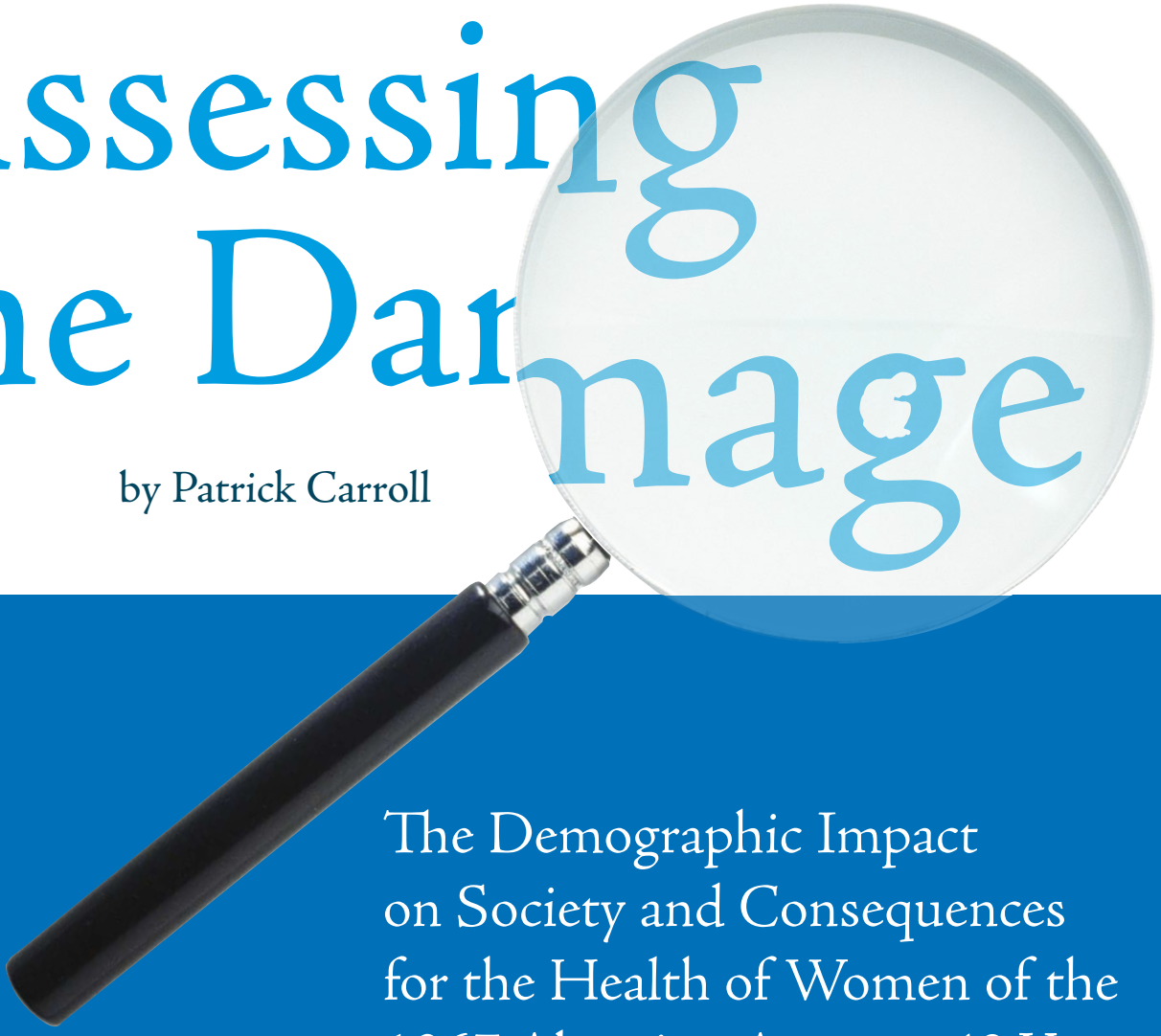
Assessing the Damage

by Patrick Carroll



The Demographic Impact on Society and Consequences for the Health of Women of the 1967 Abortion Act over 40 Years

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Introduction

Forty years is a significant time. After forty years, it is possible to assess in a more informed way the quantitative impact of a legal and cultural change.

Forty years ago, on 27 October 1967, Abortion became legal in Great Britain. This was following a debate, where David Steel (now Lord Steel) told Parliament that there were in the region of 40,000 to 200,000 illegal abortions in Britain per year and that, therefore Abortion needed to be legalised. Others speaking for this Bill stated that there would be no abortion on demand. Forty years later, we know that both statements were totally incorrect.

Forty years later, and after nearly 7 million abortions, some serious questions about the type of society we live in need to be asked. Patrick Carroll, an actuary and statistician, has provided a timely study asking urgent questions, questions that many or perhaps most in our "politically correct" age dare not ask: What is the population impact of losing millions of lives through legal abortion? What is the impact of abortion on pension and National Insurance contributions? Can we explain the dramatic increase in breast cancer observed over the past decades at least partially with the increase in abortion? What is the implication of abortion on family structure and on fertility?

This report does not simply ask questions but gives detailed answers, some of which are truly disturbing. Are we aware that – as a result of the lost generations through abortion – the UK working age population has been reduced by nearly 7% now? This figure is set to rise to nearly 11% by 2017, in other words 7.5 million missing from the working age population in only ten years time from today.

This is a high price to be paid for abortion on demand and certainly not what was intended in 1967. However, it is the reality now, forty years after abortion became legal.

The thousands of women who continue to come to England from abroad for abortions, often late abortions, are also a British responsibility, though we cannot know exactly how their health is affected.

This warning is a very timely one. Are we as a nation prepared to listen?

Dr Hans-Christian Raabe, Manchester, October 2007

Preface

The Challenge and Opportunity for Statisticians of Assessing the Damage after 40 Years of the 1967 Abortion Act.

Abortion Statistics [1] for England & Wales, which are unusually comprehensive and detailed by international standards, can be used to investigate the effects of the 1967 Abortion Act on our society over the last 40 years. By combining this abortion data with other demographic data on live births and mortality, it is now possible to estimate how many people are missing as a result of this legislation. The damage it has caused to the health of women can also be assessed in a more informed way.

Considerations of privacy and confidentiality are constraints to research into the effects of abortion. National demographic data in England & Wales benefits from the ONS (Office for National Statistics) Longitudinal Study, whereby cancers can be linked to births and deaths and census information. But there is no linking of records to abortion. Sample studies with questionnaires are often reluctant to include questions on abortion for fear of jeopardising the response. This study is however free of recall and response bias.

The 1967 Abortion Act can be considered a significant milestone in British demographic history. The liberalisation of the abortion law was followed by a comparable change in government policy as to the funding and provision of contraceptives to the married and unmarried. Marriage rates declined, divorce rates increased and births outside wedlock increased as a proportion of all births. [2] The proportion of conceptions aborted increased. All these trends are apparent from demographic data in the UK, which benefits from the ONS (Office for National Statistics) Longitudinal Study. Detailed information on childlessness by birth cohort of women and their mean age at first birth is available. Beyond its implications for Social Security, a lower birth rate and the social changes mentioned above have had a detrimental effect on family life and parenting skills.

Trends in women's health are covered by publications of the Office for National Statistics and the Department of Health. The National Health Service funds most abortions. In 2006, 87% were NHS funded [1], entirely free of charge. Almost all abortions are approved to safeguard the mental health of the mother, others to safeguard the mental health of existing children and some for reasons of foetal impairment. It is assumed that some form of health gain occurs as a result of these abortions and indeed, in Scotland, abortion statistics may be labelled Therapeutic. Abortion is often described as a simple and safe procedure but it is not without risk to the mother's health. Any ill-health effects of abortion are the result of medical intervention and may explain the reluctance of the medical profession to recognise the damage it inflicts on women's health. Independent researchers, however, are free to use the available data.

In the UK and Ireland there is good reason to be concerned about abortion sequelae because of the continuing demographic pattern of late marriage and late childbearing. The

majority of abortions are nulliparous, the termination of the mother's first pregnancy, 53% in 2006[1]. Such abortions are a greater threat to the physical and mental health of the mother than those that occur following a full term pregnancy. A nulliparous abortion may be followed by impaired fertility, as a result of a concurrent sexually transmitted disease such as Chlamydia. A future pregnancy may be at increased risk of premature birth and low birth weight with subsequent medical problems for the infant. With the linking of modern record systems and longitudinal studies it is now possible to assess the risk factors in a number of medical conditions. If known risk factors do not fully explain modern trends in a particular illness abortion can now be examined as a possible contributing factor.

Such research encounters a number of caveats. Rapid discharge, usually on the same day, is the norm following most abortions. Although follow-up information on NHS hospital abortions i.e. infections, is normally available, follow-up data from private abortion clinics is not. The risk of complications following late abortion is much increased and England is an international centre for such abortions. Women from overseas are therefore lost to follow-up and any abortion sequelae will not be recorded. Data is lacking and any post-abortion survey would be unlikely to generate an effective response.

The memory of the abortion experience affects all women to some degree. Post abortion distress is often considered to be depressive in nature. Although depressive illness accounts for fewer hospital admissions in England this is thought to reflect the reduction in the number of mental hospital beds and changing criteria for hospitalisation. Many women now need treatment for depression and some of them have had abortions. Prescription statistics show an upward trend in the use of antidepressant drugs.

Breast cancer can be considered as a long term sequel to abortion. We are experiencing a considerable increase in breast cancer incidence that is officially reported but not officially explained. The role of induced abortion as a risk factor for breast cancer is reported in the literature but is not recognised by most scientific authorities. Unlike other cancers, breast cancer shows a reverse social gradient whereby upper class women have more breast cancer than lower class women. In several countries with relevant data, this social gradient has been studied and confirmed. Ignoring induced abortion this gradient cannot be fully explained by reference to known reproductive risk factors. The epidemiological textbook solution to the problem of assessing the risk of breast cancer after abortion is to set up a prospective linked longitudinal study following women from the time of their abortions through the course of their subsequent medical histories. This would take some time to produce results and would pose considerable difficulties in obtaining a good response. Retrospective case control studies encounter corresponding difficulties in ascertaining the abortion histories of women. Meanwhile there is much that can be done by way of ecological studies using correlational analysis of national and local data.

