First, a brief diversion . . .

Into . . . how to do better on the next exam, and in the class in general!

http://www.bio.fsu.edu/~stevet/SGCEP/Sermon.pdf
Population and Development

Many low income developing nations are still experiencing very rapid population growth. How can this be fixed?

Extreme poverty is still a huge problem in most of the world. What can be done about that?

The solution needs to lie in lowering fertility rates through:
- Improved education and health care;
- Accessible and affordable family planning;
- Equitable employment opportunities; and . . .
- Improved resource management.

But how?
This chapter is just too painful . . .

To do a full lecture on. And I can’t find an appropriate movie to show, as I’ve done a couple of times so far this semester.

Therefore, I’ll go through some of the key concepts from the chapter, . . .

And then we’ll devote the rest of the time to an In-Class assignment — this time on . . .

The question I just posed: How can the problems associated with low-income, developing nations be addressed? This time I will award partial credit on a four point scale, depending on your writing and logic!
Technological progress, income growth, and poverty reduction

Average annual per capita income and technology growth, 1990–2005

Some of those disparities of growth and the association with technology. Notice the fastest growing populations are in the poorest countries with the least technology.
The same trend is obvious here.
Prevalence of contraception and fertility rates

And its correlation to birth control availability is very obvious.
The viscous poverty cycle

Dwindling resources divided among more people

Poverty

Overusing resources for survival

Context
Food insecurity
Employment lack
High disease burden

High fertility

Environmental degradation

Lack of contraceptives

More "little hands" needed to help the family in a depleted environment. Illiteracy
Improving education is key.

- Basic literacy: learning to read, write, and do simple math.
- 50-70% of women in poor countries are illiterate.
  - Educating women is considered unimportant.
  - High population growth overwhelms school and transportation systems.
- Basic literacy allows people to gain information.
- Investing in educating children returns great dividends. For example . . .
  - Korea’s 94% literacy rate helped economic growth and reduced population growth rates.
- Secondary schooling further reduces poverty and growth rates.
Improving health care really matters and is tied to education!

- Health care needed by the poor is not high-tech; not at all. However, . . .
- It is the basics of good nutrition and hygiene.
- For example, boiling water reduces disease.
- And, oral hydration therapy: treating diarrhea by giving suitable liquids.
- Developing countries have very high infant mortality rates:
  - 54/1,000, compared to 6/1,000 in developed nations.
Reproductive health is at the core of the issue.

- Reproductive health focuses on women and infants. It includes . . .
  - Prenatal care;
  - Safe childbirth and postnatal care;
  - Contraceptive information and services;
  - Prevention and treatment of sexually transmitted diseases (STDs);
  - Abortion services (where legal) and after care;
  - Prevention and treatment of infertility; and . . .
  - Elimination of violence against women.
The world’s pregnancies . . .

The outcomes of a year’s pregnancies

- Live births: 140 million (64%)
- Induced abortions: 46 million (21%)
- Miscarriages and stillbirths: 33 million (15%)

Of which more than one third are unsafe!
Life expectancy reflects health.

- One universal indicator of health is human life expectancy.
  - In 1955, it was 48 years.
  - Now it is 68 years and is expected to be 73 years by 2025.
- Increased life expectancy is the result of social, medical, and economic advances.
- The epidemiologic transition: decreasing death rates seen in countries as they modernize.
  - Shifting from high mortality (diseases) to low mortality rates (diseases of aging, cancer, etc.)
Two different worlds . . .

- The epidemiologic transition varies between nations.
  - Life expectancy in developed nations = 77 years.
  - In the least developed nations = 55 years.

- Primary health services must center on needs and expectations:
  - They must provide health security; and . . .
  - There must be universal access.

- Disease prevention and health promotion are critical.
  - As is pre- and postnatal care of mothers and children.
  - When women are better off, whole populations improve.
Mortality differs dramatically!

Total number of mortalities = 8.5 million
- Developed countries
  Population = 991 million
  - Cancers: 27%
  - Injuries: 17%
  - Cardiovascular: 43%

Total number of mortalities = 25.6 million
- Least developed countries
  Population = 2.6 billion
  - Communicable diseases: 47%
  - Other & unknown causes: 9%
  - Injuries: 10%
  - Cardiovascular: 7%
And then there’s AIDS. It is . . .

- One of the greatest challenges to health care in developing nations.
- Acquired immune deficiency syndrome (AIDS) is a sexually transmitted disease caused by the human immunodeficiency virus (HIV).
  - The epidemic is most severe in the poorest developing countries.
  - The AIDS epidemic has significantly affected mortality, especially in Sub-Saharan Africa.
- In sub-Saharan Africa the virus is often spread by heterosexual contact. And . . .
  - Infected females spread it to their children
- Swaziland has 26% incidence of AIDS!
### Table 39.3  The AIDS Situation in 2006

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of Adults and Children Living with HIV in 2006 (Estimated)</th>
<th>Number of Adult and Child Deaths due to AIDS in 2006 (Estimated)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>24,700,000</td>
<td>2,100,000</td>
</tr>
<tr>
<td>South and Southeast Asia</td>
<td>7,800,000</td>
<td>590,000</td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td>1,700,000</td>
<td>84,000</td>
</tr>
<tr>
<td>Latin America</td>
<td>1,700,000</td>
<td>65,000</td>
</tr>
<tr>
<td>North America</td>
<td>1,400,000</td>
<td>18,000</td>
</tr>
<tr>
<td>East Asia</td>
<td>750,000</td>
<td>43,000</td>
</tr>
<tr>
<td>Western and Central Europe</td>
<td>740,000</td>
<td>12,000</td>
</tr>
<tr>
<td>North Africa and Middle East</td>
<td>460,000</td>
<td>36,000</td>
</tr>
<tr>
<td>Caribbean</td>
<td>250,000</td>
<td>19,000</td>
</tr>
<tr>
<td>Australia and New Zealand</td>
<td>81,000</td>
<td>4,000</td>
</tr>
</tbody>
</table>

Source: UN AIDS Epidemic Update, December 2006

Also see: [17](http://www.youtube.com/watch?v=mogTwwepces)
A nice visual aid from National Geographic (2005)

Sub-Saharan Africa
Two-thirds of all people in the world with HIV/AIDS live here.

Each square represents 10,000 people living with HIV/AIDS in 2003.

Country where 10% or more of population lives with HIV/AIDS

SOURCE: UNAIDS NG MAPS

Also see: http://www.unfpa.org/aids_clock/
Putting it all together

- The five components of social modernization depend on and support each other:
  - Education, health, family planning, employment and income, resource management.
  - All work together to alleviate poverty, reverse environmental degradation, and reduce population growth.
- So, now that we’re all totally bummed out...
- Spend the remaining time on that assignment:
  - How can these problems associated with low-income, developing nations be addressed?