1. Introduction
I appreciate the kind invitation of Professor Janssen to participate in this course. It is a pleasure to be back at Hasselt University. For an old professor, it is always a joy to interact with young students who hold the key to our future.
I congratulate the University for selecting the theme of the course as an interdisciplinary exploration across the ugly line that still divides our world between North and South, the have’s and the have-not’s. Let me submit first that this line has, in recent decades, become increasingly porous.
In addition, we are the first generation of humankind to see our planet earth from outer space, and to see it for what it is, a fragile spaceship cruising in a vast endless universe. We, the voyagers on this spaceship, share a common fate, whether we have been privileged to have seats on upper deck, or whether we are seated downstairs in lower deck. Consciously or subconsciously, whether we like it or not, we, all of us, irrespective of where we are seated, are global citizens of a global village. As citizens of this global village, the topic of this lecture, family planning and reproductive health, is a concern for all of us.
Spaceship Earth is sending signals of distress loud and clear

- The globe is warming
- The ozone-layer is being depleted
- Degradation of natural resources, soil erosion, water stress, deforestation and loss of biological diversity are threatening the quality of life.
- As the 20th century draws to a close, the world is confronted by a daunting challenge: to bring growing human numbers and their increasing needs into balance with the natural resource base that underpins any development.

Panic on spaceship earth at this time can only lead to disaster. Apportioning of blame is no good either. This is a time for scientific objectivity and for international cooperation. Scientific objectivity provides grounds for hope and guarded optimism. A revolution in reproductive behaviour has been taking place in developing countries in the past few decades. Family planning has been a great success story of our time. The optimism, however, is guarded because there are still major challenges ahead.

In a relatively long life, it was my fate to live through revolutions. As an Egyptian, I lived, as a university student, through the 1952 revolution, which changed the political system in the country. Last year, we lived and are still living in a popular revolution, spearheaded by our young people. In my profession of women’s health, I lived and practiced through three socio-medical revolutions, which had a major impact on my career. The reason why, as an old man, I wanted to share the tale of these socio-medical revolutions with this audience is that we are still left with an unfinished agenda. It will be up to a younger generation, to see the task completed and the agenda finished.

2. The reproductive revolution
2.1. In the beginning
The very beginning of the tale was with Adam and Eve, when “God blessed them, and God said unto them, Be fruitful and multiply, and replenish the earth, and subdue it”. (Holy Bible: Genesis 1:28). Our human species is not exactly known for its willingness to comply with divine instruction. But, at least for this one, it took the instruction to heart and worked hard on it.

2.2. Population explosion
On October 31 last year, 2011, the United Nations announced that the world's seven billionth baby is born. Danica May Camacho, a girl born in Philippine capital Manila, was chosen by UN to symbolically mark this global population milestone. Baby Danica was an arbitrary choice. At the same minute she was born, 266 newborn babies landed on our crowded planet.

According to the world population clock 2011:
Every minute
266 births
108 deaths
158 natural increase
World population grows by about 83 million annually.

It took the world millennia to reach the first billion about the year 1800. It took 130 years to add the second billion. Then there was the explosion. It took only 14, 13 and 12 years to add other billions. The world population is projected to hit 8 billions by mid- 2025, and more than 9 billion by mid- 2050.

2.3. A reproductive revolution has been sweeping the world
While the bells of alarm continue to ring about over-population, it is less sufficiently realized that a reproductive revolution has been, and is still sweeping the world. It is the adoption of a small family norm. The wave started in the North at a slow pace, but then moved to the South at an accelerated pace. The total fertility rate is a term used by demographers to estimate the number of children a woman is expected to have in her lifetime. According to the most recent estimate:
Total fertility rate

<table>
<thead>
<tr>
<th>Region</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>2.5</td>
</tr>
<tr>
<td>More Developed</td>
<td>1.7</td>
</tr>
<tr>
<td>Less Developed</td>
<td>2.6</td>
</tr>
<tr>
<td>Less Developed (excl. China)</td>
<td>3.0</td>
</tr>
<tr>
<td>Least Developed</td>
<td>4.5</td>
</tr>
</tbody>
</table>

(Population Reference Bureau 2011 World Population Data Sheet)

Within only five decades, the world fertility rate has been halved from 5 in 1950-1955, to 2.5 now.

