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Applied Systems Analysis  
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Wittgenstein Centre  
FOR DEMOGRAPHY AND  
GLOBAL HUMAN CAPITAL

science for global insight

# The future Viennese religious landscape

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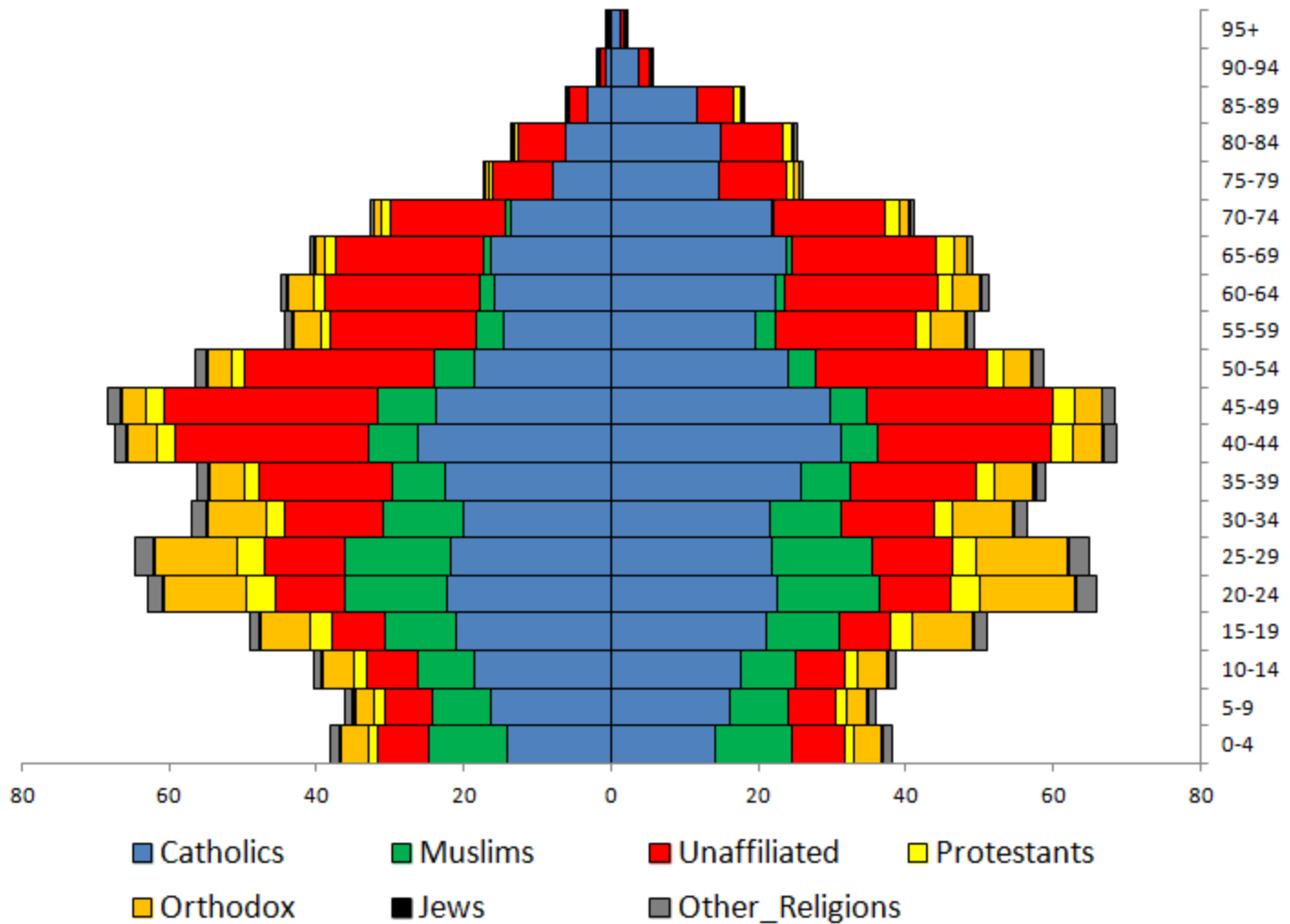
**WIREL Conference – Religion in Vienna  
Vienna 2014**



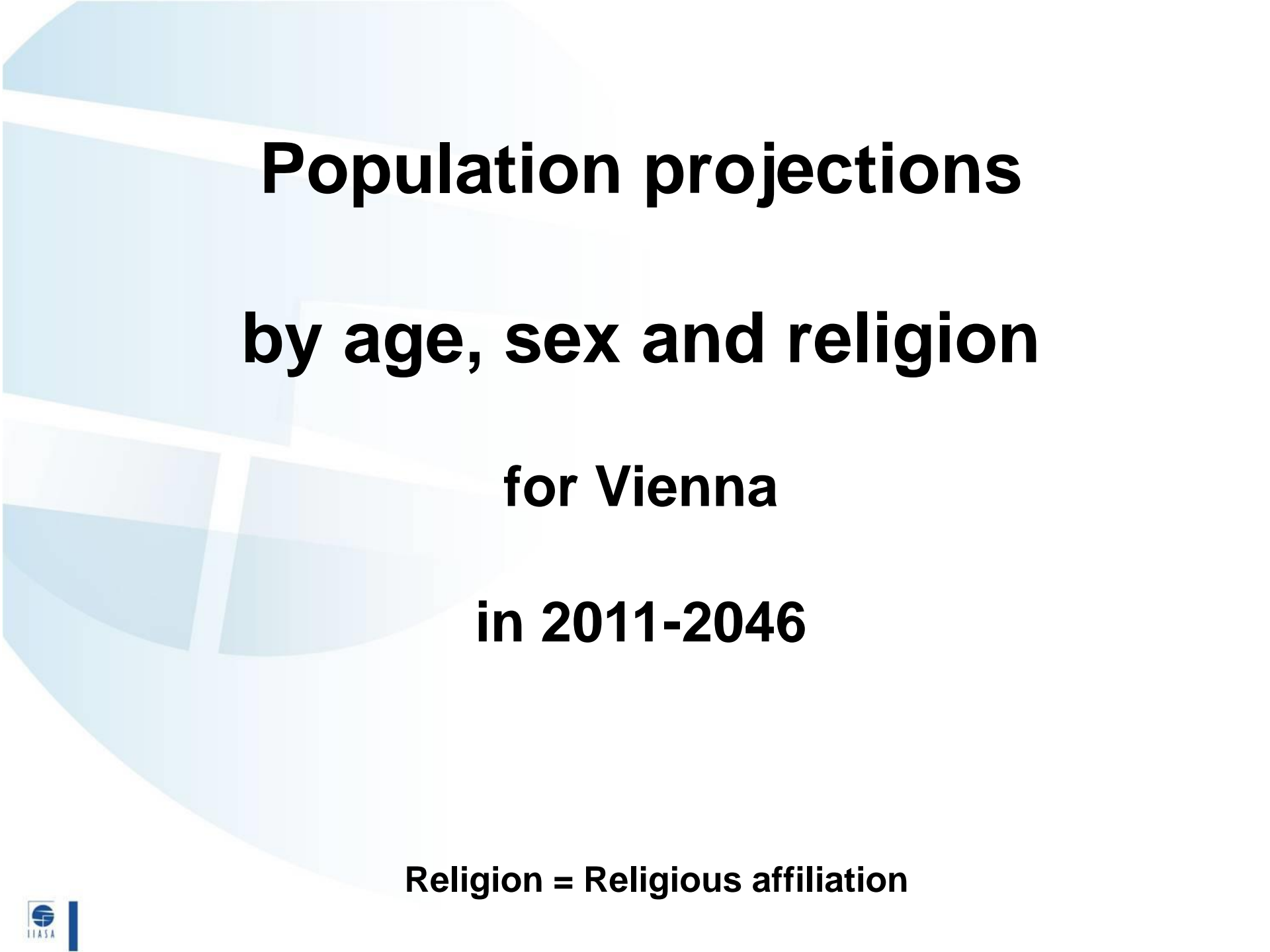
IIASA, International Institute for Applied Systems Analysis

