

THE FUTURE OF RELIGION WORLDWIDE

Vegard Skirbekk

Age and Cohort Change Group

(Thanks to Michaela Potančoková, Marcin Stonawski, and Matthew Cantele)

Norwegian Institute of Public Health

Overview

- **Timeline** of project
- **Current religious** distribution in the world
- Why a strong focus on **demographic-religious futures**
- Solid projections require solid knowledge on **causes** of religious growth
 - ▣ Important factors for population growth are **education** and **health** conditions – factors which change in a foreseeable manner
- Example **projections** from around the world
 - ▣ Projections include India and the US

Timeline

- 2006-2008:
 - Anne Goujon, Vegard Skirbekk, Marcin Stonawski and Katrin Fliegenschnee – Austrian and Swiss projections
- 2009-15:
 - Global estimates and projections, Grants from ERC and PEW –
 - Michaela Potančoková joins
 - Later Matthew Cantele strengthens team
 - Scope changes from European to Global
 - Joint reports with PEW on global religion, significant media coverage
- 2014-: Yearbook of International Religious Demography.
- 2014-2016: Initiated new project on religion, education and demography project – first estimates of schooling and faith around the world

Current knowledge

- Very little knowledge on the demography of religion despite high academic, political and popular interest and concern
- The religion project between the ACC group and PEW produced the first global dataset on religious affiliation by age and sex, covering 199 nations and more than 99% of the global population.
- Based on a large database of more than 2500 surveys, registers and censuses
(PEW 2012; Skirbekk et al. 2012)

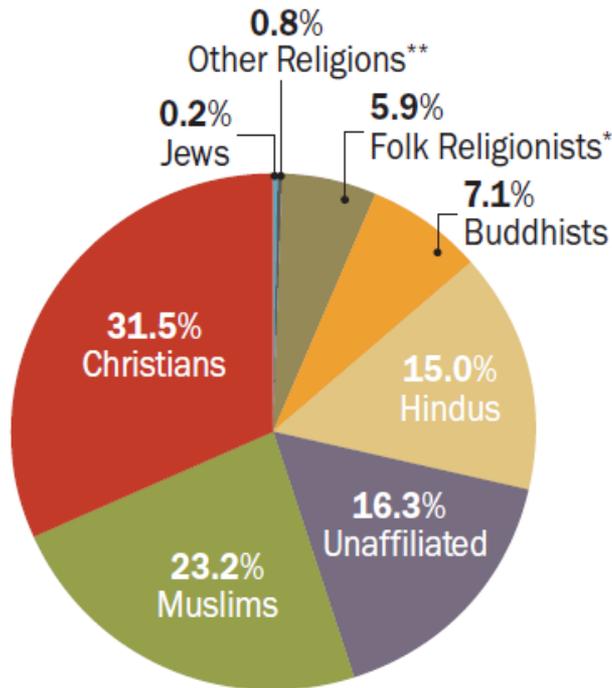
Religion categorisation

- We look at a single dimension of religiosity: **religious affiliation** due to lack of globally comparative data on other aspects of religiosity such as public and private participation in religious activities or intensity of self-assessed religiosity
- 8 religious categories:
 - Christians, Muslims, religiously unaffiliated, Hindus, Buddhists, Jews, Folk Religionists, Others
- **Religiously Unaffiliated:** a rather heterogeneous group that includes secular population –atheists, agnostics– as well as people with no declared religious affiliation and in some countries possibly those who failed to identify themselves within the religious categories in the census/survey questionnaire

84% of the world population have a religion

Size of Major Religious Groups, 2010

Percentage of the global population

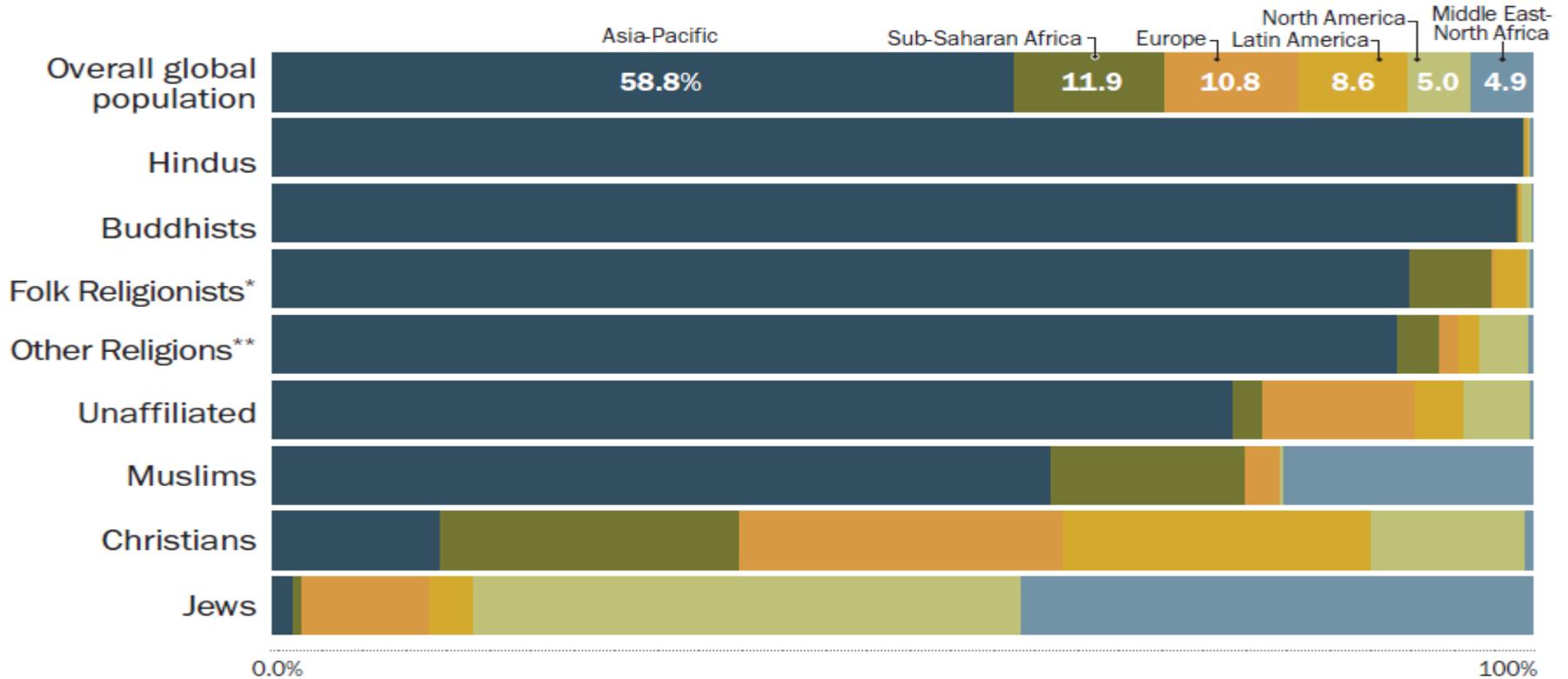


*Includes followers of African traditional religions, Chinese folk religions, Native American religions and Australian aboriginal religions.

**Includes Bahai's, Jains, Sikhs, Shintoists, Taoists, followers of Tenrikyo, Wiccans, Zoroastrians and many other faiths.

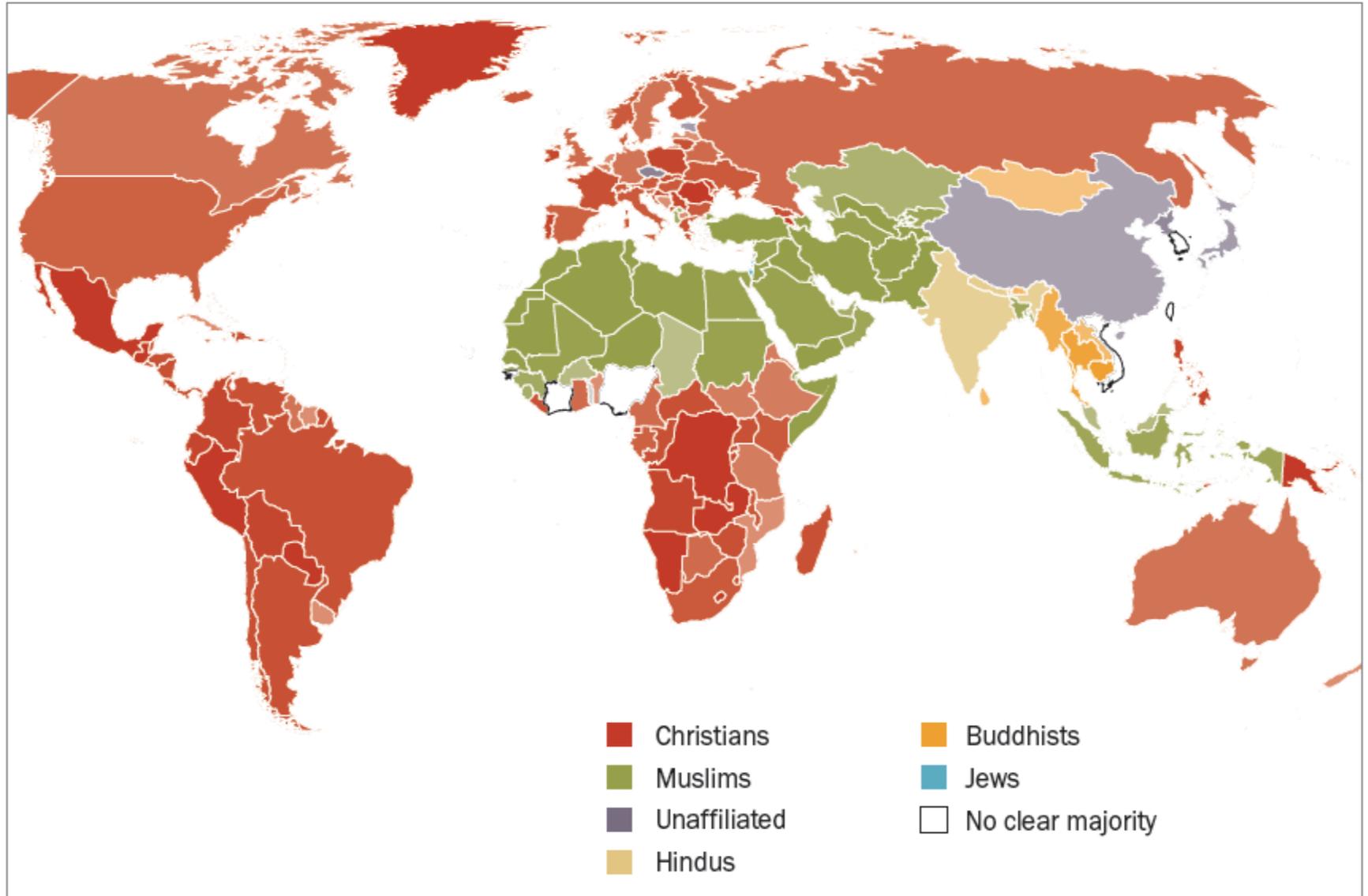
Geographic Distribution of Religious Groups

