

MCDB 150 Global Problems of Population Growth Lecture 6 Notes

Last time we started talking about tropical places where high productivity agriculture is generally not possible, except, perhaps, with the most modern technology. These geographies can't support dense populations.

Cultures in those regions grew up when land was not scarce, but people were.

While individual women still had to control their fertility, cultural limits on community population generally did not arise.

On the contrary, communities tried to increase their population, among other reasons, to protect them against hostile neighbors.

An emphasis on reproduction became the central core of the traditional culture.

Traditional Africa provides some of the best examples of how these cultures operate.

Nowadays, Africa is changing rapidly, like everywhere else in the world.

However, when it comes to fertility (remember this is the number of children people have, not their ability to have children), Africa remains quite distinct in the world. You will hear a lot of generalizations about the way population changes in the world. They almost always need to be qualified by, "except for Sub-Saharan Africa".

Last time, I showed you examples of this by comparing Morocco, in the North African Mediterranean zone with Niger just to the south of the Sahara.

The latest statistics show that Sub-Saharan Africa, not including the temperate regions of the far South has about double the birthrate of Northern Africa.

So, while many aspects of Africa are changing, the attitude towards fertility has so far been quite resistant to change.

THE CULTURE OF REPRODUCTION

In traditional culture, the central idea is that of the lineage
a family and its line of male ancestors.

The prime duty of humans is to keep the lineage going.

To provide descendants for the ancestors.

Not only is one's own future as a shade dependent on continuation,
but the whole history of ancestors stretching back into the past –
and also stretching forward into the future.

So the prime perceived goal, the central task and meaning of existence, is to reproduce and keep the lineage going.

Traditional religion is based on the lineage.

Unlike our Western Gods, where it's never obvious if they are answering prayers, the ancestors are very much around and accessible.

Every village has soothsayers who can talk to them.

They are not distant, eerie, supernatural characters,

but rather like wise grandfathers who stay near us.

The lineage head, who is the often oldest male member of the lineage, can communicate directly with the ancestors or he can commission the soothsayer to do it. SFP 29:25

The ancestors are available to discuss the most ordinary and mundane issues of life - or more weighty affairs. It takes only 15 minutes or 1/2 an hour for the ancestors to be contacted and provide their answers.

For instance in many places in Africa, family planning is becoming available.

The people are thinking it over, discussing it, trying to figure out if it's good for them or not.

One set of demographers went to Nankana villages in Ghana to see if the traditional religion of ancestor worship would be hostile to the introduction of family planning.

So he asked the village headman to inquire of the spirits.

How many children should a family have?

Here's what the spirit said:

"Listen to what I have to say! Children are the lineage. If there are no children, the lineage will end. We ancestors want many children. The women should give birth to many children."

Being Western skeptics, the demographers, of course, thought that the headman just put into the mouths of the spirit what he believed.

But, No, when they asked the headman for his own opinion a very different answer came out.

'Women need to have just enough children.

Currently, it is very difficult to fend for the children.

There is no food to feed them.

If they are in school,

it is difficult to pay their school fees and to buy them school uniforms.

Taking them to the hospital when they are sick demands a lot of money.

That is why we need to give birth to few children.'

All right the demographers said. That's the scene. The ancestors take the traditional point of view. The elders may take a more modern view.

But the next lineage head interviewed contradicted that hypothesis.

Speaking for himself, the headman said: 'I would like them to have many children because it is a large following that makes one a chief.' Power in numbers.

But the ancestor said:

Everybody should have a small number of children, but they should not refuse to have children altogether.

Since the ancestors are close at hand, they, of course, are aware of current trends.

One ancestor said: 'It is now difficult to get an education as well as to do farming. If a problem crops up, and the child is sick, then money is everything.

You have to buy medicine, and even if you go to the herbalist,

you need to take a fowl along to pay for the treatment.

It is no longer the same as in the olden days, when everyone did farming.'

In summarizing the research, there was no pattern of responses.

Sometimes the ancestor and the headman agreed. Sometimes they disagreed.

Sometimes the ancestor took the conservative line - sometimes the opposite.

It was indeed like a discussion between a living elder and his son.

In short there is an open and frank discussion between the community and the ancestors and all points of view get presented.

