

Geneva Group International, Das Eisenberg, June 2009

From Baby Boom to Baby Crash Social and Economic Aspects of Population Aging

François Geinoz, Zürich

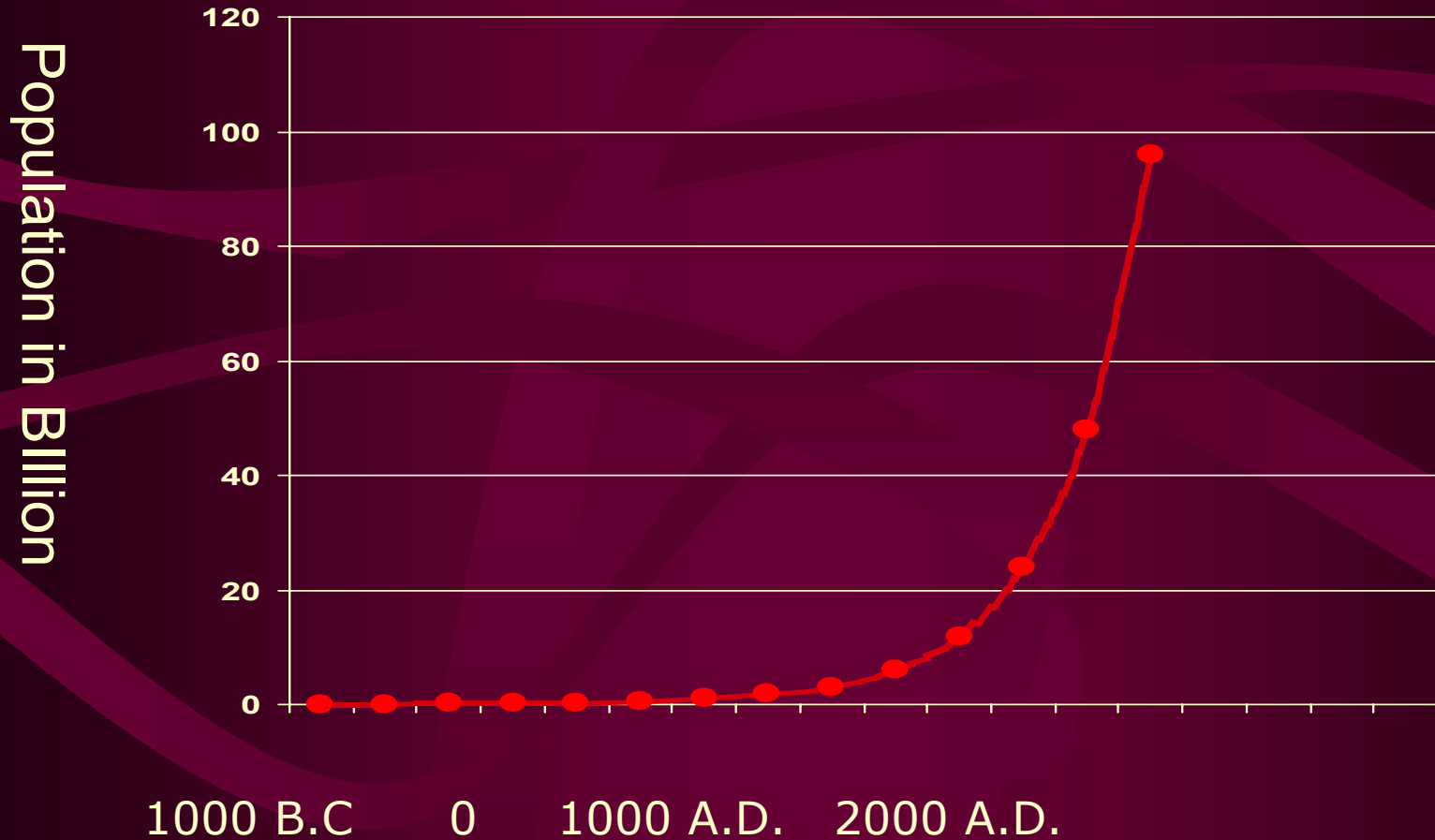
From Baby Boom to Baby Crash

Social and Economic Aspects of Population Aging

1. Population Growth
2. Population and Economic Development
3. Demographic Transition and Underfertility
4. Population Aging
5. Causes of Underfertility

1. Population Growth

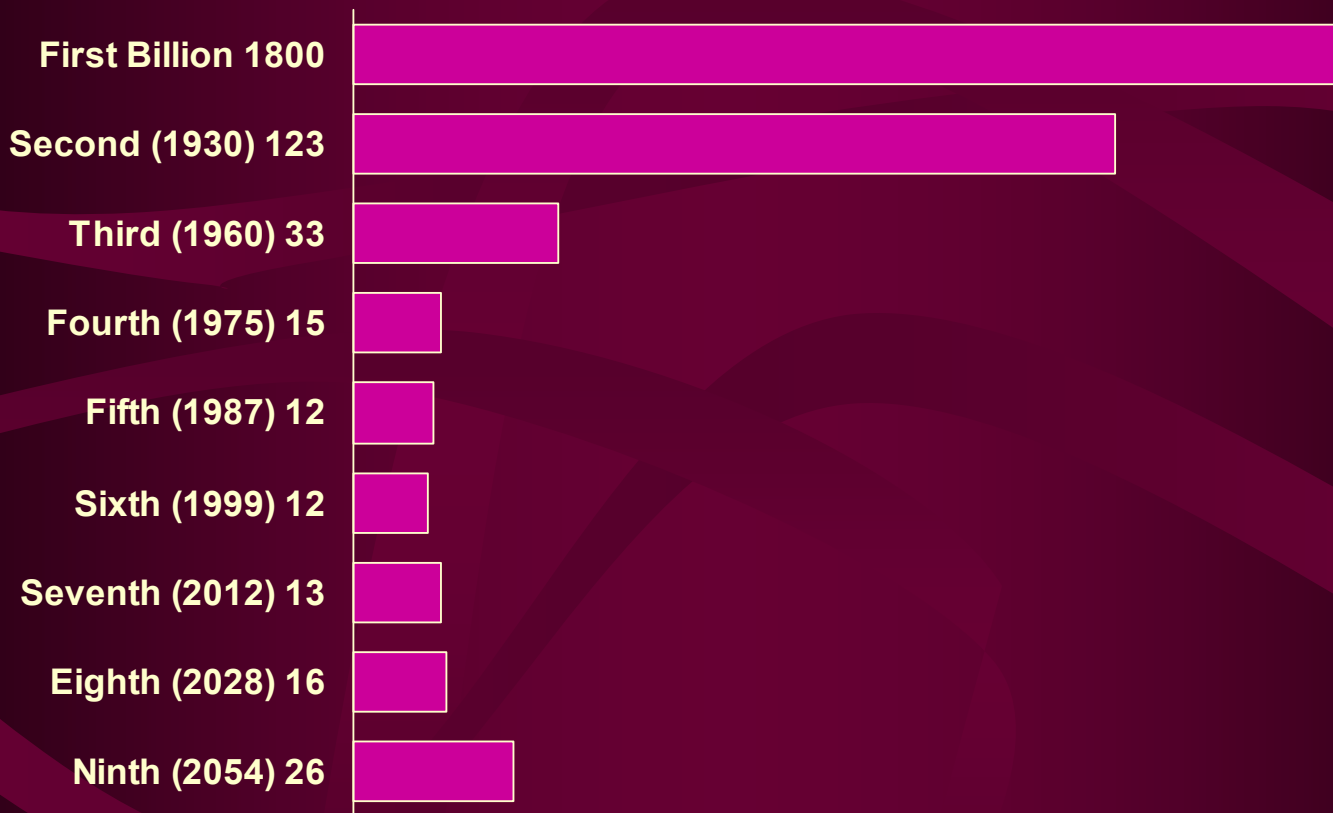
Is World Population Exploding?



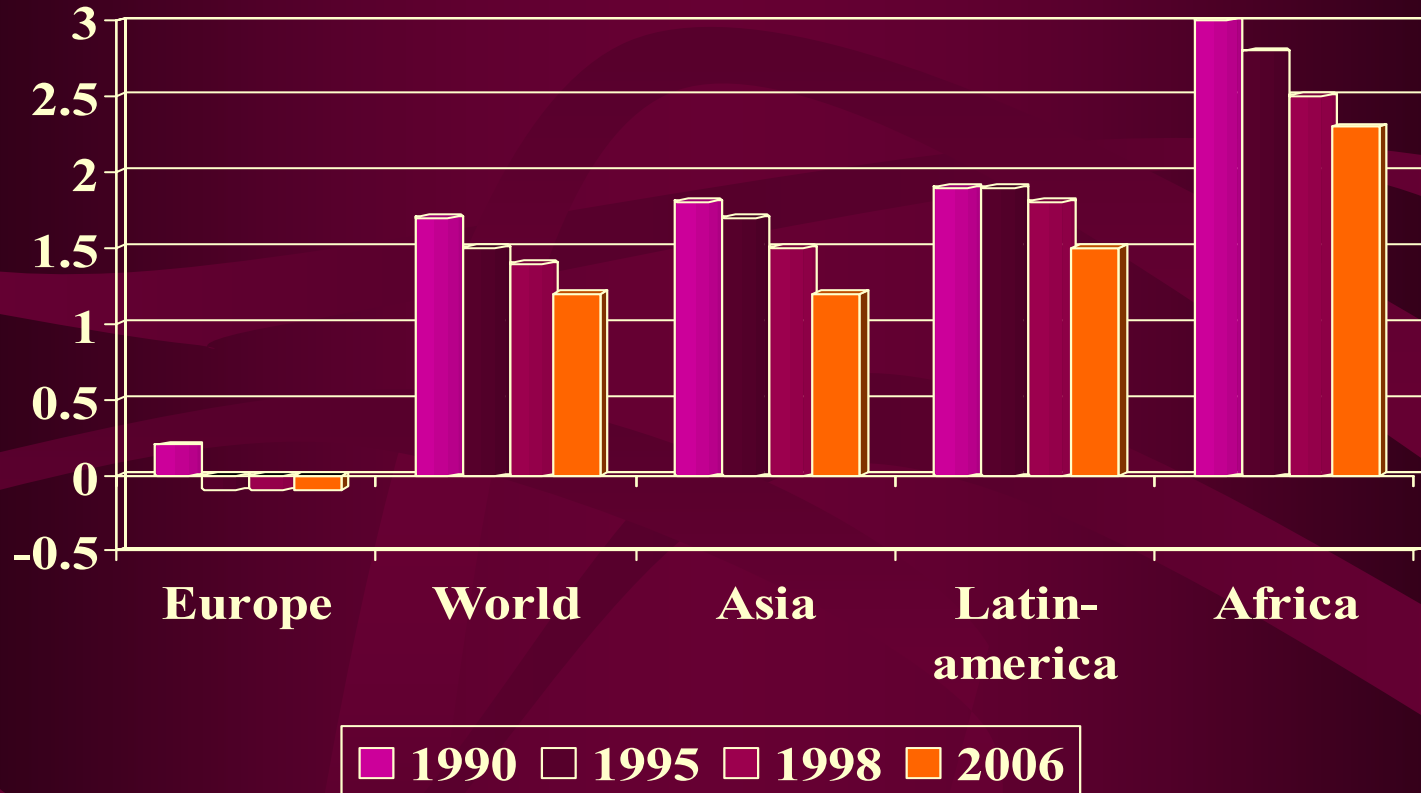
Alarmism?

- 1 Billion
- 2 Billion
- 3 Billion
- 4 Billion
- 5 Billion
- 6 Billion
- Malthus
- Population control as ideology
- Pincus pill
- Club of Rome
- Relativism under scientists
- 12.10.1999