Acknowledgements
Particular thanks are due to LIFE and The Medical Education Trust for funding the research on which this publication is based and to Andrew Chan and Lee Young for computing.

Summary

1. Legal abortions have increased in numbers - the live birth rate is below replacement level.

2. The lower birth rate leads to a smaller population of working age and an increased burden of Pension Costs and National Insurance Contributions.

3. Abortion contributes to the decline in family life and parenting.

4. Medical abortions using Mifepristone bring new health hazards for women

5. Women from abroad come for late abortions and suffer a greater risk of complications.

6. A majority of British and Irish abortions are nulliparous, i.e. childless at the time abortion, and such abortions pose a greater risk to the woman's subsequent health:
    - impaired fertility
    - increased risk of premature births
    - psychological injury
    - increased risk of breast cancer

7. The impact in the Irish Republic of the 1967 Abortion Act has been similar to Northern Ireland.

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I. Lower Fertility and Lost Generations.

The Lost Generations are those who might have been born had they not been aborted or their parents aborted. Some of those aborted in 1968 could now be grandparents.

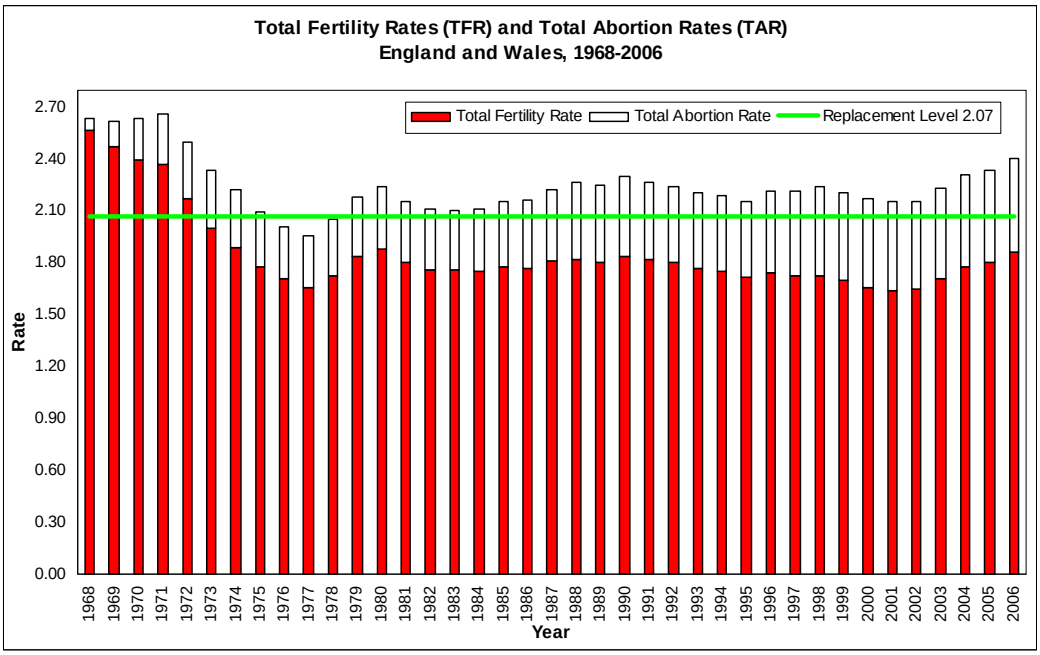
England & Wales

Abortions rapidly increased after the 1967 Act was implemented. In recent years there has continued to be some increase in abortions. In 2006 there were 193,737 abortions on resident women.

The increase in the abortion rate has contributed to the decline in the birth rate since 1968 as shown in Figure 1 for England & Wales. This shows Total Fertility Rates (TFRs) and Total Abortion Rates (TARs) for England and Wales. For several years the shortfall of fertility below replacement level was approximately equal to the abortion rate. But in recent years the birth rate has increase and the abortion rate has exceeded this. Some of the recent recovery in the birth rate is attributable to immigrants groups with a higher fertility level.

In 2006 there were around 700,000 live births in England & Wales [2]. The TFR was 1.86 in 2006 and the TAR was 0.55.

Figure 1

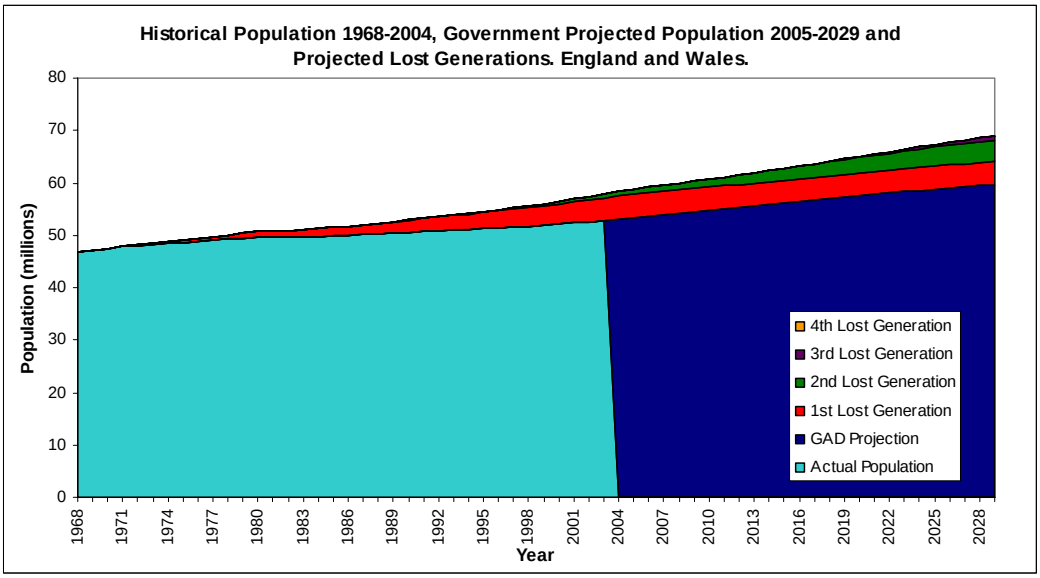


TFRs are as published by ONS [1]. TARs are derived by the author from abortion numbers in Abortion Statistics [2] with mid-year female populations as denominators as for TFRs.

Lost Generations have been computed to illustrate what the population might have been had there not been legalised abortions. The First Lost Generation is based on abortion numbers, assuming that 90% of abortions could have been live births six months later. The Second Lost Generation is then the children of the First Lost Generation whose fertility follows a birth rate augmented by 90% of the abortion rate. The Third Lost Generation is the children of the Second and grandchildren of the First.

The 10% of abortions assumed not to have been possible live births are assumed to have been miscarriages or stillbirths, legal abortions on limited grounds or illegal abortions under the old law had it been enforced after 1968. [3]

Figure 2



Source: *UK GAD - Government Actuary's Department projections [4] and modelling by author.*

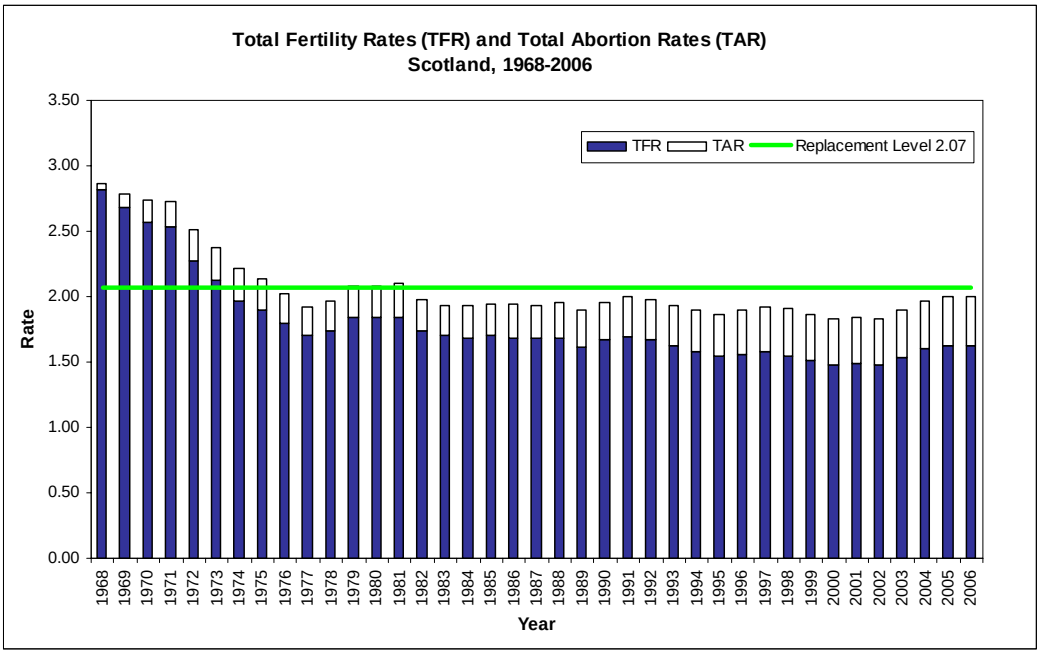
Figures 2 shows the size of these Lost Generations along with the official estimates of the population in years up to 2004 and the official population projections for years from 2005 carried out by the Government Actuary.

Scotland

While the abortion rate in Scotland continues to be lower than in England it has also increased in recent years. The birth rate has declined even more than in England so that there is now lower fertility in Scotland than England. The difference is significant at about one fifth of a child per family. Scotland has been more severely affected than England by the decline of traditional industries and the privatisation of council housing. Fewer young men are in a position to marry and start families. And there are smaller immigrant communities with high birth rates in Scotland. In 2006 there were approximately 55,700 live births and Scottish abortions totalled 13,443 including the 362 in England carried out on Scottish resident women [1, 2]. The TFR in 2006 was 1.67 and the TAR 0.38.

The trend in fertility and abortion rates is shown by Figure 3.