This contact with the ancestors seems perfectly natural to the people. For instance the Kassena-Nankana people of northern Ghana, where this research was done, have no word for the supernatural. They don't have scientific explanations for things, so they don't know what a 'natural' explanation is vs. a 'supernatural' explanation. The boundary between natural and supernatural does not exist - one flows into the other.

The idea of an unwavering set of rules, cast in stone thousands of years ago, like our Bible or the Koran, would seem ludicrous to the Nankana.

Compare this intimate, small scale, flexible, individualistic style of religion to the mass monotheistic religions of Northern temperate zones which require uniformity and submission. Muslim women at pray

(The word Islam means submission)

Instruction manual from Morocco of the exact position for the toes when bowing during prayer

Conformity was enforced in the Christian west by burning heretics at the stake for believing something that differed ever so slightly from orthodoxy?

BARENNESS

So the main virtue in African societies is fertility. The main sin is to be barren. Inability to have children is not considered a passive thing that happens to you.

It is punishment for something bad you have done.

There is little distinction between infertility, miscarriages and infant deaths.

They are all signs of moral evil. Barren women can be divorced and shunned and made to live on the fringe of the village.

Barrenness is what women really fear.

In a woman, Sexual propriety is not what is considered important – fertility is.

Bareness is considered sinful. Voluntary barrenness is inconceivable.
Barren women are sometimes consigned to house outside of or on the fringe of the village.

How the women get pregnant is less of an issue.

Monogamy not strictly enforced

KENYAN WOMEN PROTEST AT DRINKING DENS, DEMAND SEX

March 15, 2000

The People newspaper NAIROBI, Kenya (Reuters)

'A group of women stormed a Kenyan police station to demand officers either make love to them or close illegal drinking dens they said made their husbands impotent. The women said the population of the district was falling as a result of the poor sexual performance of the men.

The women, from Kandara, north of Nairobi, brought business in the town to a halt with their day-long protest against excessive drinking by their menfolk.
"Our men have turned to vegetables. They leave home early and come back intoxicated. There is nobody to meet the sexual needs of wives,"

The women, drawn from 24 Catholic church groups, demanded that the officer in charge of the police station either order his men to make love to them or find them new husbands because they were sexually frustrated.'

The paper did not say how police reacted to their demands.

Males of course want to keep the fertility of their women for themselves.

But they also want the children, no matter how sired.

The rest of society also values the kids and so is easy on promiscuity.

Last week I was reading the history of Lesotho (a small country now totally surrounded by South Africa). This is from the 1700s.

When the 3d son of the king died, he left a widow who was still of childbearing age, but had no surviving children.

By custom, the widow should have gone to live with her husband's younger brother, so that she could continue the seed of her dead husband.

P22 in Leonard Thompson, *Survival in Two Worlds* Oxford, 1975.

But the widow didn't. She got pregnant by another man. Nevertheless, the child was accepted as a descendant of the king. One of his sons became the most important King of Lesotho ever.

This king was reputed to have had 140 to 200 wives. "Most of his latter wives were regarded as distinctly inferior. Mshoeshoe would summon whomever he wished to spend the night with him and he undoubtedly sired a vast progeny He also offered these lesser wives to visitors for the night by way of hospitality, but according to custom any children they produced were regarded as his own."

Thompson p8

MY EXPERIENCE IN BORNEO.

Nowadays, many African scholars maintain that African societies do not distinguish between “legitimate” and “illegitimate” births.

15-25% of women in various west and east African countries (e.g., Kenya) report premarital births.

This is a considered a severe underestimate

Ron Lesthaeghe; Reproduction and Social Organization in SSA. UCal Press 1989 P329:

Of course the official husband will try to prevent his wife from being unfaithful. Particularly, he is concerned about his status in the male hierarchy and doesn't want to get the reputation of being impotent.

Since the men are often a good bit older than the women, impotence is a real concern.

If the wife gets pregnant by another man, and she is discrete so that the child could plausibly be the husband's, it is proof that he is still potent.

He will usually accept the child into his lineage and the community will accept that child as a resource for the community.

Focus Group Women (FGW) interview w/ Luo women in Kenya:

Moderator: So, sometimes women were unfaithful?

FGW: Yes, being unfaithful started a long time ago.