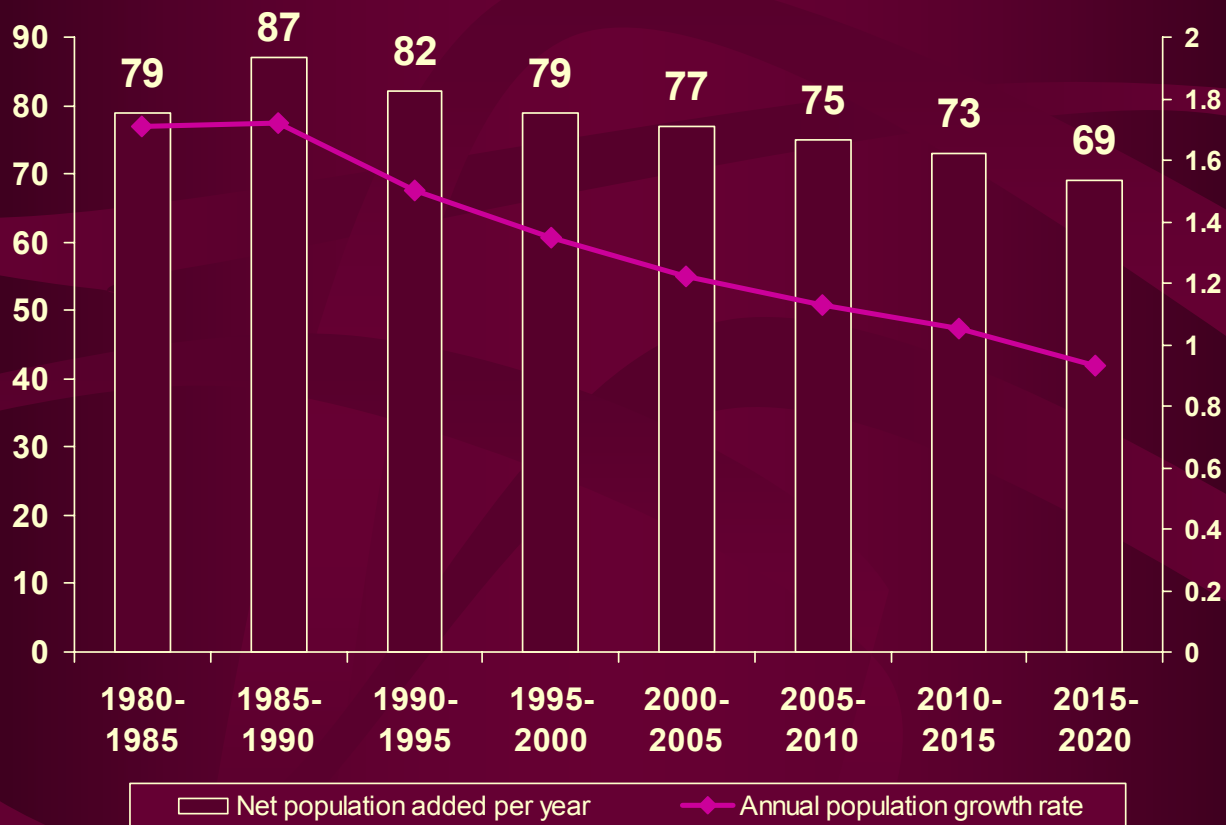
Acceleration of Growth



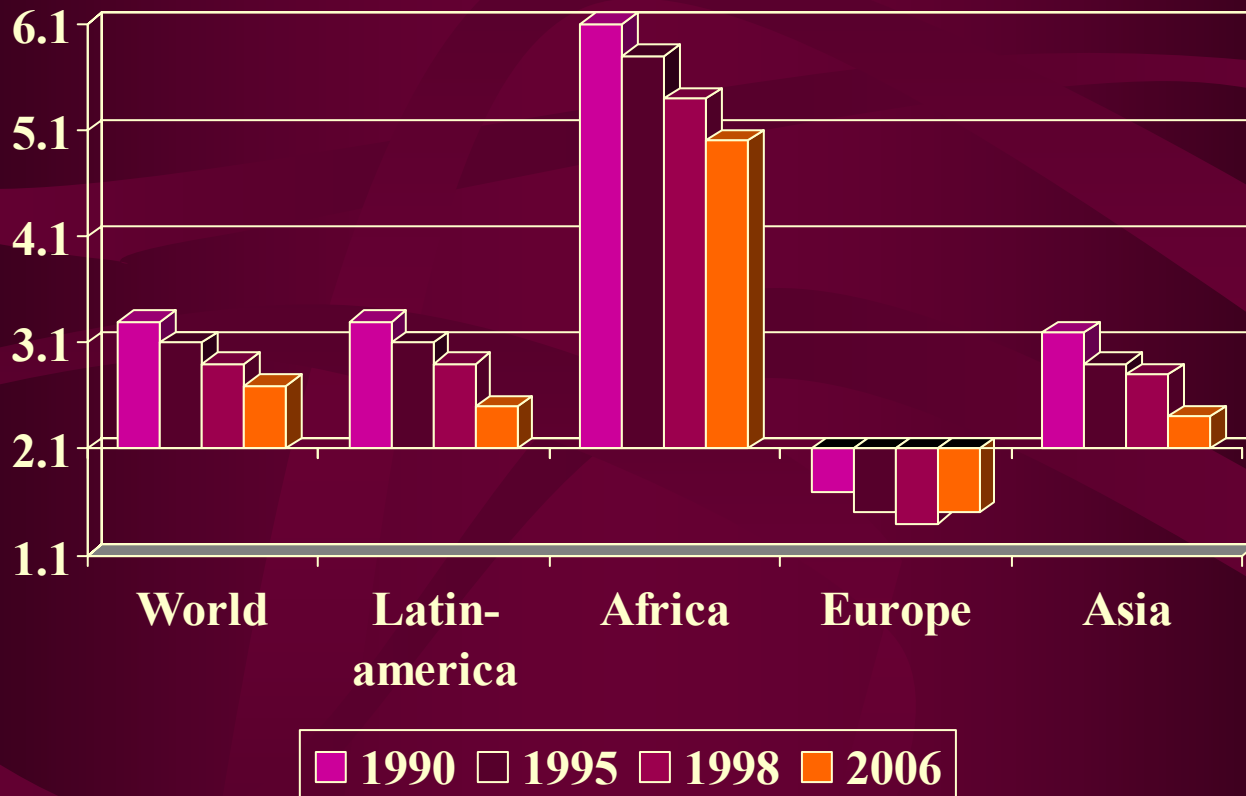
Population Growth in %



World Population Growth



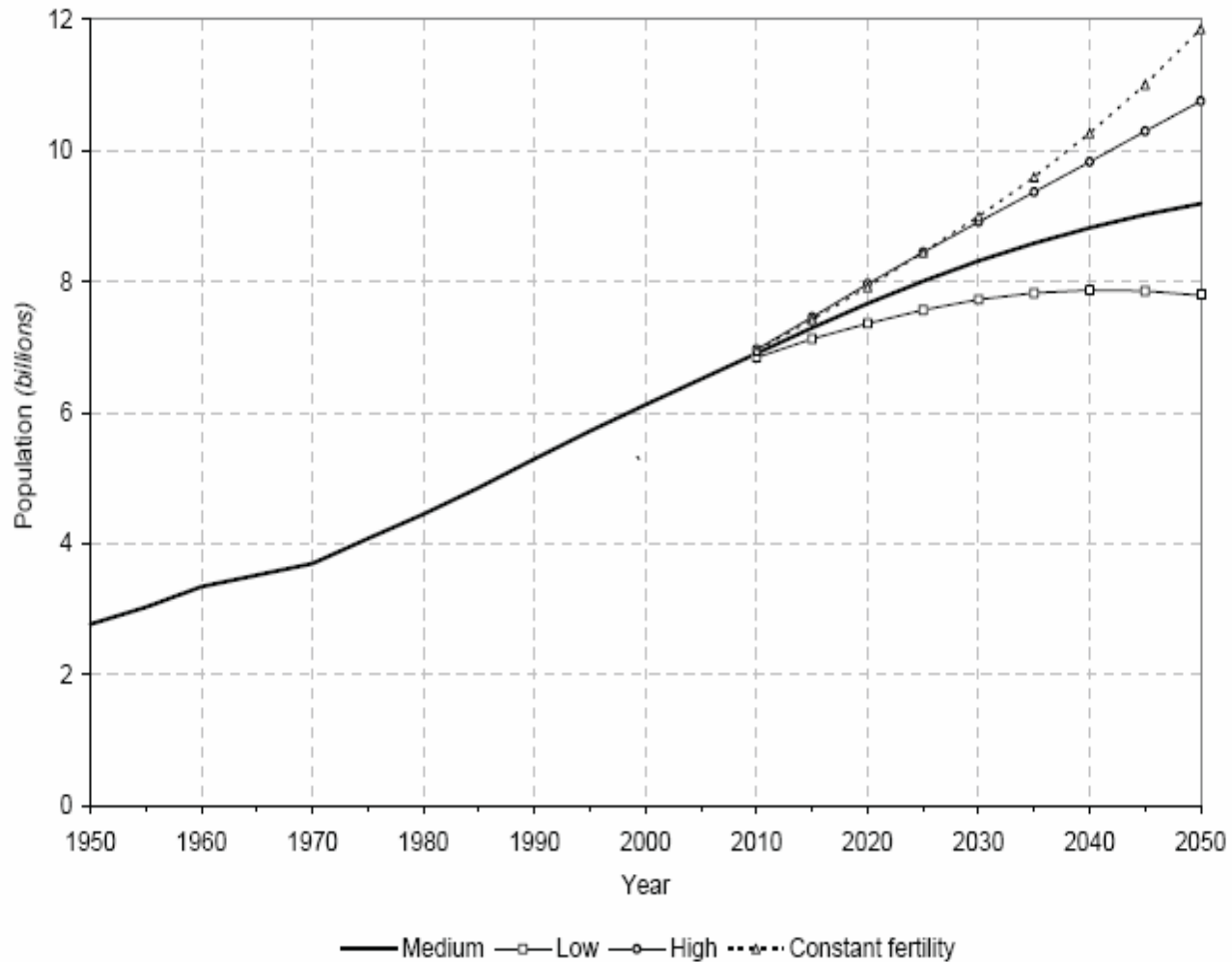
Fertility



Fertility Drop

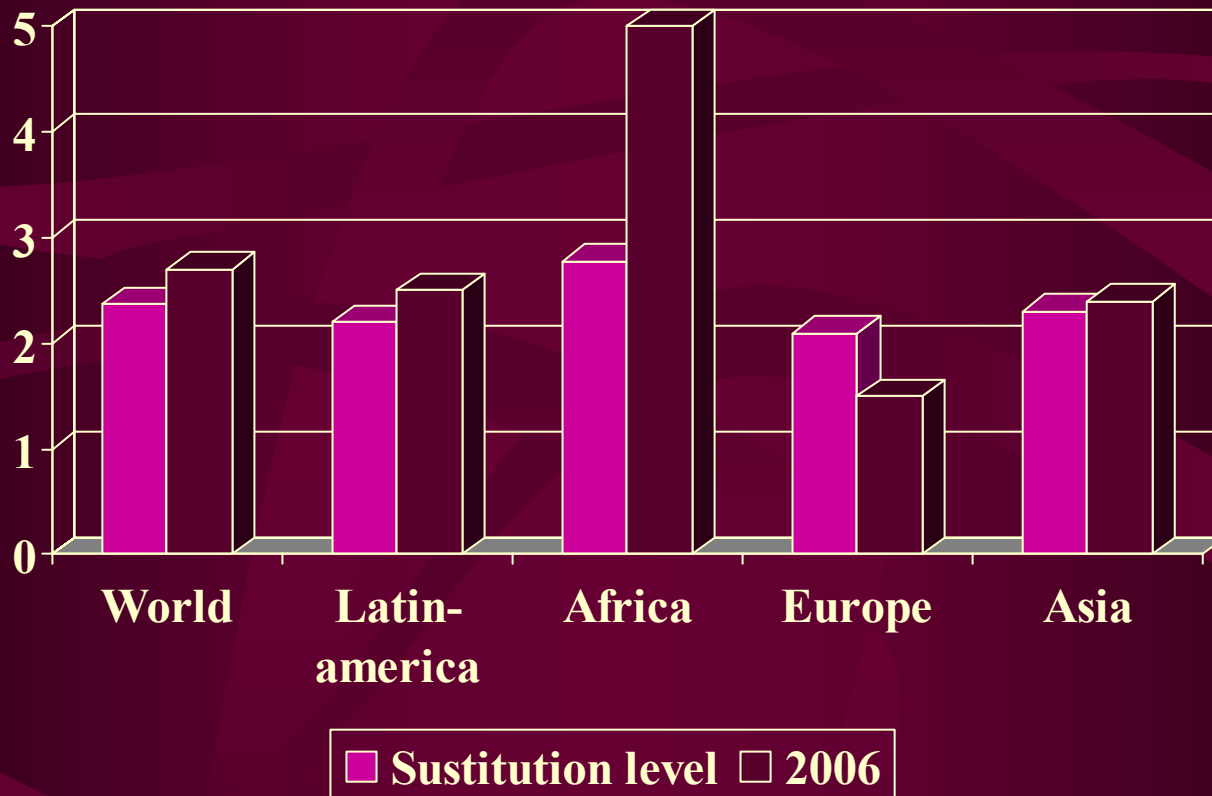
- 72 countries (with 40% of the world population) have a fertility under 2.1
- A stabilization of the world population is expected by 8 or 9 Billions (instead of 12 to 15 Billions)

Figure 1. Population of the world, 1950-2050, according to different projection variants



Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat (2007). World Population Prospects: The 2006 Revision, Highlights. New York: United Nations.

Fertility and Generations' Replacement

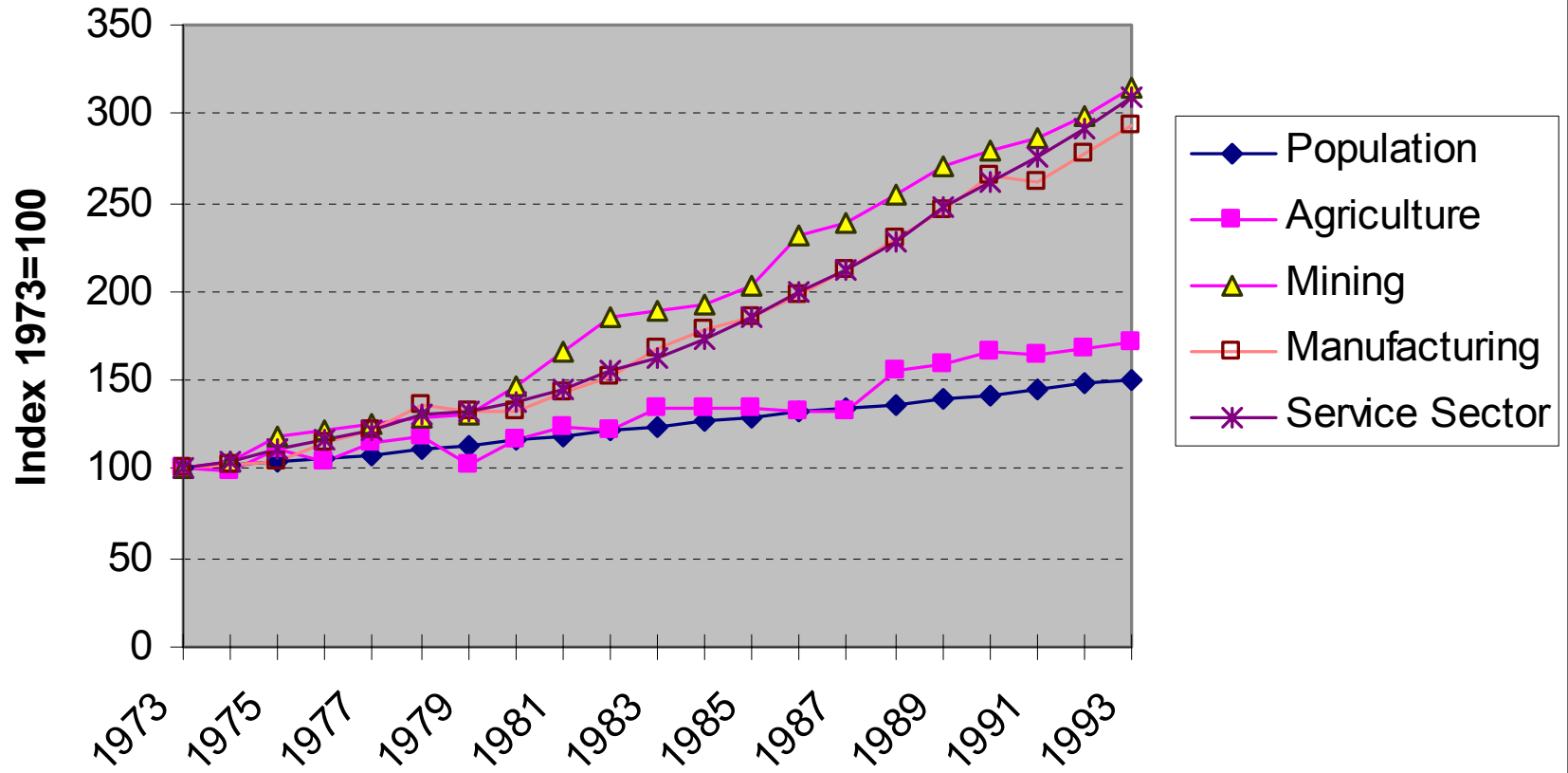


2. Population and Economic Development

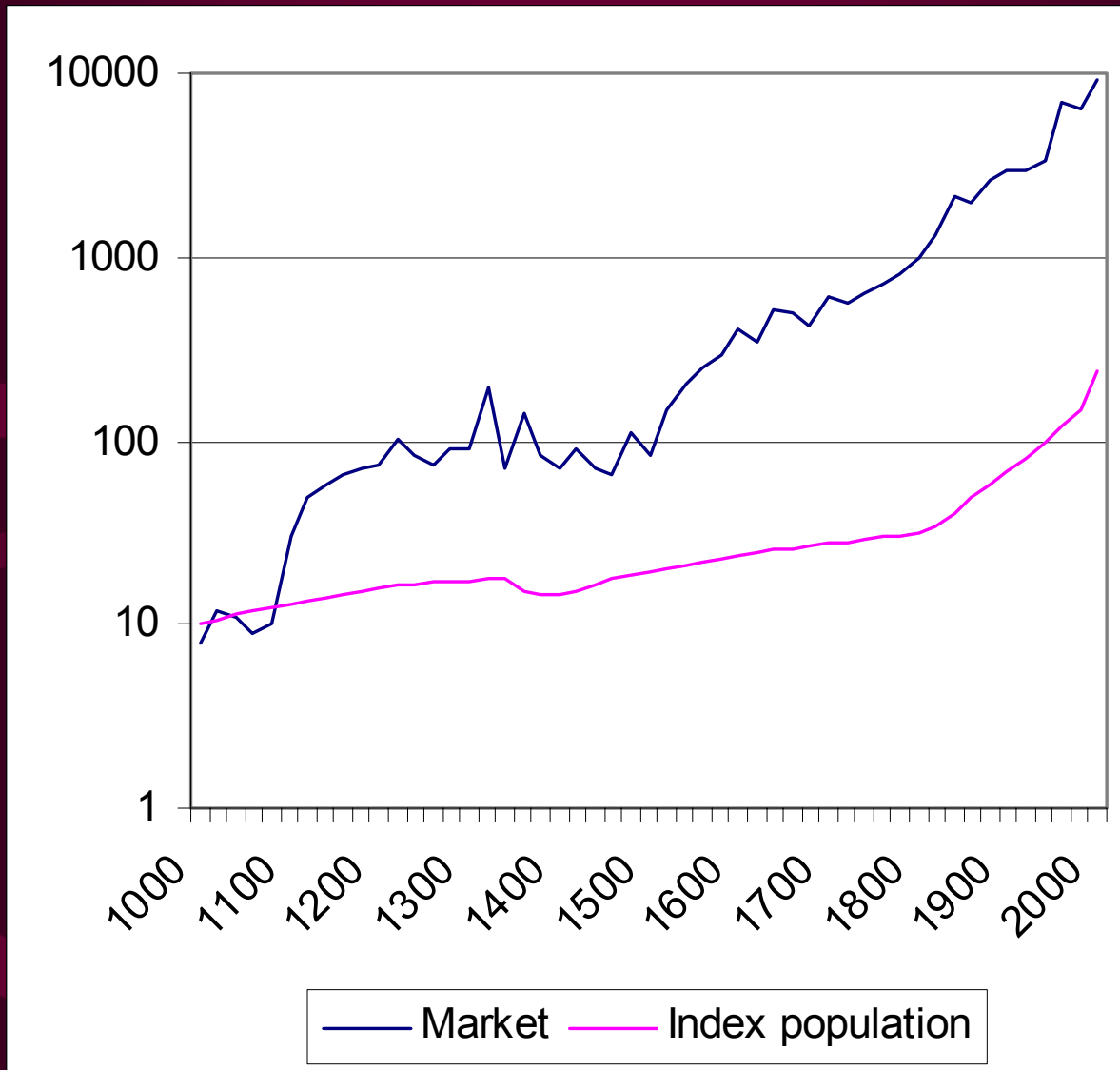
Some developing countries with population > 40 million	Population 1985	Yearly GDP Growth per Capita, 1950-85
China	1045	+2
India	761	+1.6
Indonesia	165	+2.8
Brasil	136	+3.5
Bangladesh	101	+1
Nigeria	85	+2
México	79	+2.4
Egipto	47	+2.8

Some developing countries with population > 40 million	Population density per cultivable km ² , 1985	Return per hectare (cereals, 1985)
China	1068	38.9
India	444	15.5
Indonesia	1063	34
Brasil	206	16.6
Bangladesh	1075	20.5
Nigeria	320	6.4
México	340	20.9
Egipto	1930	43.3

India 1973-1993



Global Value and Population

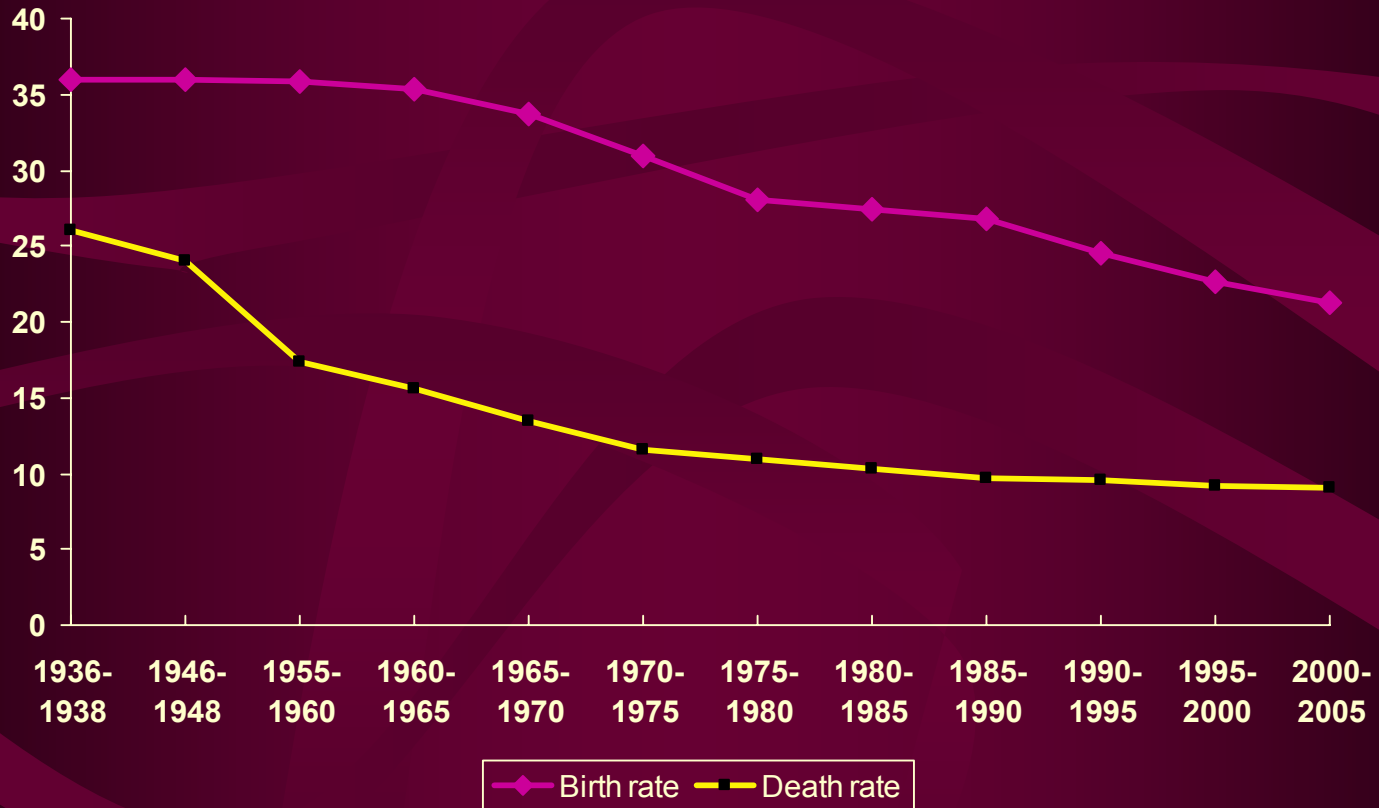


Population and Development

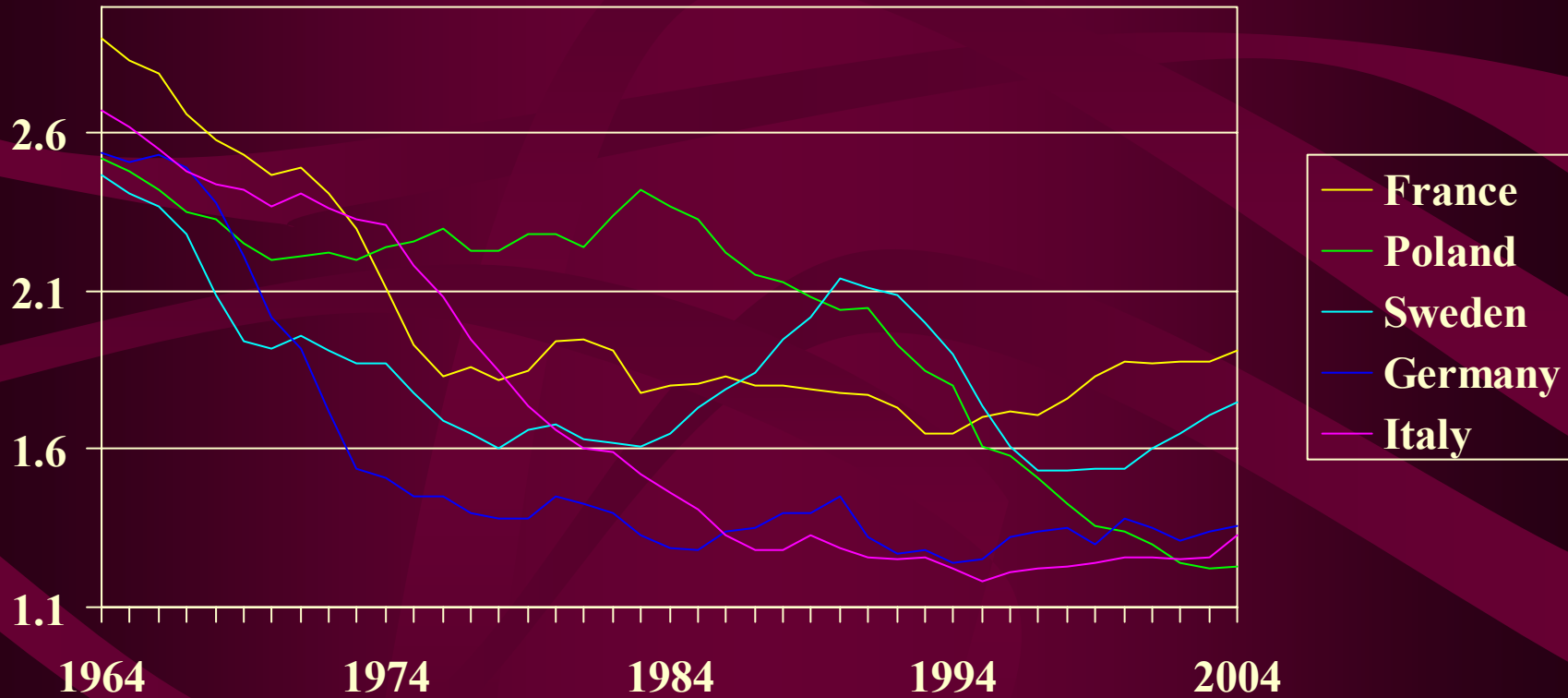
- Africa population is lower than India
- World manifestation: 1'650 km²
- 1 mouth, 2 arms: mans produces more than they consume
- Population density facilitates economies of scale and new developments
- Commodity prices sink (J. Simon)
- Environment