Figure 3

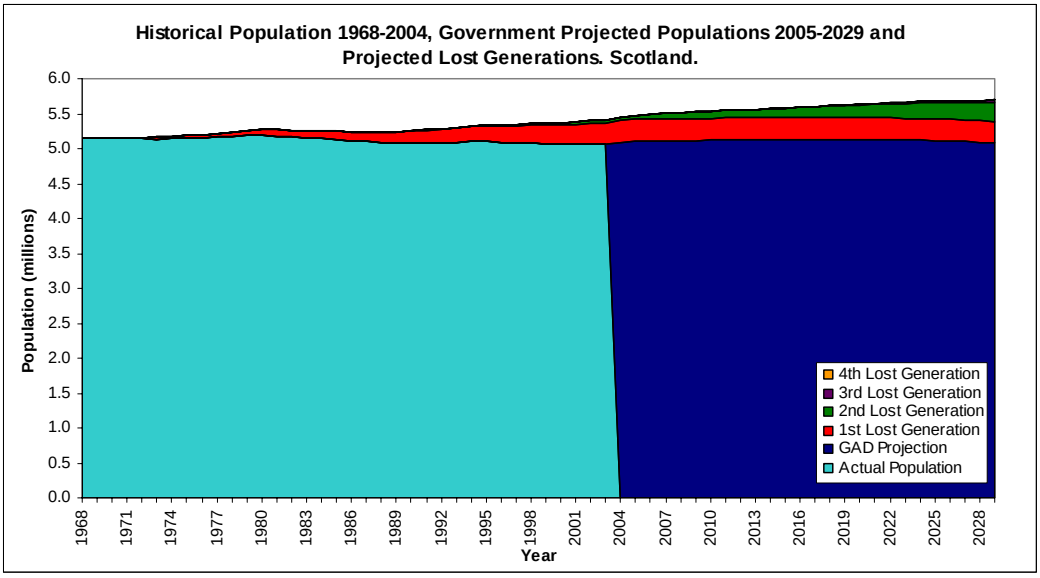


TFRs are as published by Registrar General for Scotland. TARs are derived by the author from abortion numbers published by the Information and Statistics Division of the National Health Service in Scotland and numbers of abortions for Scottish resident women in Abortion Statistics for England & Wales.

The birth rate in Scotland, which has declined more than in England, was higher in 1968. Abortion rates in Scotland, which continue to be lower than in England, have increased and now are close to equalling the shortfall below replacement level of the Scottish birth rate.

The Lost Generations for Scotland that might have been born had it not been for legally induced abortions are shown in Figure 4.

Figure 4



Source: *UK Government Actuary's Population Projections [4] and modelling by author.*

The population in Scotland has tended to decline since the 1980s and official population projections for Scotland are for some further decline in the future. But if the Lost Generations had been born alive this decline would have been averted.

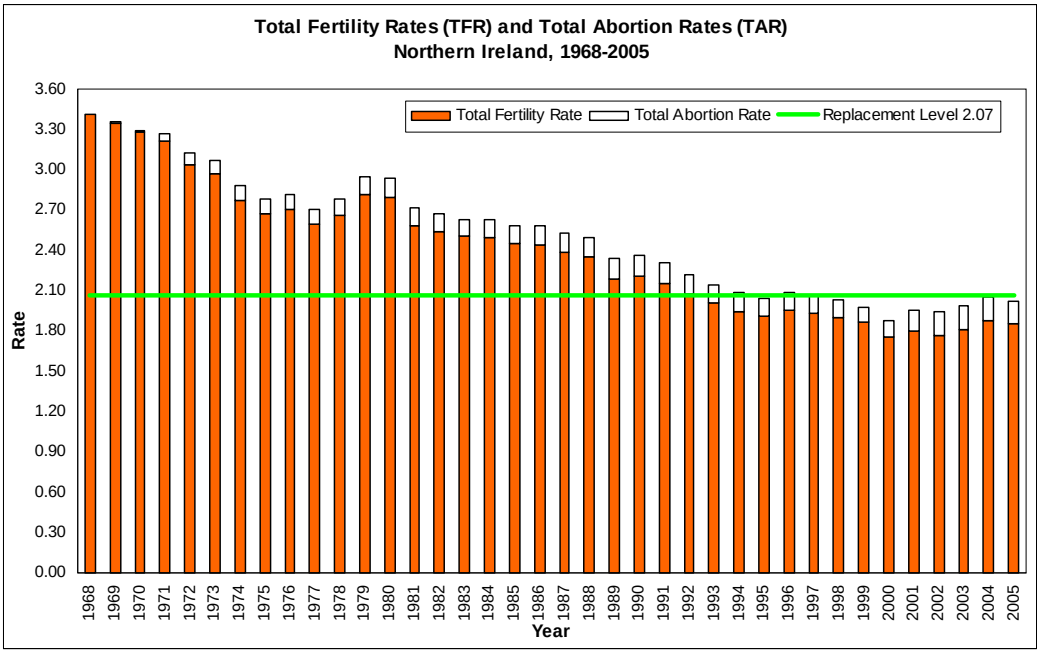
Northern Ireland

Abortions slowly increased in numbers with the advent of the 1967 Abortion Act in England. The 1967 Abortion Act does not apply in Northern Ireland. Abortion rates for Northern Ireland are derived from numbers of women resident in Northern Ireland in Abortion Statistics for England & Wales and are much smaller than in Great Britain.

Like Scotland, Northern Ireland has suffered from the decline in traditional industries which provided "breadwinner jobs" for men and privatisation of Housing Executive homes, which exposes more young couples on moderate incomes to the financial strains of house purchase and mortgage payments.

Even more than in Scotland there has been a considerable decline in the birth rate since 1968 in Northern Ireland. But it is much higher still than in Scotland. In 2006 live births were 23,300 and abortions 1,295; the TFR was 1.87 and the TAR 0.16. The TFR is the same now as that for England where there is a much larger immigrant community with a high birth rate.

Figure 5



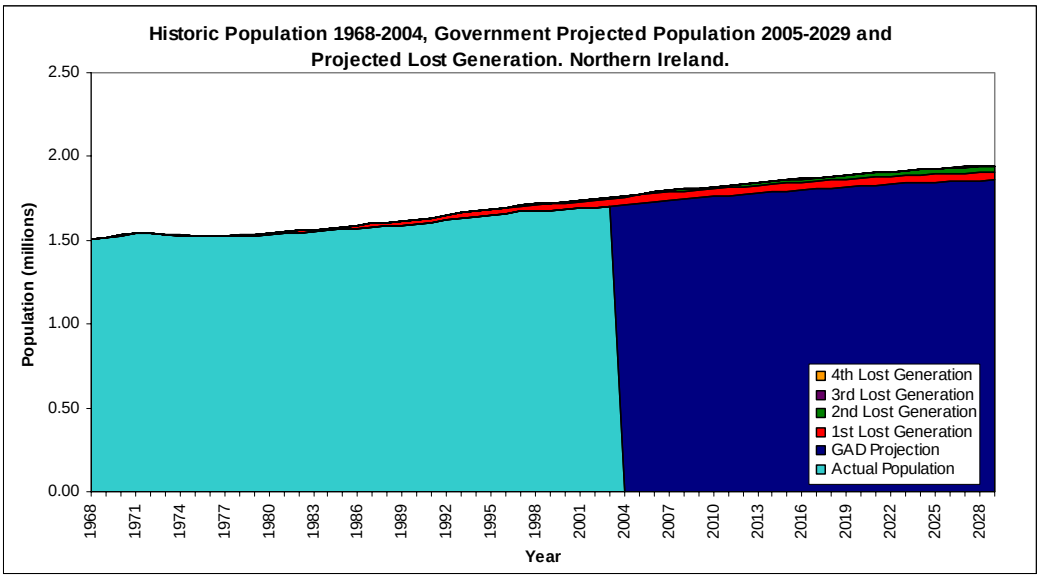
TFRs are as published by ONS. TARs are derived by the author from abortion numbers for women resident in Northern Ireland in Abortion Statistics for England & Wales.

The stricter abortion law has helped maintain fertility in Northern Ireland at a higher level than in Great Britain. Official assumptions as made by the Government Actuary in British Population Projections of near replacement level fertility in future years have not proved to be so wide of the mark in Northern Ireland. In the last two years the abortion rate in Northern Ireland, though it is very low by comparison with other countries, has nearly equalled the shortfall below replacement level of the Northern Irish birth rate.

In contrast to Scotland there has been no decline in the population and official forecasts are of some increase.

Figure 6 shows the trend in the population total and the Lost Generations for Northern Ireland.

Figure 6



Source: *UK Government Actuary's projections [4] and modelling by author.*

The Irish Republic

The Irish Republic like Northern Ireland retains earlier legislation that limits abortions. Women from the Republic also come to England for abortions and the abortion statistics for the Republic are derived from this English data. In 2006 there were over 64,000 live births in the Republic and 5,042 abortions in England on Irish resident women from the Republic. The Total Abortion Rate is similar to that for Northern Ireland at 0.18 in 2006 and much lower than Scotland.

There has been a similar decline in the birth rate to below replacement level in the Republic. The Total Fertility Rate is 1.86 for 2006, almost equal to that for England, where there are more immigrants with higher fertility, and Northern Ireland. The shortfall below replacement level fertility is nearly equalled by the abortions. The The Irish demographic distinctives of late marriage and late childbearing and nevertheless high birth rates still operate in the Republic and in Northern Ireland. Irish abortions are mostly nulliparous with 5,144 out 6,217 or 82.7% of the women resident in the Republic coming to England for abortions in 2004 having no previous live born children (C.f. 53% in England as noted above). These abortions are more hazardous to the health of women.

The Demographic Profile of the UK Population and the Implications for Pension and National Insurance Costs

The Demographic Profile

In conjunction with an increase in longevity, the decline in the birth rate has caused a strain in the funding of pensions and National Insurance in the United Kingdom. The increased cost of social security is necessarily spread over the working age population. Various studies and reports have considered how to accommodate and manage national insurance and state pension costs in the context of this demographic deterioration. It is necessary to raise the state pension ages for both men and women. Increases in state pension age are now under way to implementation in stages. Table 1 shows how the current population in the three categories compares in size for the United Kingdom with England & Wales, Scotland and Northern Ireland combined.

