers who could comply with the requirement but, rather, had been entitled to adopt a flexible approach, taking into account a number of factors including the fact that an inherently likely effect of the particular requirement in the instant case was that it would disadvantage police officers with childcare responsibilities, the overwhelming burden of which fell on women.

- The EAT also gave guidance:

    - There was no binding authority requiring 'disparate impact' to be determined solely by reference to statistics.

    - Where a single statistical calculation does not show a sufficiently disparate effect, such an effect can nevertheless be established by the demonstration of a persistent and lesser disparity over a long period. The approach to assessing the effect of a requirement or condition can therefore be flexible - Seymour Smith

    - In some cases, there will be no statistics available from which the proportions of men and women within the selected pool who can and cannot comply with the requirement/condition can be ascertained. In those

circumstances, tribunals should adopt a flexible approach to the assessment of disparate impact: Edwards. It was noted, in particular, that in Edwards the Court took into account the makeup of the workforce in question, the fact that no man in the pool was disadvantaged and that it was inherently likely that the requirement applied in that case would disadvantage more women than men.

- Applying the above propositions to the findings in the instant case, on the face of it, a percentage difference of 2.26 did not amount to a sufficiently disparate effect, especially given the observations of the Court of Appeal in the Edwards case that a disparity of less than five per cent is unlikely to constitute a 'considerably smaller proportion'. However, the tribunal in the instant case had been correct to adopt a flexible approach and to have regard to factors other than the identified percentage difference. In particular, the tribunal had been entitled to note that the statistics available to them included the bare minimum number of police officers who could not comply with the requirement/condition of shift working. Further, the tribunal had been entitled to conclude that an inherently likely effect of the requirement/condition was that it would disadvantage officers with childcare responsibilities, and to note that the overwhelming burden of such responsibilities falls on women.

- In Chew the percentage difference was between 99.96% men and 97.7% women which seems minor (only 2.26%) but the difference between the disadvantaged group (0.04% men) and (2.3% women) was huge when the figures were looked at relative to each other rather than relative to the whole pool.

- A difference of 13.34% in the context of a pool of only 6 employees is not enough to demonstrate indirect sex discrimination: Nelson[21]

    - The ET thought that N had chosen too small a pool for a meaningful comparison to be made. In the Tribunal's view, it was for N to show on the balance of probabilities that there had been indirect discrimination and she had not produced sufficient or appropriate evidence to show this.

    - The CA held that, to shift the burden of proof to the employer the employee must establish a prima facie case of sex discrimination on statistics which are both significant and valid.

- A 6.27% difference (when comparing the advantaged group) and a 8.27% difference (when comparing the disadvantaged group) is sufficient to show indirect sex discrimination: Cross[22]

- A difference of 5.1% is enough: Blackburn[23]

    - statistical evidence showed that 96.6% of men could comply with a requirement to be available 24/7 compared to only 91.5% of women

- In Bradley v West Midlands Fire and Rescue Authority (ET Case No 13047//06), the ET paid regard to the following statistics: 23 men from a total male workforce of 1,391 had made applications to work flexibily after the introduction of the new shifts (i.e. 1.65% of men within the pool). There were 3 applications by women from a total female workforce of 47 (i.e. 6.38% of women within the pool). In respect of the figures for the number of applications for total exemption from the new shift, 13 were by men (i.e. 0.93%) and 2 by women (i.e. 4.26%). The ET noted the risks of drawing conclusions from small statistical samples and noted that it was a small disparity that lasted only for

[21] Nelson v Carillion Services Ltd [2003] IRLR 428
[22] Cross and Ors v British Airways plc [2005] IRLR 423
[23] Chief Constable of West Midlands Police v Blackburn and anor EAT 0007/07

about a year. However, the statistics showed a disparate impact of the PCP upon women in the relevant pool.

Multi-faceted approach: the reluctance to use statistics in isolation

30) The House of Lords has ruled that it is wrong to approach the question merely on the basis of statistics: Hughes [24]

31) The Court, in Edwards, noted that the comparatively small size of the female component (2,023 male drivers compared with only 21 female) indicated that it was difficult for women to be recruited/retained as train operators and that the percentage of women unable to comply was likely to be a minimum rather than a maximum. The Court also took into account the effect of any amendment to the statistics, the addition of one extra "non-complying" woman would raise the proportion of women who could not comply to 10% whereas the addition of one "non-complying" male would scarcely alter the proportional difference at all.

