

MCDB 150 Global Problems of Population Growth Lecture 9 Notes

We have seen the statistics of the fertility transition.

Now let's look inside the transition and see what it meant for how people lived their lives.

I have said repeatedly that every society has mechanisms to control its population.

Before the transition, the mechanism in NW Europe was control of marriage.

Many individuals never got married and those that did usually married quite late in life.

These two factors reduced fertility by up to 50% of what it would have been without them.

The basic form of social control was that individuals were required to have the means to establish a household before they were allowed to get married.

In the countryside, marriages had to be approved by the landlord and carried out in a church.

Only one child from each family was needed to work his father's land. If the father had land, the son frequently got married only when the father got too old to work his own land and the son basically inherited the land.

But England, for instance followed the rule of primogeniture- the oldest son inherited the land (or the right to work the landlord's land).

The other sons had to migrate to the cities or join the military. Death rates in both of these was very high.

Many peasants worked on a landlord's estate's land.

Again, only one son was needed to carry on the work.

Landlords did not want a large number of families dividing up their land –

that would mean more mouths to feed and less money left for the landlord.

In order to get married, peasants had to have the permission of the landowner on whose estate they worked.

The local parish church was under the control of the local squire.

The church would not marry a couple unless they had the means to set up a household and had permission of the landlord.

Large numbers of children, who could not become farmers because of lack of land, would have to leave home in their teens or earlier.

They went to work as servants in other households or apprentices at someone's shop.

Marriage was forbidden while someone was a servant or apprentice.

Mostly, servants never married.

Apprentices took many years before they could learn the skills that would allow them to earn an income – and then to save the capital needed to start a household and get married.

Many individuals never achieved this level of independence and large numbers of people never got married.

The extra sons never married, giving rise to the cultural tradition of the confirmed British Bachelor and, perhaps, to a high degree of homosexuality.

Excess females were also displaced from the land. If they could not find a place as a servant, their opportunities were severely limited. They were also forced into the cities. Prostitution flourished as a means of support for dispossessed women and to serve the large bachelor cohort.

Infant abandonment, from both prostitutes and from marrieds, was commonplace.

This system of controlling the numbers of people who could get married was flexible and could adapt to good and bad times.

There were always large pools of people waiting to get the resources that would allow them to marry. Thus, the number of marriages could adjust rapidly to conditions.

The first year of the Black Death in southern France was 1348. Huge numbers of people died and their land was taken over by someone else. Immediately, these new landholders got married. In one small French village (Givry in Burgundy) there had been 10 to 12 marriages a year in the preceding decade. In 1349 there were 86 marriages. This testifies to the reserve army of unmarrieds whose personal desires had been held in check by the land hunger of the pre-plague epoch. These new wives immediately got pregnant. One contemporary observer wrote: "there are pregnant women wherever you looked." David Levine *The Dawn of Modernity* p329

Through European history the fertility rate adapted to climatic, economic and demographic conditions. This is seen in fluctuating fertility levels:

In England, in the 1550s, the gross reproduction rate (# of girls born per woman) was relatively high at 2.8. (1.0 just replaces each woman. In 1995 the US rate was 0.985)

Then a century later the rate dropped to 1.8 and by early in the 1800s had risen again to over 3. These changes in fertility correlate with changes in, for instance, the price of grain. When farming is bad and grain prices go high – fertility goes down.

The control of marriage can be readily seen in changes of age at marriage.

During the early 1800s, in response to a high birth rate and rising population, leading to land hunger, marriage became later and later - it eventually reached age 23 - 28 for females and somewhat older than that for males.

This late marriage takes a very big chunk out of a couples reproductive years when life expectancy is only 35 or so years.

During the 300 years of these fluctuations, - there was almost NO change in marital fertility (the rate of childbearing w/i marriage).

Basically, the whole variation in fertility, for the 300 years for which we have statistics, was due to control of the numbers of people who could get married.

(Cleland and Wilson p17)

Fertility was controlled NOT AS A MATTER OF INDIVIDUAL CHOICE

BUT BY SOCIAL CONTROL based on resources.