3. Demographic Transition and Underfertility

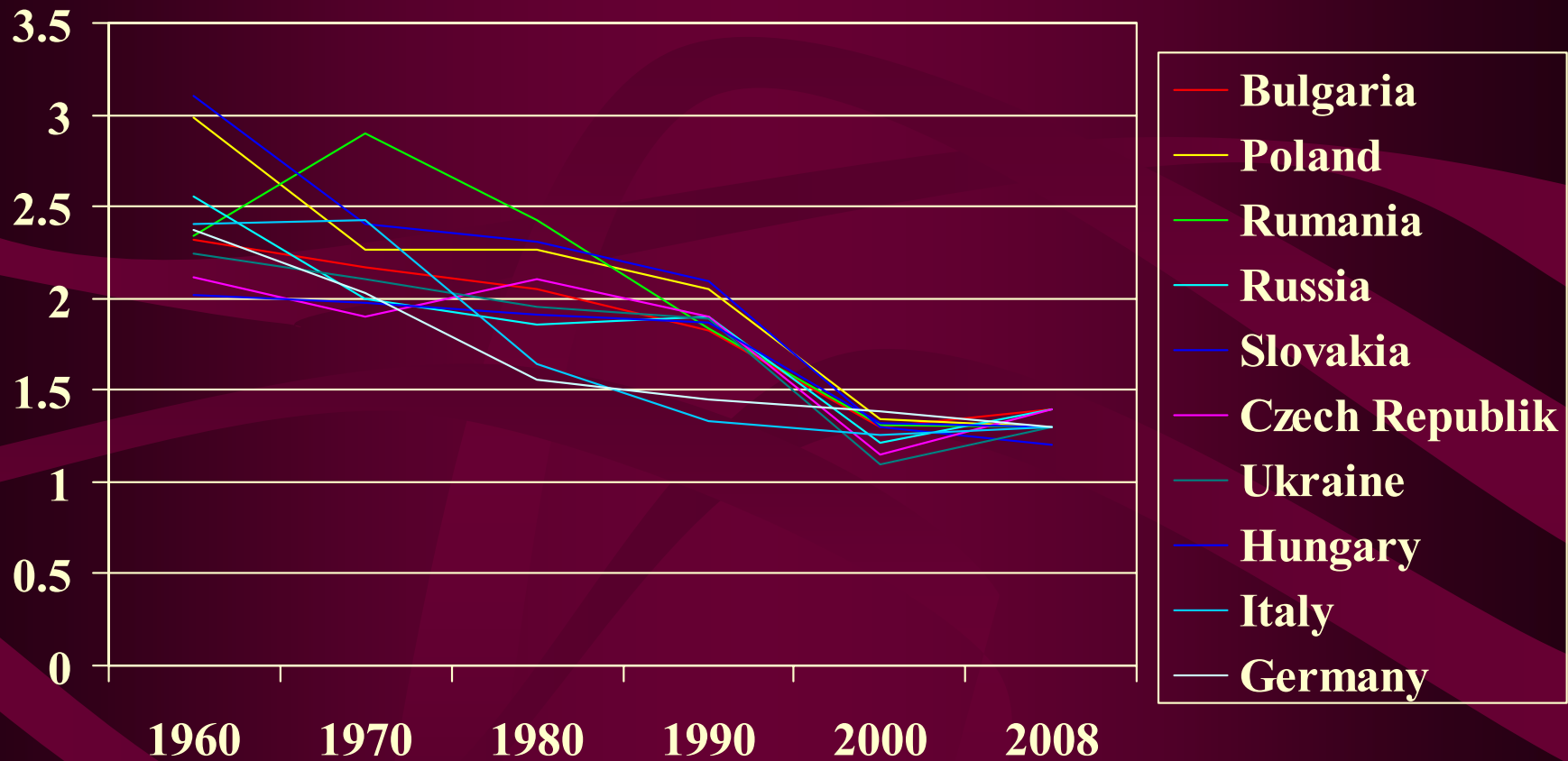
The Birth Rate sinks, the Death Rate also



The Fertility Fall in Europe

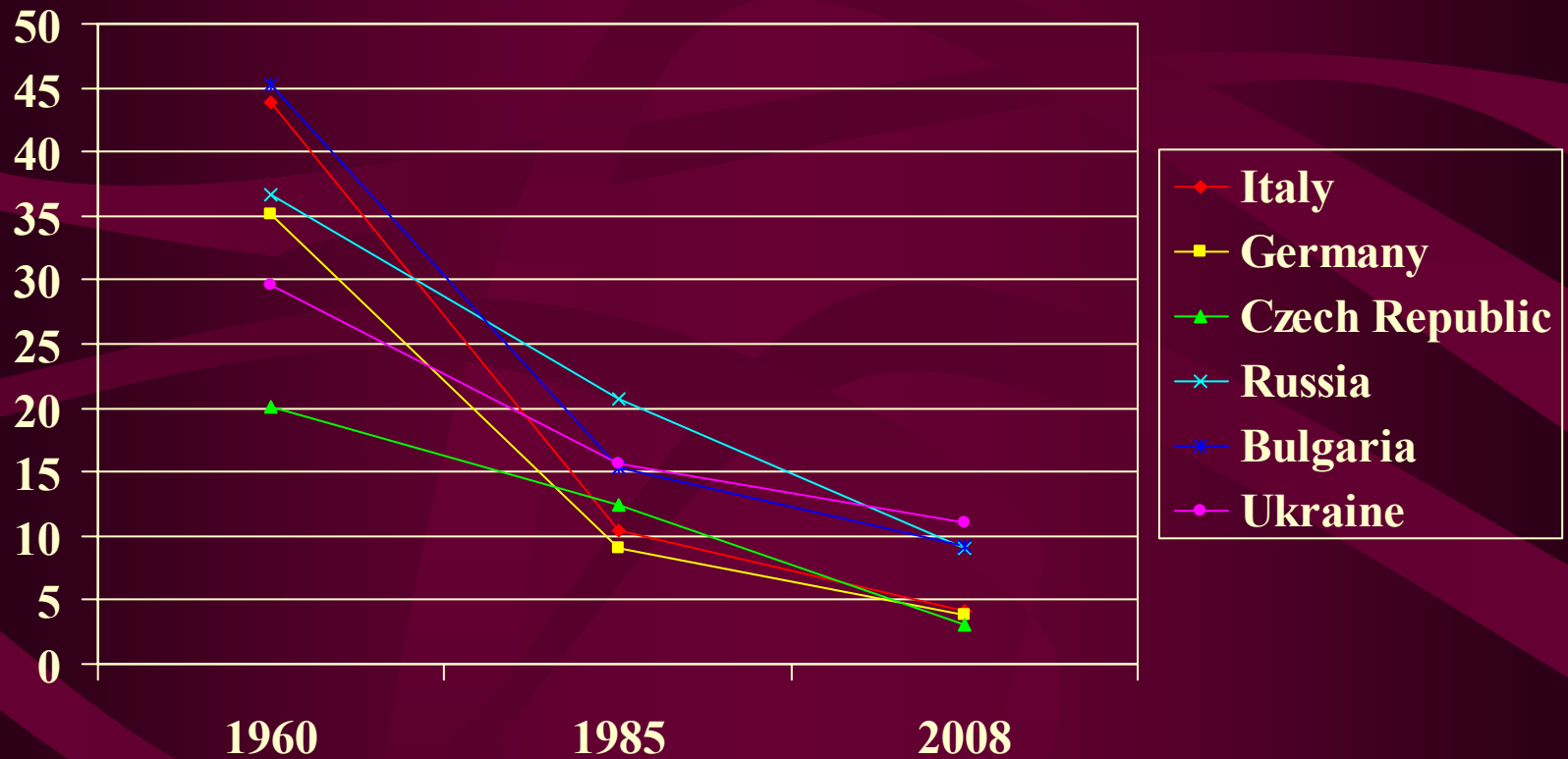


Fertility



Infant mortality rate

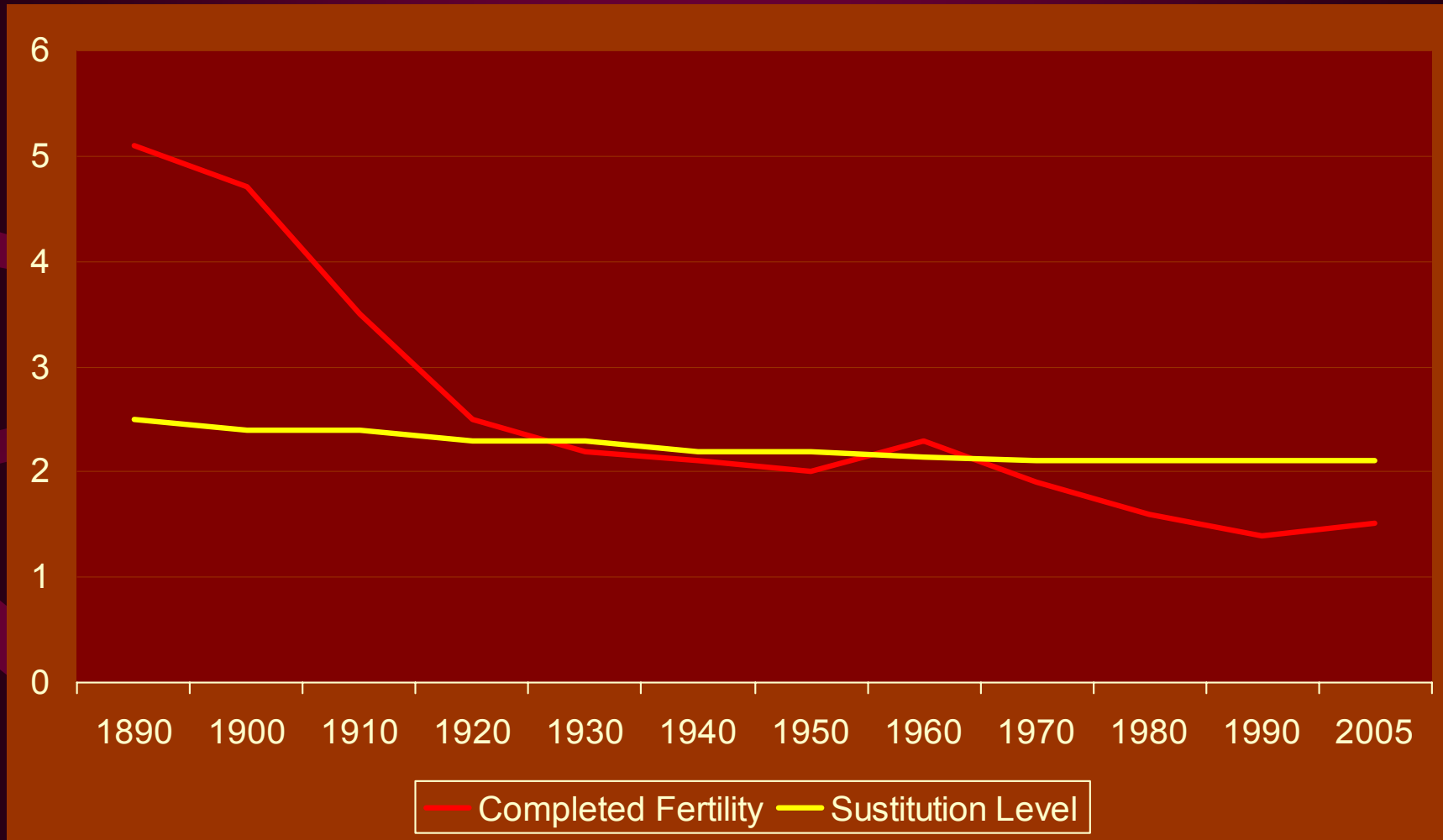
(deaths during first year per 1000 live births)



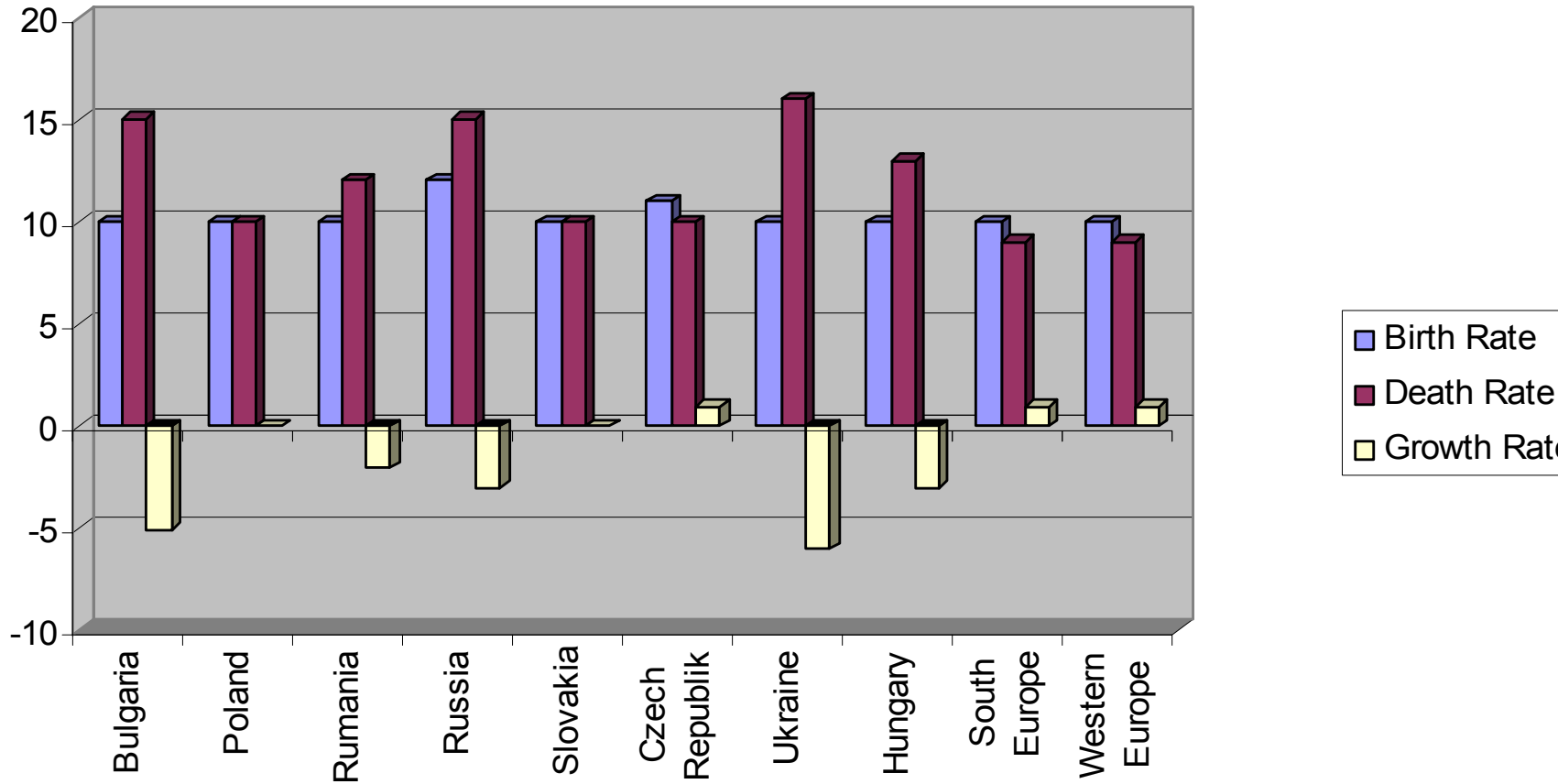
Total Fertility in Selected Countries 2005-2010

• Costa Rica	2.10	• Germany	1.36
• Peru	2.16	• China	1.73
• Mexico	2.21	• U.S.A.	2.05
• Columbia	2.22	• Turkey	2.14
• Brazil	2.25	• Philippines	2.23
• Ecuador	2.58	• South Africa	2.64
		• Uganda	6.26

Completed Fertility (Germany)