# Vienna in 2011

1.7 million people



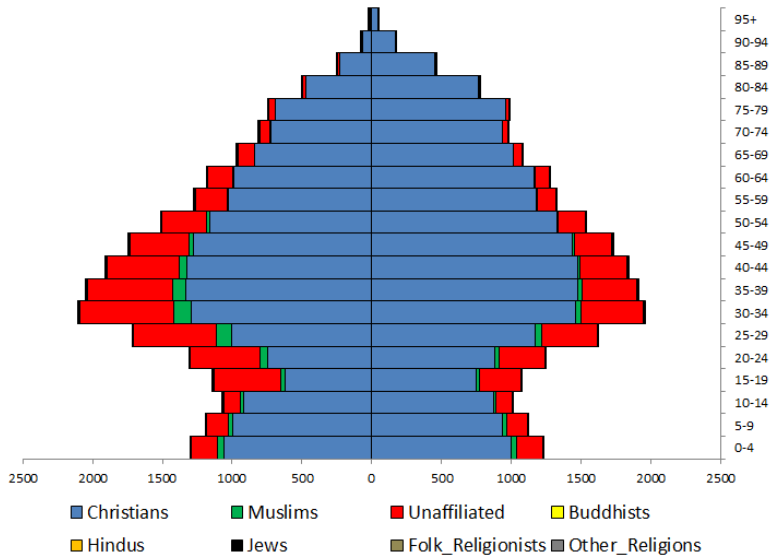
<i>Catholics</i>	<i>Muslims</i>	<i>Unaffiliated</i>	<i>Protestants</i>	<i>Orthodox</i>	<i>Jews</i>	<i>Other Religions</i>
40.8	12.4	30.1	4.4	9.2	0.5	2.6

A stylized, semi-transparent globe is positioned on the left side of the slide, serving as a background element. The globe is composed of several curved, overlapping segments in various shades of light blue and white, creating a 3D effect. The text is centered on the right side of the slide.

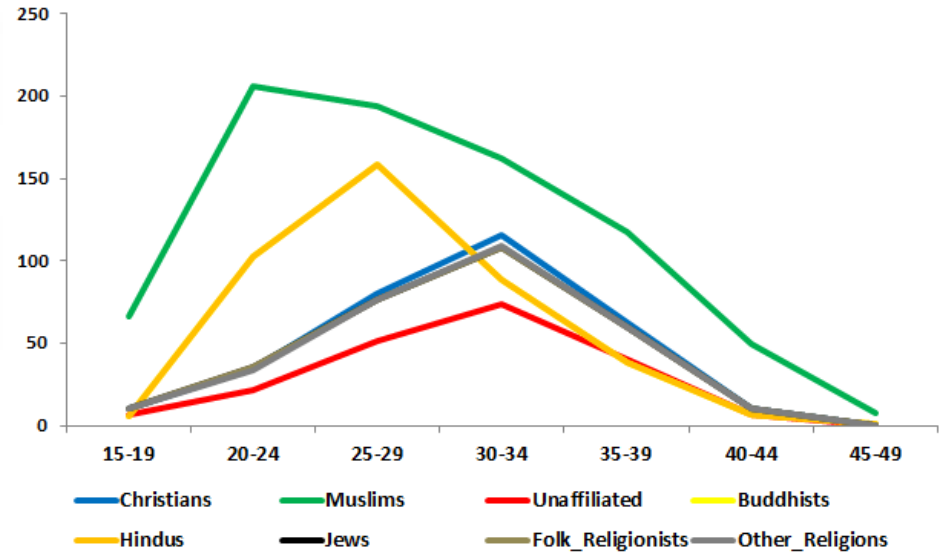
**Population projections**  
**by age, sex and religion**  
**for Vienna**  
**in 2011-2046**

**Religion = Religious affiliation**

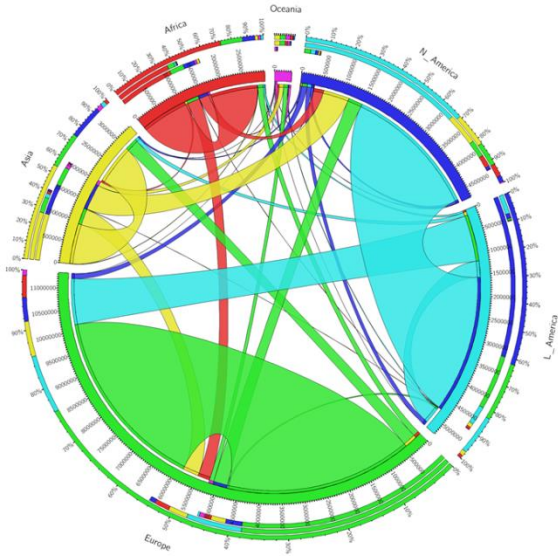
# Population by age, sex and religion



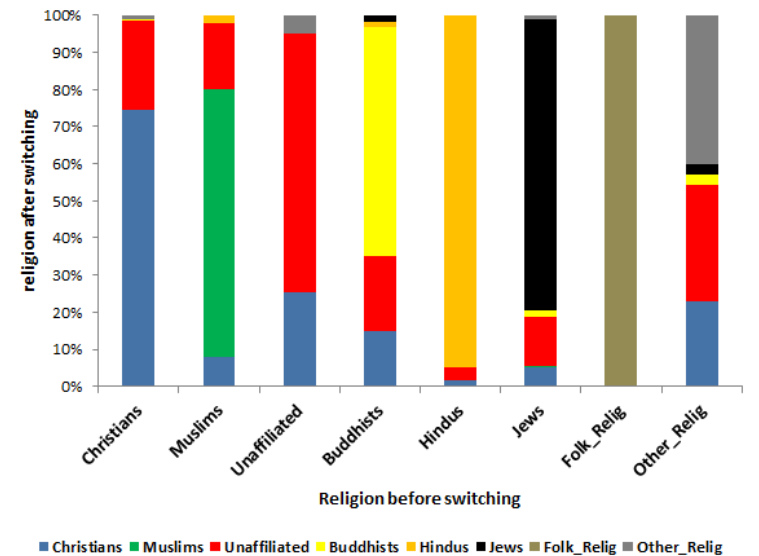
# Fertility by religion



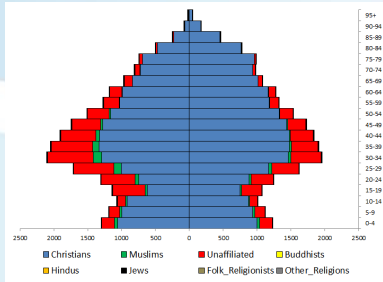
# Migration by age, sex and religion



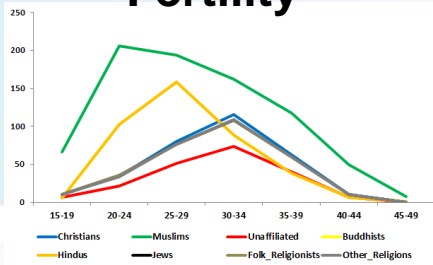
# Religious switching by sex and religion