This control of marriage lasted right into the Victorian era.

Now who do you think wrote this letter?

I think, dearest Uncle, that you cannot really wish me to be the mother of a numerous family, for I think you will see the great inconvenience a large family would be the hardship to myself;

Men never think what a hard task it is for us women to go through this very often.

1. Queen Victoria to her uncle, King Leopold of Belgium.

And Queen Victoria must have had more help than anyone else in the world in childbearing and taking care of her kids.

And even she perceives childbearing as a great hardship.

Nevertheless, neither Queen Victoria, nor almost anyone else, controlled their fertility once married.

Look at the changes that happened in a few decades:

1. The idea that fertility can and should be under the control of individual families starts to spread.

Here is a Jewish immigrant into the US writing to her mother back in Poland: "Here, it is the custom that if a woman wants to, she has a baby, and if she does not, she does not have any. David's wife says that she will have a baby every four years. I think that it is good to have one every three years, and so, after three years, I shall have another.

It is terrible that at home (Poland) women suffer only hardships and childbearing."

Notice that she doesn't talk about the wonderful new contraceptive devices they have in America. Nor about the ready availability of them. Nor about economics:

No, she talks simply about the startling new idea that she can have as many or as few children as she likes and can have them whenever she likes.

She is free of cultural constraints.

Fertility is an individual decision.

This young woman came from a culture in which continual childbearing was taken for granted.

In America, childbearing is easier medically (there is better Public Health) and easier financially (the immigrants have a much higher standard of living than they did in the old country).

Yet, now, in a new ideational climate, she perceives a lot of childbearing as bad.

She perceives the old culture as oppressive (at least on this issue).

Now she is happy that she can adopt a new set of behaviors more in line with her own preferences.

Notice that women alone are making the decision, men are not mentioned, and it is perceived now as correct that each woman should make her own decision.

Probably unthinkable in the old country.

POINT ? FERTILITY COMES UNDER INDIVIDUAL CONTROL

METHODS OF FERTILITY CONTROL ALSO BECOME A MATTER OF INDIVIDUAL CHOICE

One can't limit fertility w/o a method. One of the readings describes a painful period where women already wanted to limit their fertility – but there were no acceptable methods.

ALL THE LEADERS OF SOCIETY OPPOSED THIS CHANGE

In the reading you will read how all groups in society: government, medical profession, religion were vicious in their continuing attack on all methods of birth control. Women were caught in a bind

Leaders of the British Medical Association condemned contraceptives as unnatural and warned that all sorts of maladies would befall their users. German, French and English doctors advocated semen as a cure-all elixir for women when absorbed through the vaginal wall. They opposed anything that interfered with the intermingling of secretions!" Many doctors felt it was their duty to impede the spread of contraceptive knowledge and devices.

Doctors were putting women in a Catch 22: they were warning women about the dangers of further pregnancies - and then told them that all non-coital methods of sex were bad and all contraceptives harmful:

"When the last baby was born, the doctor said: 'Can't you finish up?'

But, when I asked him how ... he just laughed."

The major Christian denominations, Catholic and Protestant alike, "viewed with alarm the growing practice of the artificial restriction of the family.

They urged "all Christian people to discountenance such means as demoralizing to character and hostile of national welfare."

From Cleland: Potatoes & Pills NAS 1998 p13

In 1877 Charles Bradlaugh and Annie Besant printed and distributed a rather mild pamphlet on birth control called the "Fruits of Philosophy". They were arrested and charged with "inciting and encouraging subjects of the Queen to indecent, obscene, unnatural and immoral practices and bring them to a state of wickedness, lewdness and debauchery." The ensuing trial was followed with great interest by the public and became the *cause celebre* of the day.

This trial made sure that everyone in England knew about birth control.

Some historians think this trial was a major cause of the adoption of birth control.

(condoms and pessaries) Like Bill Clinton and oral sex

Women were not supposed to enjoy sex,

it was usually unknown that women COULD enjoy sex.

Many men made no attempt to prepare their wives for sex or pleasure them in any way.