Percentage of each group's total population that lives in particular regions



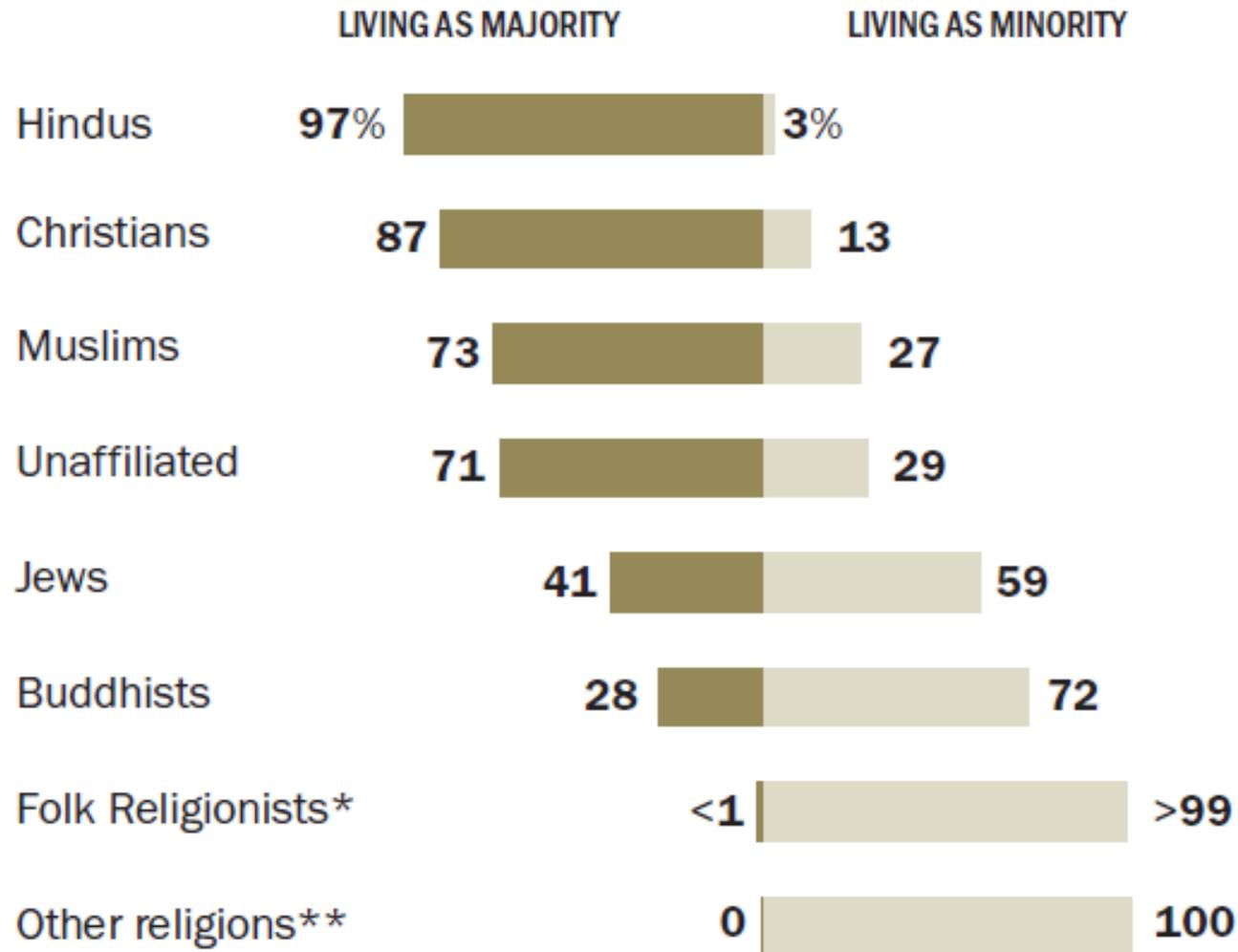
Majority Religion, by Country

Countries are colored according to the majority religion. Darker shading represents a greater prevalence of the majority religion.



Majority or Minority

Percentage of each religious group that lives in countries where its adherents are a majority or a minority



Regional Distribution of the Unaffiliated

Population by region as of 2010



Percentage of world unaffiliated population in each region as of 2010



10 Countries with the Largest Number of Unaffiliated

	ESTIMATED 2010 UNAFFILIATED POPULATION	PERCENTAGE OF POPULATION THAT IS UNAFFILIATED	PERCENTAGE OF WORLD UNAFFILIATED POPULATION
China	700,680,000	52.2 %	62.2 %
Japan	72,120,000	57.0	6.4
United States	50,980,000	16.4	4.5
Vietnam	26,040,000	29.6	2.3
Russia	23,180,000	16.2	2.1
South Korea	22,350,000	46.4	2.0
Germany	20,350,000	24.7	1.8
France	17,580,000	28.0	1.6
North Korea	17,350,000	71.3	1.5
Brazil	15,410,000	7.9	1.4
Subtotal for the 10 Countries	966,040,000	39.9	85.8
Subtotal for Rest of World	160,460,000	3.6	14.2
World Total	1,126,500,000	16.3	100.0

Population estimates are rounded to the ten thousands. Percentages are calculated from unrounded numbers. Figures may not add exactly due to rounding.
 Pew Research Center's Forum on Religion & Public Life • Global Religious Landscape, December 2012

Source: IIASA-PEW Report 2012

Why should we pay attention to the future of global religion?

- Religion - fundamental identity marker; basis for self-understanding and behaviour (Borooah 2004; Davie 2007)
- Affects lifestyles, mate choice, physical and mental health, political alliances (for an overview see e.g., Chatters 2000)
- Relates to sense of community, willingness to transfer resources towards common goals, participate in risk sharing systems

Religion determines demographic behaviour

- Religious affiliation influences family formation patterns, childbearing timing and outcomes (Westoff and Jones 1979; McQuillan 2004)
- Even net of socio-economic characteristics, religion is found to have substantial effects on fertility levels (Philipov and Berghammer 2007; Lehrer 1996)
- Fertility differentials are central for the distribution of religion in the years ahead as children tend to resemble their parents in this trait (Min and Kim 2005; Manning 2013)
- Religion may increase in importance over time as other fertility determinants converge (such as education in richer nations)
- Demographic change (ageing, changes in population density and consequences thereof) may also affect religion

Religion can affect health risk factors

- Lifestyles increasingly important for health outcomes. Religion may affect health risk factors (e.g., diet, alcohol use), disease risks and longevity.
- Specific risk factors less tolerated in certain religions, e.g., AIDS may be more stigmatized in religions opposed to same-sex relationships, suicide may be forbidden (Stack and Kposowa 2011).
- Risk factors such as obesity, diet and physical activity may be associated with greed, sloth and gluttony - considered sins in Christianity (Schimmel 1997).
- Growth in Hinduism can affect worldwide prevalence of vegetarianism and its possible health impacts (Fraser 1999).
- Health may also affect religion and fear of death can be an important determinant of religion. Psychological and environmental uncertainty correlates with religious belief (Barber 2011).

Religious fertility trajectories decided by determinants

□ **Fertility Converging**

- Global fertility decline
- Development; income growth, employment, education and health improvements
- Prices, housing shortage, less opportunities and benefits for having large families
- Urbanisation
- Basic social security cover greater proportion of world population
- Similarity of lifestyles – less physical work, more media consumption, less movement, less risk

□ **Fertility Diverging**

- Polarisation, conflicts, tension, religious revival
- Religion becoming a communal boundary marker, particularly for minority groups
- Greater risks, resource scarcity, technological change, climatic conditions
- Rectangularisation of mortality, survival of children likely; net fertility may increase even as gross fertility declines

□ **Future will be decided by**

- Convergence or persistence in these type of inequalities
- Examples include education and health