P221: FGW: Long ago, the elder women would tell us that the only time you could sleep with another man was if your husband was not able to make you pregnant.

Mod: And once you got the baby of the other man, was it for your husband or the other man?

[Note: 'was it FOR your husband or the other man.' The extra-marital pregnancy is not a mishap. Kids are wanted. - who is the gift FOR.

FGW: It is for your husband.

FGW: The other man is like a bull.

For example, doesn't your cow wander and mate with another bull?

When the cow gives birth, is its calf yours or the owner of the bull.

FGWs Chorus: Yours, of course!

These women are incredulous that the interviewer (Susan Watkins from U. Penn) would ask such a dumb question. They give her a group lesson as they would to a child.

Presumption that Susan Watkins from Univ. Penn, Philadelphia has a cow back home.

This interview illustrates how matter of fact the women are about men's limited biological role.

There is no romanticization of the relationship.

None of the western fetish about biological paternity. The old testament has several examples [see, e.g., Jacon and Onan stories] of a child being for the formal husband -no matter who is the inseminator.

Pre-marital promiscuity is not really frowned upon:

School teachers, having stable government jobs and being worldly (usually having been to college in some city) carry much prestige.

Male teachers are considered great marital catches.

Parents will offer all the young women of a village to a new schoolteacher to entice him.

Of course he may have picked up HIV during his residence in the city. Schoolteachers are one of the routes by which AIDS spreads,

d. Children are held more or less in common

Pre-marital childbearing is not especially problematic. The illegitimate children are absorbed into compound and considered to add to the strength of compound.

30 to 50% of children live in a compound not their own.

b. Some quasi-prostitution.

Sex is assented to in return for resources not provided by husband.

This provides options for females to get resources, sex and impregnation.

It is a valuable source of female autonomy and power.

Susan Watkins The Continuing Demographic Transition G.W. Jones, ed SocSci HB887
C65X 1997

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Society is arranged so that high fertility is rewarded materially as well as morally.

Consider, for instance, the land tenure system

Traditionally, land is not privately owned but is under the control of the lineage or the village or tribe.

Defended against outsiders may be a better description than owned.

Land can be, and is, redistributed every generation.

This makes good sense, since some families will be wiped out by death and others will flourish. The communal ownership of the land ensures that the land gets redistributed and that families get enough land to survive on.

Each male gets an equal share. Those families with more children get more land.

So families w/ more children do better.

They get more resources and become economically more secure.

Also the larger the number of people in the family,

the more political power that family gains.

So every way you look at it, the society is organized to reward fertility.

This is now breaking up. Dow et al., PDR 6/92 p 356-7.

Economic prospects in rural Kenya are defined largely by the availability of land. Surveys of male attitudes toward land were taken in 1981 and 1992.

At both times, the great majority of fathers expected to give land to each of their sons and to their daughters who remained unmarried.

The average landholding of those fathers who had land was 5.1 acres.

A minimum of 4 acres of high quality land, under intense cultivation is required to support a family (of the size that the fathers had).

But the fathers wanted 4.5 sons.

This would have left only 1.1 acres for each son to inherit.

By 1992, the average rural landholding had shrunk from 5.1 acres to 1.5 acres.

Less than can support a family.

But, Culture changes slowly.

The desired number of sons has shrunk only from 4.5 to 3:

It is still an impossible situation

since this leaves each male child with only 1/2 an acre.

8. Women have economic responsibility for the children's upbringing.

Men often contribute little to the support of children.

Where slash and burn agriculture is used:

Men may do the clearing – heavy labor for maybe 2 weeks a year.

Women do the rest.

The man will usually control (or 'own') the land for his family.

He will give each wife a plot of land. A woman will not only have her own plot, which she farms to feed herself and her children - but she will often have responsibilities to share in the farming of the husband's plot.

Mostly, men they only do productive activities that women are physically incapable of doing. Men like their life and only do more work when forced to do so by demographic pressure.

Men resist this demographic pressure to change.

In 1784, NY state, one tribe of the Iroquois Confederation, the Oneidas, only had 600 members,

but they inhabited 6 million acres. An extreme case of low population density. Altogether there were 6,000 Iroquois competing for land with 240,000 New Yorkers of European extraction.