"I am happy now that George calls on my bedchamber less frequently than of old. As it is, I now endure but two calls a week, and, when I hear his steps outside my door, I lie down on my bed, close my eyes, open my legs and think of England." » Wikipedia.org/wiki/Lie_back_and_think_of_England

The origin of this statement is unclear, but it is generally attributed to Lady Alice Hillingdon (1857-1940), supposedly writing in her journal in 1912.

Consequently, many wives thoroughly disliked sex w/ their husbands. Use of contraceptives would remove a compelling reason for refusing sex in the face of their husband's "lustfulness".

"For such a woman, the use of contraceptives would remove her strongest weapon in the game of sexual politics."

In short: people were terrorized with fear of legal prosecution, physical and mental injury, deep moral reservations and aesthetic distaste.

They regarded contraceptives as "repulsive, unnatural and only for prostitutes".

People DID NOT KNOW that everyone else was doing it.

IN THE FACE OF THE STRONGEST POSSIBLE OPPOSITION FROM Medical, Religious and political leaders-

The revolution took place anyway

With stunning speed.

How did this revolution take place?

Recent interviews with elderly Italian and Jewish women in the United States about their childbearing years tell us something about what was diffusing during the late 1920s and 1930s; the interviews are described in Susan Watkins, Spector, and Goldstein (1993). See also: Watkins & Danzi 1995 *Gender & Society* 19:469-490; Kate Fisher 2000 *PDR* 26:295-317. Sometimes women talked to each other about techniques, as in this Interview with an Italian-American woman, born in the United States in 1920 of recent immigrant parents, recalling a conversation late in the 1930s when she worked in a hairdressing salon shortly after her engagement.

Interviewer: How did you learn about condoms?

Nina: One of my customers said, "I really hope you don't get pregnant, let him wear a raincoat." So I started wondering, I'm thinking, I'm working, and my mind just can't work out what a raincoat is. And then Mary White, who worked for me, said, "Baby, what's on your mind," and I said "Mrs. Jacobs said a funny thing to me, she said my ring was lovely but she hoped I didn't start a family, he should wear a raincoat, but I can't ask Johnny to wear a raincoat to bed." She laughed and laughed. "She means he's to wear a condom. What is it," I said, and she told me. Now you hear about them all the time.

3. The results of discussions are not always to embrace the new behavior.

The culture of any time has limits and women may explore those limits

- and if they perceive some behavior to be beyond the limit - they will reject it.

Interviewer: How did your friends have abortions?

Peggy: I'm trying to think what they would take, because they'd tell me.... A lot of them would have a friend who would put something up there that would bring on their period.

Interviewer: A knitting needle?

Peggy: Not a knitting needle, some kind of fluid
like hot boiling water or salt water.

They would ruin their insides. They would say "Oh Peggy, don't you do that?"

Oh No, I would never do that, that's my husband, it's the man who takes care.

Meaning that since abortions are so damaging, she won't have one. Her husband has to take care, i.e., use a condom.

METHODS OF FERTILITY CONTROL BECOME A MATTER OF INDIVIDUAL CHOICE AND
THE REVOLUTION TAKES PLACE VIA SOCIAL COMMUNICATION.

OF COURSE ONE DOESN'T WANT TO OVERSTATE: SOCIAL NORMS ALWAYS EXIST AND
COMMUNITIES TRY TO ENFORCE THE CULTURAL NORMS ON THEIR MEMBERS

So, before the fertility transition, fertility is high and the social norms keep it that way. After the transition - fertility is low - and social norms also act to keep it that way.

An elderly Jewish woman reported that her mother, who did not control her fertility,

was gently chided by her friends and relatives who did:

"They would say 'Oh Esther, not another belly.'"

One of the few remaining prolific Italian peasants in a Sicilian village in the 1980s reported that their neighbors called them "animals" (Schneider and Schneider, 1984).

The force of social influence is nicely summarized by an Englishwoman interviewed in 1945, who said, "My own opinion is that people wish to have a small family on account of public opinion which has now hardened into custom. It is customary-and has been during the last twenty-five years or so to have two children and no more if you can avoid it. A family of five or six children loses in prestige and, some think, in respectability" (Levine, 1985: 202).