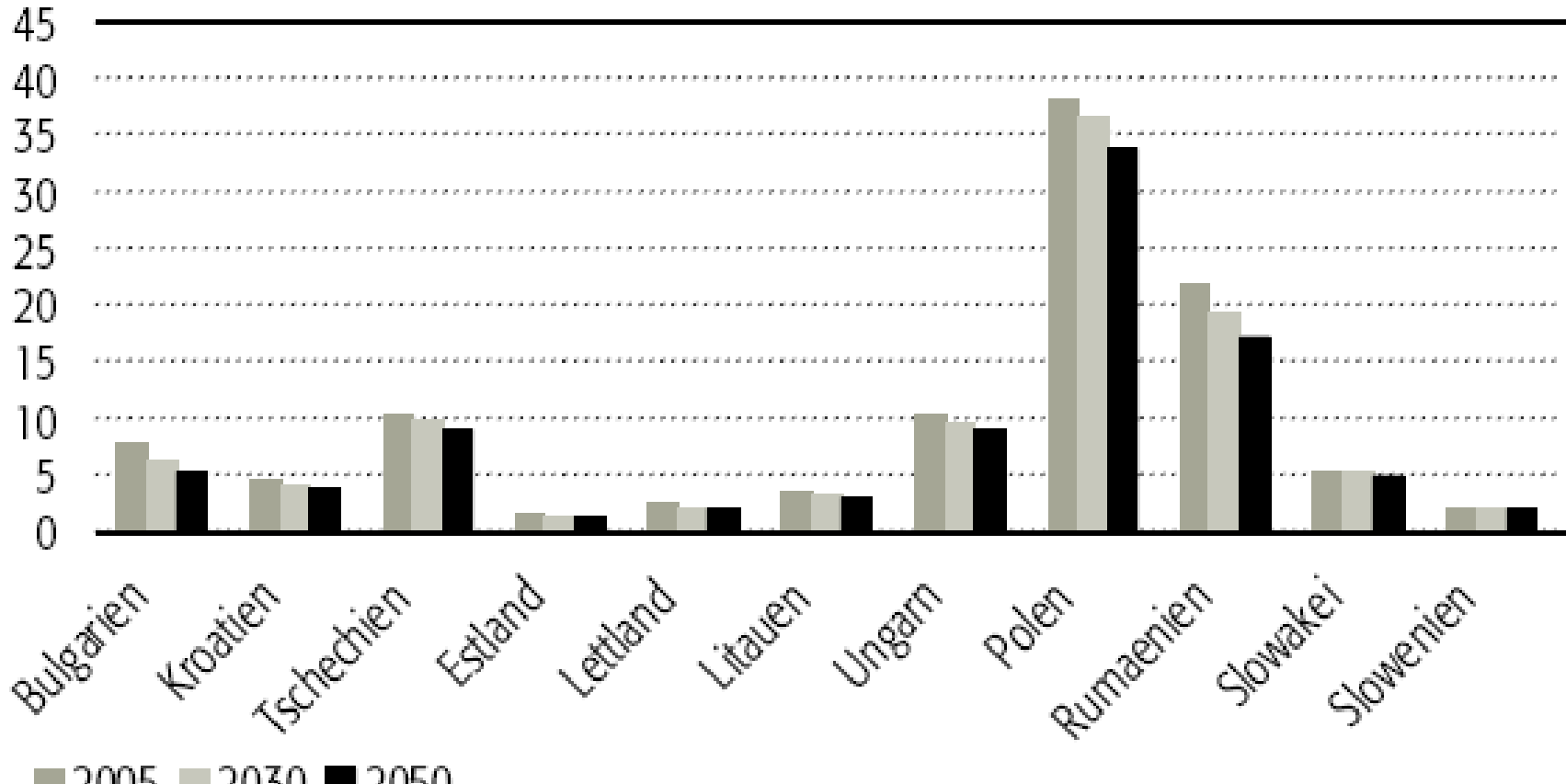
Natural Decrease in Eastern Europe (2008)

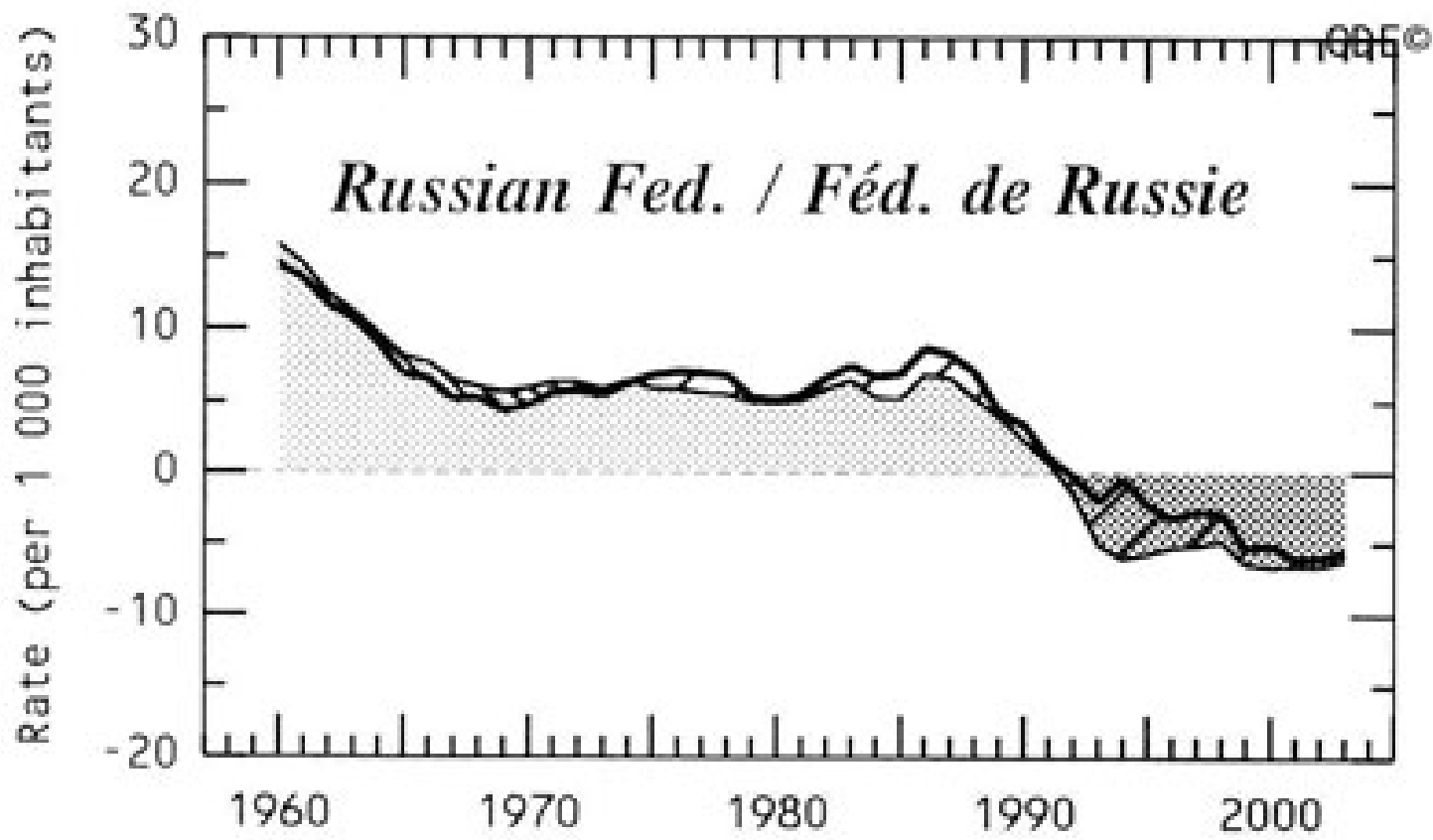


Population downfall

Schrumpfende Bevölkerungen

in Mio.

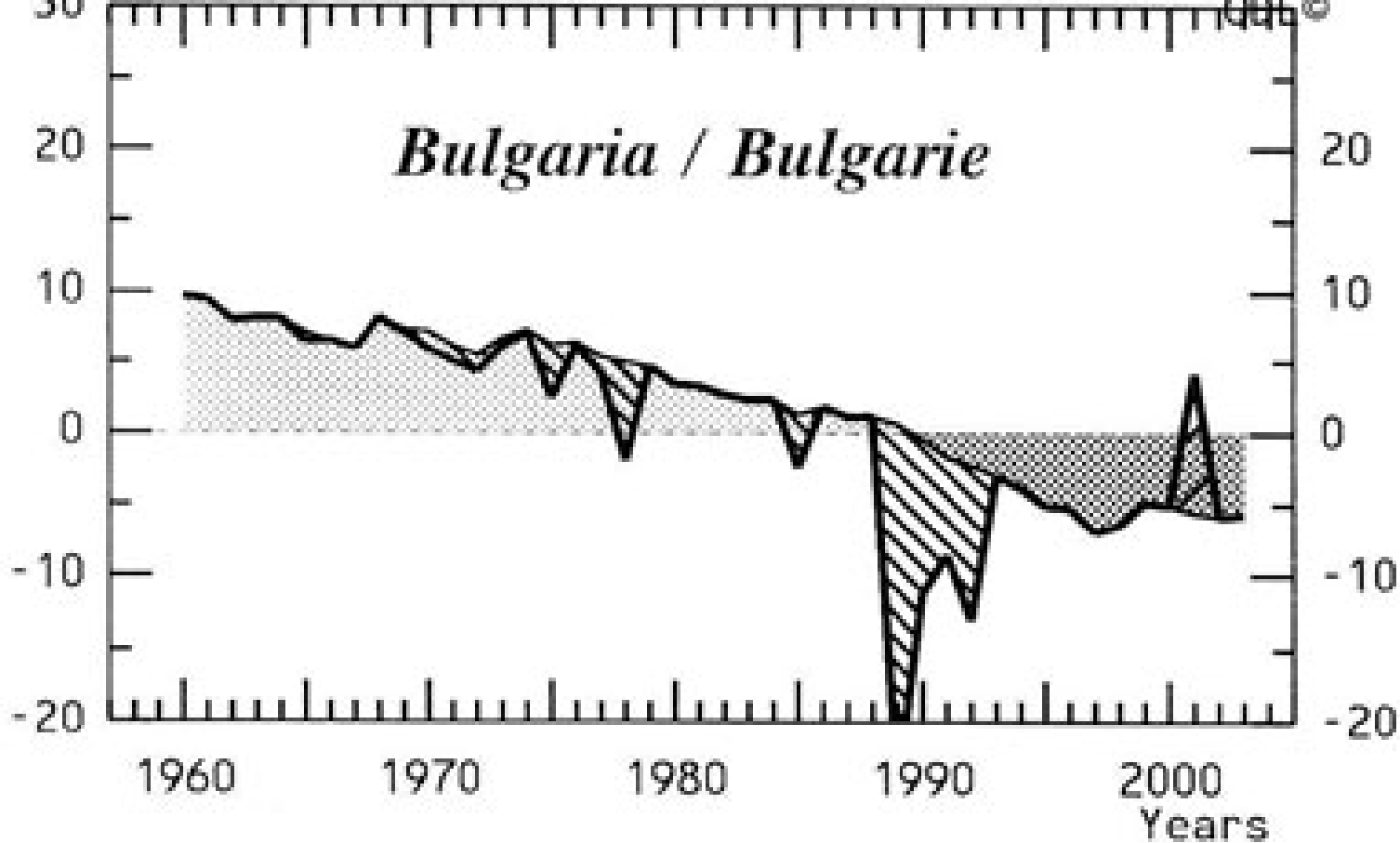




— Annual growth rate
— Rate of natural increase

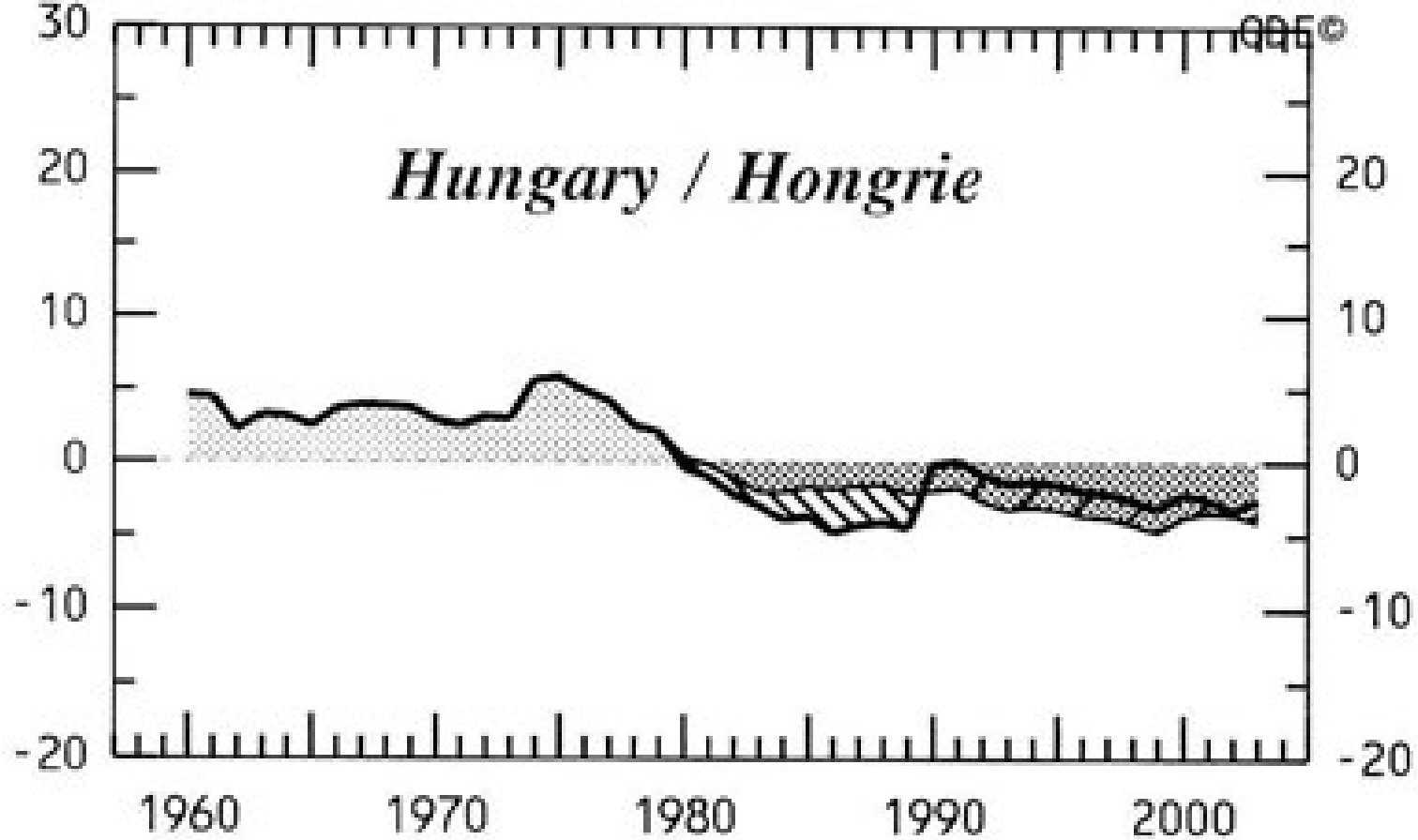
Positive natural increase
Negative natural increase
Positive net migration
Negative net migration

Bulgaria / Bulgarie



— Annual growth rate
- - - Rate of natural increase

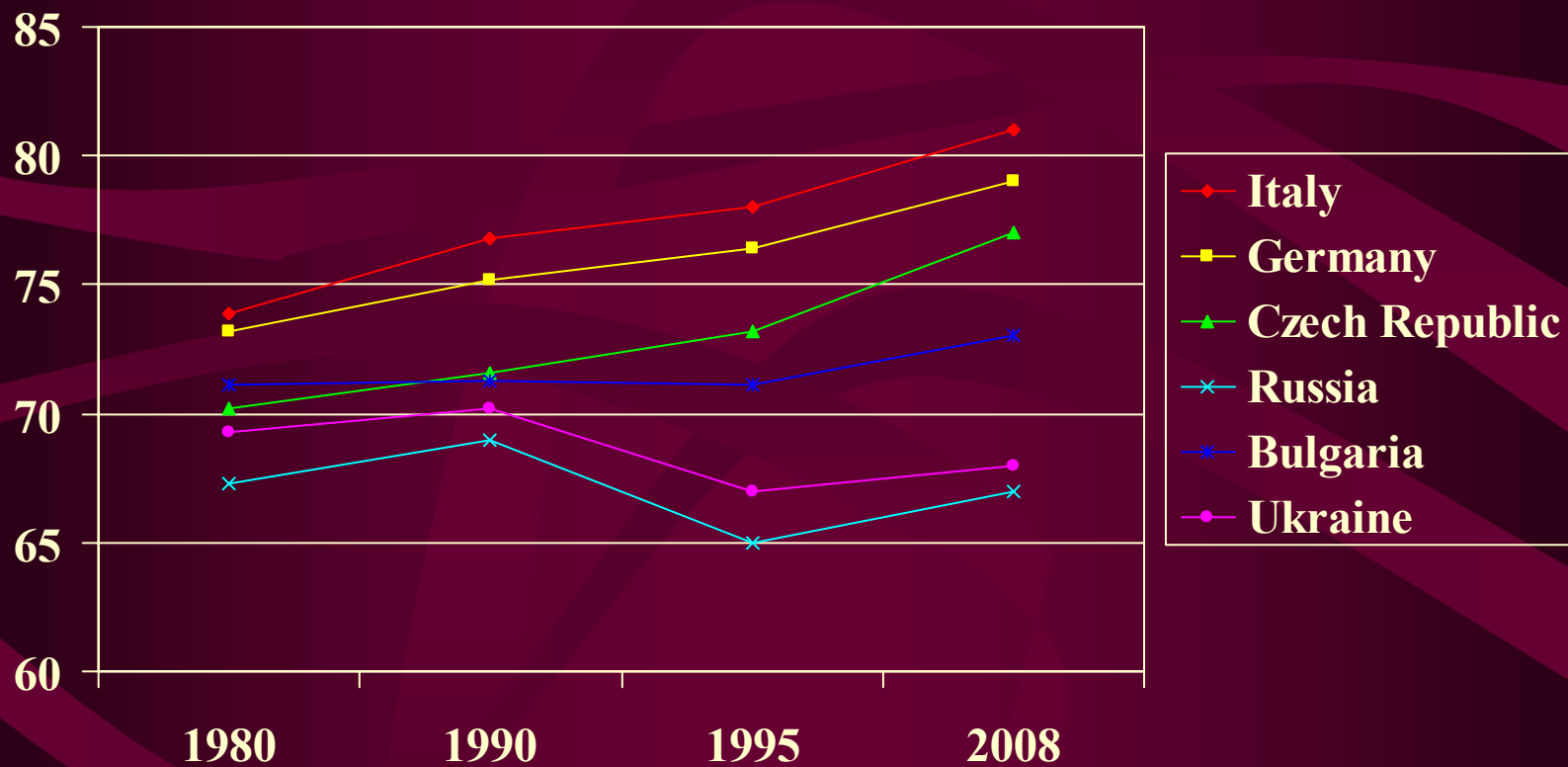
Positive natural increase
Negative natural increase
Positive net migration
Negative net migration