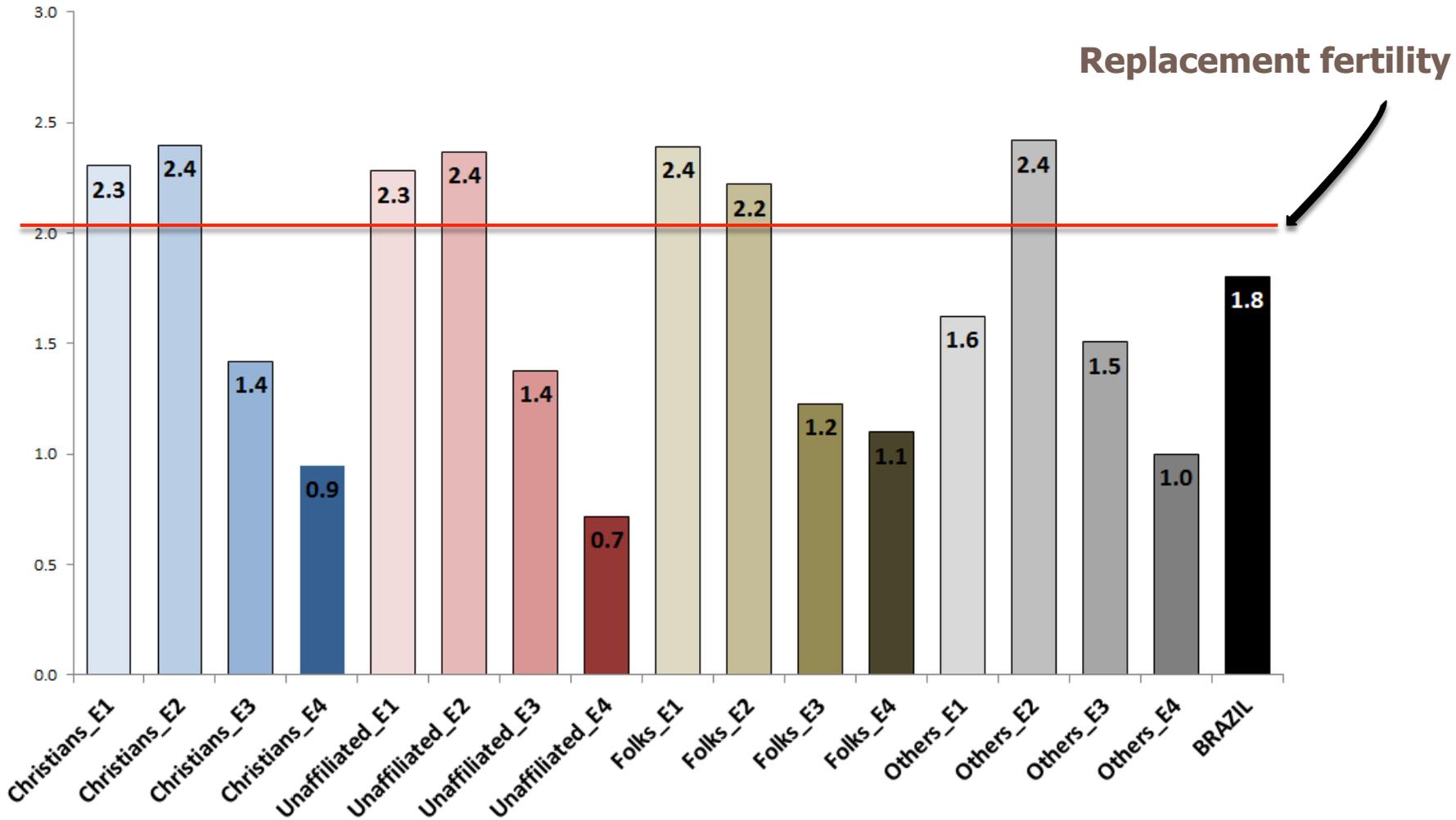
Education

Education and religious demography

- Growth in secular schooling may decrease religious variation in childbearing and demographic growth
- Schooling tends to imply lower fertility (James et al. 2012) but also causally lead to later fertility, as evidence from instrumental variable techniques reveal (Black et al. 2008, Skirbekk 2004, 2008).

Secularisation relates to low fertility across beliefs

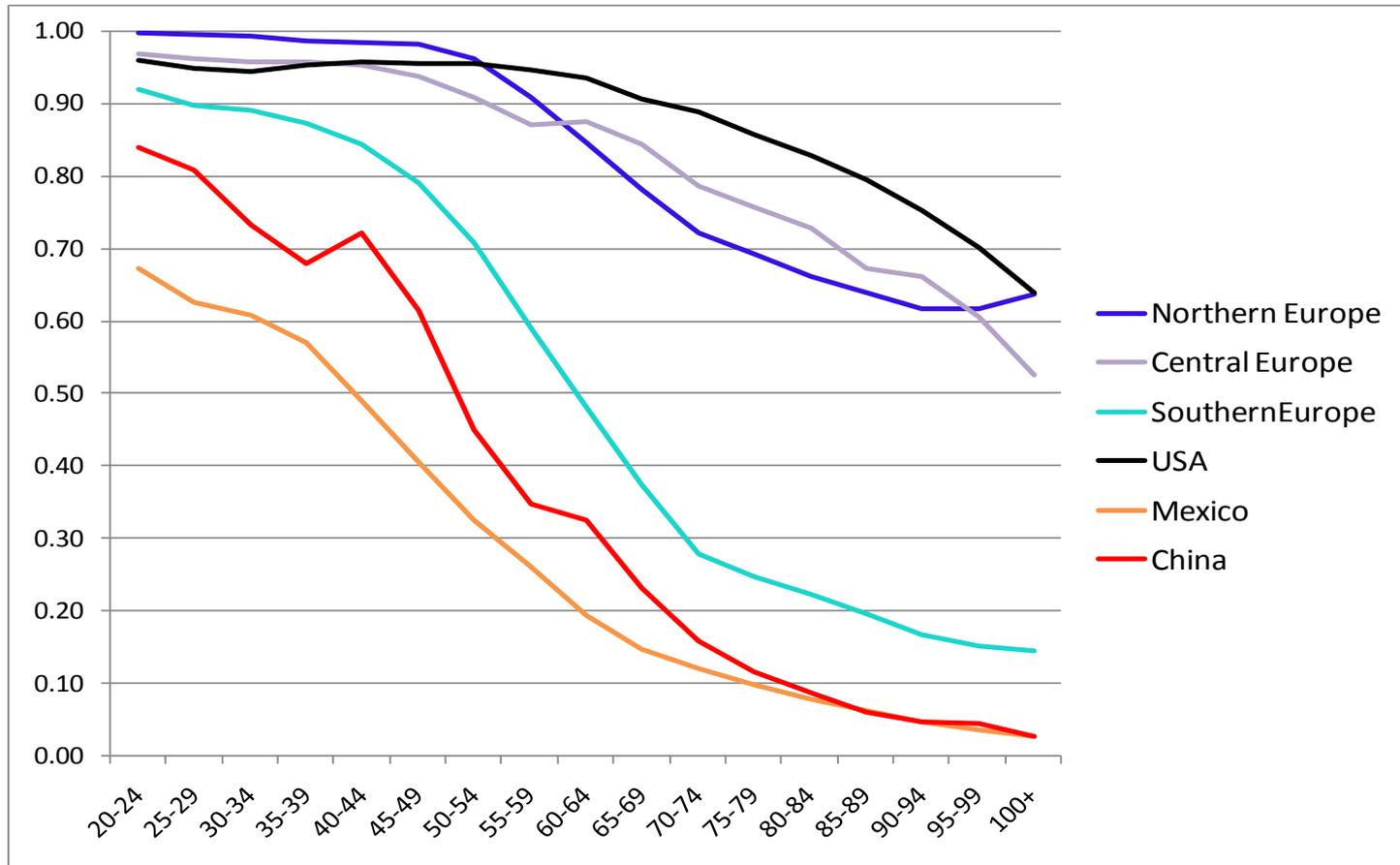
Total fertility rate by religion and education in Brazil 2010



Fertility rates of women with postsecondary education (E4) in Brazil are extremely low, at 1.0 child per woman for all religious groups, and as low as 0.7 children per woman for the unaffiliated. Even those with secondary and above education (E3) have all below replacement fertility (1.2-1.5 children). With no or only primary education (E1 and E2) fertility is in most cases above replacement.

Religious futures converging?