The Iroquois were losing the battle for control of land.

The Iroquois did both hunting and gathering as well as farming .
The women did the farming.

Well intentioned colonists suggested that the Indian men undertake farming as a way to increase their food productivity, their numbers and their hold on the land.

But the Iroquois said: "FARMING IS WOMEN'S WORK. MAN WAS NOT MADE TO GO TO WORK IN THE EARTH LIKE A HEDGEHOG, BUT TO GO TO WAR AND HUNTING.

"Alan Taylor 'The Divided Ground' 2006 E99.I7 T299X reviewed in NYT Book review 4/23/06 p24

Lesth, p298-302 Theories of Polygyny, esp Boserup

The value of female agric labor leads to high levels of polygyny, fast remarriage & bridewealth)

In 1989, Ron Lesthaeghe; Reproduction and Social Organization in SSA. UCal Press 1989 P212:

1-7% of N Africa and Middle Eastern men were polygamous;

<10% of 19th C Mormon men were polygynous:

but 12 to 38% of SS African men are in polygynous marriages.

(50% is the max)

In Senegal (SSA) 95% of women who had been widowed were remarried w/in 5 yrs – 75% of these polygynously. Almost never happens in Bangladesh (temperate zone).

Women will often choose a polygamous marriage over a monogamous one.

- 1) Men who have resources often already have some wives.
- 2) The other wives act as a support group and safety net.
- 3) When a woman gets sick, or has other trouble, the other wives often help her.
- 3) It relieves her of the burden of sexuality and to a small degree of childbearing if the husband has lots of other opportunities.

In Kenya, a white French woman anthropologist married an illiterate Masai warrior

She said that despite their cultural differences, she and her Masai husband, as well as his other wives, got along famously. She wrote a memoire: Originally titled, "The 6 Wives of My Husband," it was amended to "The 9 Wives of My Husband," when he married three more women. NYT 5/??/06 pA23

Now, contrast this to the temperate regions where agriculture is much more productive.

A single farmer can produce enough to support more children than are needed to replace him and his wife. The extra people become a huge class of landless laborers or migrate to the developing cities where they become the urban poor. A very few can take advantage of this situation and rise to become the noble or priestly or commercial classes.

People become cheap and land scarce.

In the earliest written documents from the temperate civilizations, this perceived over-population becomes a concern.

Here is a Greek Epic from ~700 BC

Cohen 6

“There was a time when the countless tribes of men ...

oppressed the surface of the deep-bosomed earth [= deep soil].

And Zeus saw it, and had pity [on the earth],

and in his wise heart resolved to relieve the all-nurturing earth of men,

by causing the great struggle of the Trojan War,

That the load of death might empty the world.

200 AD Rome: Tertullian:

“The earth is currently more cultivated and developed than in early times. Now all places are accessible, all are full of activity ... everywhere there is a dwelling, everywhere a multitude, everywhere a government, everywhere there is life.”

“We are burdensome to the world, the resources are scarcely adequate to us;

and complaints are everywhere while already nature does not sustain us.

Truly, PESTILENCE and HUNGER and WAR and FLOOD must be considered as a remedy for nations,

like a pruning back of the human race becoming excessive in numbers.”

Of course the Europeans weren't the only ones to worry about population.

In China, about 500 BC Han Fei-Tzu complained:

“People at present think that 5 sons are not too many

and each son has five sons also,

and before the death of the grandfather there are already 25 descendants. Therefore people are more and wealth is less; they work hard and receive little.”

As large civilizations build up, the magnitude of the catastrophic forms of death that limits population also increases.

Disease:

Plague in Athens during Peloponnesian War. Thucydides, who got sick, but was one of the few who recovered. 430BC. Thucydides Book II: Ch47-54. pp341-357 in Loeb Classical Library.

“Words indeed fail when one tries to give a general picture of this disease; and as for the sufferings of individuals, they seemed almost beyond the capacity of human nature to endure. People were dying like sheep; they died like flies. The bodies of the dying were heaped one on top of the other, and half dead creatures could be seen staggering about in the streets or flocking around the fountains in their desire for water. The temples in which they took up their quarters were full of the dead bodies of people who had died inside them.”

He goes on to describe the despair of the people, the collapse of civil society and the outbreak of all kinds of lawlessness.