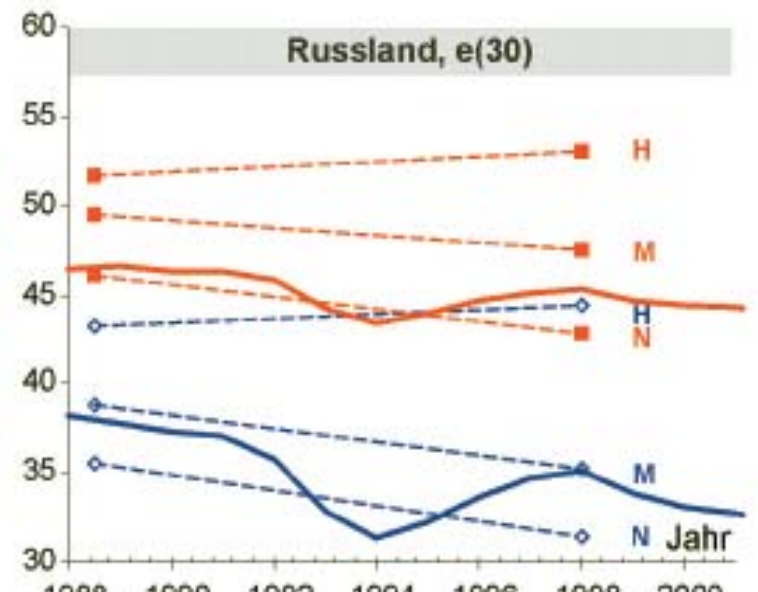
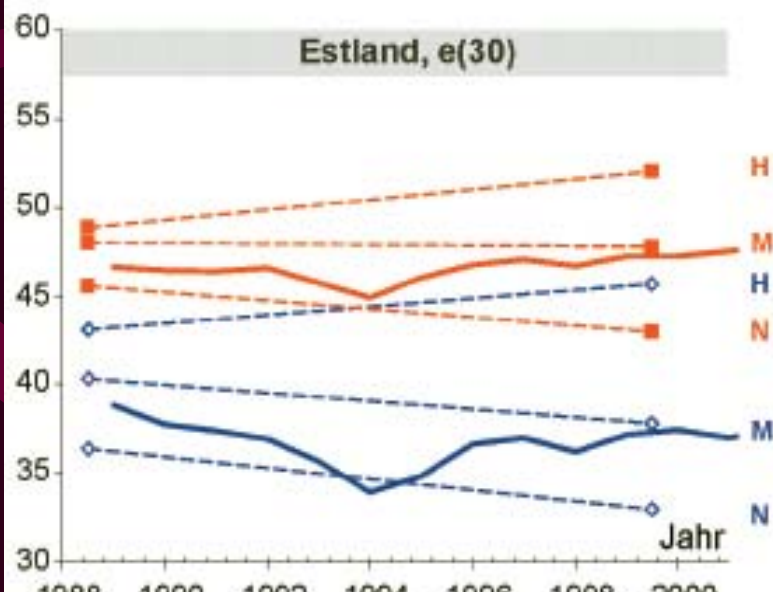
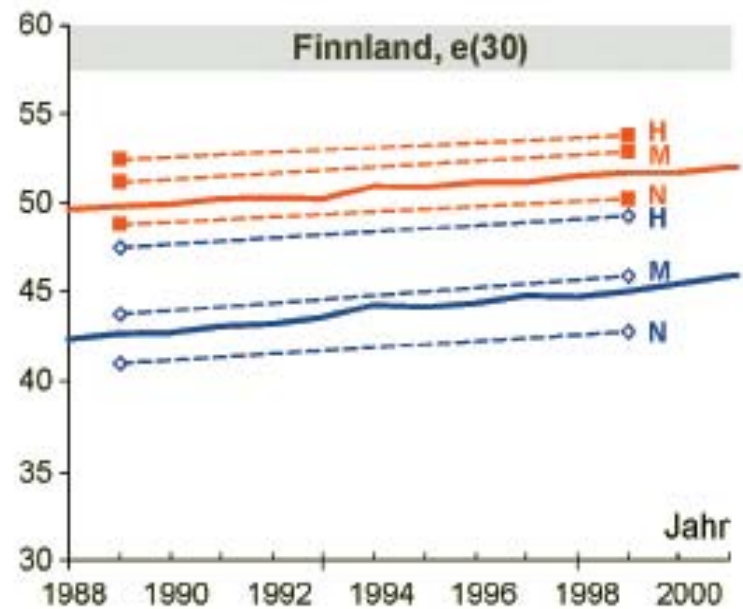
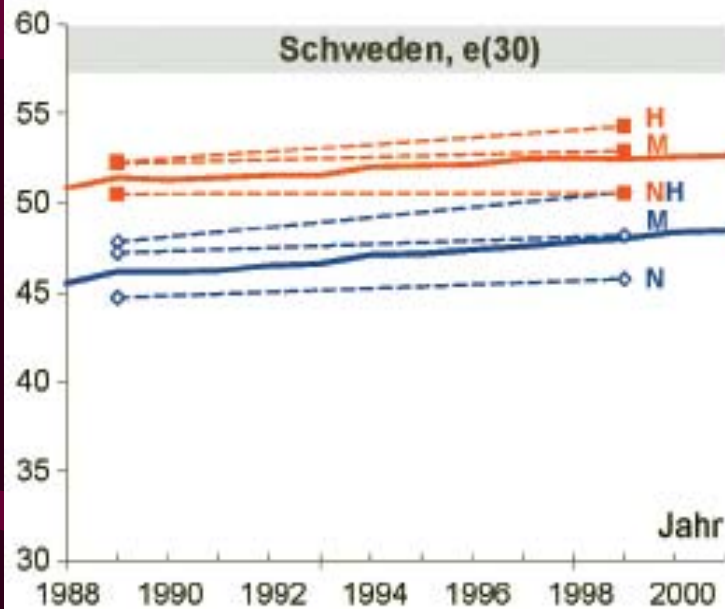
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Positive natural increase
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 Positive net migration
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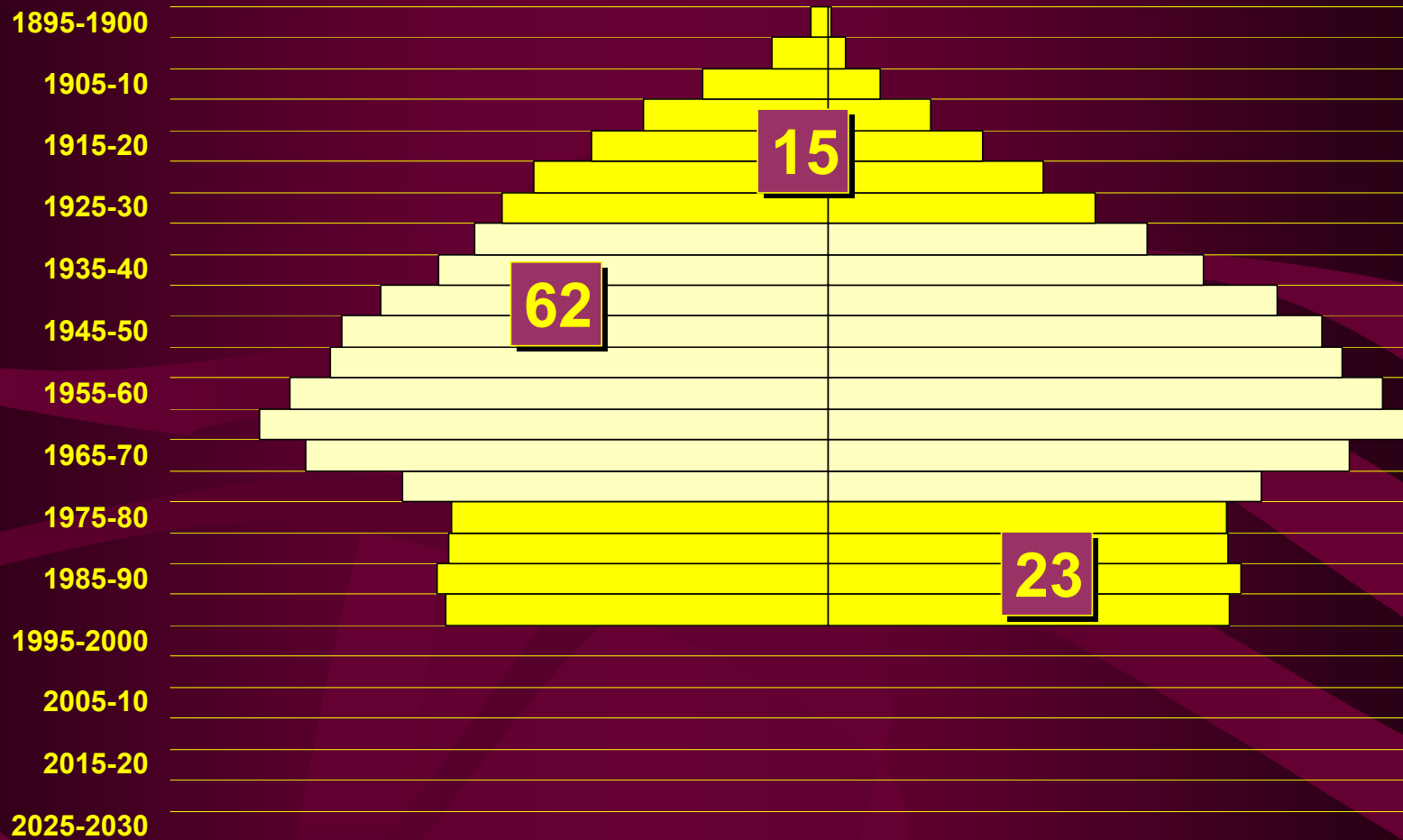
Life Expectancy



Life Expectancy and Education Level



4. Demographic Aging



1895-1900

1905-10

1915-20

1925-30

1935-40

1945-50

1955-60

1965-70

1975-80

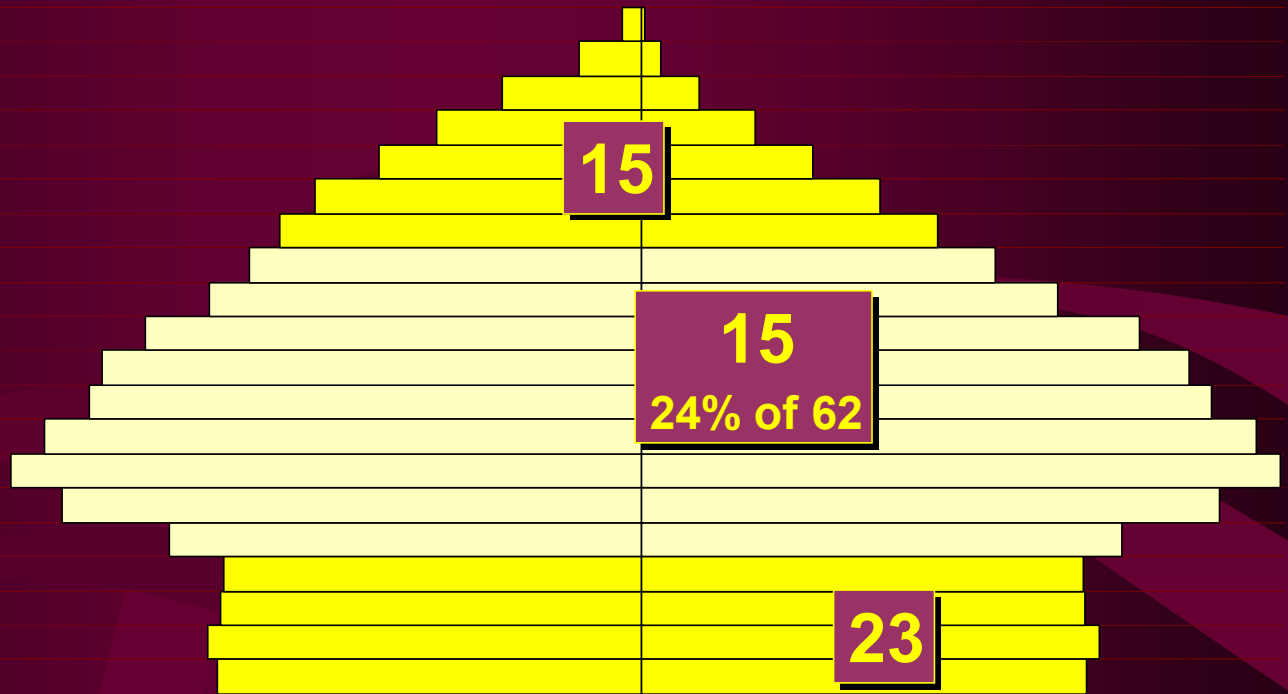
1985-90

1995-2000

2005-10

2015-20

2025-2030



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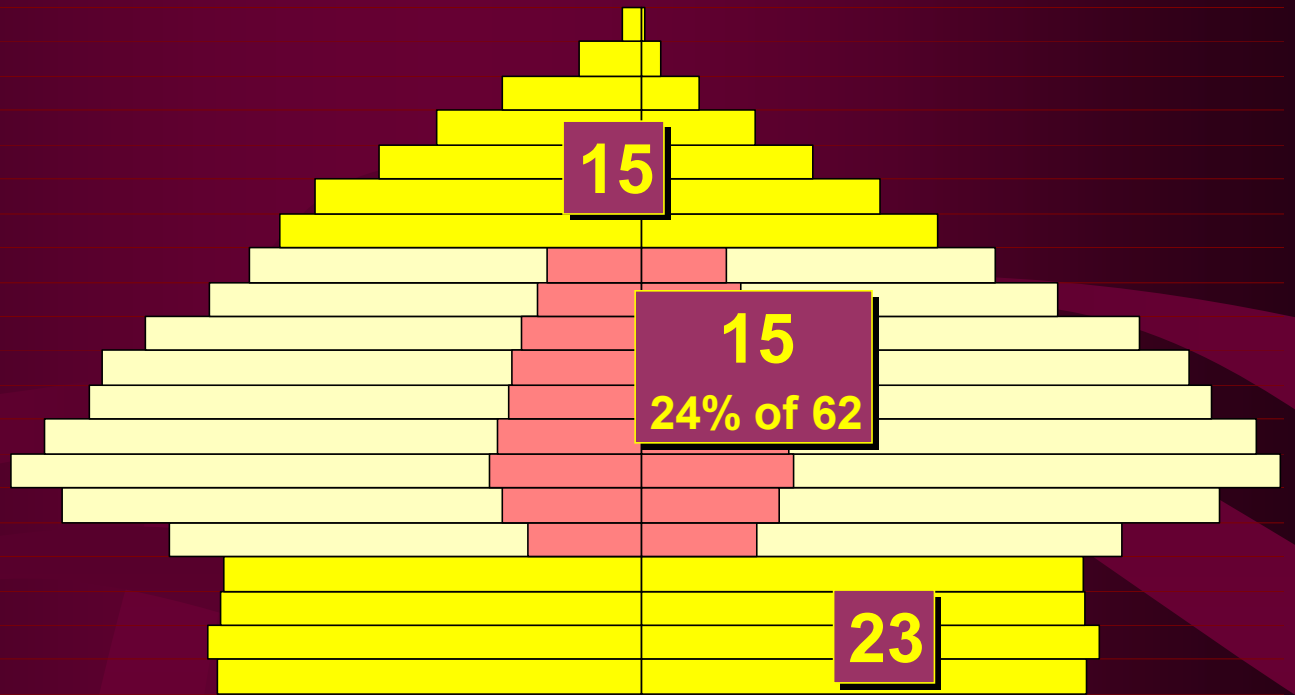
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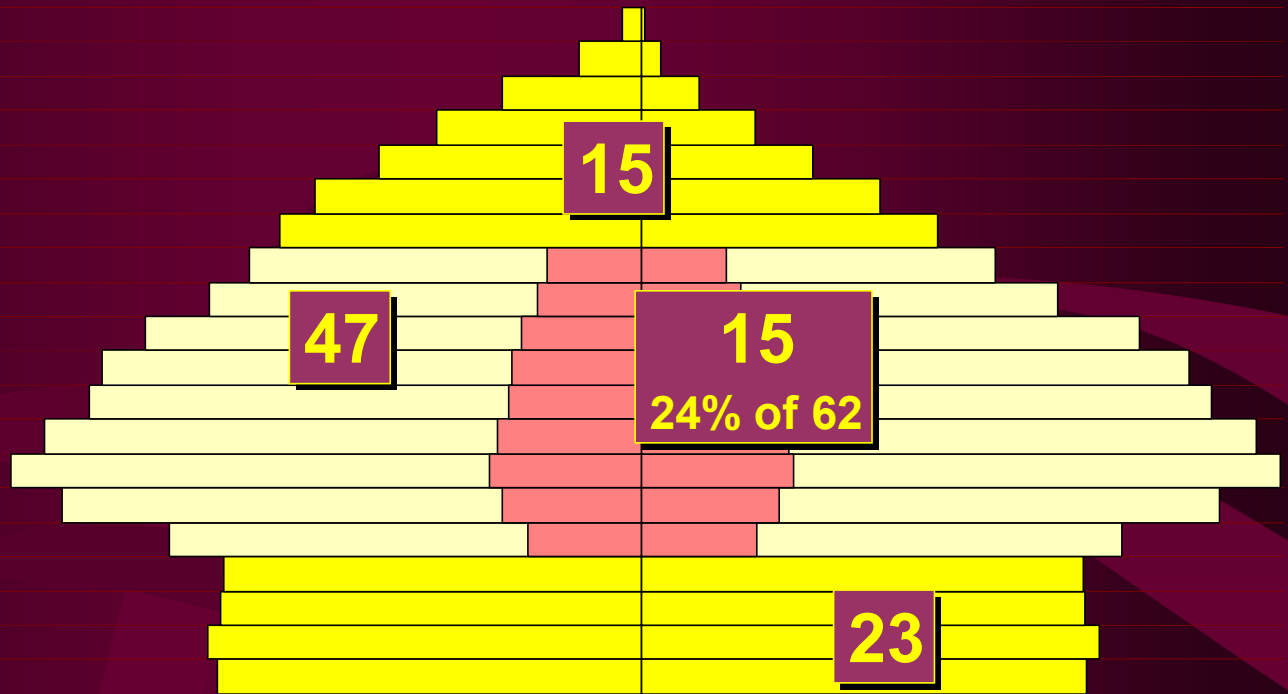
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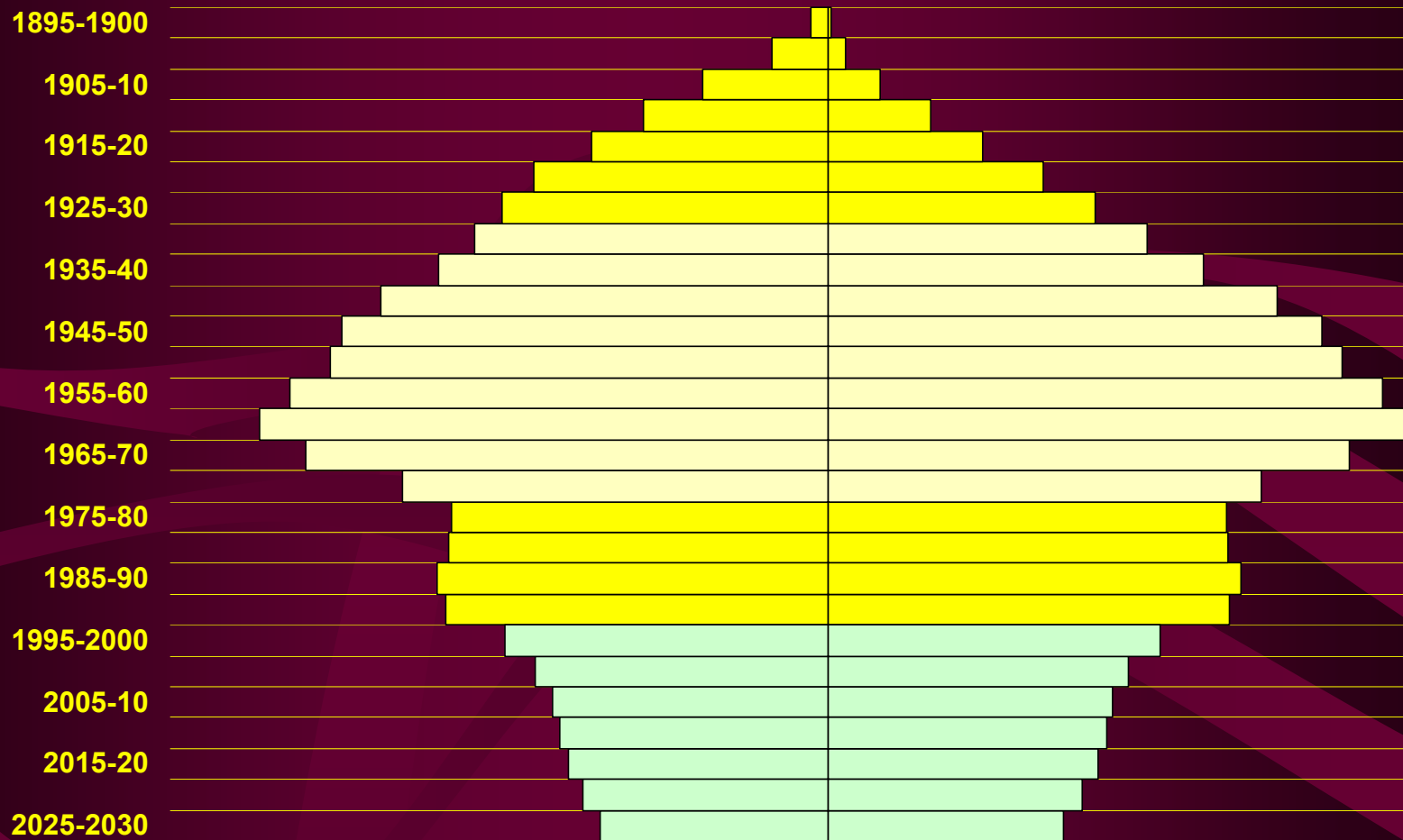
1995-2000