2.4. Contraception: from medical indications to a way of life
In the early years of my professional practice, contraceptive use was the exception, not the rule. We were taught in our textbooks about the medical indications for contraception. Now, contraception has become a way of life. Fertility became a choice, not a chance. In my early practice, people used contraception when they did not want a pregnancy. Now, people stop contraception when they want a pregnancy.

Women aged 15-49, married or in union, currently using contraceptives (2009)

<table>
<thead>
<tr>
<th>Region</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>739 Million</td>
</tr>
<tr>
<td>More developed regions</td>
<td>117</td>
</tr>
<tr>
<td>Less developed regions</td>
<td>622</td>
</tr>
<tr>
<td>Least developed countries</td>
<td>46</td>
</tr>
<tr>
<td>Other less developed countries</td>
<td>576</td>
</tr>
</tbody>
</table>

(United Nations Population Division, 2011)

2.5. Egypt: Fertility, contraceptive prevalence and population growth

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total fertility rate</td>
<td>2.9</td>
</tr>
<tr>
<td>Contraceptive prevalence</td>
<td>60%</td>
</tr>
<tr>
<td>Population mid-2011</td>
<td>82.6 million</td>
</tr>
<tr>
<td>Projected population</td>
<td>million</td>
</tr>
<tr>
<td>Mid-2025</td>
<td>100.9</td>
</tr>
<tr>
<td>Mid-2050</td>
<td>123.5</td>
</tr>
<tr>
<td>Population under age 15</td>
<td>30.8%</td>
</tr>
</tbody>
</table>

In Egypt, the total fertility rate stands at less than three children for a woman during her lifetime. About 60% of married women of reproductive age are currently using contraception. The remaining 40% include women who are pregnant, infertile, or not exposed to pregnancy. But our population, 82.6 million now, is projected to hit 100 million by mid-2025, and 123 million by mid-2050. Does this sound as a paradox: a fertility rate that is not high, a contraceptive prevalence that is not low, but still a high
rate of population growth? The figures are right, and the explanation is the population momentum.

2.6. The population momentum
The population is growing in Egypt (and in many other developing countries), not as much because people are reproducing more, but because the number of people reproducing is increasing. Egypt has a young population structure. More than 30% of the population are under age 30. This young population will continue to add increasingly to the reproductive pool. Even with the adoption of a small family norm, population will continue to increase. Demographers call this phenomenon the population momentum.

When you put the brakes on population, it will continue to grow for some time before it comes to a standstill and the population size will be stabilized.

It is similar to the situation when you put the brakes on a rapidly moving car. The car will continue to move for some distance (depending on how fast the car was moving), before it comes to a halt.

Demographers view the population momentum as a challenge but also as a window of opportunity. They point to a demographic dividend or bonus, when the population has more of the young, potentially productive population, before population ageing sets in. In this connection, I am reminded with what my Chinese friends told me when we were discussing the similar situation in Chinese population growth. They pointed out to me how the Chinese word for crisis is written: a combination of “danger” with “opportunity”.
2.7. Infertility and the population problem
In a world that needs vigorous control of population growth, concerns about infertility may seem odd, but the adoption of a small family norm makes the issue of involuntary infertility more pressing. If couples are urged to postpone or widely space pregnancies, it is imperative that they should be helped to achieve pregnancy when they so decide, in the more limited time they will have available.

3. The contraceptive technology revolution
3.1. An old need
A need for contraception has been felt throughout human history. The Holy Bible records the first account of “withdrawal” as a method to avoid an unwanted pregnancy. “And Onan knew that the seed should not be his; and it came to pass, when he went into his brother’s wife, that he spilled it on the ground, lest that he should give seed to his brother.”

Holy Bible: Genesis 38:9
An ancient Egyptian papyrus records what may have been the first prescription for a contraceptive: a vaginal pessary to be used by women.