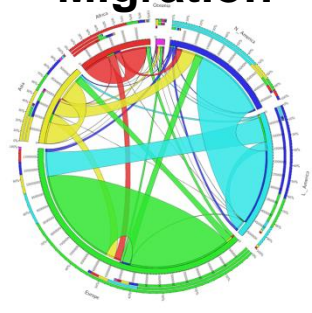
# Structure



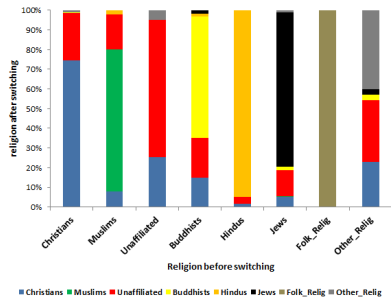
# Fertility



# Migration



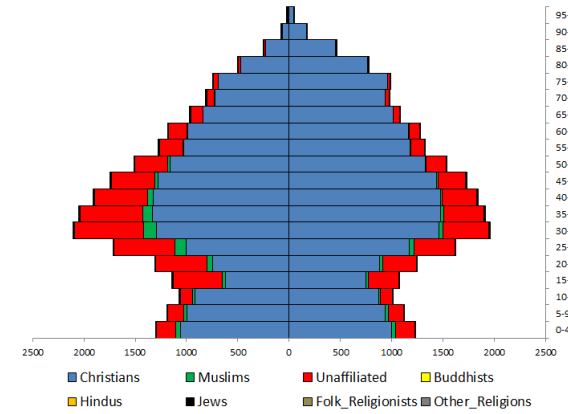
# Switching



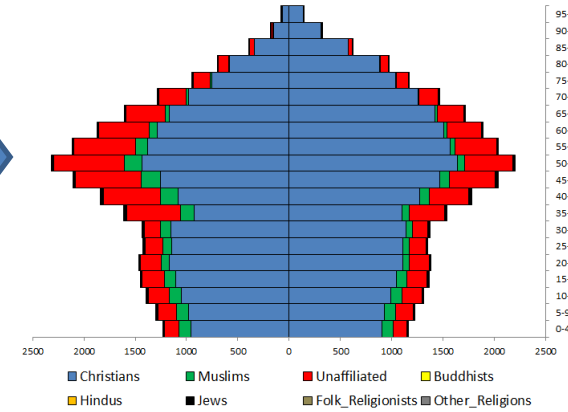
Multi-state demographic projections with several scenarios



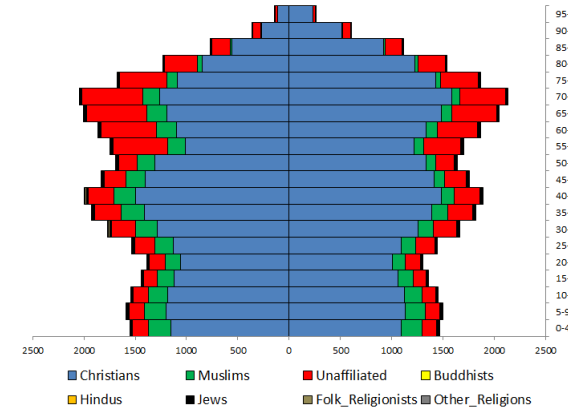
2011



2031



2046



# We present 3 Major Scenarios

**TREND** - business as usual:

*Continued migration with strong EU component, fertility convergence, decline in secularization rate*

**SEGMENTATION** - Diversification without integration:

*Continued migration from EU + increase of non EU countries, slow fertility convergence, sharp decline in secularization rate.*

**SECULARIZATION** – A European Vienna:

Immigration ONLY migration from EU countries (NO immigration from non-EU), rapid fertility convergence, continued high secularization rates.

# Assumptions

## I. Baseline population

Population by age, sex and religion estimated for the year 2011  
*Catholics, Jews, Muslims, Protestants, Orthodox, Others and Unaffiliated,*

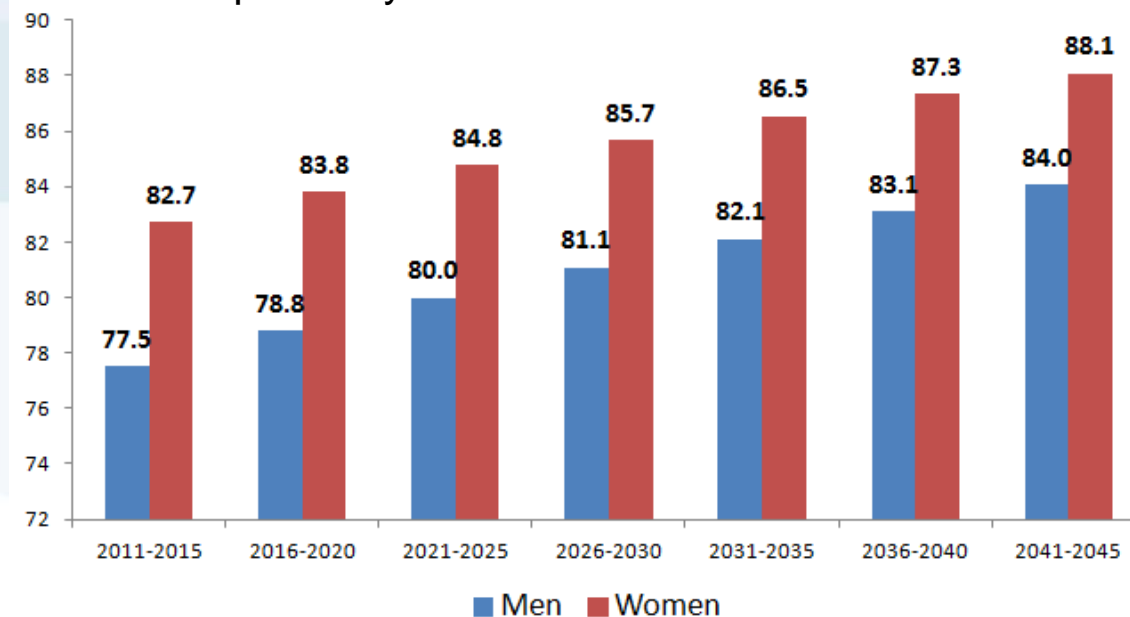
## II. Mortality

**No differences by religion** - life tables are the same for all 7 religious groups

Life expectancy at birth follows trend assumed by Statistics Austria for Vienna

(medium variant)

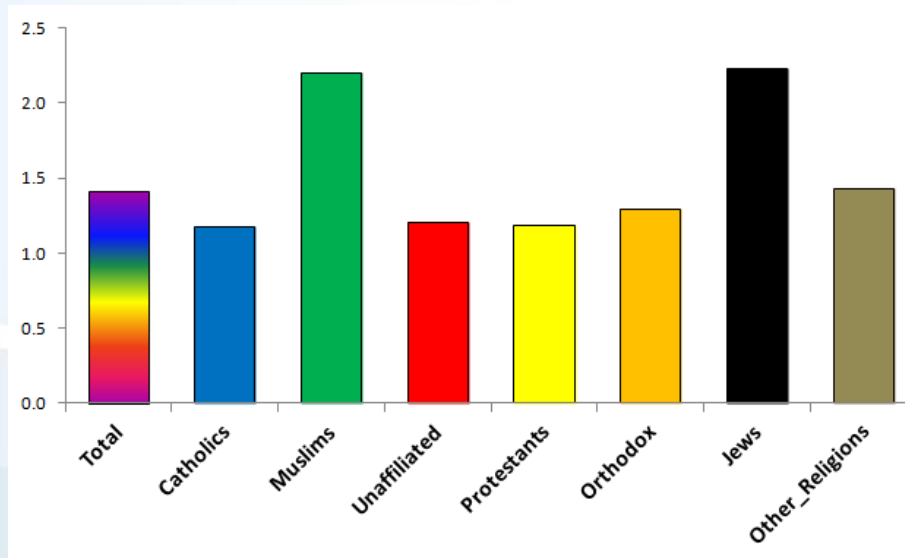
Life expectancy at birth in Vienna in 2011-2045



### III. Fertility

#### Age Specific Fertility Rates (ASFR) and Total Fertility Rate (TFR) by religion

TFR by religion in 2011-2015



TFR for total Vienna follows medium variant projection of Statistics Austria.