32) Statistics may not, on their own, establish disproportionate impact where the percentage of men working 75% of tull time was 99.816% and the percentage of women was 96.15% (the difference being only 3.66%): Starmer[25]

33) An Employment Tribunal needs to look at the "total picture" considering all the relevant material before it and should not take a fragmented approach by treating invididual incidents in isolation: Rihal[26]

[24] Hughes v Department of Health and Social Security [1985 ICR 419]
[25] British Airways plc v Starmer EAT 0306/2005
[26] Rihal v London Borough of Ealing [2004] IRLR 642

Where do they all come from? How to find good sources of statistics

34) In securing the necessary statistical evidence, good sources of official statistics are:

- Official statistics for the general working population: Labour Market Statistics published by Office for National Statistics. For example, ONS' Social Trends Report 2008 survey. This is available free on the Internet www.ons.gov.uk
- Statistics on temporary and part-time jobs: Economic and Labour Market Review section on the ONS website
- Department for Business, Enterprise and Regulatory Reform's website, which publishes the Workplace Employment Relations Survey (a national survey of people at work last undertaken in 2004) www.berr.gov.uk
- The archived Equal Opportunities Commission, Commission for Racial Equality and Disability Rights Commission's websites, which can be accessed via the Equality and Human Rights Commission's website (www.equalityhumanrights.com).
- For sex discrimination relating to new mothers and breastfeeding, the Infant Feeding Survey 2005
- For statistics about young families, the Millennium Cohort Study (June 2007)
- For eldercare there are statistics showing that women are more likely to be carers of the sick, disabled and elderly than men: ONS "Carers 2001 Census".

EOC statistics

35) Equal Opportunities Commission (EOC) statistics were relied upon in:

- Trainer[27]

    - In Trainer, in accepting the argument that a PCP to work full time has a disparate impact on women, the Tribunal took into account the EOC's "Investigation into

[27] Trainer v Penny Plain Ltd (ET Case No. 2510846/05

Flexible and Part-Time Working" (2005) which found that "flexible and part-time working is female dominated":

- Clarke[28]

  - A Claimant was entitled to rely on EOC statistics to successfully argue that a requirement that she work evenings and weekends indirectly discriminated against her

  - In order to establish the disproportionate impact of the PCP on women in the pool, C referred the Tribunal to statistics published in two reports by the Equal Opportunities Commission. The first report, 'Facts about Women and Men in Great Britain 2004', contained statistics supporting the widely accepted conclusion that a greater proportion of women in the workforce work part time owing to their childcare responsibilities. The second report, 'Evening and Weekend Working - 2000 and 2004', highlighted that in 2004 11 per cent of female employees with dependant children worked evenings and weekends in their main job, compared with 18 per cent of male employees with dependant children.

  - Despite T plc's argument that the statistics in the first report were not applicable to the pool because they did not cover the period when C's request was refused, the tribunal took the view that they provided useful and relevant information about the working patterns of men and women. It accepted that the statistics supported a claim that more women than men work part time owing to childcare responsibilities.

[28] Clarke v Telewest Communications plc (ET Case No.1301034/04)

- T plc also maintained that the statistics in the second report did not prove that the reason fewer women with children work in the evenings and on weekends is because they find it harder to do so. The tribunal rejected this argument on the basis that it would be 'practically impossible' to obtain the statistical information T plc demanded. The Tribunal therefore concluded that, given the 'facts of the case and in the light of the statistical surveys', childcare difficulties were the reason fewer women worked evenings and weekends.

- On this basis, the Tribunal found that a greater proportion of women than men suffered or would suffer a detriment if, in order to continue working for an employer, they had to work evenings and weekends. As T plc could not justify this PCP, having regard to its discriminatory effect versus the needs of the business, the tribunal concluded that C had been indirectly discriminated against on the ground of her sex.

Employer Monitoring

36) A further source of statistics is derived from the employer's monitoring of its own workforce. The various commissions (the Equal Opportunities Commission (EOC), the Commission for Racial Equality (CRE) and the Disability Rights Commission (DRC) - now all part of the Commission for Equality and Human Rights (CEHR)) have recommended that employers monitor their policies for unlawful discrimination.

- Statistics obtained from monitoring can be used to support assertions that direct or indirect discrimination has occurred. It is nnoteworthy, in Singh, that the CA found probative value in the Race Relations Code of Practice (effect 1 April 1984):

> "Statistics obtained through monitoring are not conclusive in themselves, but if they show racial or ethnic imbalance or disparities, then they may indicate areas of racial discrimination."

The recognition given to the CRE's Code of Practice and the use of ethnic monitoring as an evidential source were helpful in eradicating the "paper tiger" attitude often taken towards the Commission and its recommendations.

- Tribunals have no power to require a party to create evidence: Carrington

Replies to Statutory Questionnaires

37) There is legislative provision, in the form of statutory questionnaires, for Claimants to ask Employers questions about their discrimination and about the Employer's organisation including policies, practices, training etc:

- The Sex Discrimination (Questions and Replies) Order 1975;
- The Race Relations (Questions and Replies) Order 1977;
- The Disability Discrimination (Questions and Replies) Order 2004;
- The Equal Pay Questionnaire (S.7B Equal Pay Act 1970).

38) The ET may draw an adverse inference from a failure to answer a questionnaire. The provision of an evasive or equivocal reply to a questionnaire may help to shift the burden of proof: Igen v Wong.[29]

[29] Igen v Wong [2005] IRLR 258

Judicial Notice

39) Where a general fact or state of affairs is firmly established as common knowledge, the courts will often be prepared to take cognisance or "judicial notice" of it so that the formal proof becomes unnecessary.