Education rising along cohort lines

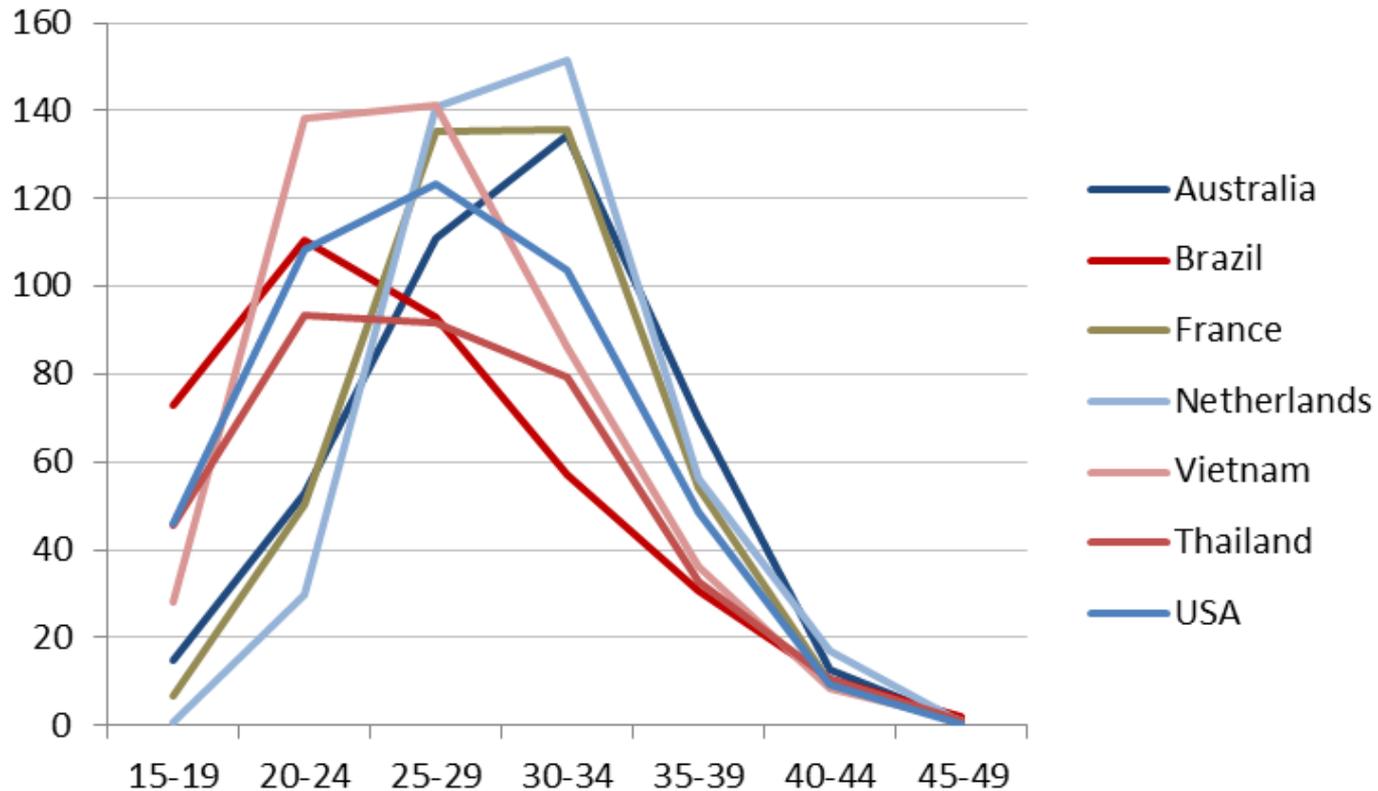


Schooling universally shifts fertility to older ages

- Those with more schooling concentrate their childbearing at older ages (Jejeebhoy 1995, Kravdal and Rindfuss 2008)
- Possibly greater similarity in fertility outcomes between groups with similar schooling

Age patterns differ, even when TFR levels similar

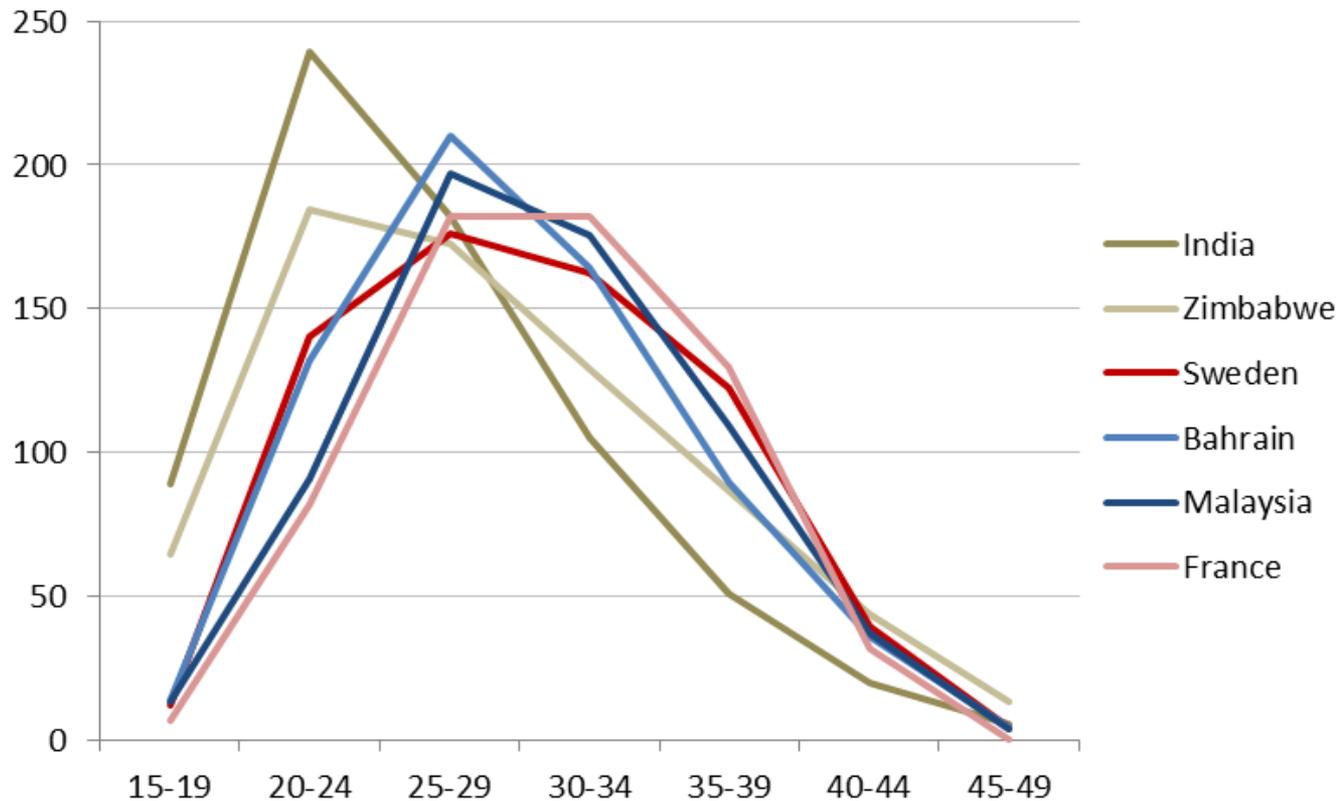
Fertility patterns for Christians (TFR 1.8-2.2)



	Australia	Brazil	France	Netherlands	Vietnam	Thailand	USA
TFR	1.98	1.89	1.96	1.99	2.20	1.78	2.20
Differential to overall TFR in %	3	-1	0	14	17	9	6
% fertility realised by age 25	17	49	15	8	38	39	35

Age patterns differ, even when TFR levels similar

Fertility patterns for Muslims (TFR 3.0-3.5)

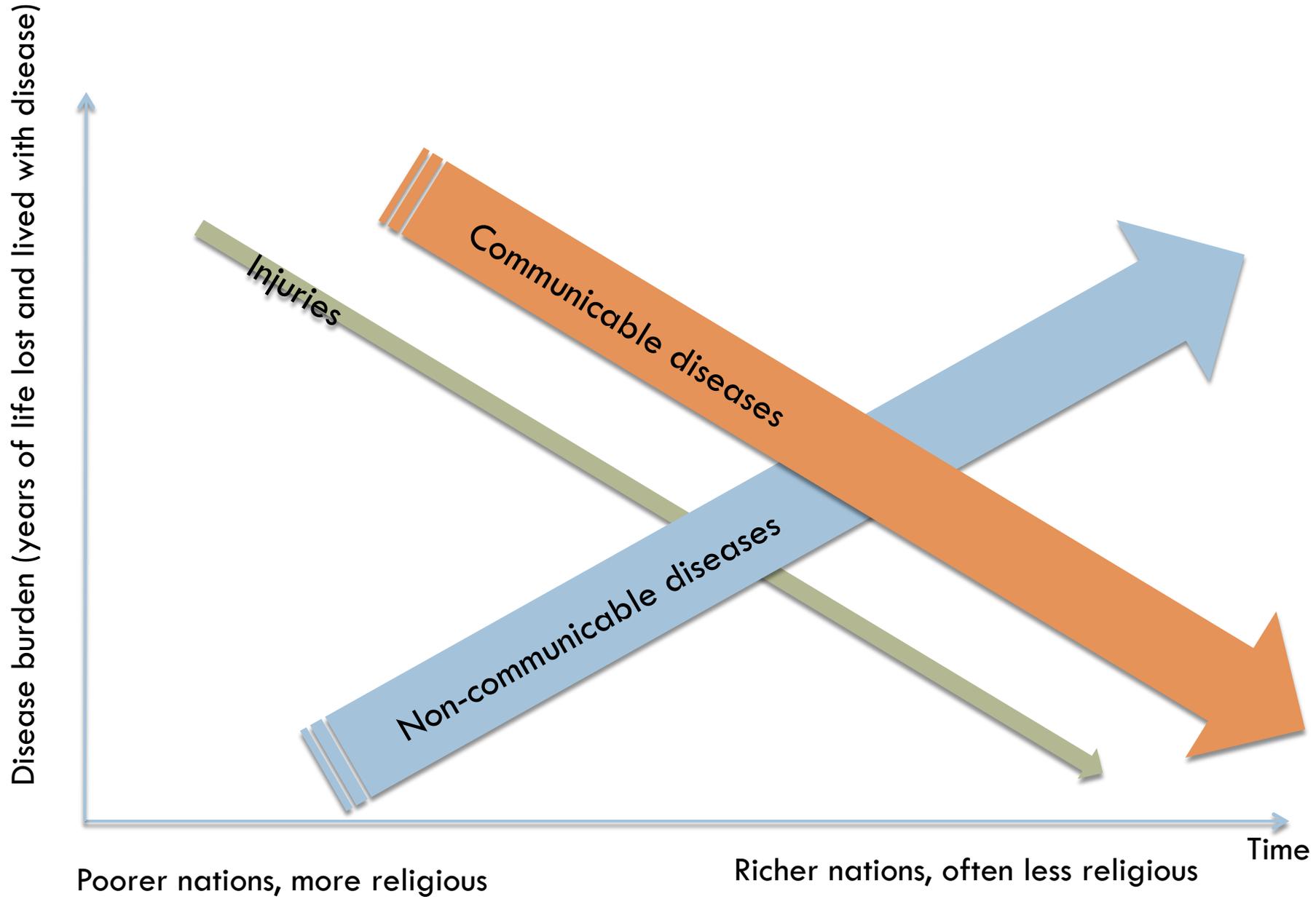


	India	Zimbabwe	Sweden	Bahrain	Malaysia	France
TFR	3.46	3.47	3.29	3.25	3.13	3.07
Differential to overall TFR in %	27	0	73	24	15	56
% fertility realised by age 25	47	36	23	22	17	14