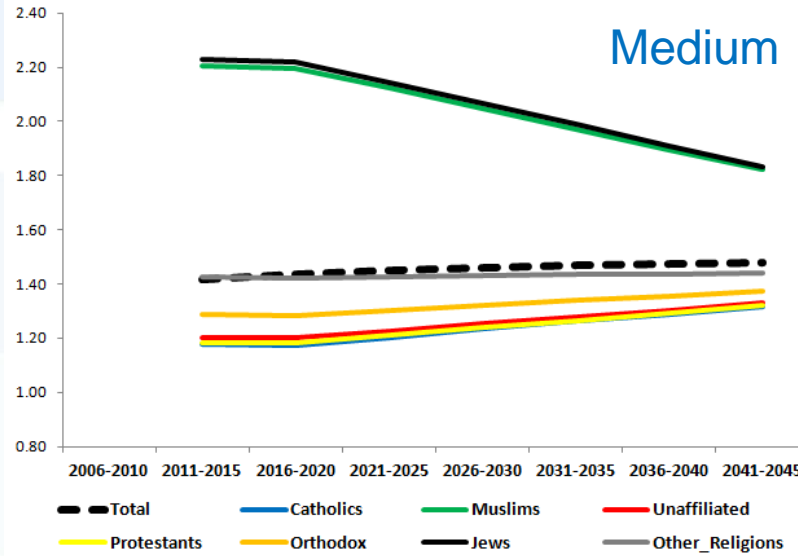
We assume full fertility convergence between religious groups - in scenario:

1. *Trend* – **by 2070**
2. *Secularization* – **by 2035**
3. *Segmentation* – **by 2100**

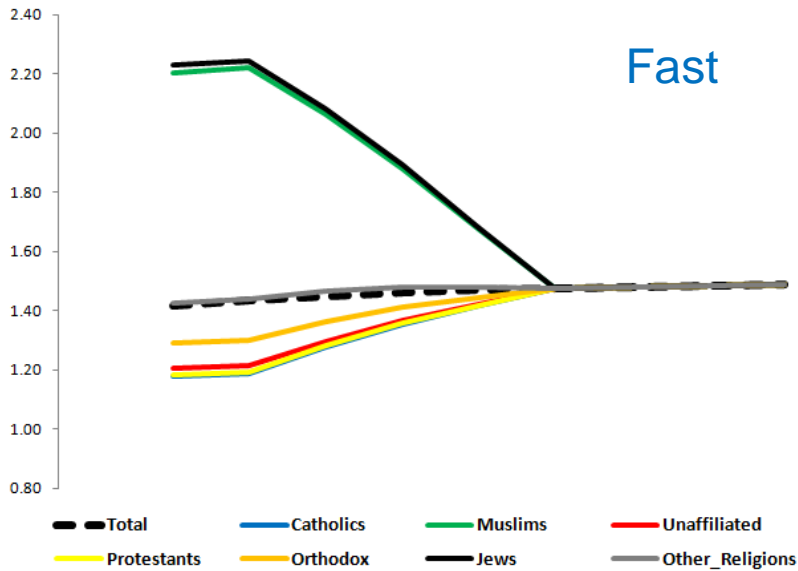


# Fertility convergence

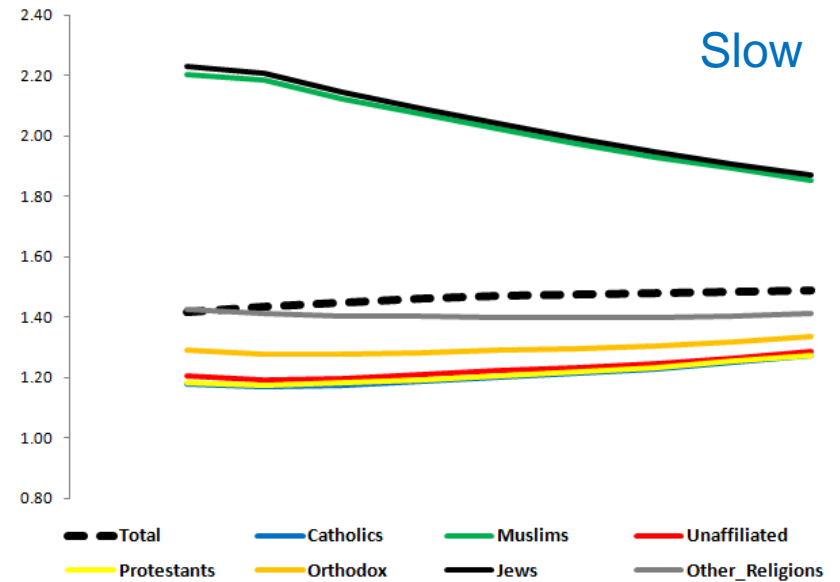
## TREND



## SECULARIZATION



## SEGMENTATION



## IV. Migration

### Inflow and Outflow of migrants by age, sex and religion

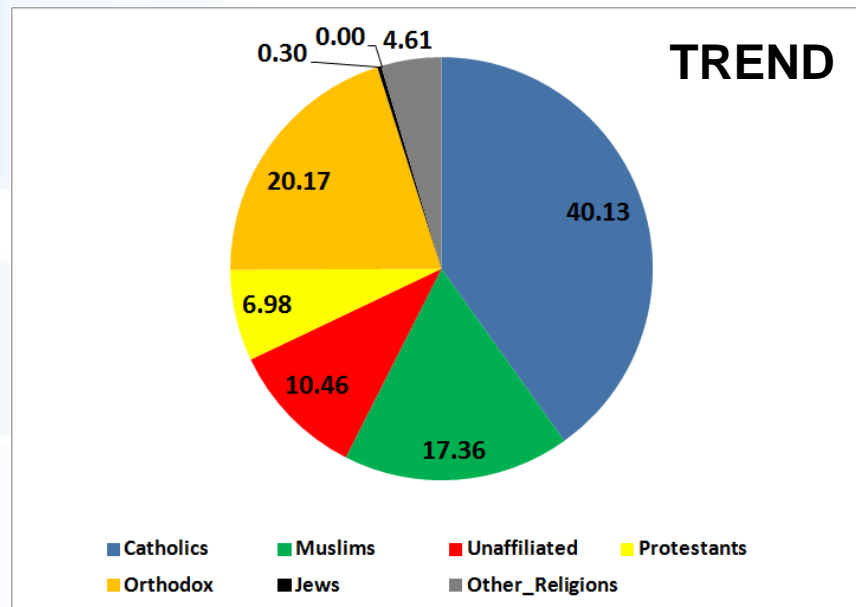
#### Migration flows by religion in Vienna in 2011-2015

Migration	Catholics	Muslims	Unaffiliated	Protestants	Orthodox	Jews	Other_Religions	Total
In-migration	40.1	17.4	10.5	7.0	20.2	0.3	4.6	419,846
Out-migration	45.0	13.6	11.1	6.9	18.6	0.3	4.5	322,149