Table 1 UK Population 2007

Males	**GAD**	**Lost Generations**	**TOTAL**
0-15	5859429	1699234	7558663
16-65	19994339	1416978	21411317
66+	3979651	0	3979651
Total	29833419	3116212	32949631

Females	**GAD**	**Lost Generations**	**TOTAL**
0-15	5582059	1618939	7200998
16-60	18508322	1338115	19846437
61+	6897100	0	6897100
Total	30987481	2957054	33944535

Note: *GAD denotes official population projection by Government Actuary's Department.*

The absence of the Lost Generations results in the working age population that is 6.7% smaller than it would have been had 90% of the aborted foetuses become live births.

Tables 2 and 3 show the numbers in the three categories: children, working-age and retirement age of the population we can expect in 2017 and 2027 together with the Lost Generations had they not been aborted:

Table 2 UK Population 2017

Males	GAD	Lost Generations	TOTAL
0-15	5760307	1370183	7130490
16-65	20473946	2508392	22982338
66+	5443656	0	5443656
Total	31677909	3878575	35556484

Females	GAD	Lost Generations	TOTAL
0-15	5517136	1305561	6822697
16-62	19483405	2372272	21855677
63+	7234878	0	7234878
Total	32235419	3677833	35913252

Table 3 UK Population 2027

Males	GAD	Lost Generations	TOTAL
0-15	5871854	1542014	5871854
16-66	21437025	3358636	24795661
67+	5380551	0	5380551
Total	32689430	4900650	36048066

Females	GAD	Lost Generations	TOTAL
0-15	5626382	1469237	7095619
16-66	21043939	3173481	24217420
67+	6867923	0	6867923
Total	33538244	4642717	38180961

The working age population in 2017 is forecast to be 10.9% smaller than it might have been and in 2027 it is 11.3% smaller.

The Implications for Pension Costs and National Insurance Contributions

In accord with the principles of Assessmentism and National Solidarity, National Insurance Contributions to fund pensions and other insured benefits are determined in a Pay-as-You-Go system by spreading the cost over the working population contributing. Table 4 shows how the Lost Generations might have formed a larger contributing base for the state pension and national insurance scheme so that smaller contributions would have been required. National Insurance Contributions paid by Employers and Employees (Contracted In) for men and women on average earnings in 2007/08 were taken as the base for estimation. Inflation of 2% per annum was assumed for future years.

Table of National Insurance Contributions in 2007 and projections for future years 2017 and 2027 with reductions if Lost Generations were included

Table 4

Males	**2007**	**2017**	**2027**
	£	£	£
Average Weekly pay**	605.79	767.94	973.48
Employee's NIC	55.64	65.27	75.12
Employer's NIC	64.74	75.95	87.40
Total NIC	120.38	141.23	162.52
Reduction* in Employee's NIC	2.57	5.52	8.85
Reduction* in Employer's NIC	2.99	6.43	10.30
Total Reduction	5.56	11.95	19.15

Females			
	2007	2017	2027
Average Weekly pay**	464.49	588.81	746.40
Employee's NIC	40.09	47.03	54.12
Employer's NIC	46.65	54.73	62.98
Total NIC	86.74	101.76	117.11
Reduction* in Employee's NIC	1.85	3.98	6.38
Reduction* in Employer's NIC	2.16	4.63	7.42
Total Reduction	4.01	8.61	13.80

**Wage and salary inflation assumed 2.4% per annum as in official assumptions 2007
*Reduction by inclusion of Lost Generations compared to when population accords with official (GAD) population estimates.

If the Lost Generations were included in the working age population our current National Insurance Contributions might on average be reduced by £5.56 per week for men and £4.01 per week for women with larger reductions in future years.

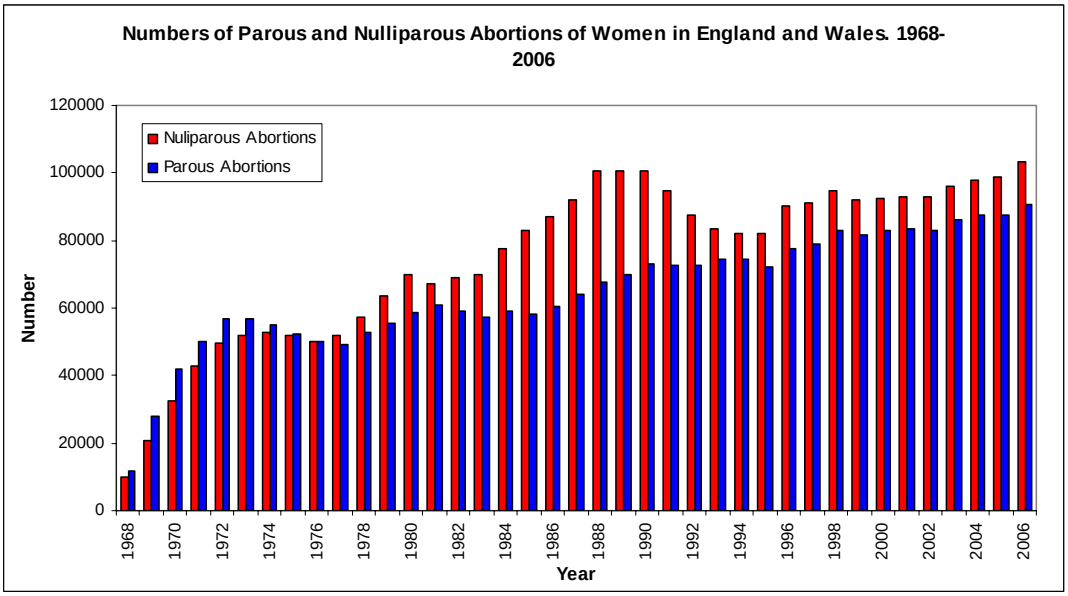
II. The Demographic impact on Society

The Interaction between Abortion, decline of Marriage and Family Size, Status of Parents and Family Integrity

England & Wales

The demographic impact of abortion takes effect in the context of the traditional demographic pattern of late marriage and late childbearing which continues in Great Britain and a fortiori in Ireland. Indeed marriage and childbearing are taking place at a later age now than formerly and abortion is an influence on this trend.

Figure 7



Source: *Rates derived by author from abortion numbers supplied by ONS and Department of Health*

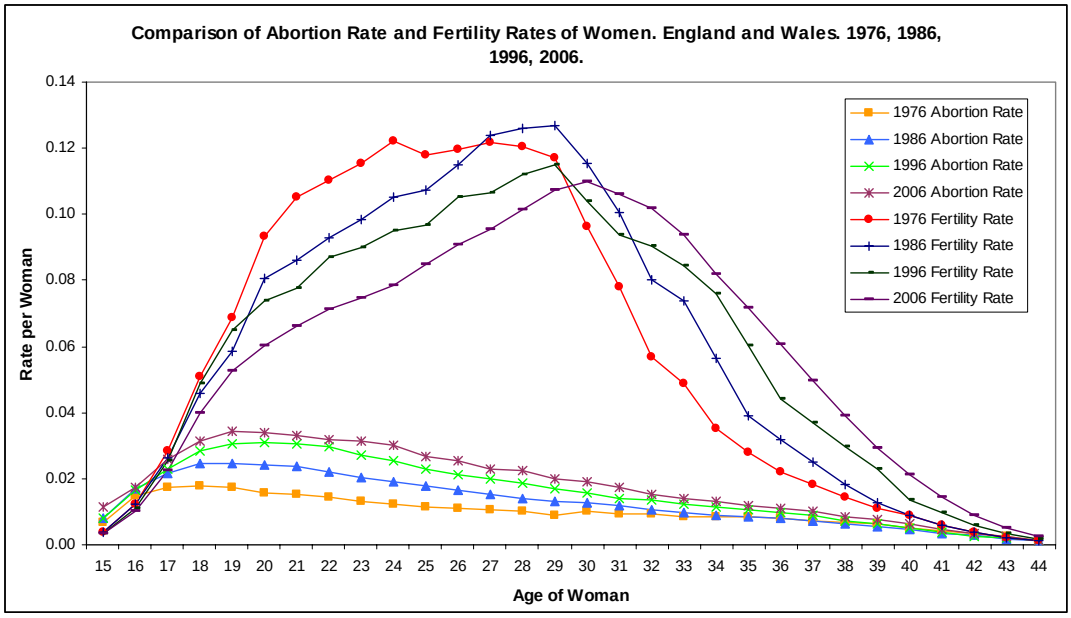
Figure 7 shows how rates of Parous and Nulliparous abortions have increased since 1968. Since 1976 Nulliparous abortions have been more common than Parous. But since 1990 the increase in abortions has been among women with children. This parallels the increase in single parenting. The proportion of abortions on married women continues to fall and is now20% (Abortion Statistics 2006). [1]

In the USA 60% of women having abortions have already given birth to live children [5]. In the UK the higher proportion of nulliparous abortions is linked with a higher rate of extramarital childbearing to a lower marriage rate. More than 40% of British children are now born outside wedlock. Single parenting is increasing not only from the increase in extra martial births and from divorce but also from instability in non-marital partnerships.

At birth the number of lone registrations and those in which named parents have different addresses is high by comparison with international standards.

Abortion has a peak or modal age of 20 in England compared to the modal age of 30 for live births.