Community norms are still very important. People are still very concerned for their status in the community. - BUT NOW CONTROL IS WEAK - EXPRESSED ONLY AS OPINIONS OF INDIVIDUALS - NOT WITH THE FORCE OF LEGAL AND RELIGIOUS REQUIREMENTS.

LIBERATION IS NOT GOING TO A NEW NORM - BUT GOING TO INDIVIDUAL PREFERENCES.

MARRIAGE

Prior to the transition, there was no individual control of fertility within marriage.

Married couples had children at a very rapid rate.

When contraception started being practiced within marriage-

The pressure on the institution of marriage itself was released

So, in parallel with the decline in marital fertility-
there was a decrease in the average age of marriage
and a great increase in the proportion of people married.

Belgium Lestheage 3.2 ---->15

1870 All of Europe: Coale Maps 2.6 ---->16

1960 Map 2.9 ---->17

SOCIETIES NEED TO CONTROL THEIR POPULATION. AS COUPLES STARTED HAVING FEWER CHILDREN WITHIN MARRIAGE, SOCIETY DID NOT NEED SUCH STRICT CONTROLS ON WHO GOT MARRIED. FERTILITY CONTROL SWITCHED FROM SOCIAL CONTROL OVER MARRIAGE TO INDIVIDUAL CONTROL OF FERTILITY WITHIN MARRIAGE.

The demographic transition is one of the most important revolutions ever in human history.

Humans got many extraordinary benefits out of the transition:

1. Life - Each person got to live about 3X as long.
2. Numbers: The number of humans on earth has multiplied by about 10X
3. Wealth: The industrial revolution, by itself, was insufficient to cause a major increase in per capita income. The Malthusian situation persisted; population increase ate up most of the progress. Only after the fertility transition did per capita income start a dramatic rise.
4. A tremendous democratization of marriage.

Prior to the revolution, marriage was restricted basically to those who could afford it.

Only about half of adults got married.

After the transition - almost everyone got married and considered the opportunity to marry as one of their most fundamental human rights - so much so that nowadays we don't even think about it.

Marriage is an option for everyone.

5. Sex: Of course the democratization of marriage also means the democratization of sex. Access to marriage means access to sex.

Couples were freed from the perpetual threat of pregnancy during sex

7. fertility came under individual control. Individual couples could choose

how many children to have and when to have them.

8. Family Life.

Within marriage, people were freed from the constant demands of childbearing.

Women were freed from the physical rigors of repeated pregnancy, they were freed from the unending labor of childrearing.

Men were freed from the economic burden of having to support large families.

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TERM PAPERS: The relationship of the fertility transition to many cultural phenomena have not been explored. For instance;

Is it related to the rise of romantic conception of marriage.

Is it related to the end of infant abandonment? Timing is about right.

These, and similar questions, are great topics for term papers.

What I have been describing, and what you have been reading about should be extremely shocking to you.

I described to you how every society has mechanisms to control its population.

You should think a little about what each culture's methods are:

Some mechanisms are beyond the control of individuals or societies.

Disease: Plague, smallpox, etc

Famines caused by drought, flood, crop diseases, etc.

Some mechanisms are under societal control;

Europe: Late marriage

Tenant farmers

Local parish churches under control of landlord

Household servants

Apprentices

Other mechanisms are within the control (or agency) of humans.

What did Europeans as individuals do?

They engaged in a huge amount of infant abandonment.

Sent children to wet nurse where they knew they would probably die

Other more direct forms of infanticide

They sent daughters to nunneries – where conditions were often horrible.

Galileo's daughter starved to death in a nunnery.

Possibly monasteries were the same

In short, there was a lot of doing away with children AFTER THEY WERE BORN

It must have jumped out at you that there is an easier solution.