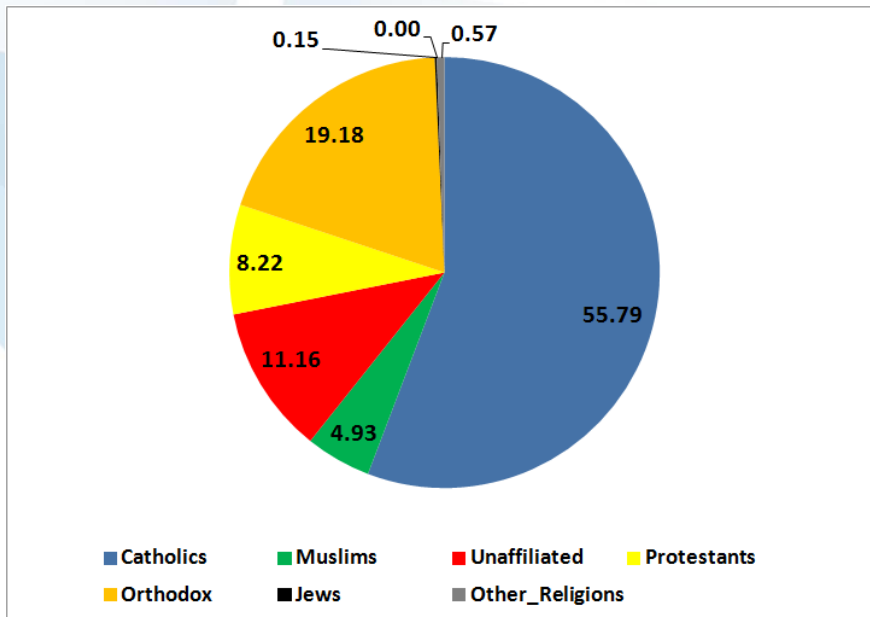
We assume:

- constant out-migration rates by age, sex and religion estimated from baseline data
- constant inflow by age, sex and religion following scenarios:
  1. *Trend* – baseline data
  2. *Secularization* – immigration only from European Union countries
  3. *Segmentation* – 50% higher immigration from non-EU countries than in baseline

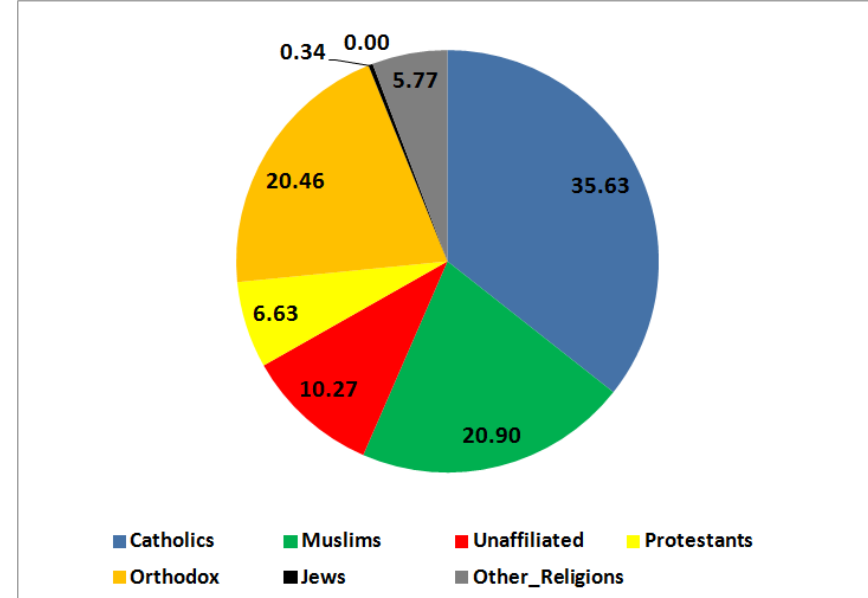
# Immigration



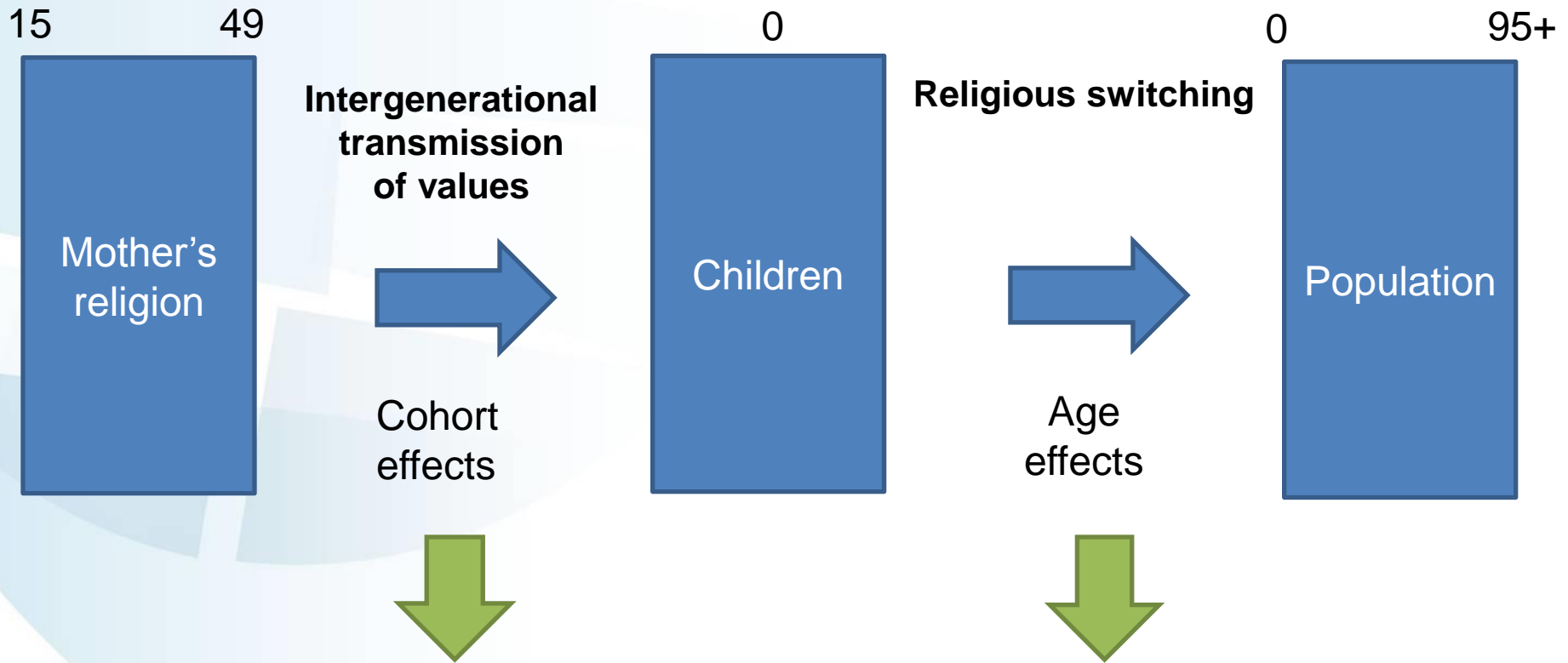
# SECULARIZATION



# SEGMENTATION



# Changes in religious affiliation



- Religious composition of females
- Fertility by religion
- Adjustments for transmission – because e.g. mixed marriages

Transition rates

## V. Intergenerational transmission of religion

Estimation based on census data on religion on mothers and children from censuses.