Figure 8

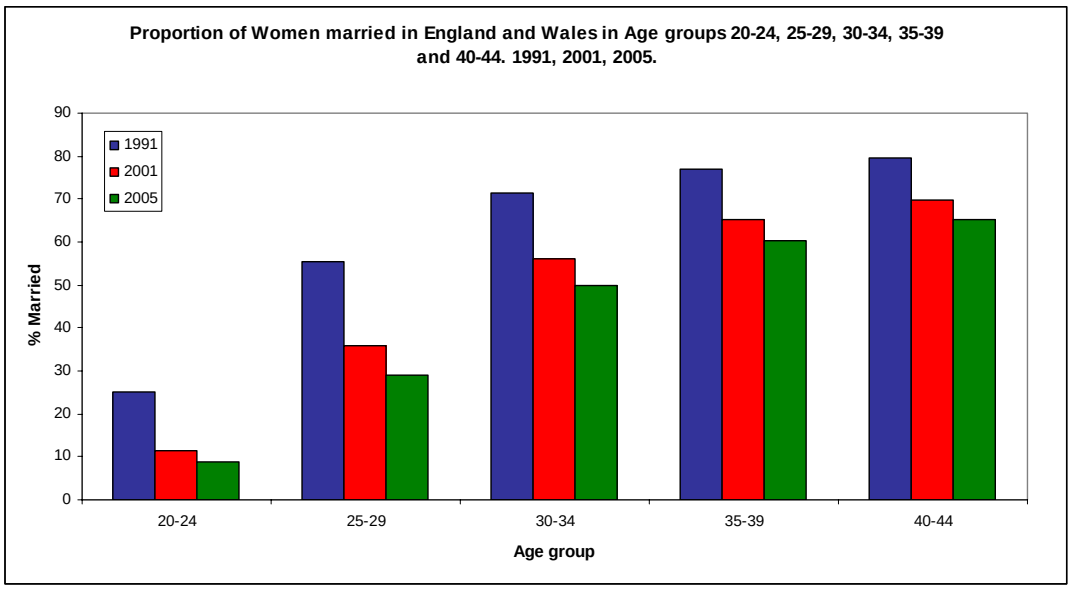


Fertility Rates are as published by ONS. Abortion Rates are derived by the author.

Figure 8 shows how the age distributions of the abortion rate and the birth rate in England & Wales since 1976. The abortion rate tends to increase at all ages and the birth rate to decline at the ages below 30. Improved educational and career opportunities for young women lead to later childbearing and a greater preference for abortion at younger ages by pregnant women.

Abortion rates are much lower for married women and the increase in abortion rates is linked to the decline in marriage rates.

Figure 9

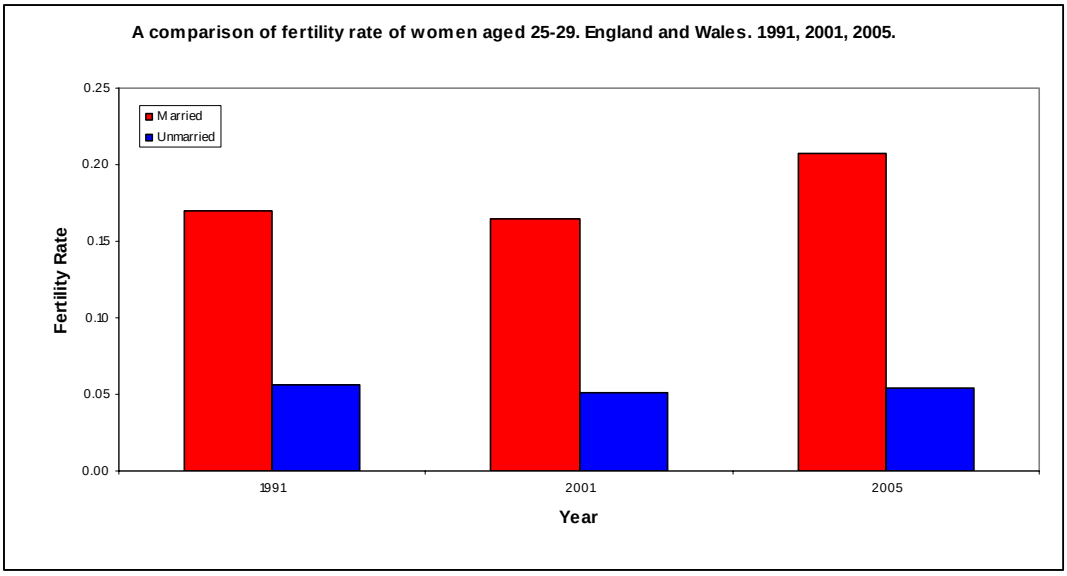


Source: *ONS*

Figure 9 in 2005 shows how fewer than a third of women in the age group 25-29 are now married and in the age group 30—34 only half are married.
Married women who are already mothers are less likely to choose abortion.

Abortion, which is closely linked to the further decline in marriage rates, has also an effect in reducing the proportion of women married at reproductive ages.

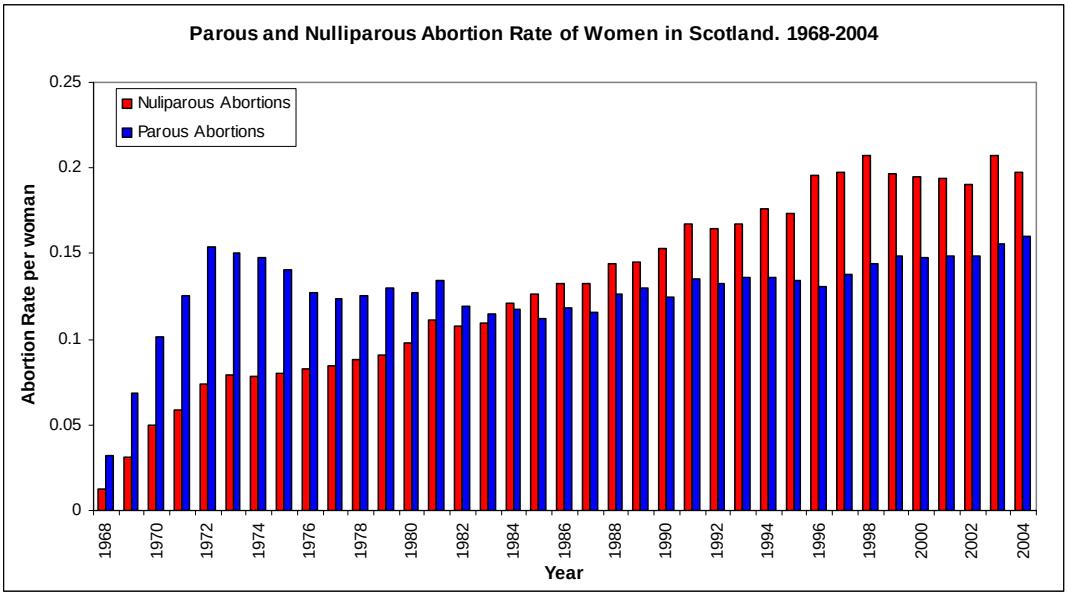
Figure 10



This decline in the birth rate is clearly linked to the decline in marriage when the increasing divergence between intramarital fertility and extramarital fertility is viewed in Figure 10.
For women aged 25-29 the birth rate of married women increased to 22% in 2005 but the

birth rate for unmarried declined by 4%. The difference between the fertility rates widened to .152. The married rate was .207 which is 3.8 times the unmarried rate of .055.

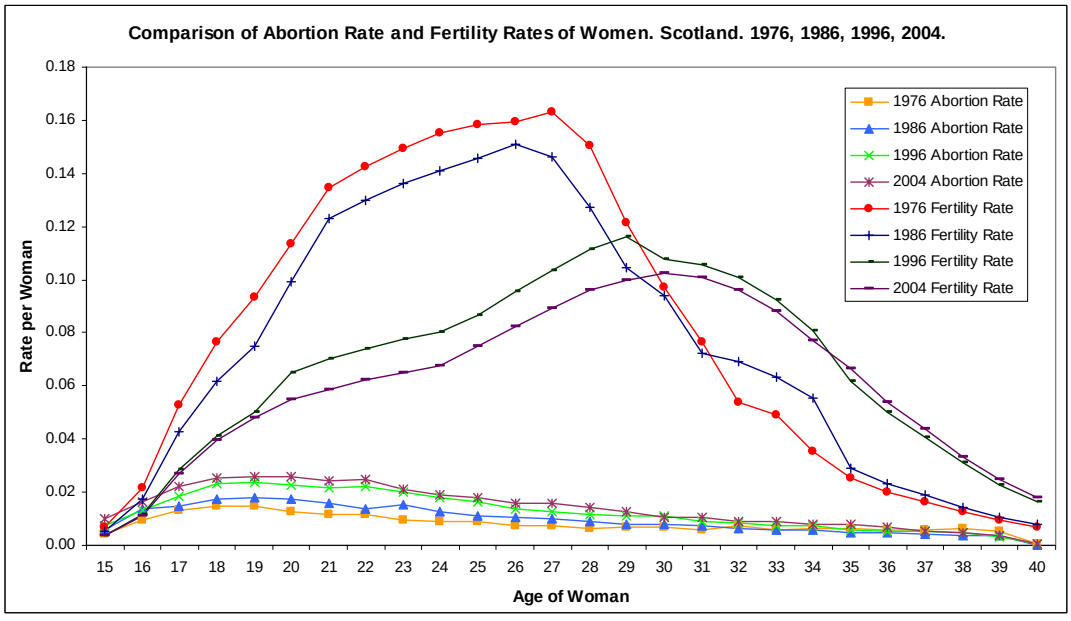
Figure 11



Source: *Rates derived by author from official abortion numbers [2]. Abortions in England on Scottish resident women are included.*

For Scotland we have a similar prevalence of nulliparous abortions with an increase in recent years of parous abortions, shown in Figure 11.