IN EUROPE, Herlihy: p33. The invasions of the Germanic Tribes, Huns, Saracens, Vikings reduced European populations to very low levels.

The invasions stopped about the year 1,000. the population then grew rapidly

So that it was already very high in late 1200s. Herlihy 43:

Life expectancies in the good years of the 1200s were between 35 and 40 years old.

After about 1250 the population was stable at that maximum for maybe 100 years.

A stable population is a sign that it is up against some limit.

And cannot grow beyond it.

The Catholic Church was, by far, the biggest landowner,

owning 30-50% of all the productive lands in Europe.

The peasants on the land were serfs and lived in extreme poverty.

They were not allowed to leave the estate.

The Church derived huge profits from the labor of the serfs.

In 1535, for instance, the revenue from the Church lands was 10X larger than the revenue from Crown lands.

Most of the rest of the land was controlled by continuing families of Hereditary Lords. The serfs on these lands had somewhat more rights than those on Church lands – but they were still deep in poverty.

Serfs farmed small plots in the way they had done for centuries.

There was no place a farmer could escape to to get his own land and try things a different way.

The Guilds had the Professions sewn up and did not want newcomers and new ways.

Herlihy p81: Historians often describe Europe, in about 1300, as a land caught in a Malthusian deadlock. Europe was in a demographic and economic situation which paralyzed its capacity to improve the ways it produced its goods.

That system, marked by saturated use of resources and stagnant outputs,

might have persisted indefinitely.

PLAGUE Then the plague hit:

See Readings in Barbara Tuchman: The 14th Century p24; Ch 5 thru pg 116. See also last Para pg 123.

The plague first appeared in Sicily in 1347 after an absence of 6 or 7 centuries.

It spread throughout Europe killing millions of people.

Wave after wave spread through Europe

1360, 1371, 1381, 1388, 1398, etc

In places 1/6, 1/3 or 1/2 of everybody died. Herlihy

No-one knows what explains the onset of the plague in Europe:

It was apparently continuously present in Asia

One theory has it that before 1340 - it took so long to get from Asia to Europe, that anyone infected with plague was dead long before reaching Europe.

With advances in the speed of transportation, sailors could still be alive when they reached European ports.

In Europe as a whole, the first hundred years of the plague wiped out about 30-40% of the population.

The plague continued for 100s of years. More than 300 years after the plague started, it killed more than 70,000 people in London alone (1664 and 1665).

The population of Europe probably didn't return to its 1340 level until the early 1700s.

It persisted because people had no idea of what caused the plague or how to protect against it. There was no knowledge of bacteria or viruses; there was no understanding of infectious contagion.

Some thought that just having visual contact with an infected person would transmit the disease.

Others perceived the cause to be God's punishment.

Trying to escape God's punishment by penitence, long lines of people wandered from village to village whipping the person in front of them.

Of course these mutilated pilgrims, with their open wounds, served to spread the disease around Europe. Depicted in Ingmar Bergman's 7th Seal movie.

People tried everything to prevent getting sick:

When syphilis was introduced to Europe from the New World, a number of doctors recommended getting infected with Syphilis as an effective prophylaxis.

This seemed to have been taken up mostly by rich people.

Kate Simon: A Renaissance Tapestry (Jan has). Web site w/ a generally interesting description of plague in Italy. Good description of increase in sensuality, piety, flagellation.
www.shu.ac.uk/phrases/bulletin_board

"After the Black Death, Europe entered a new historical epoch." David Levine, At the Dawn of Modernity, 2001. P6

The Plague marked a huge change in the course of European Civilization.

Many historians think that the black death was instrumental in breaking the medieval pattern in Europe and ushering in the Renaissance.

The first, and most virulent waves of plague lasted until 1400.

The next generation was the core of the Renaissance:

In 1420 Brunelleschi's designed the great dome over the Cathedral in Florence

about the same time as Ghiberti was creating his great bronze friezes for the door of Florence's Baptistry

At about the same time Donatello made the first famous sculpture of David.

Botticelli, Leonardo DaVinci, Michaelangelo worked in the 1400s.

Machiavelli and the Medicis were of this century.

At the end of the Century, Columbus discovers America.