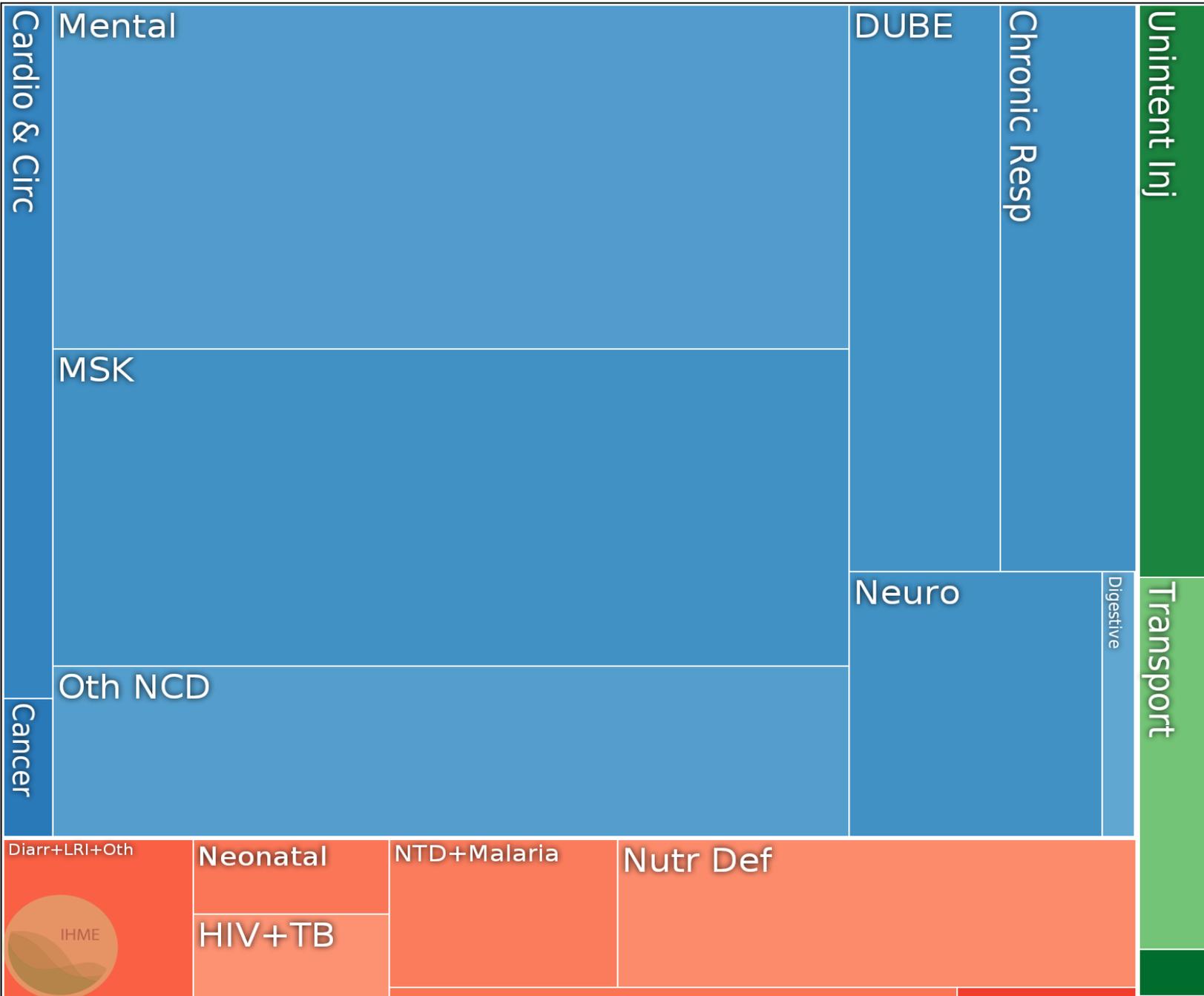
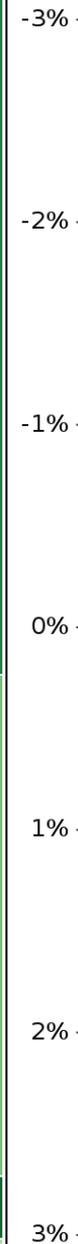
Health

Epidemiological transition



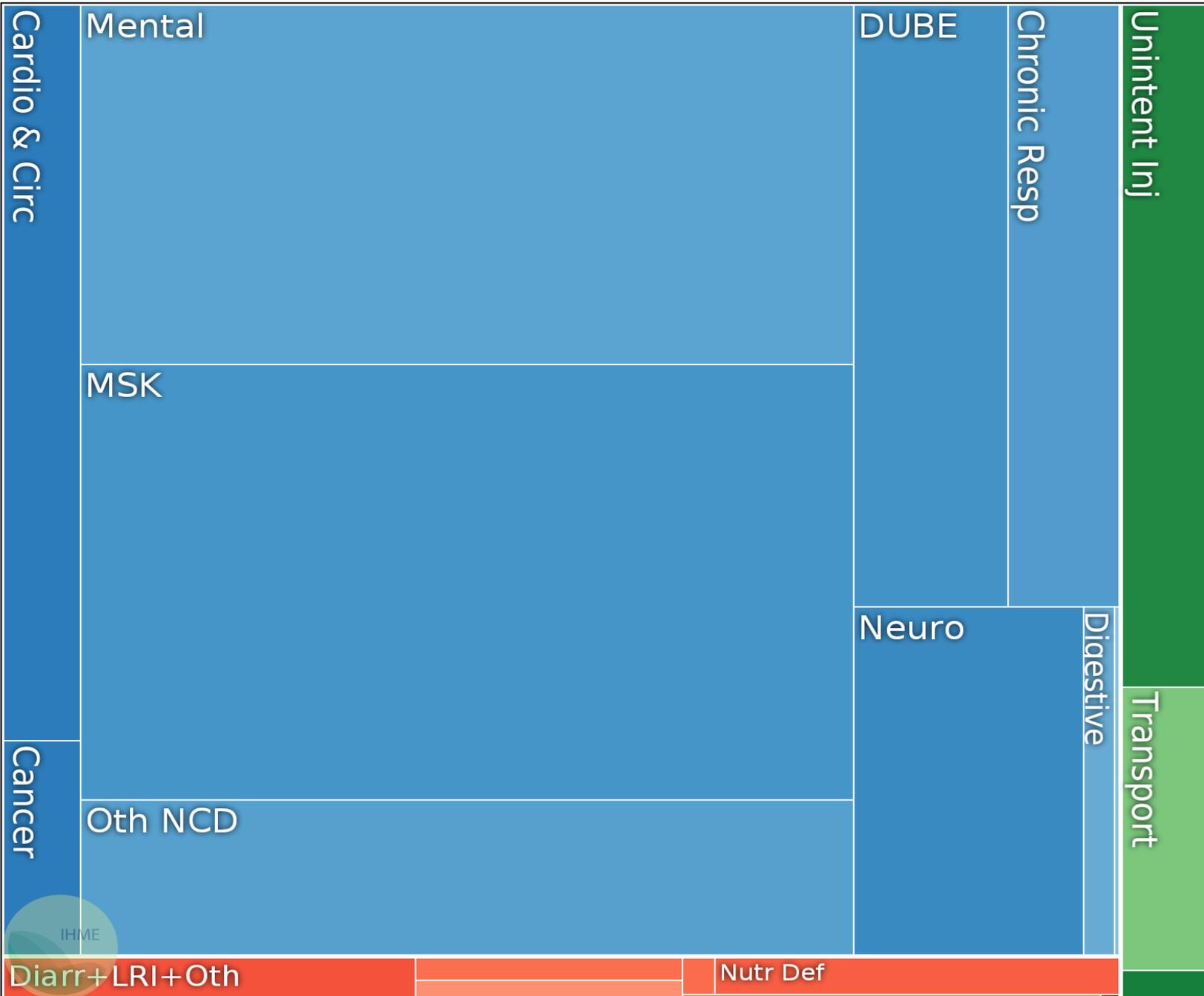
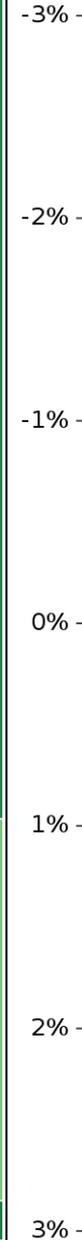
Global, YLDs
Both sexes, All ages, 2010