DON'T HAVE THE CHILDREN IN THE FIRST PLACE

Now, it may be unreasonable to expect that people would abstain from sex,
The instinctual desire to engage in sex is just too strong
But, in the period we are talking about
some means of having sex AND avoiding pregnancy were available.
Coitus interruptus is described in the Bible
Anal sex, as in Sodomy is described in the Bible
Alternative forms of sex, oral, manual were certainly known
The French had already reduced their fertility
They were doing something
Condoms were becoming available.

SLIDES

They were made from animal intestinal membranes
The technology was similar to making sausage casings.
And were called skins.
Although these methods were known – and used when visiting prostitutes
They were believed to be immoral, to be sacrilegious, and to be downright disgusting.
So, Europeans were CHOOSING various forms of infanticide
over engaging in what were considered immoral sexual acts.
In short, SEXUAL MORALITY WAS CONSIDERED MORE IMPORTANT
THAN LIFE-DEATH MORALITY.

It was unthinkable to use a condom with your wife but it was quite normal to abandon the child that resulted.

We have echoes of that same conflict now

Should religious, political and school organizations condone the distribution and use of condoms to prevent the spread of AIDS? Sexual morality vs. life-death morality

We know that about half of women who have unwanted pregnancies have an abortion.

So, should religious, political and public health organizations support contraception as a way of preventing abortion? Sexual morality vs. life-death morality

We as a society are currently struggling with these issues,
so we can have some empathy for the 19th Century

We have been looking at what caused fertility to fall in Europe in the 19th century.

People have a lot of pet theories:

The Drop in infant mortality

Rise in standard of living

Education

Industrialization

Urbanization

Etc.

In particular, we have been discussing the Princeton project.

Last time we saw that the Princeton project could not find strong evidence for any of these.

However, the authors were very struck by the observation that, once the fertility decline had begun in any particular country, it progressed very rapidly.

Here is a graph of the time course of fertility decline for the European countries.

Coale Fig 2.3 pg 39 lg vs, Date, >Fig 8

This graph is somewhat of a mess.

At the beginning of the graphs time period, each country's fertility is different, but all are at a high level (except for France which by 1860 was well along in its transition).

The fertility of each country stays roughly constant (a plateau) for a few decades

It had probably fluctuated around this level for a long time prior to the era of this graph.

Then a decline sets in,

- and then, soon, a rapid drop occurs.

In order to see this rapid drop better, the Princeton authors gathered all these curves together at the time point where fertility has dropped by 10% from that country's plateau,

Coale 40 Fig 2.4 Gather curves at 90%. ---->Fig 9

The time scale is now not actual date, but years after declining to 90% of the plateau

The fertility scale is not actual fertility, but % of what fertility was at the plateau.

Now the rapidity of the drop and the similarity of the transitions is obvious.

Well, this is fabulous - within 20 or 30 years a country's fertility drops to half what it had been for perhaps centuries.

[The two exceptions are France, transitioning very early, and Ireland, transitioning very late. Both are Catholic countries, but the French Revolution rejected Church influence on the state, while in Ireland, religion was an important element of the nationalist conflict with Britain. Similar to Poland's more recent use of Catholicism in its conflict with the Soviet Union.]

Once fertility had dropped by 10% - the drop was irreversible –

Fertility falls all the way to $\frac{1}{2}$ or $\frac{1}{3}$ of the plateau.

That's one of the important contentions of the Princeton project

That 10% is some kind of threshold.

Once fertility in a country drops by this much, a rapid and irreversible fall ensues.

Not only is this process very rapid in any individual country, this phenomenon spreads rapidly all over Europe
Decade Graph - Coale p 38---->Fig 10

This graph shows the decade in which the provinces of Europe reached the 10% decline point.

The early ones on the left are from France,

Then the rest of Europe follows.

59% of provinces entered the fertility transition in the 30 years between 1890 and 1920

add 10 years onto both ends of that range and 71% of the provinces have entered

(Cleland and Wilson p17)

This happened all at once across Europe - something spread like wild-fire.

At the 10% point, these countries had vastly different levels of economy, education, industrialization, urbanization, etc.

But they all transitioned rapidly thereafter.

What spreads so fast? The variables we've been talking about – mortality, economic development, etc., don't change at anywhere near this rate.