The plague broke the deadlock, and allowed Europeans to rebuild their demographic and economic systems in ways more admmissive of further development."

Suddenly, there was more land than peasants - so peasants could run away from Church land or leave their lords and move to unoccupied lands or demand better conditions from their next Lord.

There was a shortage of labor and that led to labor saving inventions.

Herlihy p45: New people were recruited into previously closed guilds.

Tremendous freeing of the creative energies of the population.

One of the geat French historians, Fernand Braudel, (The Perspective of the World, 1984) Quoted in David Levine, At the Dawn of Modernity, 2001 p5: goes so far as to say:

"The Black Death was a headlong tumble into darkness.

Yet the disaster engendered a recovery:

the uninterrupted movement that led eventually to the industrial revolution and the economy of the modern state."

MALTHUSIAN TIMES

What was life like in that long period from the middle of the 14th to the end of the 18th century. That is between the Black Death and the industrial revolution

Europe was very poor. The population was overwhelmingly made up of peasant farmers trying to stay alive.

"A typical house in Europe in the late middle ages is made of wood or various scraps of vegetable matter mixed with mud or clay. The roof is of straw or reeds. The floor is of dirt and there is a pit in the middle for fire. If it is winter the family huddles together around the fire in semi-darkness, with the animals nearby for warmth, and the smoke filling the room. Kertzer & Barbagli: Family Life in Early Modern Times 1500-1789 p3. Yale U Press 2001. SML HQ611 H578 2001 Vol 1 (LC)

P141 in Barbara Tuchman "A Distant Mirror, The Calamitous 14th century. 1978 hardback Woodbridge Town Lib

Europe was very barbarous. In the 14th Century, violence was official as well as individual. Torture was authorized by the Church and regularly used to uncover heresy by the Inquisition. The tortures and punishments of civil justice customarily cut off hands and ears, racked, burned, flayed, and pulled apart people's bodies.

In everyday life, passersby saw some criminal flogged with a knotted rope or chained upright in an iron collar. They passed corpses hanging on the gibbet and decapitated heads and quartered bodies impales on stakes on the city walls. In every church they saw saints undergoing varieties of atrocious martyrdom – by arrows, spears, fire, cut off breasts – usually dripping with blood. The crucifixion with its nails, spears, thorns, whips, and more dripping blood was inescapable. P142 The citizens of Mons bought a condemned criminal from a neighboring town so that they should have the pleasure of seeing him quartered.”

300 years later there was little progress:

The French Historian George Huppert has provided a very sad description of an ordinary village in France in the 17th C. Sennely had 500-700 people.

1/3 of babies born died in their 1st year. Another third died before adulthood. Thus only ~1/3 survived to their reproductive ages - same as the graph I showed you for Cis-Alpine Gaul 1,500 years earlier.

The little children who managed to survive were good looking.

But if they reached the age of 10 or 12 -

they had already assumed the generally unpleasant appearance of adults:

The people tended to be stunted, bent over, and of a yellowish complexion.

They did not look healthy, their bellies were distended.

They moved slowly, they had poor teeth, their growth was retarded.

Of the 350 births, only 145 would reach adulthood and marry in turn

There was no particular difference in the death rates of males and females: half of the 145 survivors were females.

But, of the 75 female survivors, marriage was almost universal - about 70 of the 75 would get married.

Nutrition, however, was so poor that girls reached the age of 18 before first menstruation. Women married late, at about the age of 23.

Childbearing, during sexual maturity and marriage was at a very high rate -

but maternal death cut severely short the period of childbearing.

Of the 1/3 that reached marriageable age, most couples had only one or 2 children before their marriage was broken up by the death of one parent.

The end result was that by the time 100 female children of a preceding generation had died or finished their reproductive years, they had produced only ~70 daughters - the population was not replacing itself.

The villagers probably made up the deficit by marrying the daughters of transient artisans and laborers. When death struck a household, no time was wasted; widows and widowers remarried right away. (Remember the Enga of New Guinea?) Most first marriages occurred in the wake of a parent's death, so that the farm and the family could continue to function with a normal complement of hard working men and women.

This situation was characteristic of France as a whole.

For 4 centuries, approx 1300 to 1700, there was a ceiling on the French population of 20 Million.

The population was caught in a Malthusian Trap.