If mother was Catholic, children were:

Year	Unaffiliated	Catholic	Protestant	Other
1971	0.7	<b>96.5</b>	2.0	0.9
1981	1.3	<b>96.0</b>	1.9	0.8
1991	2.7	<b>93.1</b>	1.6	2.6
2001	4.4	<b>91.7</b>	2.0	2.0

Example

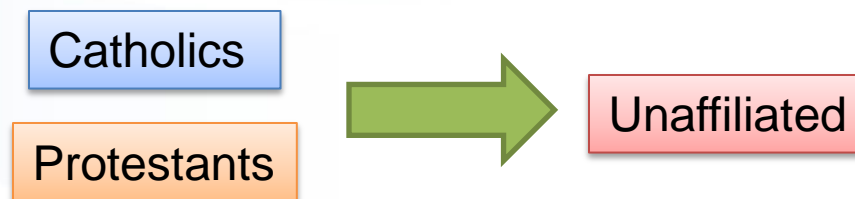
We assume:

1. *Trend* – constant transmission from baseline
2. *Secularization* – transmission follows trend found in past data
  - among Catholics, Protestants and Muslims - more Unaffiliated;
  - among Unaffiliated - more Unaffiliated;
3. *Segmentation* – 100% transmission from mothers

## VI. Religious switching

Religious switching rates by age, sex and religion

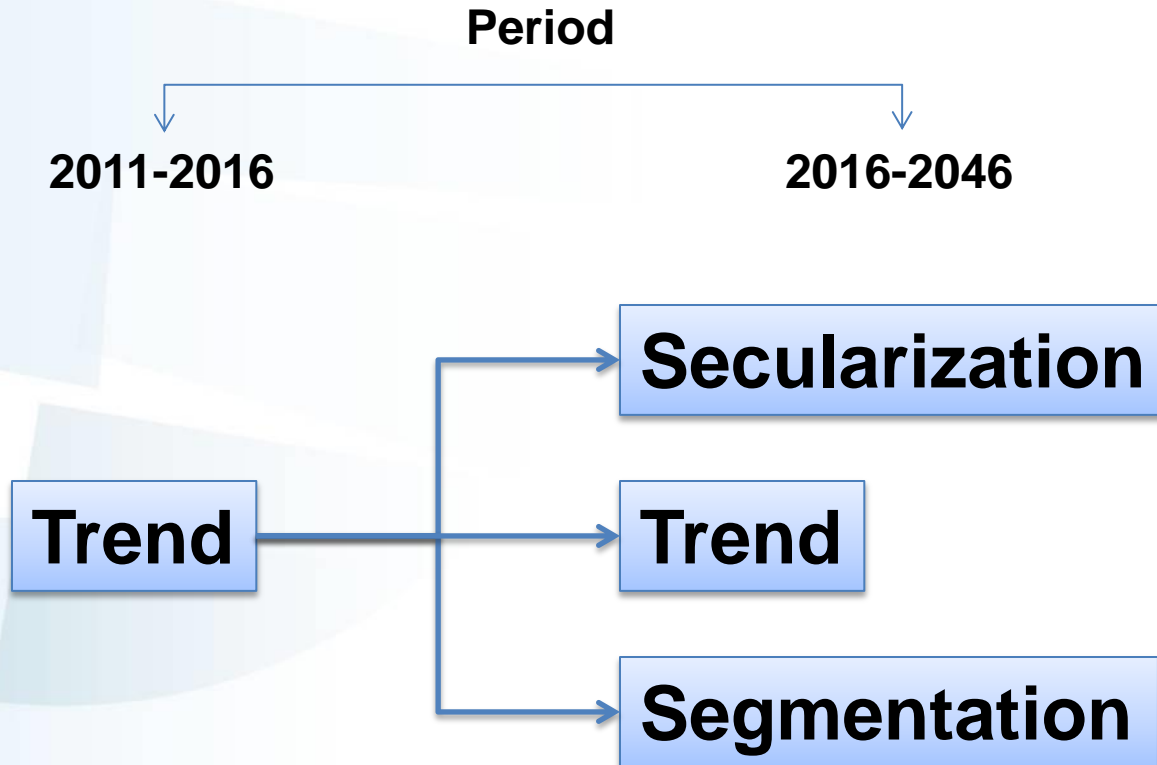
Switching only for Catholics and Protestants



We assume in the following scenario:

1. *Trend* – constant switching rates on the level – 50% lower than baseline
2. *Secularization* – constant switching rates from baseline
3. *Segmentation* – constant switching rates on the level – 75% lower than baseline

# Projection strategy



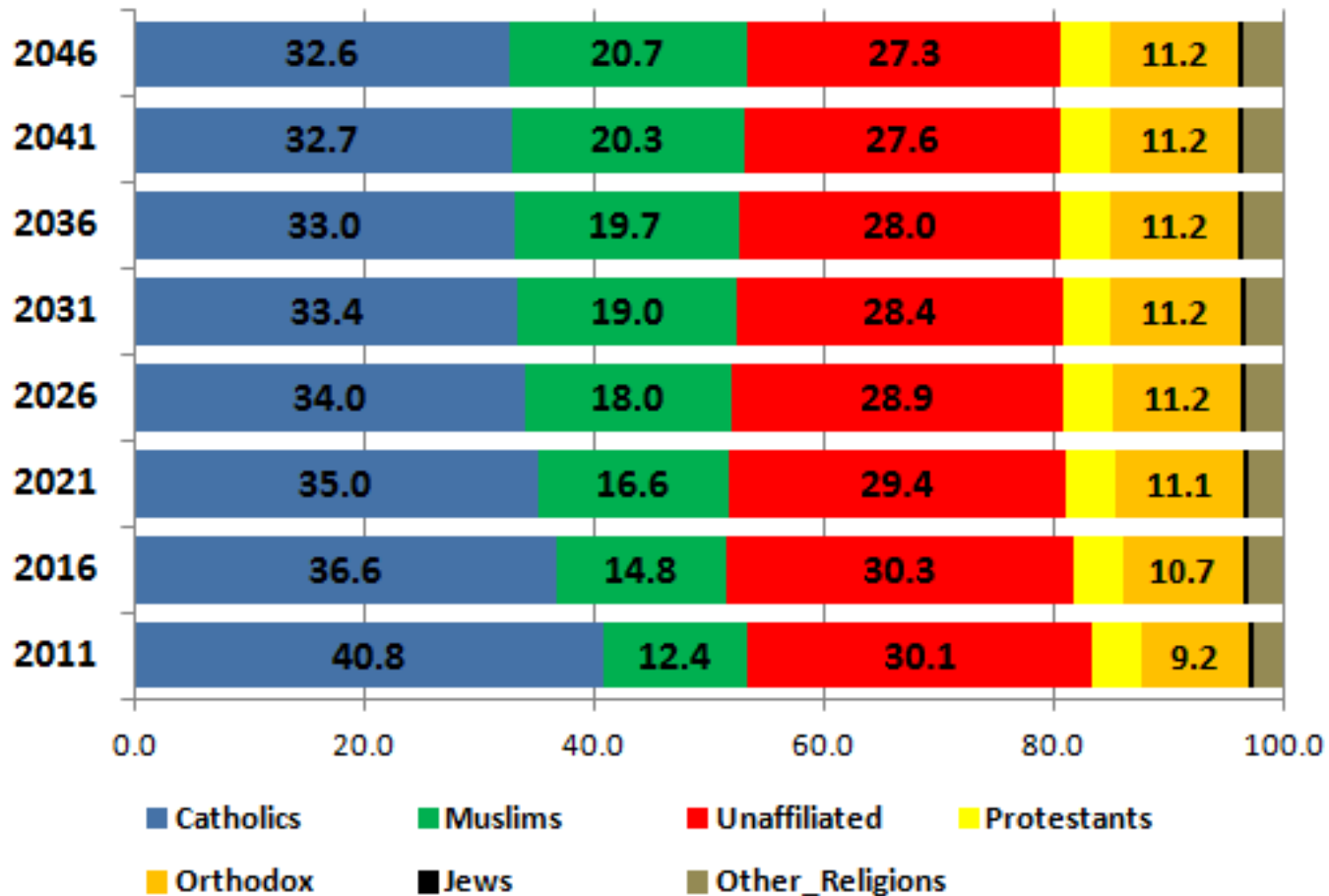
# Results

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# Future of religion in Vienna according to TREND scenario