Annual % change
2005 to 2010
YLDs/100,000

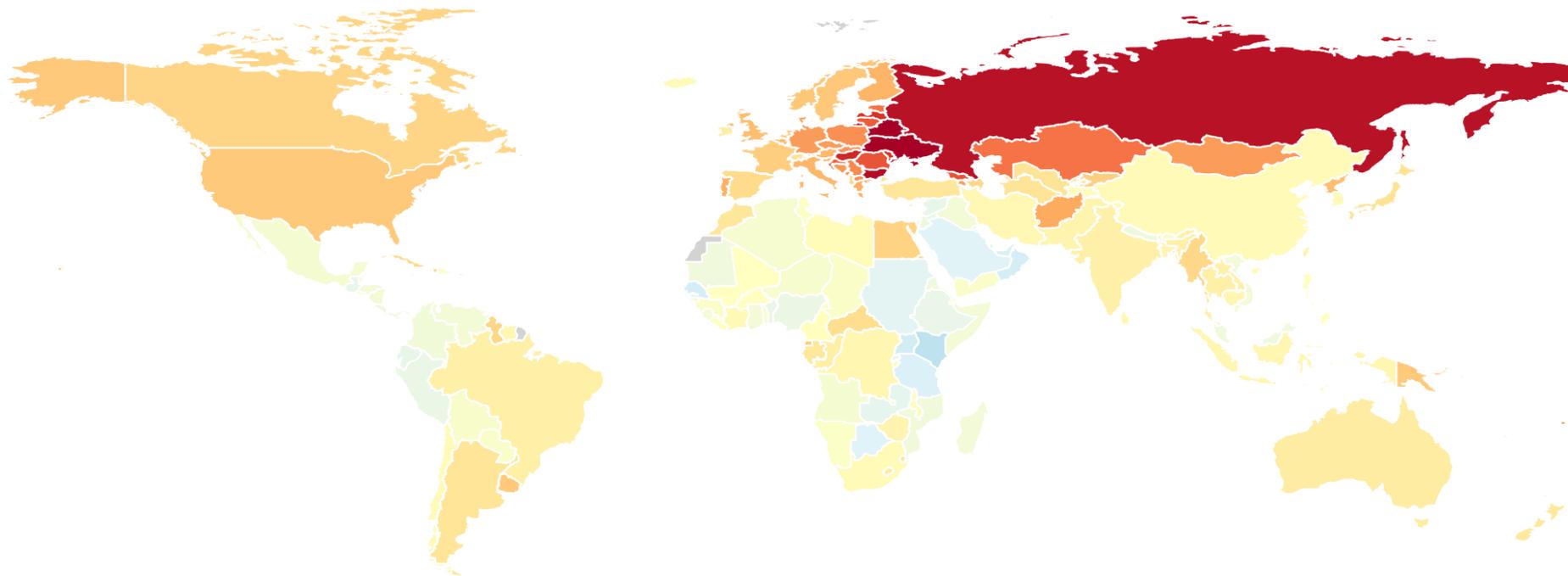


Developed, YLDs
Both sexes, All ages, 2010

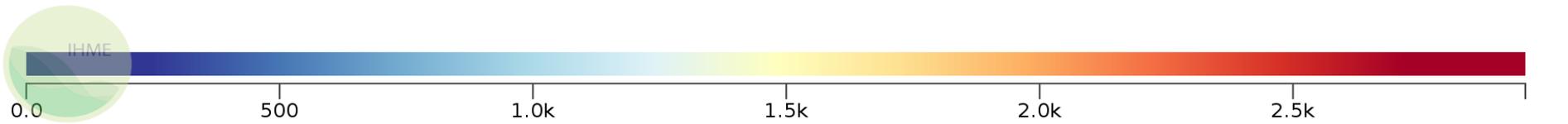
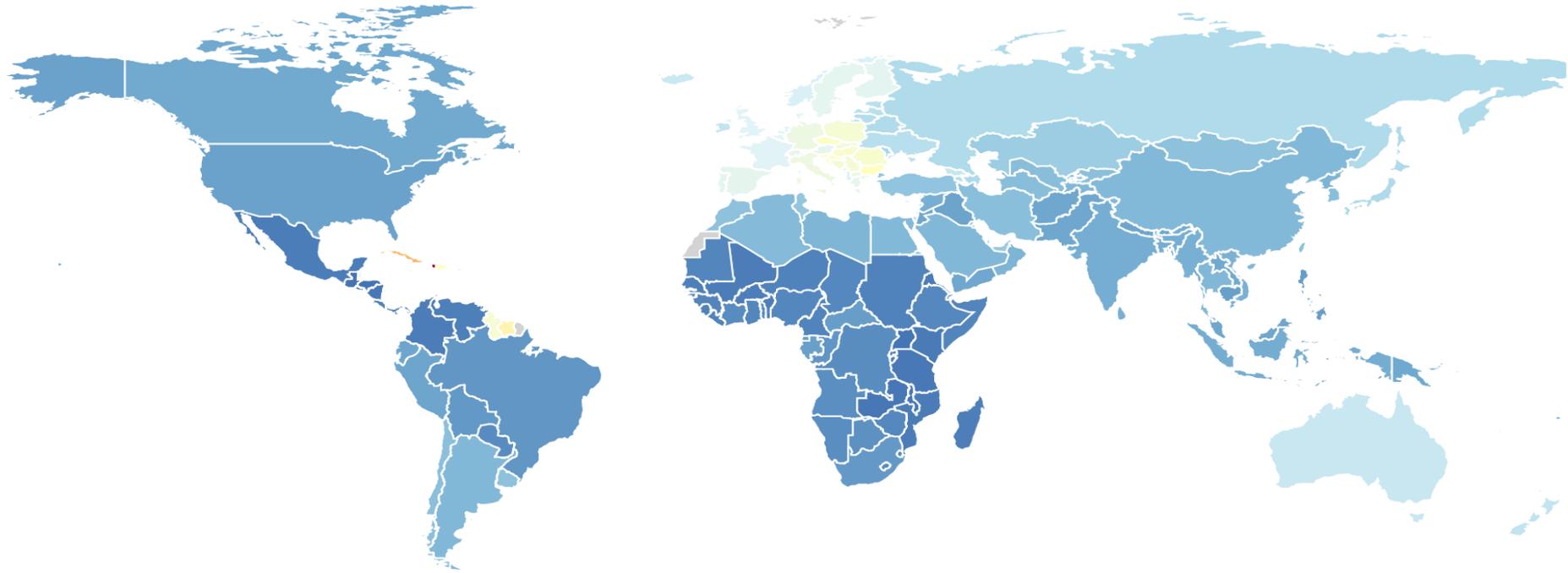
Annual % change
2005 to 2010
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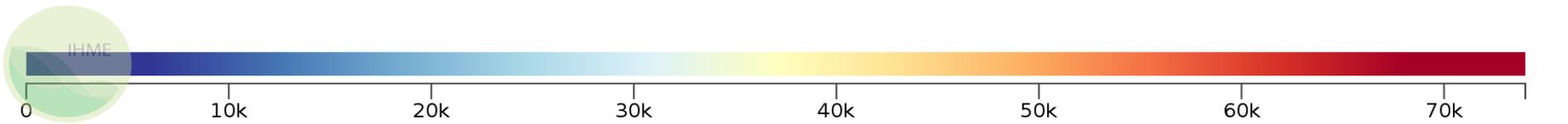
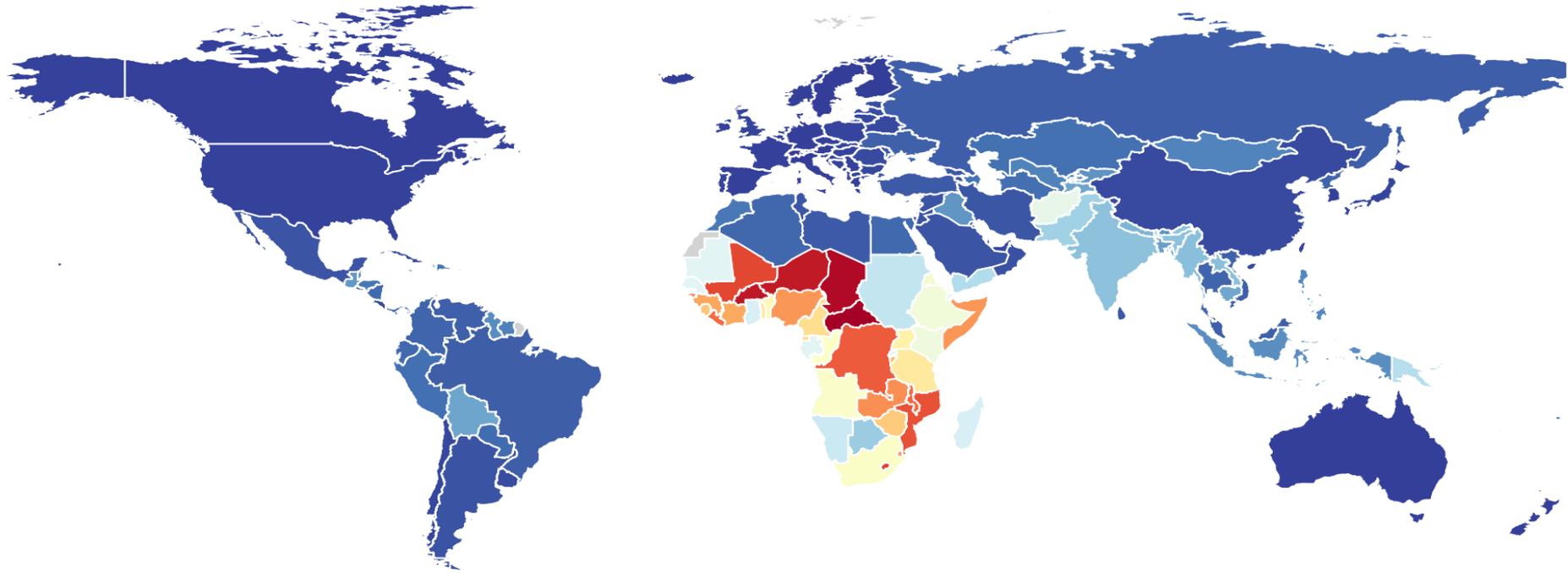
Non-communicable diseases
Both sexes, All ages, 2010
DALYs per 100,000



Injuries
Both sexes, All ages, 2010
YLDs per 100,000



Communicable, maternal, neonatal, and nutritional disorders
Both sexes, All ages, 2010
DALYs per 100,000



Religion and health

- A change in the composition of disease (less CDs and injuries, more NCDs) and less uncertainty surrounding the timing of death may affect ones religiosity and how religion is expressed and practiced



Future of religion

The US - fertility differentials*

<i>Ethnoreligious categories</i>	TFR (2003)	Difference with total
Protestant Fundamentalist excluding Blacks	2.13	+0.05
Protestant Moderate excluding Blacks	2.01	-0.07
Protestant Liberal excluding Blacks	1.84	-0.24
Black Protestant	2.35	+0.27
Catholic non Hispanic	2.11	+0.03
Catholic Hispanic	2.75	+0.67
Jew	1.43	-0.65
Hindu/Buddhist	1.73	-0.35
Muslim	2.84	+0.76
Other	1.64	-0.44
No religion	1.66	-0.42
Total	2.08	

* Based on USCB TFR and children ever born to women aged 40-59 (GSS 2000-06)

Source: Skirbekk, Goujon and Kaufmann, *Journal for the scientific Study of Religion*, 2010