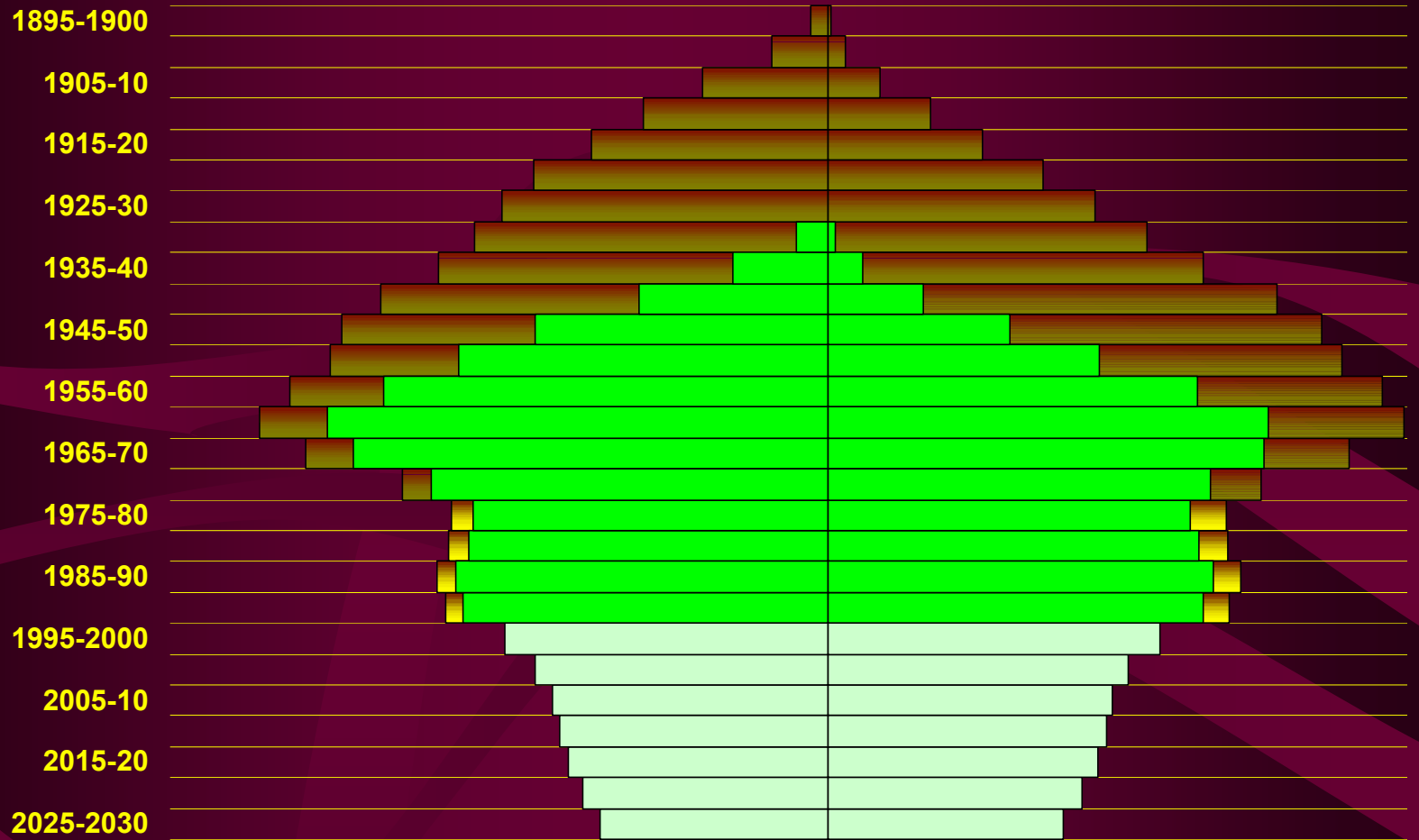
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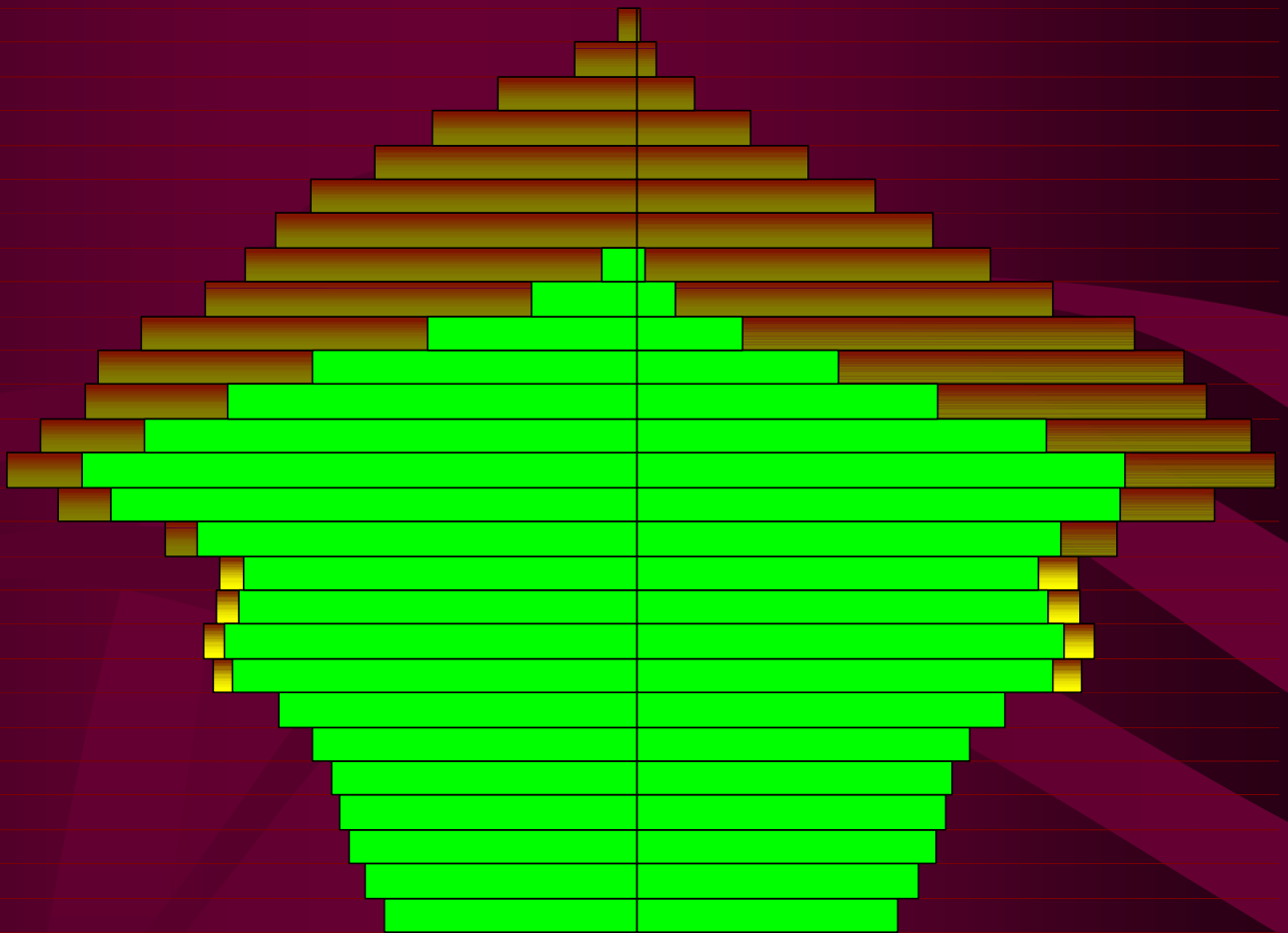
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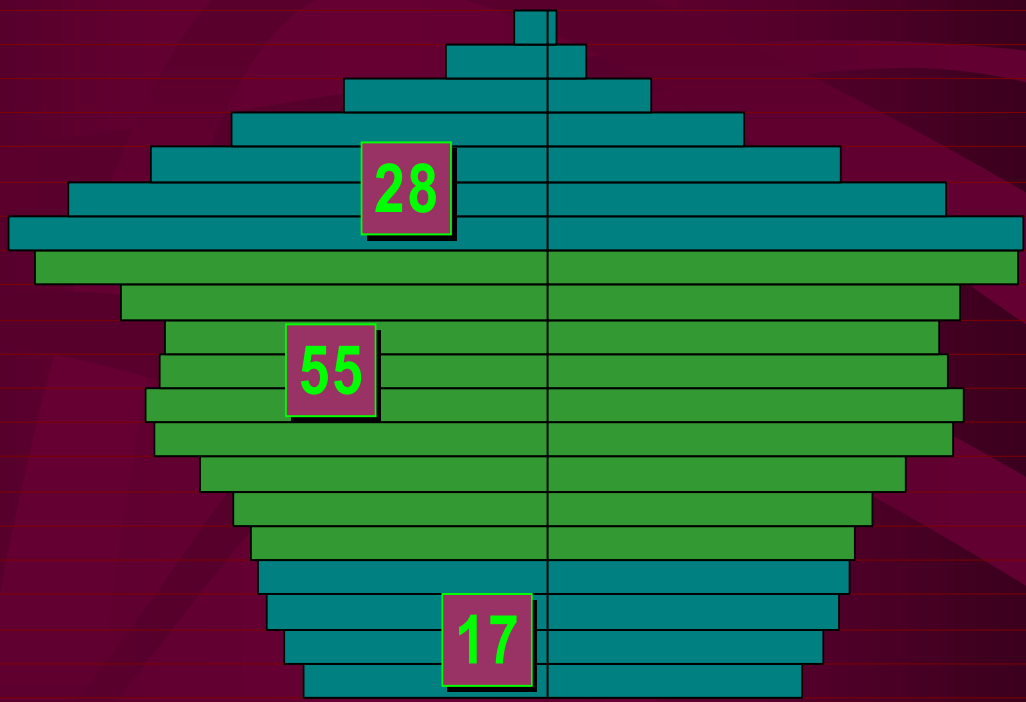
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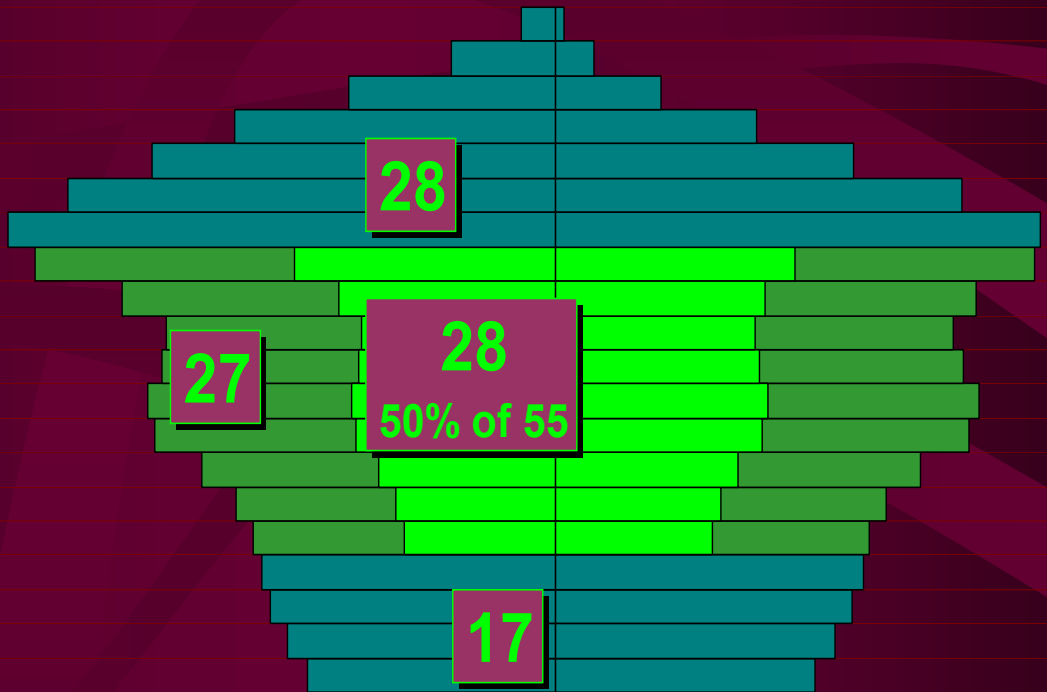
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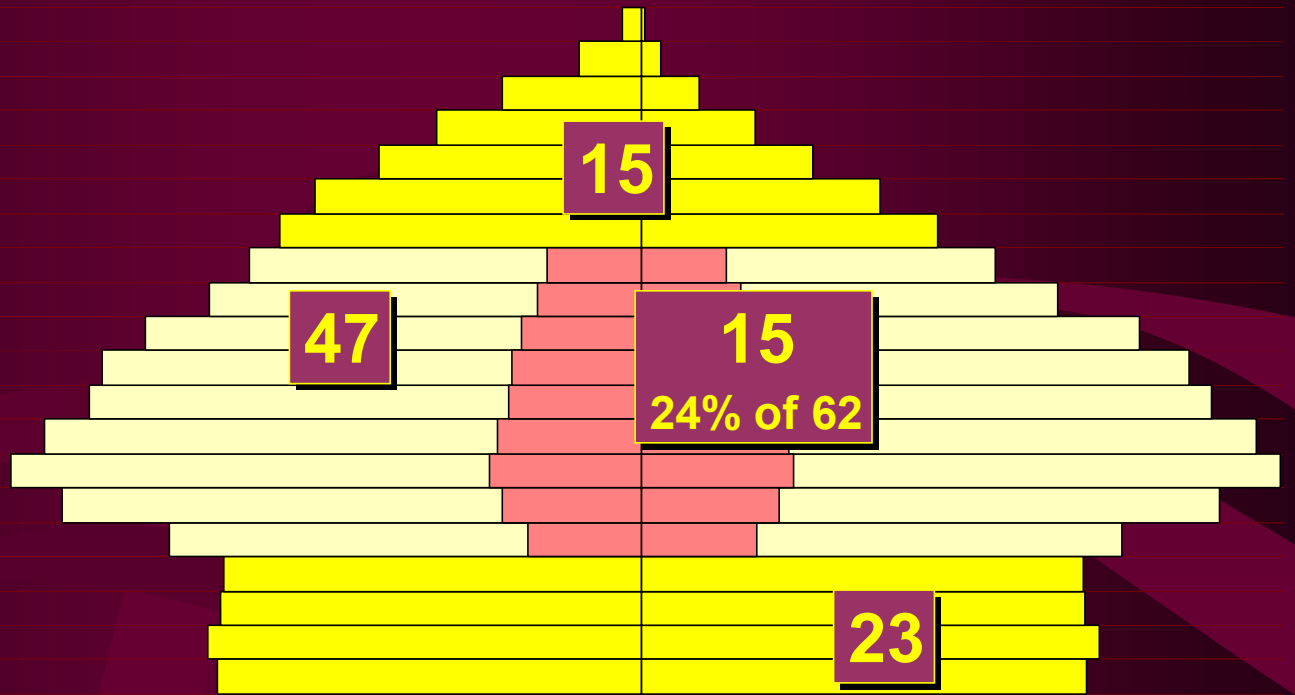
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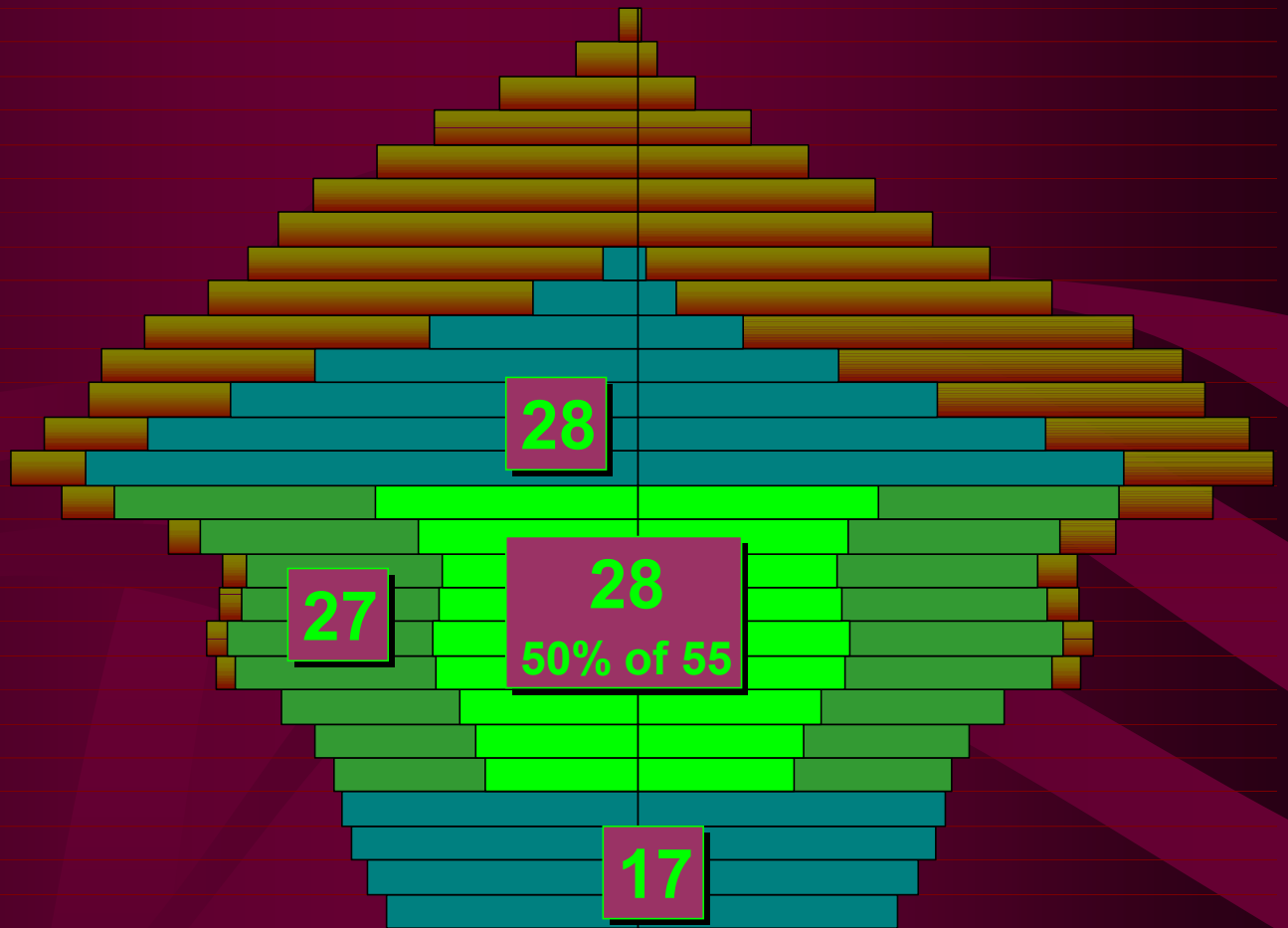
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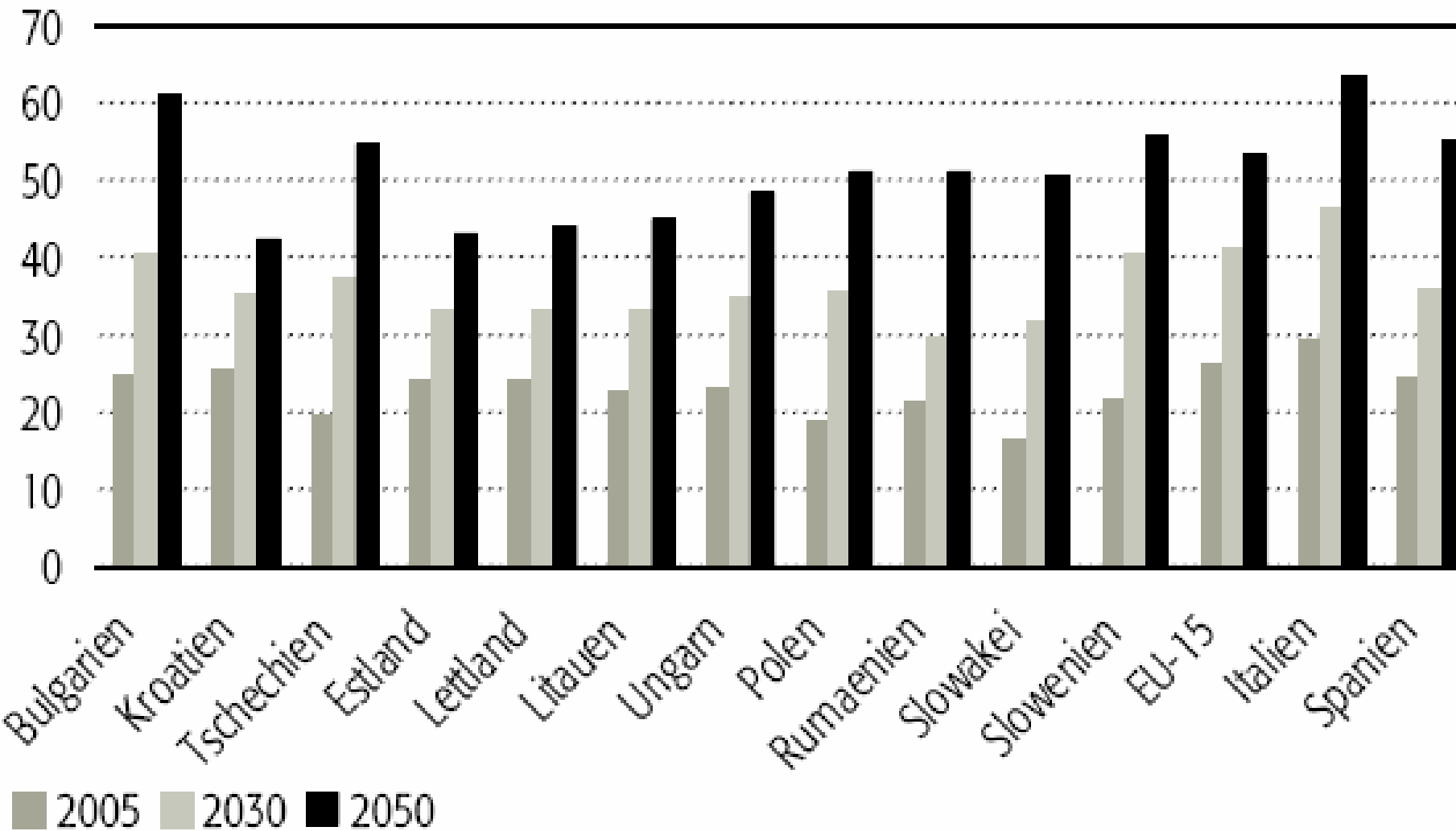
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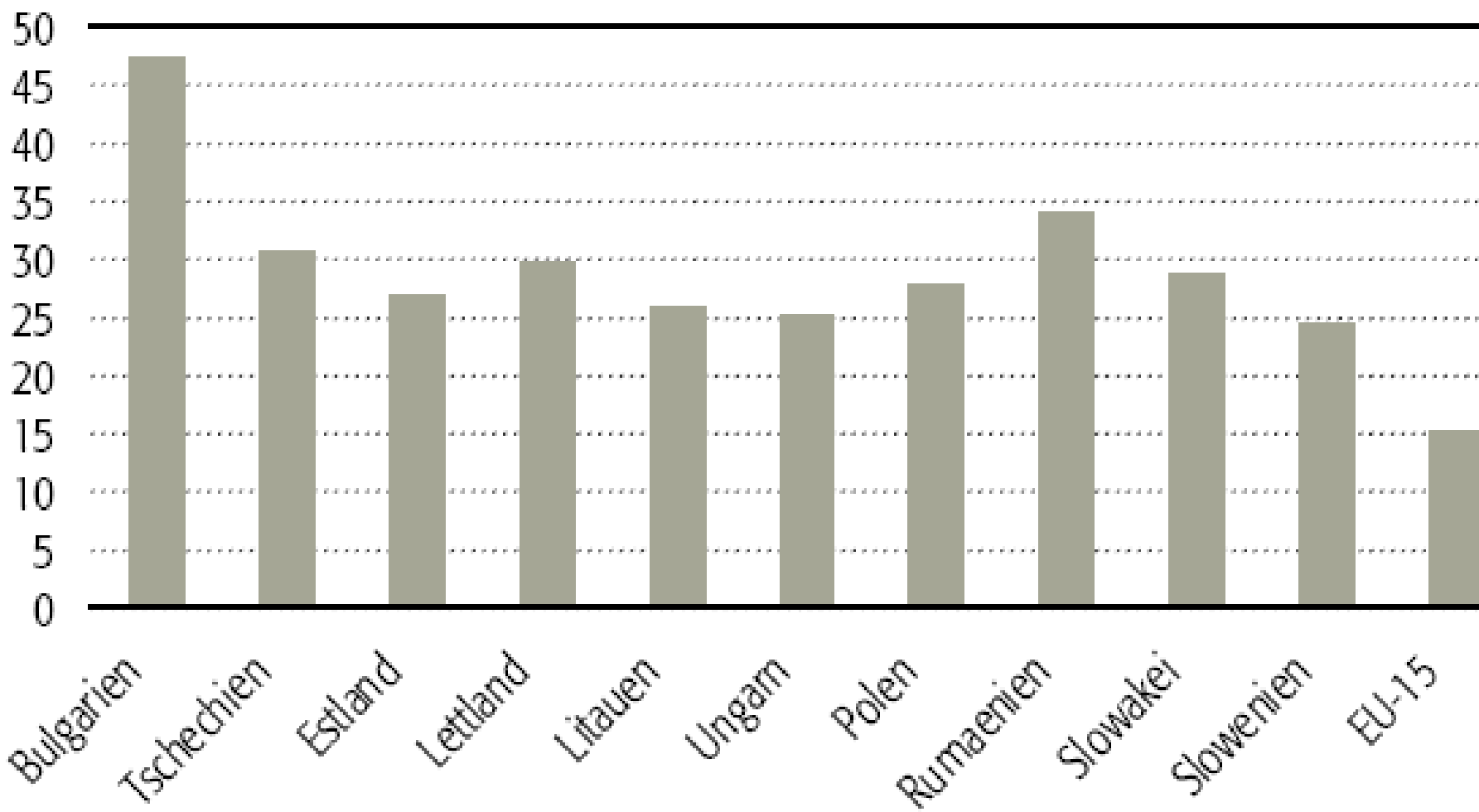
2025-2030