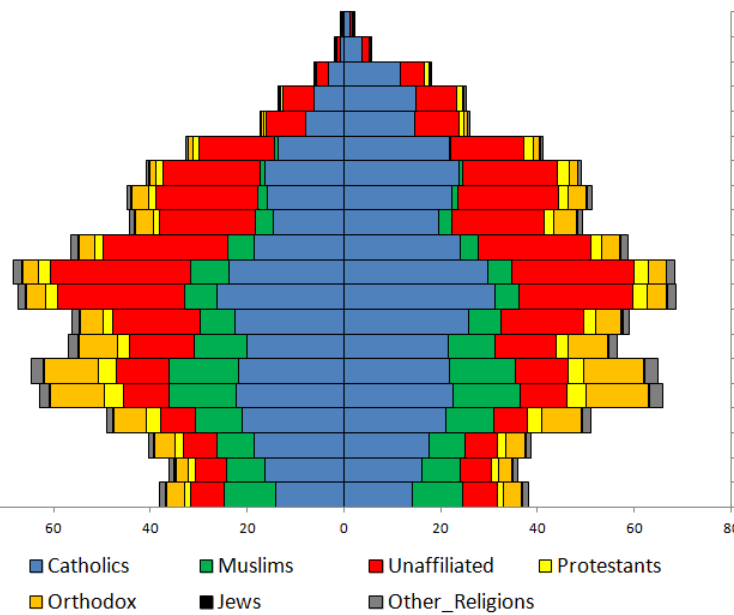
Change in religious composition in Vienna in 2011-2046



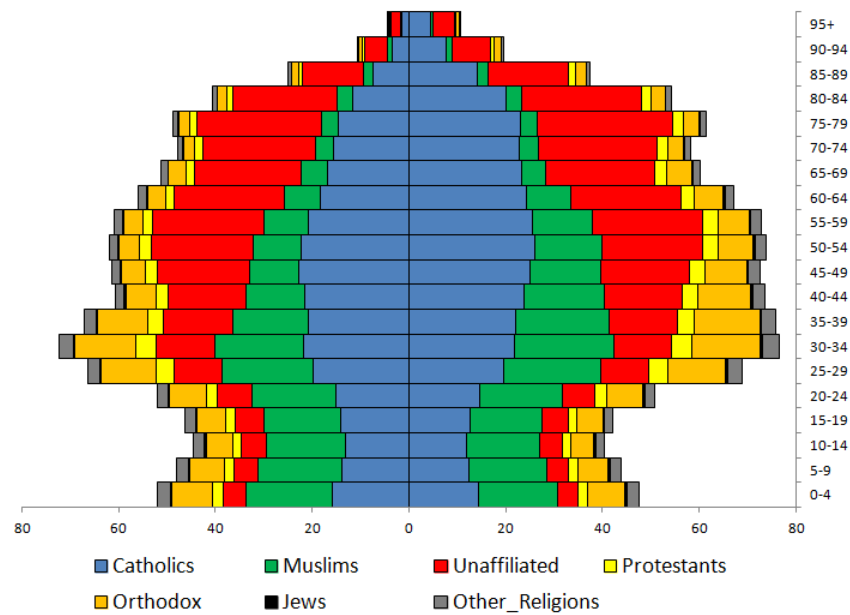
# Future of religion in Vienna according to TREND scenario

## Population by age, sex and religion in 2011 and 2046

2011



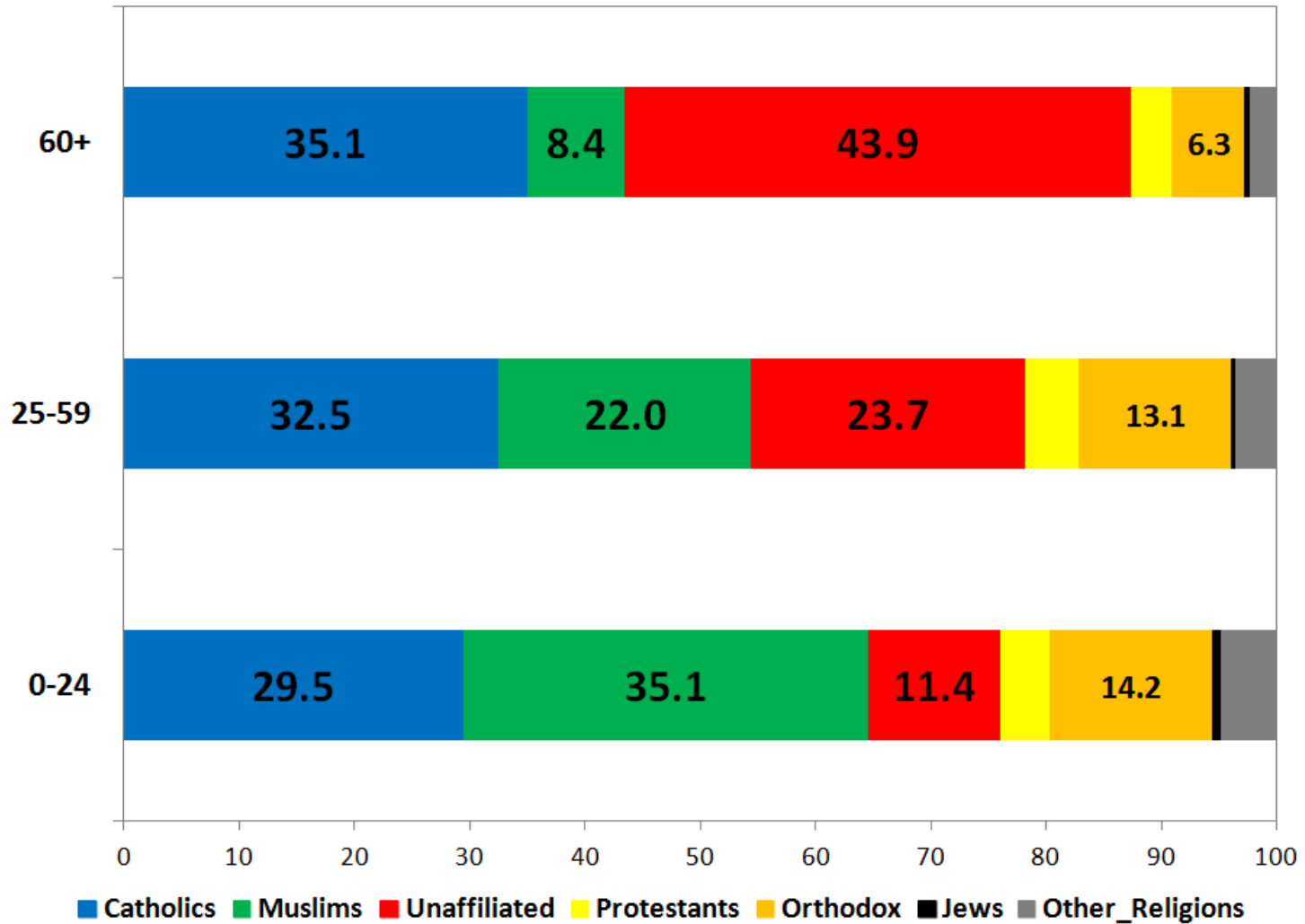
2046



Year	Catholics	Muslims	Unaffiliated	Protestants	Orthodox	Jews	Other Religions	Population
2011	40.8	12.4	30.1	4.4	9.2	0.5	2.6	1.7 million
2046	32.6	20.7	27.3	4.3	11.2	0.5	3.4	2.1 million