Figure 12

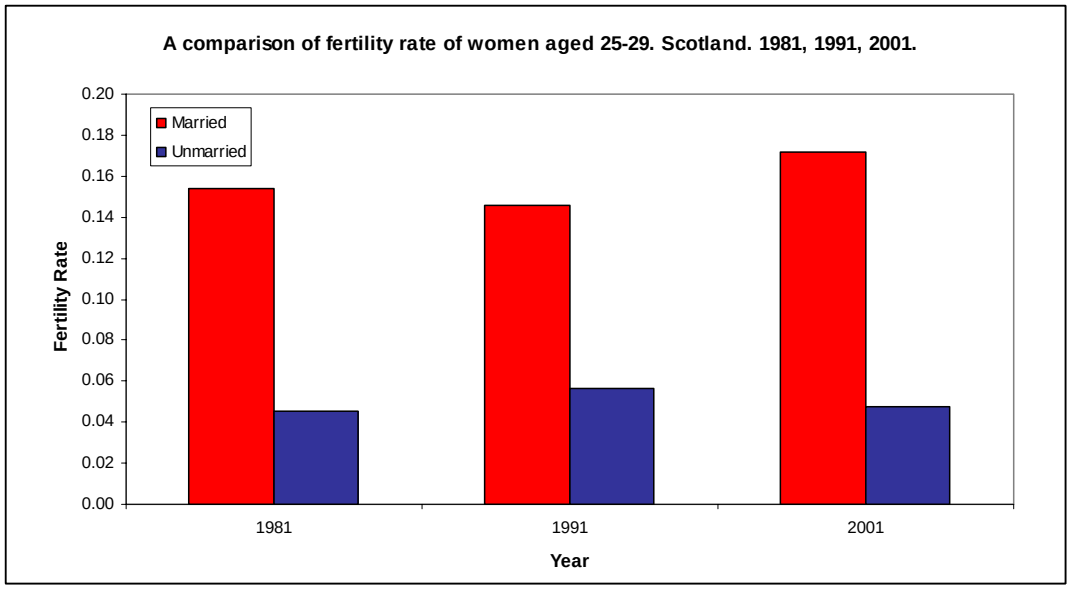


Fertility Rates are as published by ONS. Abortion Rates are derived by the author.

Figure 12 shows the spectacular decline in the Scottish birth rate among women under age 30, only partly offset by an increase in the over 30 birth rate. The decline in traditional industries has reduced employment opportunities for young men in Scotland and the privatisation of social housing has been on a bigger scale than in England. Fewer young men are in a position to provide for families. More young couples are exposed to the financial strains of house purchase and mortgage payments. Newer service industries offer more employment for women who also have good educational opportunities.

The intramarital birth rate has however increased in Scotland even in the age group 25-29 as shown in Figure 13 and there is a widening gap between intramarital and extramarital fertility.

Figure 13



Source: *UK censuses*

The greater decline in the Scottish birth rate is associated with a parallel decline in proportions married in Scotland, as shown in Figure 14.

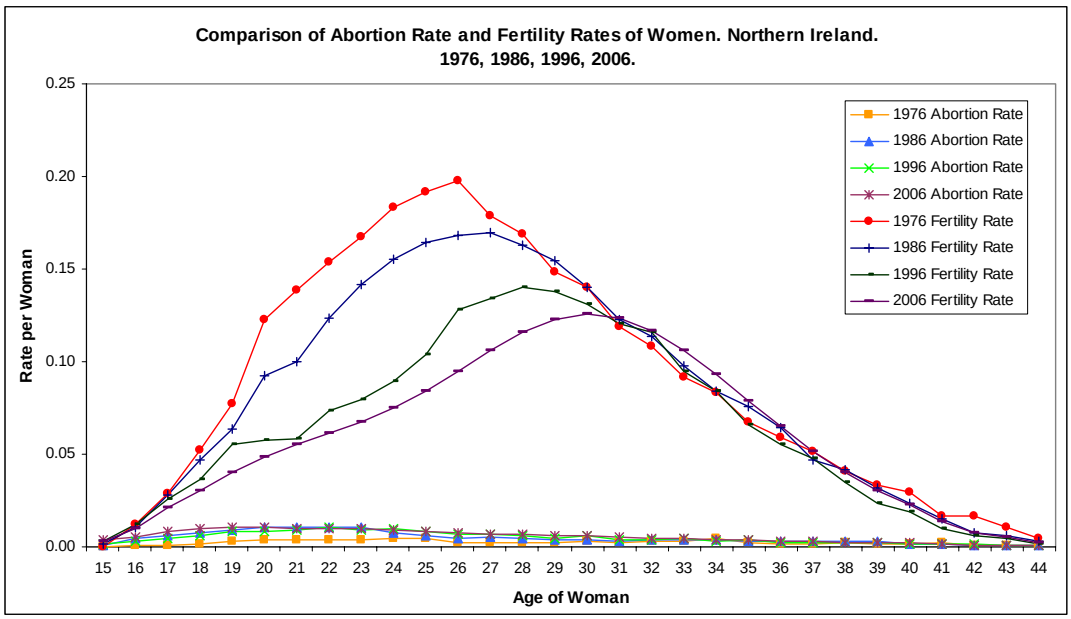
Figure 14

Scotland now has the lowest proportion of women married of any of the constituent countries in the United Kingdom, as shown in Figure 14. This shows how the proportions married have changed at successive censuses. The link between marriage and fertility within the UK is clear. The birth rate in Scotland is now the lowest and the Scots marriage rate has also declined to the lowest of the three constituent countries.

Northern Ireland

Northern Ireland has always the highest marriage rate and the highest fertility rate in the UK. Northern Ireland has suffered like Scotland from the same increased difficulties for young men to provide for families. There has been a decline in traditional industries and large scale privatisation of social housing. But abortions continue to be illegal in Northern Ireland and the birth rate continues at a comparatively high level as shown above in Figure 5. The proportions married in Northern Ireland continue also to be higher for women in the age group 25-29 as shown in Figure 14. It seems the law against abortion in Northern Ireland has helped maintain the birth rate at a relatively high level and is also linked to the proportion married continuing at a level higher than elsewhere in the UK.

Figure 15



Fertility rates as published by ONS. Abortion rates derived by author.

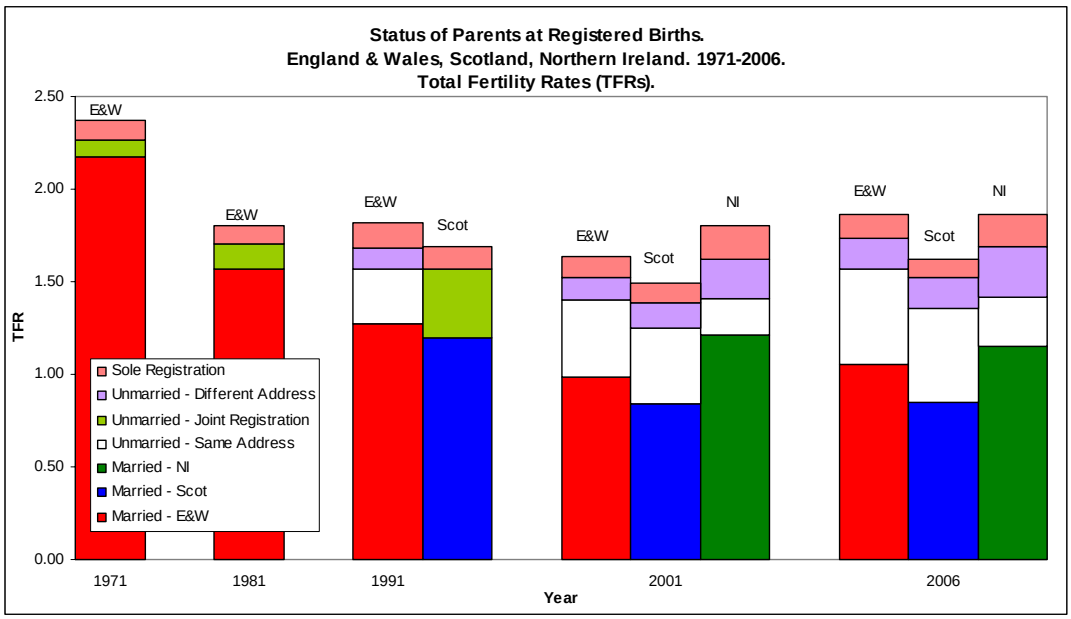
The birth rate has declined likewise in Northern Ireland at ages below 30, as shown in Figure 15. The Irish demographic distinctives of later marriage, later childbearing and, nevertheless, higher fertility rates are now still just apparent in an attenuated form. Starting from levels much higher than in England the Northern Irish birth rate is now slightly higher than England but it is still much higher than the birth rate in Scotland.

Status of Parents at Birth and Absent Fathers

With abortion and contraception long accepted and publicly funded, "shotgun marriages" are rare and the proportion of extramarital births has continued to rise. Fathers have suffered a loss of status and their lack of involvement in their children's lives is often remarked. The Census no longer acknowledges men as "Heads of Households", but they are counted as "Household Reference Persons".

Figure 16 illustrates these trends at the time of a child's birth.

Figure 16



Source: *ONS Population Trends.*

The proportion of absent fathers at registration either not named or not resident at the same address as the mother, is 15.8% in 2006 in England & Wales. Sole registrations number 45,443 in 2006 and joint registrations with separate addresses are 60,590 out of a total of all registered live births 669,500.

For Scotland this percentage is higher at 16.3% absent in 2006. And in Northern Ireland it is higher still at 23.8%.

In Northern Ireland the proportion of births registered with married parents is also higher at 62.1% compared to 56.5% in England & Wales. This pattern might suggest that the stricter abortion laws in Northern Ireland are leading to more live births both within marriage and for parents living apart.

In Scotland, where abortions are easily accessed but employment opportunities for young men are more limited, the proportion born to married parents is lowest in the UK at 52.3% in 2006.

III Health Implications

Mortality and Morbidity

Complications: The Early Months:

Abortion Deaths

In the short term, abortion complications may be apparent before the woman is discharged from the abortion clinic or immediately thereafter. These include abortion deaths.

When the passage of the 1967 Abortion Act, doctors trained to deliver live born children became abortionists and they lacked the skills of practised abortionists. Complications were more common for abortions in NHS premises, where the new abortionists were less experienced.

In the early years there were an alarming number of abortion deaths. Abortion Statistics[1] for England & Wales reported 3 deaths in 1968, 17 for 1969, 14 for 1970, 14 for 1971, 15 in 1972 with the numbers then declining to 6 in 1973, 7 in 1974, 3 in 1975 and 1 in 1976. Here the numbers for residents and non-resident women are combined. In 1976 there were 129,673 abortions so the fatality rate overall was less than 1 per 100,000. Since then this rate has been a sort of standard for abortion fatalities.