Quotient $>65 / 15-64$



Decline of active population (15-64) 2006-2050



Aging: What's the Problem?

- Financing (distribution vs. capitalization)
- Aging within the active population
- Unemployment
- Is a growth of GDP still possible?
- Lack of transmission of knowledge
- Lack of innovation
- Democracy

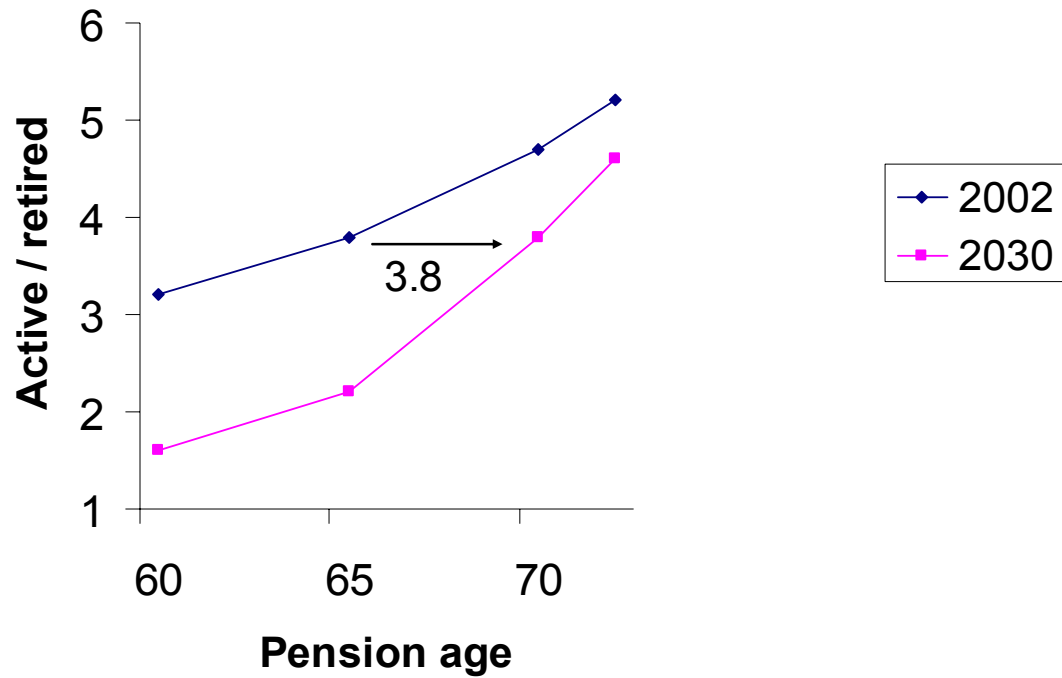
Solutions?

- Sustainability of Social Provision System:
 - To enhance the contributions
 - To reduce the retirement benefits
 - Distorted financing (i.e. Added Value Tax)
 - Focusing the benefits on needy people
 - To increase the retirement age
 - Massive immigration
 - Contributions and/or benefits as function of fertility

Retirement Age



Retirement Age



Massive Immigration?

	Yearly migration's balances (2010-2020), to maintain the age quotient	Effective annual migration (2004)
France	1.1 Mio	120'000
UK	760'000	120'000
Japan	2.2 Mio	200'000(E)

Massive Immigration?

CH	Without migration	Migration Scenario: yearly +33'000 (0.45%)	
Year	Quotient 20-64/65+	Quotient 20-64/65+	% Foreigner in the population
2000	3.6	3.9	22%
2015	2.65	3.3	31%
2030	1.9	2.6	39%

Sustainable rates of financing pension (without health) making it depending of fertility

Total in % of wages

Personal Fertility: 0 1 2 3 4 5 6

Fertility of the population

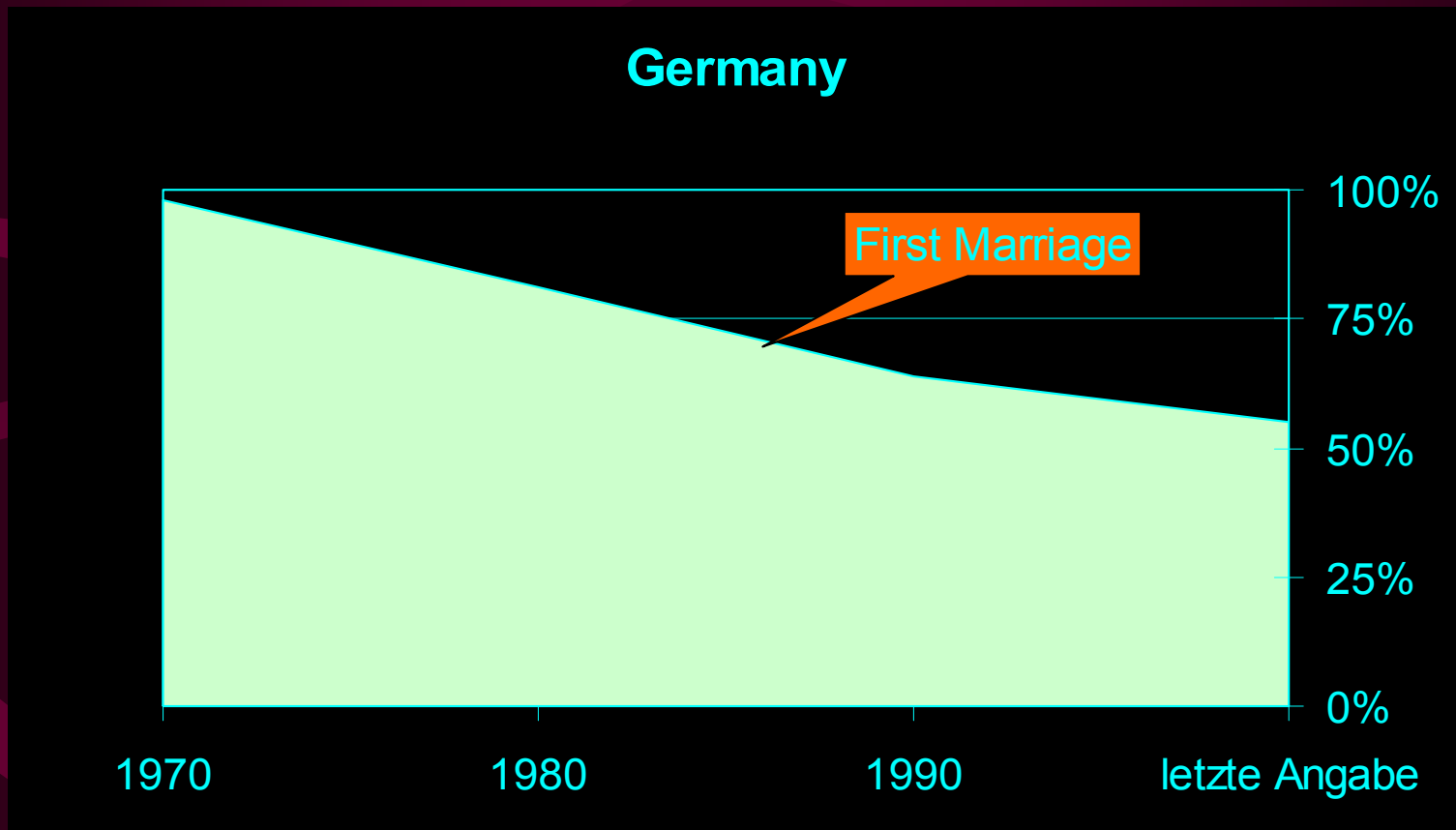
1.4	37.0%	27.7%	18.5%	9.2%	-0.1%	-9.4%	-18.7%
1.55	34.4%	26.0%	17.7%	9.3%	0.9%	-7.5%	-15.9%
1.7	32.2%	24.6%	16.9%	9.3%	1.6%	-6.0%	-13.7%
1.9	29.8%	22.9%	16.1%	9.3%	2.4%	-4.4%	-11.3%
2.1	27.8%	21.6%	15.4%	9.2%	3.0%	-3.2%	-9.3%
2.5	24.8%	19.6%	14.4%	9.2%	4.0%	-1.2%	-6.4%

5. Causes of Underfertility

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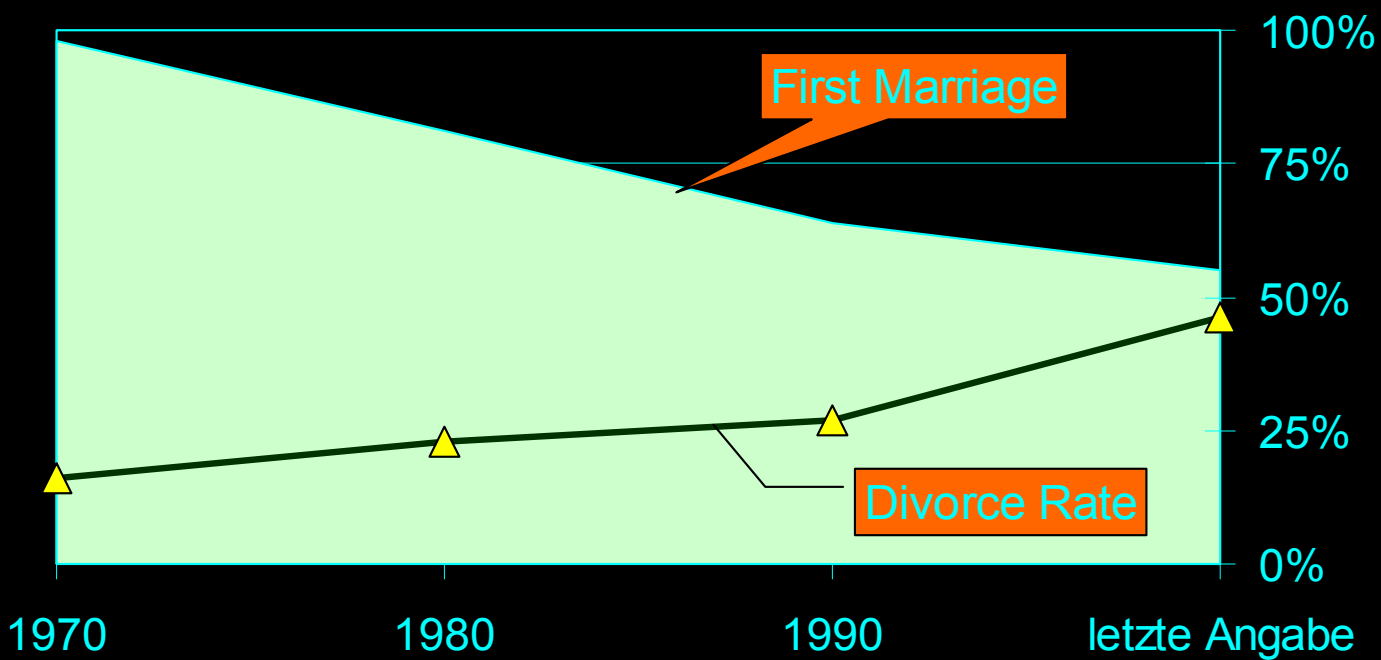
- Institutionalization of micro-family
- Image and status of maternity
- Disintegration of families
- Sexualization of society
- Abortion and anti-birth mentality