Ideas, fashions and fads can spread very fast to people of very different circumstances.

This thought kept appearing:

One of the first indications of this was in a study of Spain:

William Leasure of Princeton mapped the level of marital fertility in 1910 in the 49 provinces of Spain. He couldn't find any correlation with the level of literacy, the fraction of workers in agriculture or in industry. In short he was coming up empty handed.

The only thing he could see was that the provinces with similar marital fertility were adjacent - not spread around the map. He couldn't make sense of it.

Leisure showed the map to a professor of Spanish language, literature and culture. He didn't tell the Prof. what it was a map of.

The Prof. immediately recognized it as a map of the linguistic regions of Spain.

People who could talk to each other had similar fertility levels!

These regions once constituted different Kingdoms with different traditions.

He found that over 90% of the variation in marital fertility occurred between these regions - and less than 10% within the regions.

Another important example of linguistic boundaries is Belgium.

Belgium is bilingual - the Southern half speaks French (Walloons)

The Northern half speaks Flemish (really a version of Dutch)

One can draw a line dividing the two populations.

Map 1.2 ---->11

In the second half of the 19th century, fertility limitation, which had started in France 60 to 100 years earlier, started to cross into French Speaking Belgium.

It spread rapidly through the Walloon provinces right up to the language boundary ---- and then it stopped.

---->1890: Map 4.2 p 108 13

The only arrondissement to overlap in fertility w/ the Flemish speaking territories was Bastogne – (notice SouthEast on the map) which is in the heart of the Ardennes Forest, rather isolated from the rest of Belgium.

Three of the big urban areas (Antwerp, Brussels, Ghent) are in the Northern area - and the 4th (Liege) - doesn't have particularly low fertility for the southern area.

It took 60 years for the fertility change to cover the 100 miles between Hainaut and Maasiek p 224: the most advanced French speaking arrondissement to the slowest Flemish.

Were the economic differences between the two parts of Belgium?

Lesthaeghe paired 70 Walloon villages with the nearest Flemish village across the language border. These pairs crossed the country from East to West over almost the entire length of the border. The distance between the village pairs averaged 4 miles and never exceeded 6 miles.

There was no significant difference between the Flemish and Walloon villages in their social and economic indicators. p111

Yet their fertility became drastically different during the transition. ->Fig. 4.2 p113 #6

At the peak of the transition the Flemish provinces were having 20 -40-60 -80 more children per 1,000 women of childbearing age. That's an enormous difference.

Brussels is a mixed city: It has both French and Flemish speakers.

Different individuals in Brussels had different numbers of children.

There must have been a myriad of reasons for these differences.

But in fact 80% of the variation in different districts could be explained by one factor:

Whether the people of the district spoke French or Flemish.

All the other reasons together only accounted for 20% of the variance.

So, even when these language groups were living as neighbors in the same streets - they retained their cultural differences with respect to fertility.

The idea is that the cultural norm of low fertility is diffusing within culture zones and it is very hard for it to jump linguistic boundaries.

How does one get a measure of cultural change:

One component of culture is secularization:

How much one moves away from the precepts and control of organized religion and toward involvement in non-religious issues.

Both halves of Belgium are essentially Catholic. In Belgium at this time

(and in Europe generally) there were two types of political parties:

Catholic parties and Liberal or Socialist parties.

One of the best measures of secularization is the vote for the non-Catholic parties.

So Lesthaeghe compared fertility of a community with its vote for secular political parties. This vote turned out to be an extremely good predictor of fertility rate.

Fig 7.1 p 229 #14

The correlation coefficient was 0.8 to 0.9 for both French and Flemish halves and for both actual rate of fertility and of how rapidly fertility was falling.

SUMMARY:

The Princeton project was a 20 year effort, with an enormous amount of work, painstakingly collecting the demographic and economic statistics from every Province of Europe. They expected to find some obvious reasons for the fertility decline - and focused on the measurable conditions of everyday life.

Infant mortality, employment in the industrial sector, urbanization, etc.

They drew a blank on the economic factors.

Meanwhile they started to find evidence for cultural factors.