The following have been "judically noticed":

- That women in their mid-20s to mid-30s are likely to be more responsible for childcare than men – Price v Civil Service Commission and anor [1978] ICR 27, EAT
- That a higher proportion of women than men work part-time – Home Office v Holmes [1984] IRLR 299, EAT
- That women are more likely to be secondary earners – Meade-Hill and anor v British Council [1995] ICR 847, CA
- That women are more likely to be lone parents which childcare responsibilities: Edwards
- That more women than men taken on childcare responsibilities: Chew
- That a PCP requiring working until 5pm would affect more women than men: Venkatasamy
- That women outnumber men 10:1 among single parents (a ration mentioned in Edwards) and that ratio had barely changed in the 10 years since Edwards: Bradley v West Midlands Fire and Rescue Authority (ET Case No 13047//06)

Limitations of relying on judical knowledge

40) In practice, it is unwise for Claimants to arrive at court unarmed with statistical evidence to back up anything less than obvious assertions about the ability of one sex compared to the other to meet stipulations by the employer. For example, in Fox[30], statistical evidence showing that the ratio of males to females in receipt of occupational pension schemes is 3:1 was held not to be sufficient to prove that men are less able to comply than women with a condition that claimants should not already receive an occupational pension. The ET held that the pool should be drawn narrowly so as to exclude persons who, although in receipt of a pension, would be exempted from the employer's general policy under express exceptions, and also those who had already reached normal retirement age. They said that cogent and credible evidence was needed for Indirect Sex Discrimination regarding the issue of "considerably smaller" proportion. The Claimant in Fox thought that, because he had traced the limited data available on the relevant proportions of men and women occupational pensioners, he had reliable evidence on which to base his assertion that the requirement not to be in receipt of an occupational pension indirectly discriminated against men. But, as the ET said, the onus was on him to prove his positive case. To do that he needed far more detailed statistics, both regarding the appropriate pool and the relevant proportions of pensioners of both sexes within that group. As the EAT in Lea made clear, the questions of what is the appropriate pool and what kind of statistical evidence is necessary are matters largely for the discretion of the ET. Since the EAT will rarely interfere with decisions on these aspects, it is essential that claimants are armed with comprehensive evidence to support their assertions about the respective proportions of the sexes which can comply with the alleged discrimination requirement/condition as well as the appropriate pool of comparison.

41) Similarly, in Brymer[31], B did not put forward any statistics in support of her claim for indirect discrimination (B claimed that she could not comply with a 24 hour shift system because she was a carer for dependant parents) and, instead, relied on Edwards to back up

[30] Fox v Greater Manchester Police Authority COIT 1988/77
[31] Brymer v Essex Police (ET Case No.3202894/01)

her contention that the caring responsibilities of women were so well known that no additional proof was required. The tribunal did not feel able to find that significantly more women than men are carers and made a wasted costs costs award against her.

42) Claimants should not make stereotypical assumptions about childcare responsibilites. For example, a Claimant could not assume that all women with children would be adversely affected by a PCP: Sinclair Roche and Temperley and ors v Heard and anor [2004] IRLR 763. In that case, the EAT overturned an ET deciison that there was indirect sex discrimination in respect of a female solicitor's request to work part-time. The EAT held that the ET had not been entitled to conclude that, because women have greater responsibility for childcare, a considerably larger proportion of women than men are unable to commit themselves to full-time working, if this was to be a relevant finding with regard to men and women solicitors or men and women working in high-powered and highly-paid jobs in the City.

43) Although this decision has been criticised on the basis that a finding that more female than male solicitors would request to work part-time arguably falls within the industrial knowledge of the tribunals, the legitimacy of judicial notice on such matters may become open to question as the roles of men and women in society change. As more and more men take on childcare responsibilities, stereotypical assumptions about traditional male and female roles might become outdated.

The statistics behind the statistics …

ET Cases Disposed and Outcomes in 06/07[32]

Claim	Disposed	Withdrawn	Settled (ACAS)	Struck Out (Not at Hearing)	**Win**	Dismissed at Preliminary Hearing	Lost	Judgment in Default
Sex	18,909	8,998 (48%)	2,302 (12%)	6,315 (33%)	**463 (2%)**	203 (1%)	587 (3%)	41 (0%)
Race	3,117	968 (31%)	1,173 (38%)	224 (7%)	**102 (3%)**	161 (5%)	465 (15%)	24 (1%)
Disability	4,385	1,142 (33%)	2,015 (46%)	231 (5%)	**149 (3%)**	148 (3%)	343 (8%)	18 (0%)
Religion/ Belief	498	167 (34%)	176 (35%)	38 (8%)	**12 (2%)**	31 (6%)	69 (14%)	5 (1%)
Sexual Orientation	384	127 (33%)	157 (41%)	25 (7%)	**21 (5%)**	11 (3%)	43 (11%)	0 (0%)
Age	135	51 (38%)	56 (41%)	11 (8%)	**0 (0%)**	5 (4%)	6 (4%)	6 (4%)

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24 May 2008

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[32] ET statistics 2006/2007