More recently Mifepristone is used for medical abortions and a number of abortion deaths have been recorded. [6]

Morbidity: Abortion Complications

Injury, bleeding, sepsis

The risk of complications is greater with late abortions, where the gestational age of the foetus is over 13 weeks. The foetus is larger and there is more risk of cuts and bleeding in the course of the abortion. Only those complications observed within abortion clinics are reported in Abortion Statistics. Current health management targets make maximum use of hospital beds and fewer women are now detained overnight while abortion numbers continue to increase. A cause of concern is that women may only become aware of complications after leaving abortion clinics.

Sepsis may not be manifested until some time after the abortion. Chlamydial infection is becoming more common in the age groups with high abortion rates. Abortion questionnaires, used to compile abortion statistics, now include a question on Chlamydia testing but the results are not usually available at the time of the abortion. Infections, such as MRSA, (**Methicillin-Resistant *Staphylococcus Aureus*** (**MRSA**) is an isolate of the Bacterium *Staphylococcus Aureus*) occur in hospitals where abortions take place but specialist abortion clinics are not surveyed for MRSA.

Secondary infection after abortion is quite common and acknowledged by the Royal College of Obstetricians and Gynaecologists [7] with a rate of 10% for all abortions. This may cause pelvic inflammatory disease and subsequent infertility.

Mifepristone, now widely used for medical abortions, can also give rise to complications. Bleeding is expected in all cases and 5-8% of medical abortions subsequently require surgical intervention [8].

Women from abroad coming for Abortions

England is an international centre for late abortions and there is an increased risk of complications following such abortions.

Abortion Statistics 2006 [1] for England & Wales show that of 7,436 abortions for non-residents, 1,309 (17.6%) were late abortions of 13 or more weeks' gestational age.

In 2006 most non-residents came from Ireland, with 1,295 from Northern Ireland and 5,042 from the Republic. The proportion of late abortions was 14% in both jurisdictions, somewhat higher than the 10.8% for English residents.

Of the other 1,099 abortions for non-residents, 419 (38.1%) were late abortions. In Scotland there were 362 abortions for non-residents of which 39% were late abortions. The proportion of late abortions for these non-residents is much higher than that (10.8%) for English residents.

The current practice of rapid discharge after any operation increases the risk of non-residents having post-abortion complications on their journey home. Analysis of overnight stays in England by non-residents in 2000 showed that "residents had a shorter average duration of stay than non-residents, the exception being 13-19 week terminations where the average for non-residents was very slightly shorter" [9].

Although late abortions at 13-19 weeks are associated with a higher rate of complications overnight stays are rare and the numbers of women detained overnight after abortion is not now reported in Abortion Statistics.

Later Implications for Health after Abortions

The adverse consequences of abortion are greater for nulliparous women than for those who have borne children. Indeed, the outcome of a woman's first pregnancy may be crucial to her subsequent health.

Infertility: Premature, Low Weight Births and Infant mortality

The increased incidence of the sexually transmitted infection Chlamydia in young British women is of particular concern in the context of nulliparous abortions since it is associated with an increased risk of subsequent impaired fertility. Some women seeking infertility

treatment have had a previous abortion. In addition the possibility of cervical damage during nulliparous abortions is thought to increase the risk of miscarriage in subsequent pregnancies.

Demand for fertility treatment continues to increase. Figures from the Human Fertilisation and Embryology Authority 2006 Report indicate 6,174 treatment cycles for women aged 40-45 using their own eggs. In 1991, the comparable figure was just 596 treatment cycles. In the 2006 Report women aged 40-45 accounted for 15.5% of all treatment cycles while in 1991 the comparable figure was 9.2% [10]. It seems reasonable to suppose that some of the women seeking infertility treatment have had previous abortions.

In England NHS hospital admissions for miscarriage have increased from 39,600 in 2000-01, a rate of 6.7% of live deliveries, to 46,200 in 2005-06, a rate of 7.9% of live deliveries [11]. Although there have been fluctuations in this rate since 1990-91, it is disappointing to note the absence of improvement in this rate. Induced abortion has not been considered a relevant risk factor for miscarriage in official reports [11]. If the role of induced abortion had been investigated its influence could have been determined. The increased rate of miscarriage in recent years runs parallel to the increase in abortions in the relevant age groups of women.

Low Weight Births (less than 2500 grams) are especially common among unmarried women and their abortion rate is much higher than for married women. A recent publication, using the 1990's data from the National Longitudinal Study, confirms that within marriage 5% of live births were of low weight while that figure was 9.4% of sole registrations, 7.5% of joint registrations with different addresses and 6.6% of joint registrations with the same address [12]. Since abortion is much more common among unmarried women these figures suggest it may be a contributing factor to low weight births. Although official studies have not considered abortion as a risk factor in premature or low weight births previous abortion could explain the known effect of marital status. "While little is known about how to prevent preterm births, known risk factors are history of induced abortion or miscarriage, past or current sexually transmitted infections,…"[13]. An earlier French study [14] found "Previous induced abortion was associated with an increased risk of preterm delivery…and the risk increased with the number of previous induced abortions". A recent American study also addresses this issue [15].

Neonatal mortality is higher in premature births and in infants of low birth weight. The authors of a new study of infant mortality (death within a year of birth) among babies born in England and Wales state: "In 2005 7.6% of live births were preterm, under 37 weeks gestational age, 88% were born at term, 37 to 41 weeks, and 4% were born post term at 42 weeks and above. The corresponding infant mortality rates were 42, 1.8 and 2.0 deaths per 1,000 live birth respectively." Full term babies of low weight were at additional risk: "Among babies born at 37 weeks and above, the neonatal mortality rate of those weighing 1,500-2,499 g. at birth was 5.3 deaths per 1,000 live births as compared to 0.8 deaths per 1,000 live births for those weighing 2,500 g and over." [16]. If previous abortions contribute to premature and low weight births they also increase infant mortality rates.

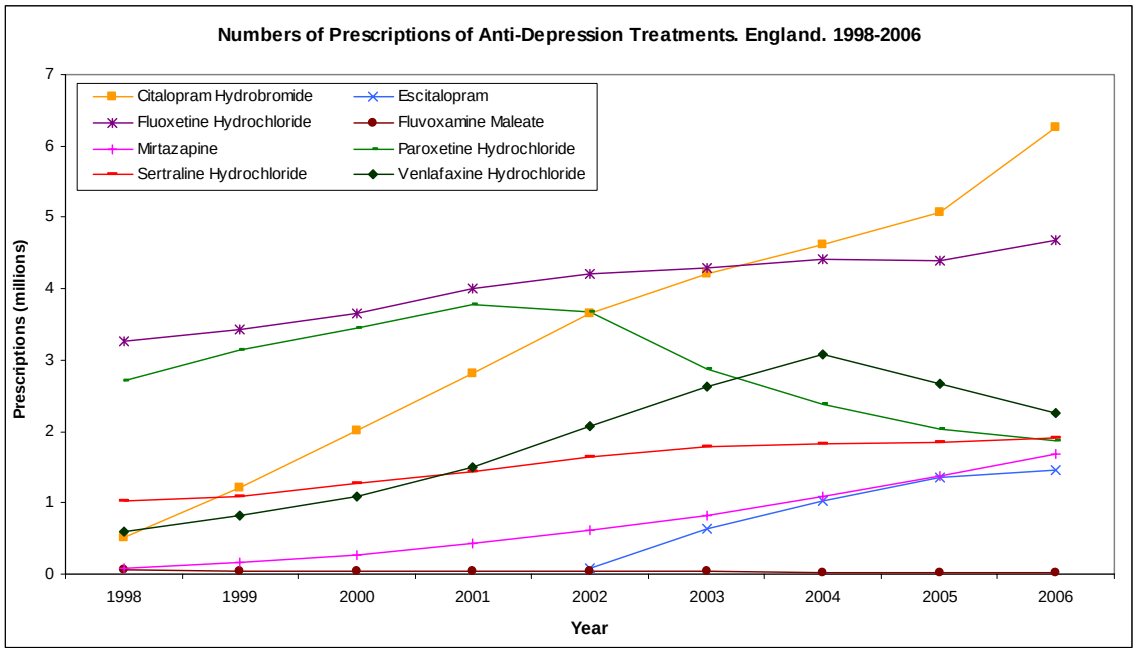
Mental Health: Depression, Anxiety, Personality disorders and Relationships impaired

Mental illness is more common after nulliparous abortions – it is more traumatic, the memory lasts longer and it interferes with subsequent childbearing and relationships. This kind of mental health damage is thought to be largely depressive in nature.

Major depression, anxiety disorder, suicidal ideation, alcohol dependence, illicit drug dependence and other mental problems were investigated in a New Zealand study which found "mental health problems highest amongst those having abortions". [17]

In England an increasing number of patients are being treated for depressive mental illness. 31 million prescriptions for antidepressants were issued in England in 2006 compared with 21.3 million in 2001 [18]. Figure 16 shows how modern drugs such as the newer Selective Serotonin Reuptake Inhibitors or SSRIs have become more widely used. It is thought that most of those treated are women and they are within the age groups likely to have had abortions. The increase in the number of patients seeking treatment for depressive mental illness parallels the increase in the number of abortions. It seems reasonable to suppose that abortion has played a part in the increasing numbers of women requiring such treatments.

Figure 16



Notes: *SSRIs include Citalopram/Escitalopram, Fluoxetine and Sertraline and Paroxetine and new non-SSRIs include Mirtazapine*

Suicides

Women who have had an abortion have an increased risk of suicide. A Finnish study, published in the British Medical Journal, found a six fold increase in the incidence of suicide after an abortion compared with that after a full term pregnancy [19].

Breast Cancer

Abortion, and especially nulliparous abortion, appears to increase the risk of breast cancer. In early pregnancy maternal hormones begin to prepare the breasts for lactation. Legalised abortion is a deliberate interruption of this process. Breast cells are left in a state of interrupted hormonal development, especially when the woman is nulliparous, whereby they are more susceptible to breast cancer.

The effect of abortion in increasing the breast cancer risk is apparent over a long term. Until a woman passes the age of 45 the increased risk is small. But the published studies concentrate on younger women and there are various other faults in the studies that report no increase in breast cancer from the effects of abortion.[20] In retrospective case control studies it is difficult to discover the abortion history of women. Prospective studies of cancer incidence take a long time to produce data and non response from women having abortions is a problem.