3.2. **New contraceptive technologies**

It was only in the last several decades of the past century that a contraceptive technology revolution was ushered. I was one of the people who were privileged to work on some parts of it. Thanks to this new contraceptive technology, people can now take charge of their fertility by a wide variety of methods to suit their particular need and circumstances. Almost inconceivable before, contraception has been moved outside the bedroom, and long-acting contraception became possible for a month, three months, a year, five years or ten years. Apart from convenience, modern methods are effective and reversible.
3.3. **Prevalence of modern methods of contraception**

Women aged 15-49, married or in union, currently using contraceptives (2009)

<table>
<thead>
<tr>
<th></th>
<th>Any method</th>
<th>Modern methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>62.7%</td>
<td>56.1%</td>
</tr>
<tr>
<td>More developed regions</td>
<td>72.4</td>
<td>61.3</td>
</tr>
<tr>
<td>Less developed regions</td>
<td>61.2</td>
<td>55.2</td>
</tr>
<tr>
<td>Least developed countries</td>
<td>31.4</td>
<td>25.0</td>
</tr>
<tr>
<td>Other less developed countries</td>
<td>66.0</td>
<td>60.2</td>
</tr>
</tbody>
</table>

(United Nations Population Division 2011)

The great majority of world contraceptive users are taking advantage of these modern methods. They are used by people in the skyscrapers of the North, as well as by people in the peri-urban slums and rural areas of the South. They are used by people in widely different cultures. They are used to postpone a first pregnancy, to space pregnancies or to put a limit to childbearing.

**4. The sexual revolution**

**4.1. The tale of human sexuality began in the Garden of Eden.**
“And the eyes of them both were opened, and they knew that they were naked; and they sewed fig leaves together, and made themselves aprons.”
Holy Bible: Genesis 3:7

For other mammals, sex is only a tool for reproduction. The female will not be sexually attractive to the male, and will not be receptive to the male advance except when ready to conceive. But the eyes of Adam and Eve have been opened to sex. Sex, a reproductive duty, became a pleasure.

4.2. The dissociation between sex and reproduction
Although the desire to separate sex from reproduction is old, it was not until the reproductive revolution and the contraceptive technology revolution that the dissociation between sex and reproduction became almost complete. Sex without reproduction became a norm. Even reproduction without sex, the other side of the coin, also became a possibility, thanks to the efforts of in-vitro fertilization scientists like Professor Willem Ombelet in your distinguished University.
Sex has become an important component of our psych-social well-being. I recall an interesting encounter in India several years ago. I was representing the World Health Organization in a scientific meeting on family planning. I was approached by a group of participants promoting a "novel" contraceptive method. They claimed (and they were right) that the method can be 100 percent effective, is completely free from known side effects, and can be used by both men and women. Moreover, the method offers complete protection from sexually transmitted infections. It can be used by almost anyone; there are no contra-indications to its use. The method had a one time cost equal to about one US dollar. The promoters were disappointed that, in spite of all these merits, the method was not selling.
The brand name of the method was "The Joy of No Sex". It preached complete abstinence. The one-time cost was for a little booklet that teaches some yoga exercises to help in compliance with the method. Apparently, when you learn to stand on the head end of your body for a long time, you will not think much about the other end. I do not think it will be appropriate for an old Egyptian to lecture this knowledgeable young audience about the sexual revolution. But I thought there may be something you do not know, and I can share with you, particularly that it came from a Belgian.

4.3. **We, humans, are not the sexiest of the primates**
For a long time, we used to think that we, humans, are the sexiest of the primates. But that was because we did not know about a forgotten cousin of ours: the Bonobo, to whom the credit must go. We now know about this forgotten hyper-sexed ape, a close relative of the Chimpanzee, thanks to Claudine Andre, a Belgian woman raised in the Congo. She founded "Lola Ya Bonobo", or "Bonobo Paradise" in the Lingala language, is an 86-acre sanctuary set in Verdant hills 20 miles south of Kinshasa, Democratic Republic of the Congo.
In this sexy paradise, Bonobos enjoy sex all the time, and in all varieties, known or unknown to us humans.