# TREND scenario

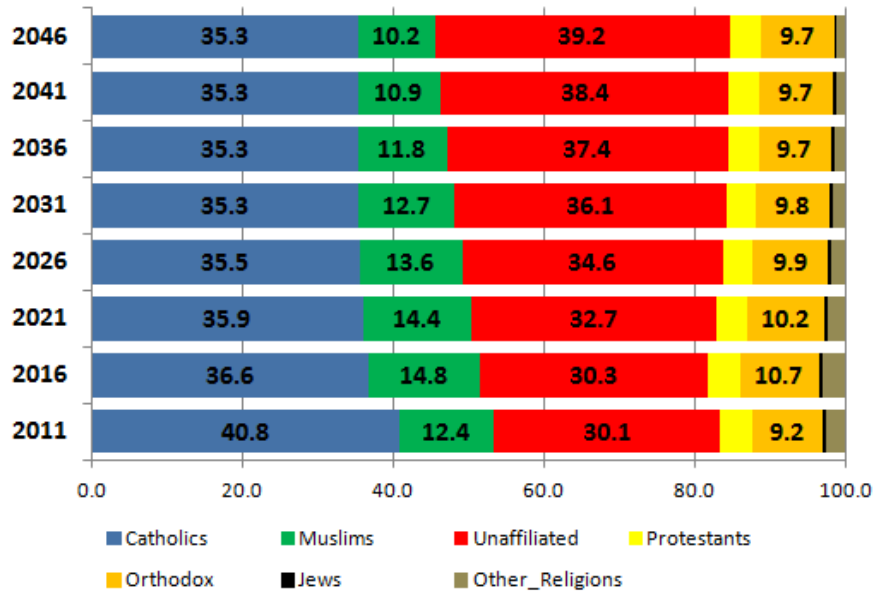
Religious composition among population at age 0-24, 25-29 and 60+ in 2046



# Alternative futures for Vienna by 2046

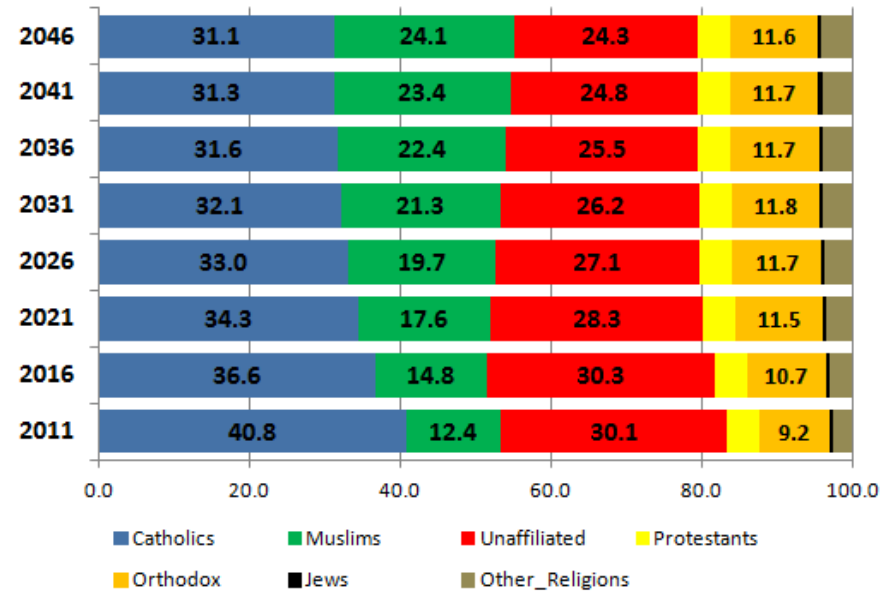
## Secularization

1.6 million people



## Segmentation

2.3 million people



**If:**

- (a) migration only from EU
- (b) fast convergence in fertility
- (c) trend in r. transmission
- (d) high switching rates

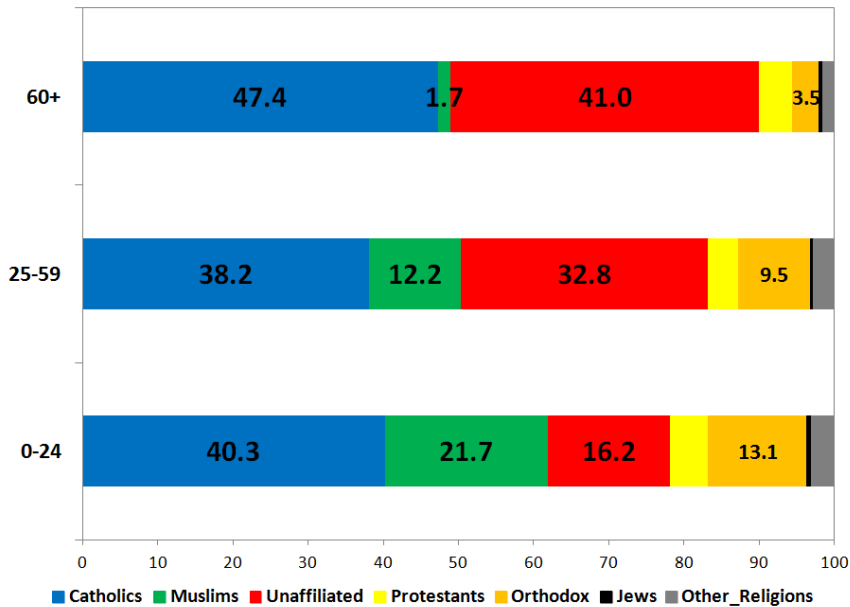
**If:**

- (a) more migration from non-EU
- (b) slow convergence in fertility
- (c) 100% religion of mothers
- (d) low switching

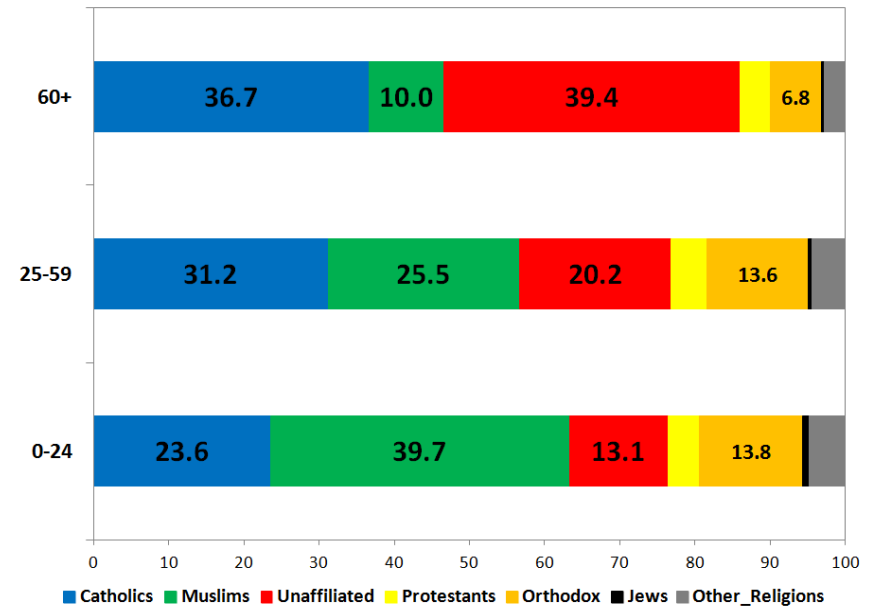
# Alternative futures for Vienna by 2046

Religious composition among population at age 0-24, 25-29 and 60+ in 2046

## Secularization



## Segmentation



# Conclusions

Our projections suggest:

- *Muslim* population in Vienna will increase in the future both in numbers and shares
- *Muslims* will be the biggest group among 0-24 year olds
- The share of *Catholics* and *Unaffiliated* will decrease
  - in TREND scenario – despite growing in numbers;
  - but percentage of Unaffiliated grows under SECULARIZATION scenario.



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