Marriage and Divorce

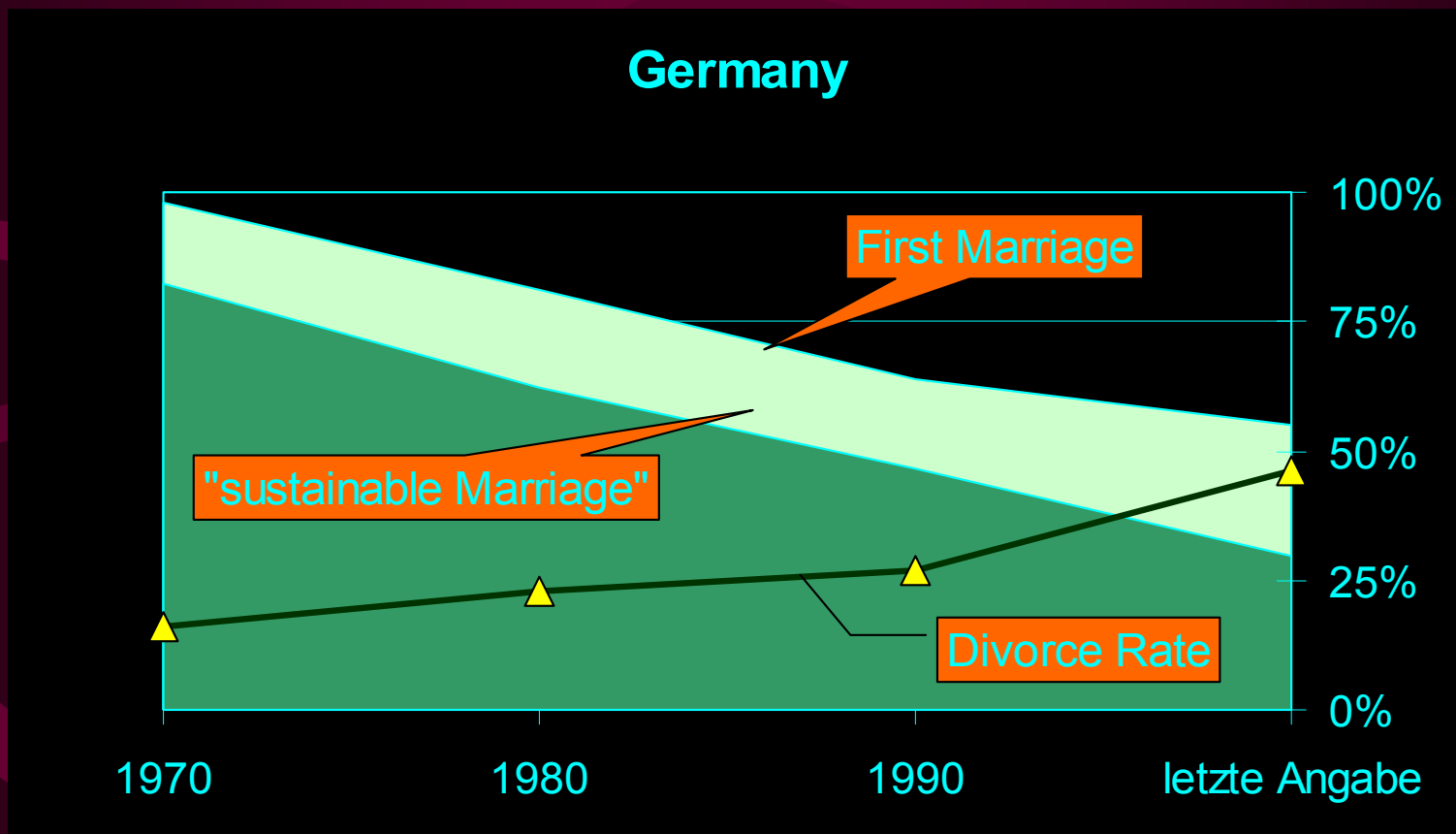


Marriage and Divorce

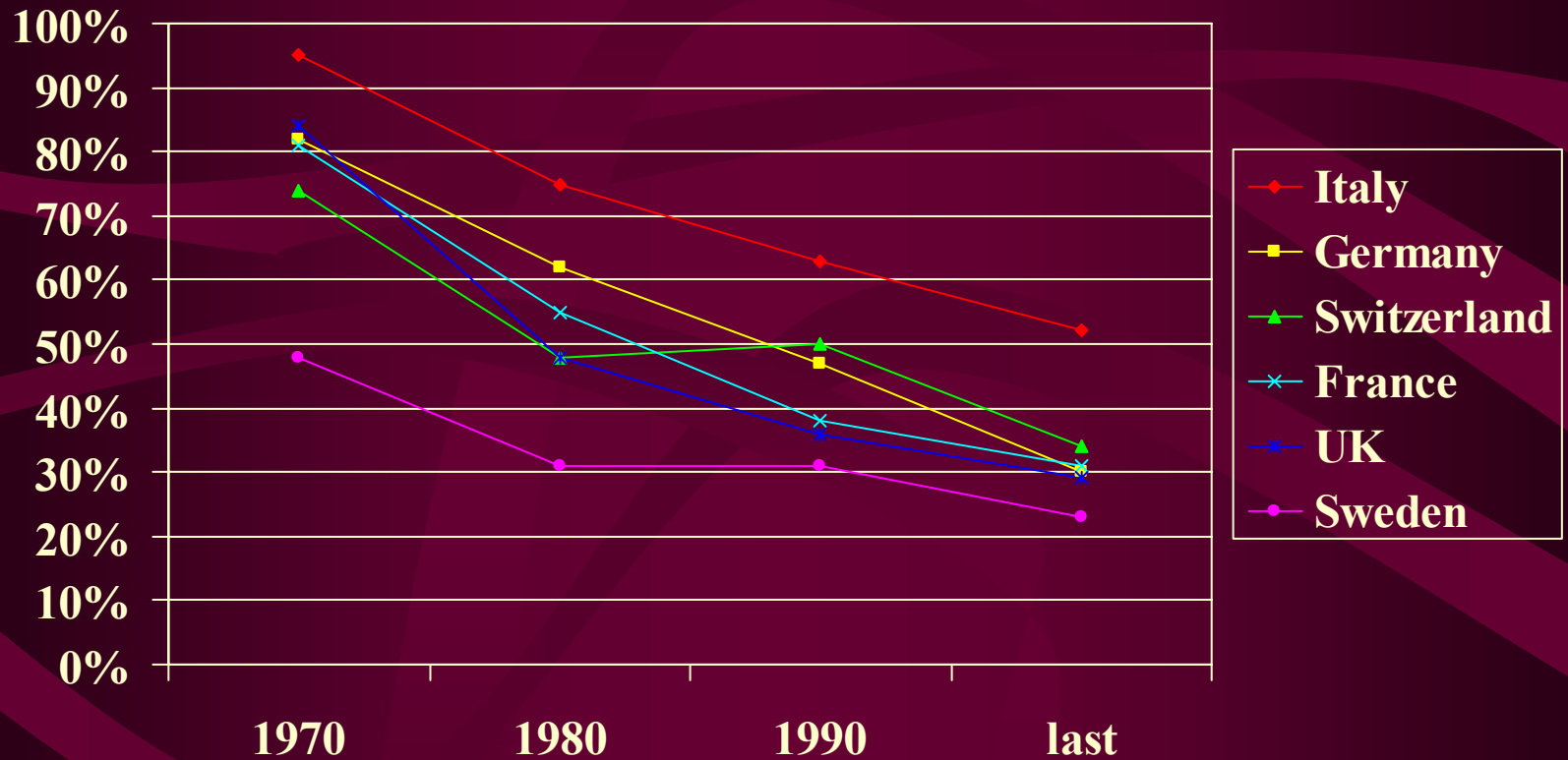
Germany



Marriage and Divorce



“Sustainable Marriages”



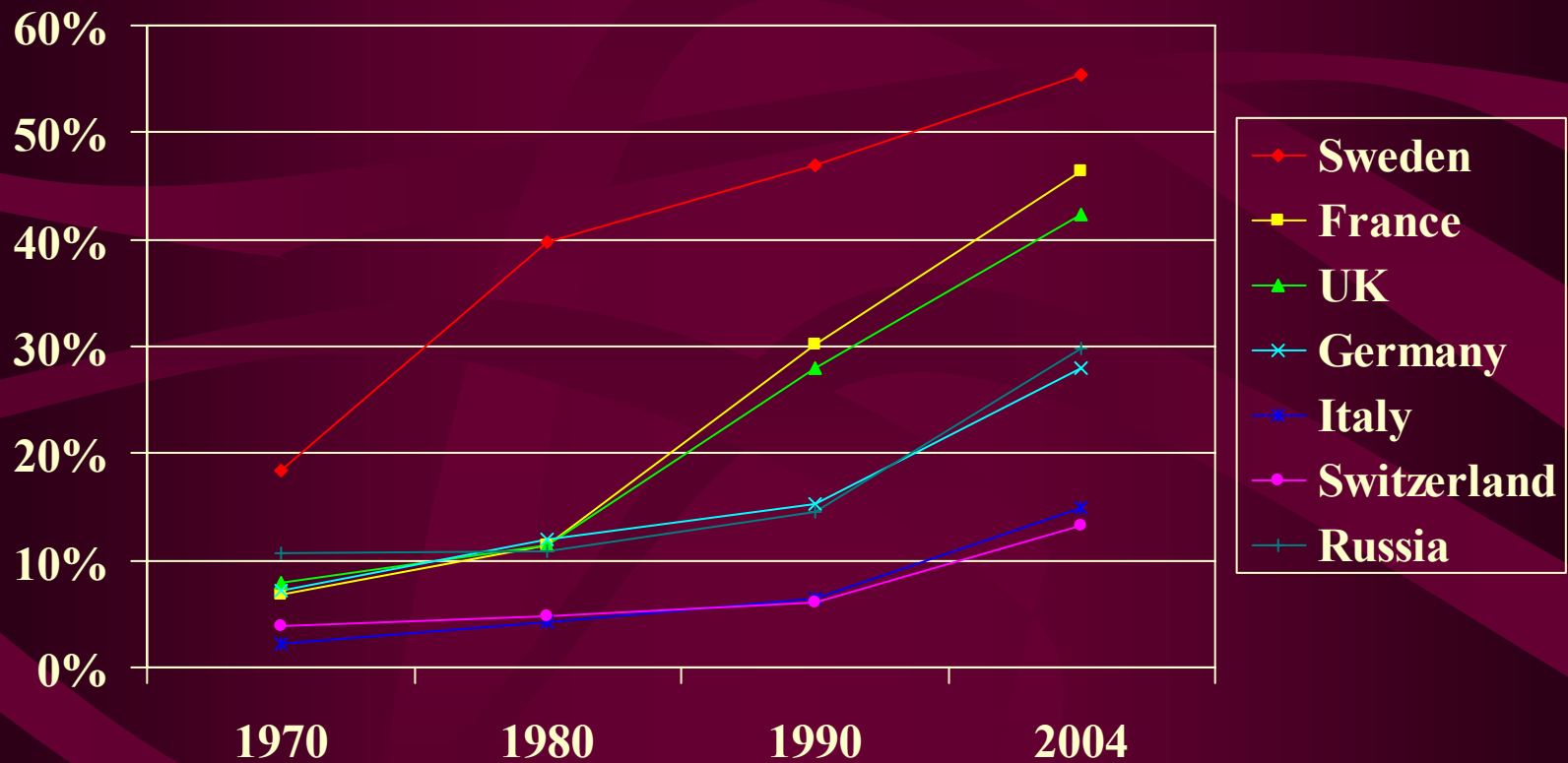
Risk of divorce according to characteristics of spouses

	Woman	Man
Son / daughter of divorced	21%	140%*
Only child	43%*	37%*
Cohabitation before marriage	42%*	64%*
Catholic vs. protestant	-32%*	-25%*
Childless couples	39%*	62%*

Survey on 10'000 Families in Germany, 1988

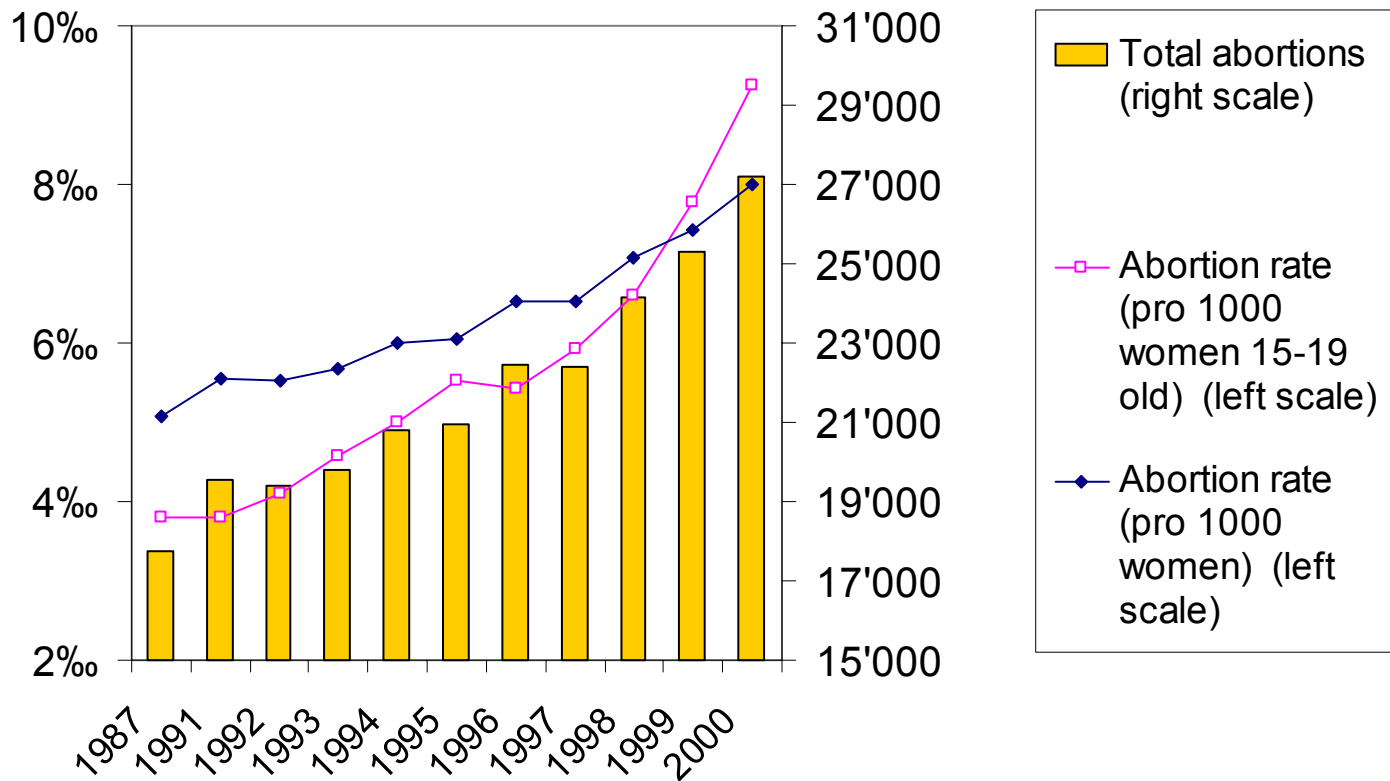
* = statistically significant

Extramarital Births



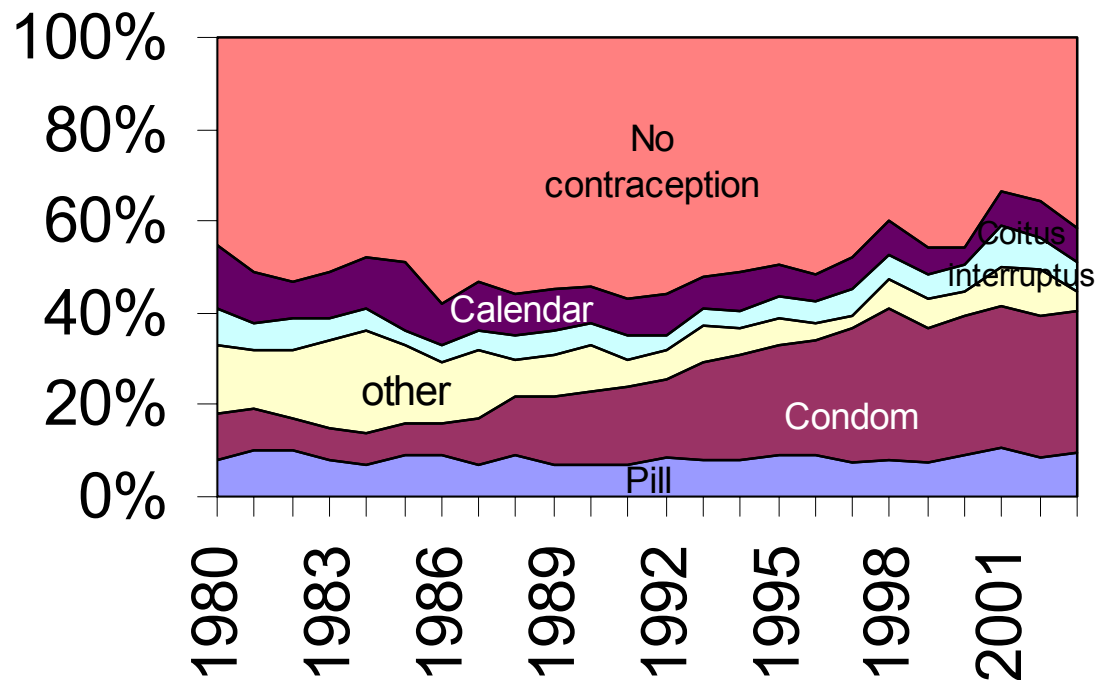
Abortions

Abortions in Nederland
(only in NL domiciliated women)



Abortions and Contraception

Used contraceptive method at the moment of conception, on 100 abortions (canton Bern)



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Thank you