Use of national data can overcome some of the limitations of using sample studies. In the UK we have comprehensive data on abortions that is age specific to the women. Cancer registration has been in operation since the 1970s. We have age specific data on incidence as the benefit of cancer registration of newly diagnosed cancers.

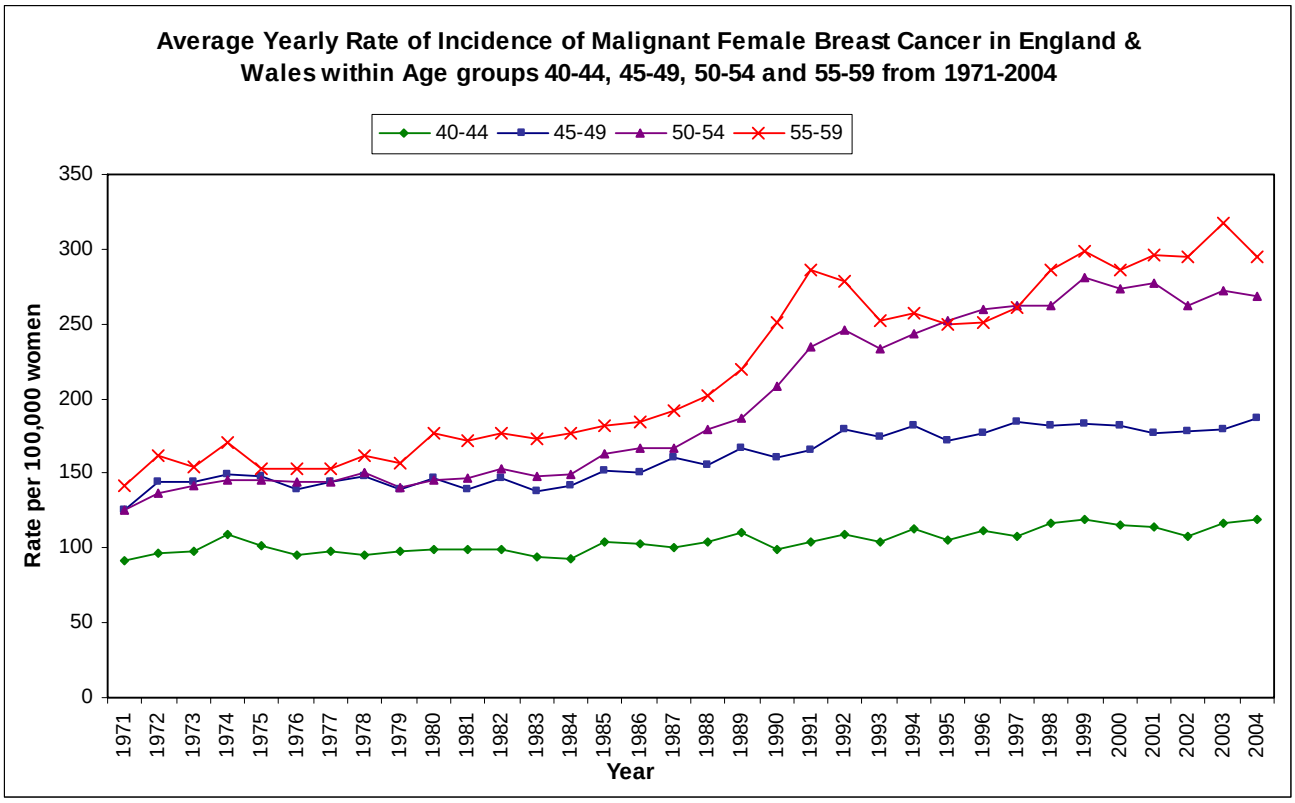
Data on nulliparous abortions that is age specific allows us to calculated cohort rates for these.

The social gradient for female breast cancer is unlike that of other cancers with upper class women having a higher rate of incidence than those from lower social classes. As in other countries this is termed a negative or reverse social gradient for female breast cancer. ONS, the official statistical office [21] use data from cancer deaths and census information linked by the ONS Longitudinal Study to report on the mortality gradient for breast cancer. In Scotland [21] the mortality gradient is flat and a smaller incidence gradient is reported. British official publications report on the social gradient but do not explain it in terms of known risk factors.

In England this gradient is steeper than can be explained by a later age at first birth that is known to be a factor increasing the breast cancer risk. Upper class and upwardly mobile women are more likely to choose abortion when they are pregnant and this helps to explain this otherwise inexplicable social gradient. Upper class women tend to postpone childbearing and have a later age at first birth. Abortions before full term pregnancies are the more carcinogenic nulliparous abortions. [22]

The incidence over all age groups and all social classes has increased by 80% since the 1970s in England. [21] Figure 17 shows how the incidence rates have increased in four age groups around age 50. The larger increases are in the age groups over the age of 50 and the breast cancer screening programme is designed to cover these groups. The introduction of screening around 1989 is apparent in the increases in incidence in the age groups 50-54 and 55-59.

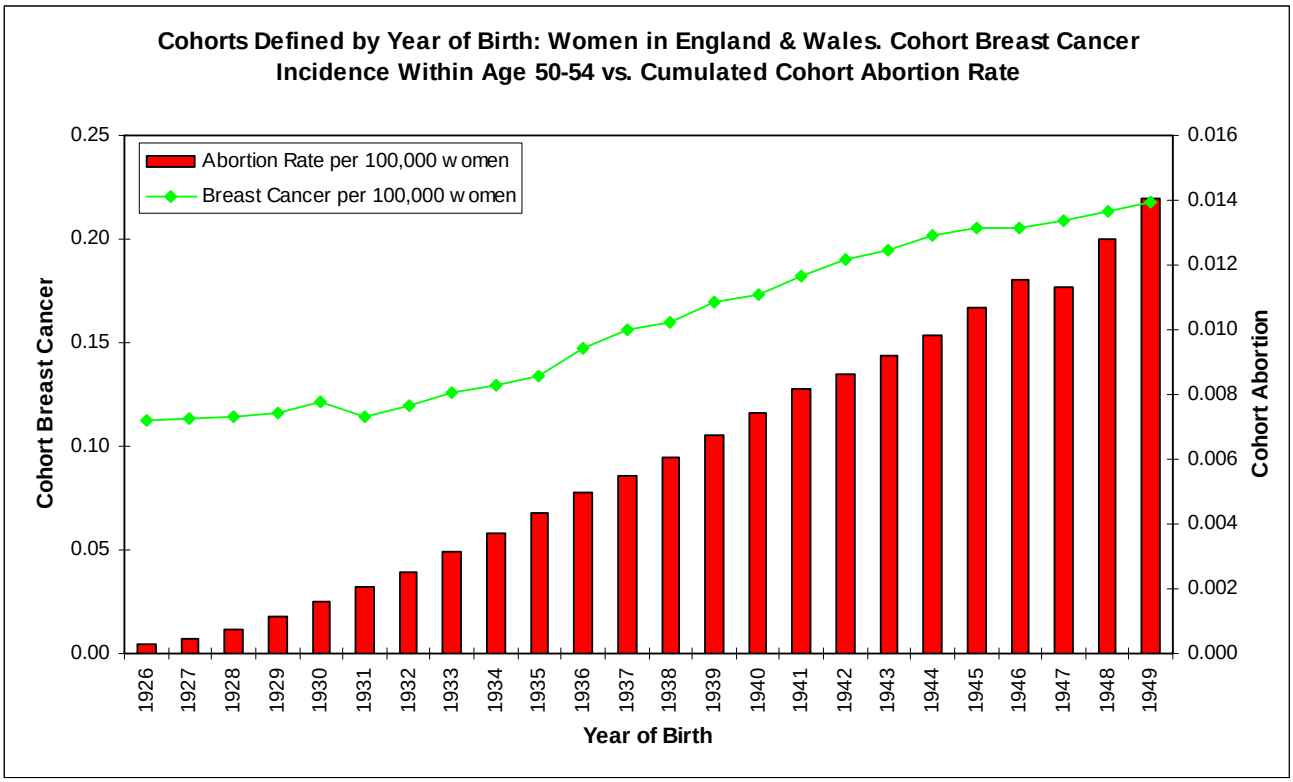
Figure 17



Following the 1967 Abortion Act, the women who had abortions in the 1970s will have entered the post-50 age groups when they are more likely to be diagnosed with breast cancer. After 40 years of increasing numbers of legally induced abortions, successive birth cohorts of women who have had more abortions can be expected to have more breast cancer.

Figure 18 shows this trend for successive birth cohorts of women for breast cancer diagnosed within ages 50 to 54.

Figure 18



Correlation Coefficient: 0.98

Source: *ONS Office for National Statistics for England, WCIS Welsh Cancer Intelligence and Surveillance for Wales*

Notes:

** TFRs or Total Fertility Rates are as published by ONS the Office for National Statistics. The TFR corresponds to family size in number of children per woman.*

*** TARs or Total Abortion Rates are derived by the author in the same way as TFRs using numbers of abortions for each age of women as numerator and the corresponding mid year female population as denominator. The TAR for a calendar year corresponds to a notional career average number of abortions per woman. Cumulated cohort abortion rates are likewise derived in the same way by summation across successive years for a woman born in a particular year of age-specific abortion rates.*

The correlation is much higher than for other known risk factors such as Childlessness, Age at First Birth and Fertility. Abortion has been found to be the best predictor of breast cancer trends. Modelling using abortion and birth rates as explanatory variables has been used to make forecasts for eight countries for the future incidence of female breast cancer. [22]

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Assessing the Damage

About the report
The report discusses how British national statistical data can be used to assess the demographic impact on society and the effects on the health of women of legally induced abortions that have taken place in Great Britain since the implementation of the 1967 Abortion Act.

About the author
Patrick Carroll M.A., F.I.A. is an actuary and statistician who has contributed several papers to the actuarial literature. He is the author of previous works published by PAPRI that include: Pension Age in a Changing Society (1990); and Abortion and other Pregnancy-Related Risk Factors in Female Breast Cancer (2001).

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