4.3.1. Bonobos make love not war
Claudine Andre tells us that Bonobos uphold and practice the slogan “Make love, not war”. Bonobos use sex to deflate tension. Competition for the best food could cause a fight, so they diffuse it by having sex first. Then they sit peacefully and amiably to share whatever food they had. It is a pity that their home country, the Republic of Congo, has been torn by conflicts and internal wars. Humans did not learn something from their neighbouring cousins.

4.3.2. Who rules in the peaceful sexy Bonobo paradise?
Bonobos are perceived to be matriarchal: females tend to collectively dominate males by forming alliances. Although male bonobos are individually stronger, they cannot stand alone against a united group of females. Maybe there is a lesson here for feminists of our species from our nearest cousins: Women of the world: Unite.

5. And the winners are women
Women emerge as the clear winners in the reproductive, contraceptive technology and sexual revolutions.

5.1. Women and the reproductive revolution
Thanks to the reproductive revolution, the woman has finally emerged from behind the mother. Childbearing and rearing became “a” function of women, not “the” function of women. Women pursued a productive, and not only a reproductive career.

5.2. Women and the contraceptive revolution
Women for the first time had women-controlled methods which they could use, even independent of the cooperation of their male partners, to regulate their fertility and to enjoy sexual life without fear of unwanted or ill-timed pregnancy.

5.3. Women and the sexual revolution
Thanks to the sexual revolution, women came to seek and enjoy mutually fulfilling sexual relationships. It was not so in the past. In the early 20th century, Marie Stopes, a British leader in the family planning movement, noted that a popular demand of women was for a simple pill or drug to make their husbands less, rather than more, passionate, and women often said they liked everything about marriage, except “the going to the bed side of it”.

6. An unfinished agenda
Great as these revolutions and their impact, they leave an agenda still unfinished.

6.1. The neglected tragedy of maternal mortality in developing countries:
An unfinished agenda

6.1.1. A health and human rights scandal
GLOBAL VILLAGE

DEATH TOLL IN HUMAN REPRODUCTION

1370 women reported killed during physiological duty; thousands more, seriously injured.

Every minute

- 380 women become pregnant
- 190 women face an unplanned or unwanted pregnancy
- 110 women experience a pregnancy-related complication
- 40 women have an unsafe abortion
- One woman dies from complications related to pregnancy and childbirth

Every minute (or two), in our 21st century world, one woman dies from complications related to pregnancy and childbirth.

In a piece of local African folklore, a Tanzanian mother, about to give birth, speaking to her older children, tells them:
“I am going to the sea to fetch a new baby, but the journey is long and dangerous and I may not return.”

And she is right. Many women still do not return from this dangerous journey. The adult lifetime risk of maternal death (the probability that a 15-year-old female will die eventually from a maternal cause) is 1 in 31 in sub-Saharan Africa, 1 in 11 in Afghanistan, and 1 in 4300 in developed regions. In Belgium, the risk is 1: 10 900. (WHO 2010).

6.1.2. Forgotten scenes
Women in the North have forgotten what a maternal death and maternity risk are. Let me share with you one such scene:

“In front of the door a couple of neighbour women are standing, muttering and whispering. The ten children have just come back from school and are standing around bewildered. Inside, the house had a terrible look. There is a huge pool of blood in the kitchen, and tracks go into the shop and through the living room. And the bedroom! It looks like someone has been murdered. The bedding is all awry, a wash basin, the floor...everything covered with blood.”

This terrible scene is not from Africa. Here is the completion of the account:

“Frau Schultz is lying in bed, pale as wax, and sunken as warmed-over death”

This account is what Lisbeth Burger, a German midwife wrote in her memoirs in 1936. This terrible scene is still a reality in some parts of our twenty first century world.

6.1.3. Pregnancy is not a disease
Pregnancy is a bio-social function, entrusted to women, to ensure survival of our species. If women stop getting pregnant, and they now can, thanks to contraceptive technology, our species will become extinct. Given the state of our medical knowledge, women do not have to give up their lives to give us a new life. Mothers are not dying because of diseases we cannot prevent or treat. They are still dying because societies have yet to make the decision that their lives are worth saving.