Conversion*

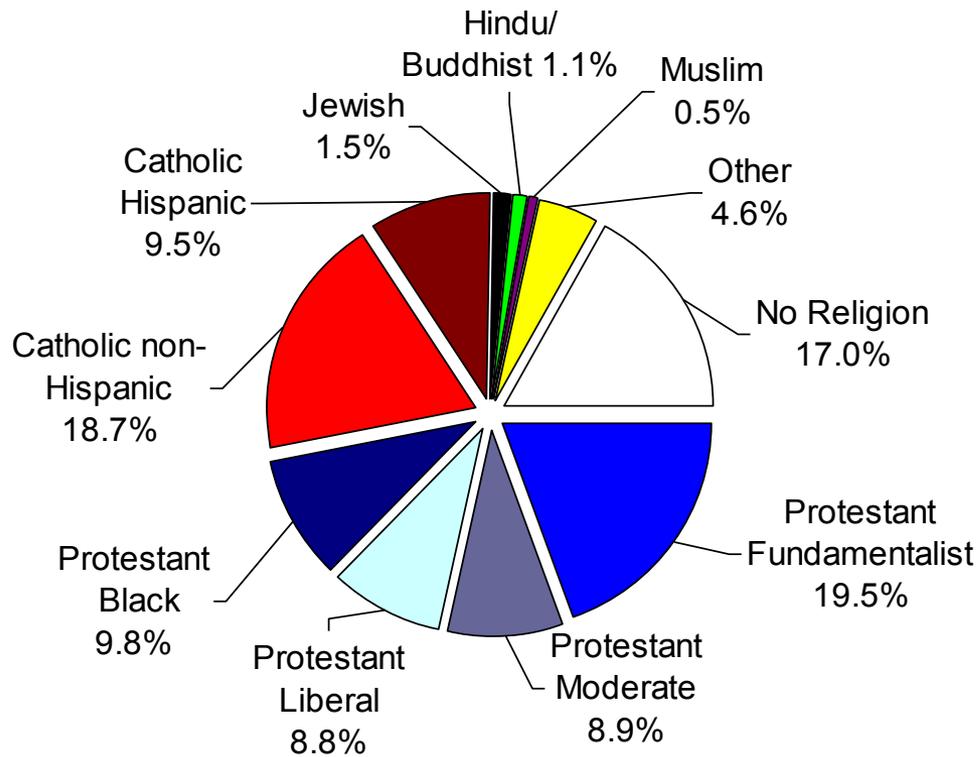
	Protestants				Catholics		Others					Total
To:	Fundamentalist excluding Blacks PFU	Moderate excluding Blacks PMO	Liberal excluding Blacks PLI	Black PBL	non Hispanic CAT	Hispanic CHI	Jew JEW	Hindu/ Buddhist HBU	Musli m MUS	Other OTH	No religion NOR	
From:												
PFU	67.3	7.7	7.1		2.7	0.1	0.2	0.1	0.1	2.9	11.7	100
PMO	9.9	57.8	9.2		2.6	0.1	0.1	0.9	0	4.4	14.9	100
PLI	11.0	7.0	58.9		4.6		0.1	0.5	0	2.9	15.1	100
PBL				87.1	1.5			0.2	0.4	3.2	7.5	100
CAT	4.4	3.5	3.2	1.2	71.2		0.2	0.3	0	4	11.9	100
CHI	5.6	1.1	0.9			81.7	0.1	0.6	0	2.6	7.3	100
JEW							80.5					100
	1.0	1.4	0.8		0.8			1.1	0	0.5	13.8	
HBU	3.3	7.1	1.3	0.5	5.7		1.3	55.4	2.4	3.3	19.7	100
MUS				3.2				5.0	71.4	7.1	13.3	100
OTH	8.3	14.0	1.6	4.6	4.0			0.9	0.4	47.1	19.1	100
NOR	15.1	8.3	6.2	2.0	5.8	0.2	1.5	1.1	0.3	3.6	55.9	100

* Based on questions on affiliation at age 16 (GSS 2000-06)

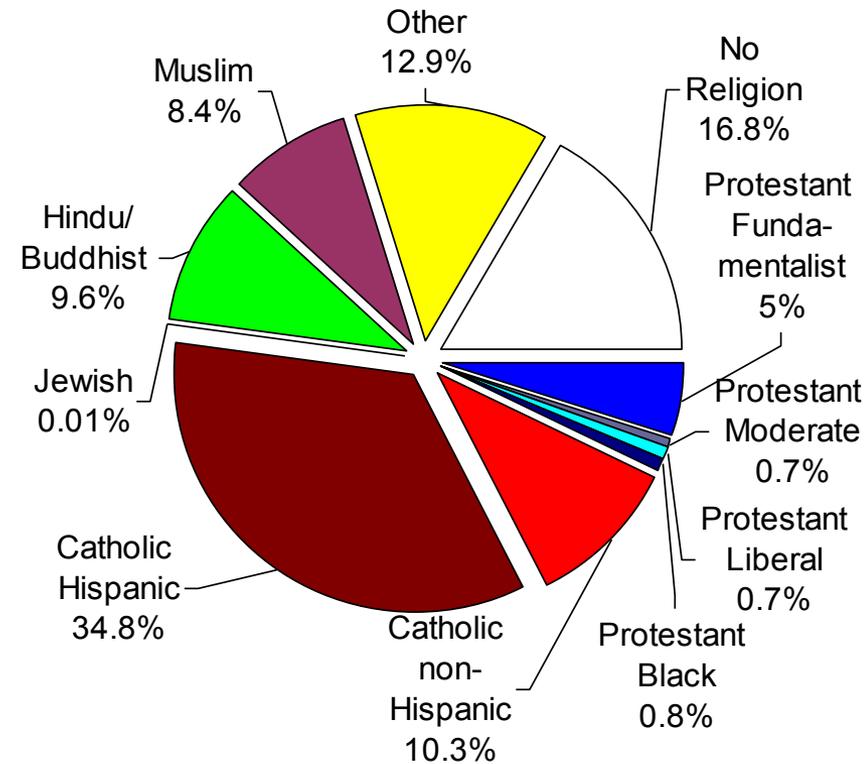
Source: Skirbekk, Goujon and Kaufmann, *Journal for the scientific Study of Religion*, 2010

Share of resident and migrant population by ethnoreligious status*

Resident population



Net migrants



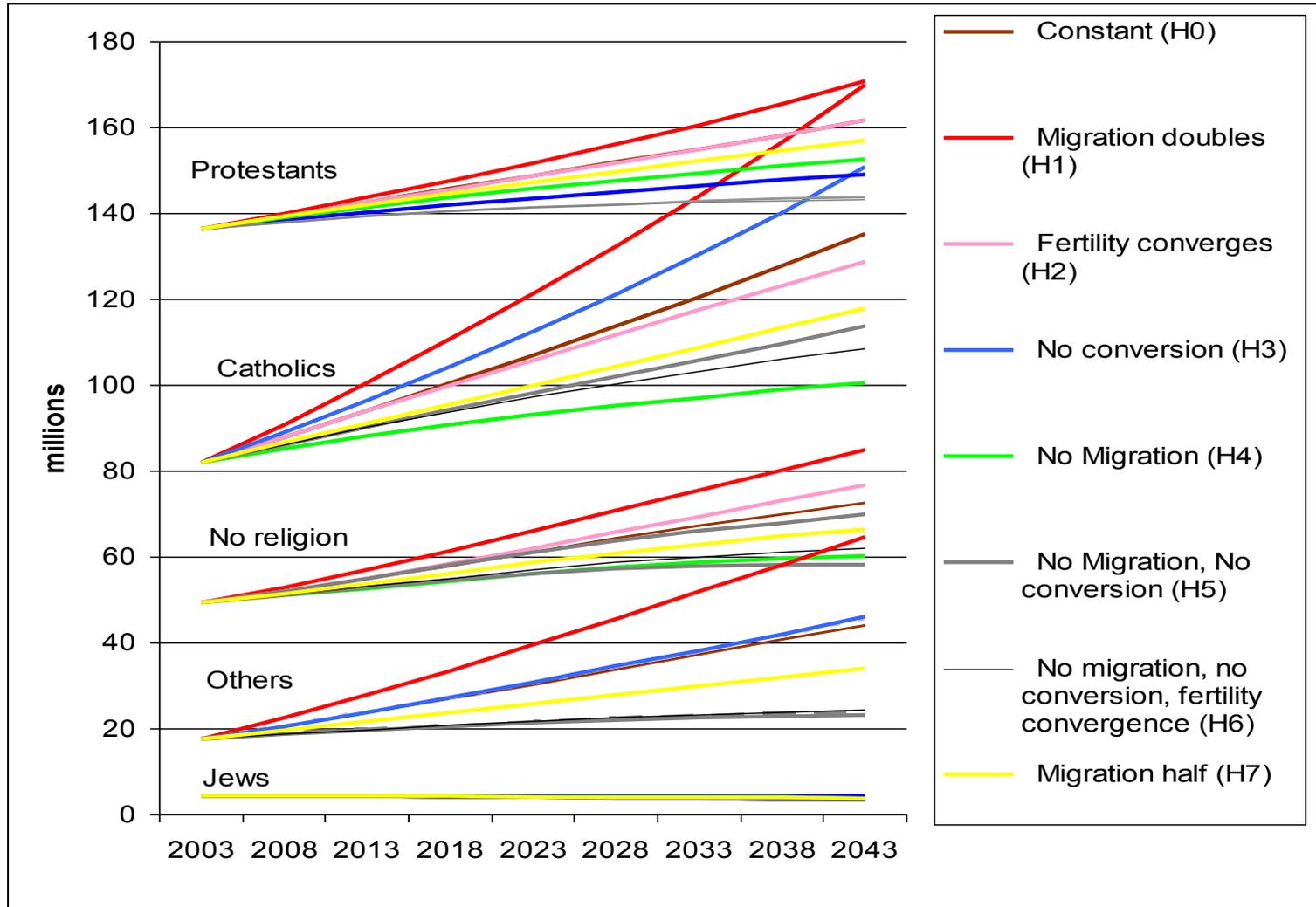
* Based on data on legal permanent resident status (US Dept of Homeland security and CIA)