6.2. Unmet need for family planning- An unfinished agenda
The fruits of the contraceptive technology revolution are still not available or accessible to a sizeable population in the world. A recent United Nations report estimated that worldwide, more than 120 million women aged 15 to 49 who are married or in a union have an unmet need for family planning. These are women exposed to getting pregnant, do not want a pregnancy now or later, and are not using contraception.

6.3. The sexual revolution and the pandemic of sexually-transmitted infections
The sexual revolution has not been enjoyed by men and women only. Microbial agents shared in the fun, finding sex a convenient mode to spread and flourish. Sex has become a dangerous sport. The World Health Organization estimates that nearly a million people acquire a sexually transmitted infection (STI), including the human immunodeficiency virus (HIV), every day.

6.3.1. The vulnerability of women
A recent report from the United Nations AIDS Programme UNAIDS, highlighted HIV
transmission in intimate partner relationships in Asia, and the feminization of the AIDS epidemic.

Most women are acquiring HIV not because of their own sexual behavior but because their partners engage in unsafe behaviors.

More than 90% of women living with HIV acquired the virus from their husbands or from their boyfriends while in long-term relationships.

At least 50 million women are at risk of acquiring HIV from their intimate partners. These women are either married or are the regular partners of men who engage in higher-risk sexual behaviors.

6.3.2. An unmet need for women: Woman-controlled methods for protection against sexually transmitted infections (STIs)

Abstinence, being faithful and condom use are the classical ABC of protection against STIs, including HIV. Given the reality of gender power relationships, these methods are not women controlled.

7. Family Planning and Reproductive Health- An Unfinished Agenda.

A question of the will or the wallet?

Why is the agenda unfinished? Is it a matter of commitment or a matter of resources?

Before we hang the blame on lack of resources, let us look at how our world is spending or wasting its resources.

The World military expenditure in 2010 is estimated to have been $1.6 trillion (not billion). Even with the world financial crisis, this expenditure has increased by 1.3 per cent in real terms. (Stockholm International Peace Research Institute (SIPRI) 11 April 2011: World military expenditure 2010). Worse still, are figures for developing and least developed countries.

The region with the largest increase in military spending was South America, with a 5.8 per cent increase, reaching a total of $63.3 billion.

The Middle East spent $111 billion on military expenditure in 2010, an increase of 2.5 per cent over 2009. The largest absolute rise in the region was by Saudi Arabia.

Estimated spending in Africa increased by 5.2 per cent, led by major oil-producers such as Algeria, Angola and Nigeria.

It seems that whenever a country is endowed with more resources, a considerable portion goes to military expenditure, to human warfare, rather than welfare. In the best scenario, this vast expenditure will go down the drain, and the obscenely expensive equipment will be left to rust. In the worst scenario, it will be put to use for human destruction.

I know that this information is sad and depressing. But this is no reason to overlook it and not to face it. Let me quote the Belgian artist Rene Magritte, who said “We must not fear daylight just because it always illuminates a miserable world”.

8. The future

So now, that was my tale about the three revolutions, the past and present. What about the future? Being optimistic by nature, and by my profession, I see a brighter future when I look at my crystal ball. Things will not be easy. But are not impossible. Let me end with another Belgian quotation, from an admirable cinema actress of my time: Audrey...
Hepburn. Speaking about how it was possible for her to reach the top, she said: “Nothing is impossible. The word Impossible, after adding a simple ‘ will read I’m possible.”

Hartelijk dank
Merci beaucoup
Vielen Dank
Thank you very much

Selected publications by the author


Fathalla MF. Imagine a world where no woman is denied her right to health- Seven propositions. F, V & V IN OBGYN, 2011, 3 (4): 247-251


Fathalla MF. Issues in Women’s Health and Rights-International, Arab Regional and Egyptian Perspectives. International Planned Parenthood Federation Arab World Region.

Other resources