Scenario Matrix

Fertility Differentials	Conversion	Migration			
		<i>Constant</i> 1.2 M / year	<i>Doubles</i> 2.4 M / year	<i>Half</i> 0.6 M / year	<i>Zero</i>
<i>Constant</i>	<i>Constant</i>	H0	H1	H7	H4
	<i>Zero</i>	H3			H5
<i>Converging</i> (to 2.1 by 2033-38)	<i>Constant</i>	H2			
	<i>Zero</i>				H6

Source: Skirbekk, Goujon and Kaufmann, *Journal for the scientific Study of Religion*, 2010

Projection result: Size of five aggregated religious groups



Source: Skirbekk, Goujon and Kaufmann, *Journal for the scientific Study of Religion*, 2010

The future of religion in the US

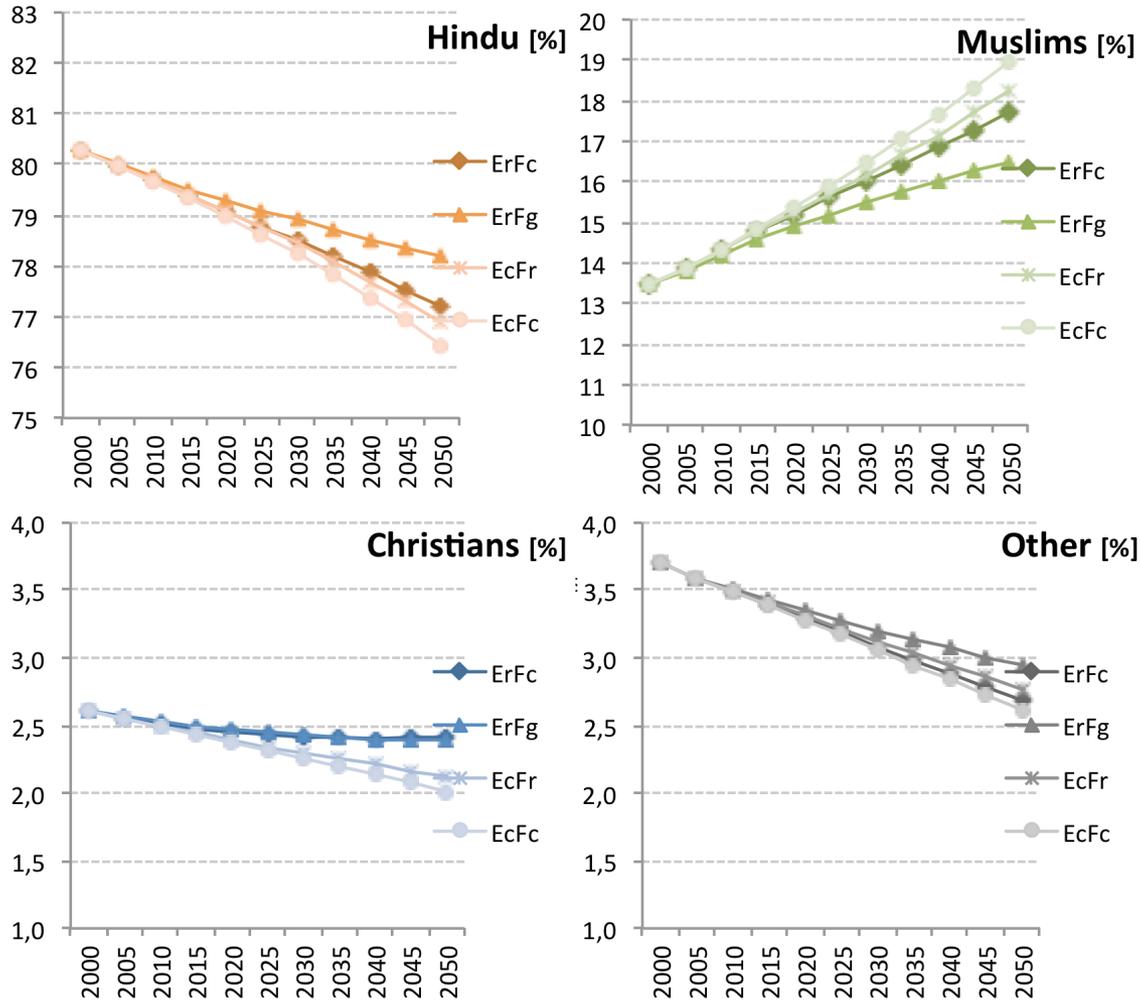
- ❑ Main drivers to 2043 are immigration and secularisation. Conversion favours fundamentalist Protestants but is not large enough to compensate for immigration of Hispanic Catholics and secularisation
- ❑ Jews, white Catholics and liberal Protestants will decline
- ❑ Hindu-Buddhists and Muslims may increase to a larger share than the Jewish population by approximately 2015-2020 due to migration
- ❑ Protestants decline from a majority in 2003 to 40 percent by 2043; Catholics may outnumber Protestants by mid-century

India Scenarios

- **EcFc** is a constant scenario that represents stall in fertility and education. It can be understood as a benchmark scenario and provides a point of reference to illustrate the effects of education and fertility change.
- **EcFr** is a persisting inequality scenario. In this possible future inequalities in education and fertility persist. Enrolment rates are constant and there is no educational expansion but compared to the constant scenario fertility decline continues. Fertility differentials across the religious and educational groups, however, remain as of 2000.
- **ErFc** is an educational expansion scenario. Fertility remains constant, i.e. educational improvements do not translate into change in childbearing. It is presented to demonstrate the effect of improving education.
- **ErFg** is a convergence scenario that represents the most optimistic possible trajectory of rapid educational expansion that translates into behavioural change. Fertility declines as education improves and fertility differentials between religious and educational groups shrink. This development would result in diminishing inequality.

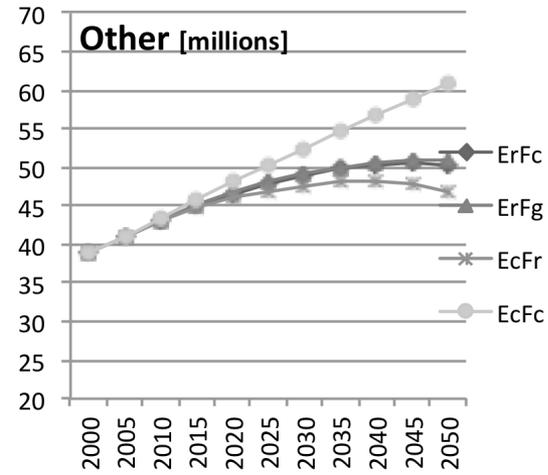
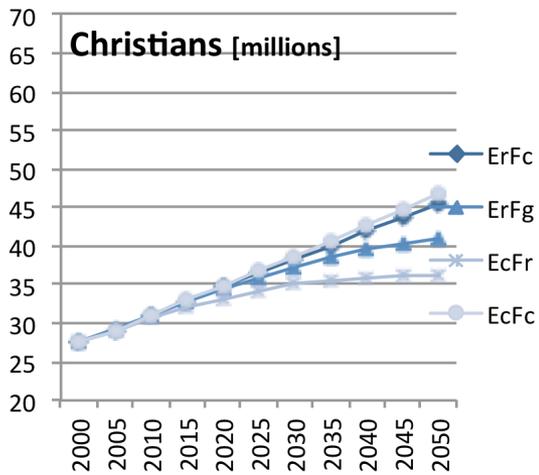
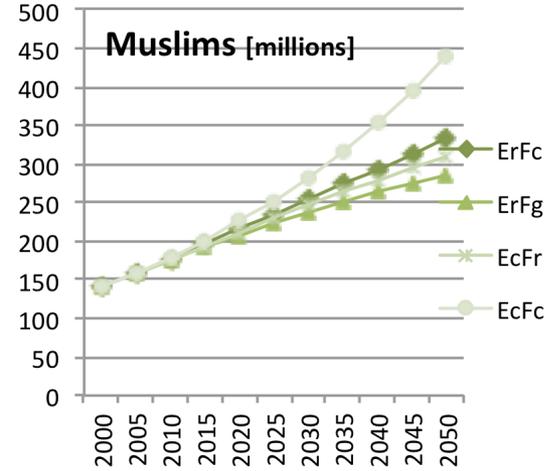
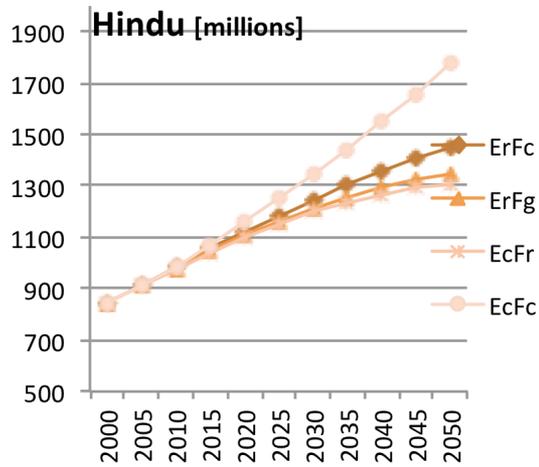
India –future shares

Figure 12. Projected religious shares in India in 2000-2050



India –future numbers

Figure 13. Projected population size of religious groups in India in 2000-2050



Conclusion

- Religion central to world's future, affects population size, ecology, fiscal sustainability, culture and health
- Education and health central, may affect religion and religiosity
- Large religious changes projected in coming years in nations such as India and the US
- Broader framework needed to understand complex patterns of religious demographic change globally