Methodology for the reconstruction of the 1971-2011 population by religion

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Aim & Objective

- Reconstruct the yearly population since 1971 until 2011 by age (single), sex, and 7 religious categories (Catholics, Protestants, Jews, Muslims, Orthodox, Others, No religion)
- Learn about the past to inform the future

Main available inputs for Vienna

- Census population by religion (5 out of 7 religious categories in 1971, 6 in 1981 and 1991, 7 in 2001), by age (5 year age groups) and by sex.
- Register based census data(2011) by age and sex
- Total births by religion of the mother by year
- Total deaths by sex
- Net-migration to Vienna by age and sex
- Religious mobility by age (until 1983) and sex (only for exits)

Methodology

- Until 2001:
  - Step 1: Estimate the missing religious categories in the 4 censuses;

Missing religious categories in census

- **1971**: Catholics, Protestants, Muslims, Other, no religion, unknown
  - Missing: Jews (MA23) and Orthodox (old Catholics, nationality of the other religion population – all European are assumed to be Orthodox: 93 M—99 F).
- **1981 and 1991**: Catholics, Protestants, Jews, Muslims, Other, no religion, unknown.
  - Missing: Orthodox (92 M – 95 F)
- **2001**: Catholics, Protestants, Jews, Muslims, Other, no religion, unknown.
  - No missing categories

Overall methodology

- Until 2001:
  - Step 1: Estimate the missing religious categories in the 4 censuses;
  - Step 2: Estimate the population by age/sex/religion in the missing years (1972, 73, …, 79, 80, …82…) using linear or exponential interpolation by age (not by cohort).
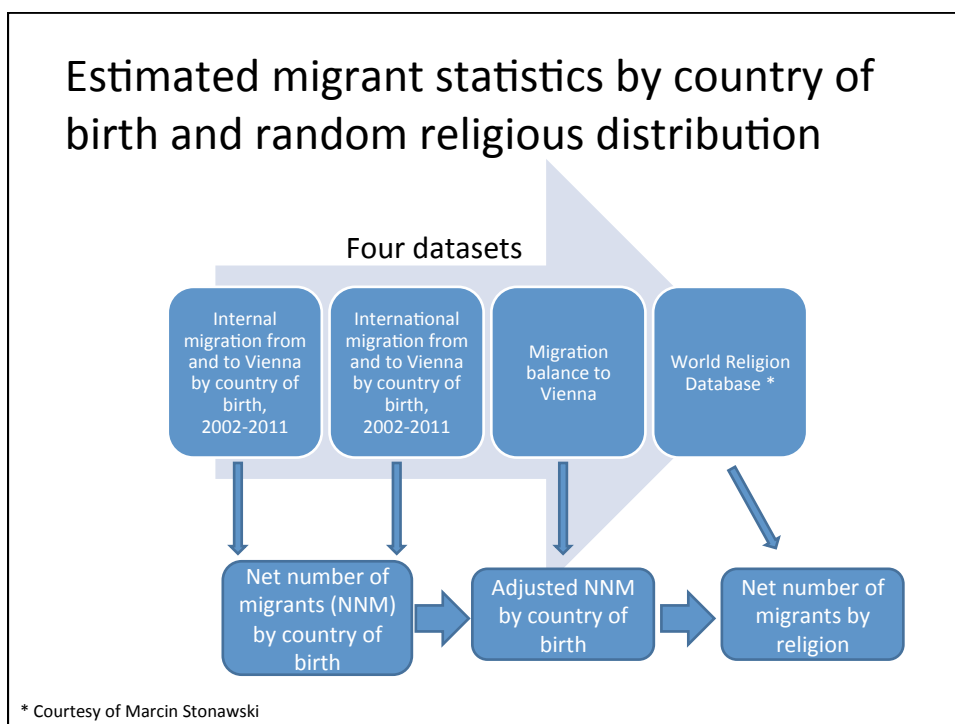
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  - Step 3: Use splines to transform 5-year age groups/sex/religion to single years of age/sex/religion.
- Between 2001 and 2011:
  - Step 4: Project the population by age (5-year age groups), sex, and religion using available statistics on births by religion, deaths (randomly distributed), secularization, and estimated migrant statistics.

Estimated migrant statistics by country of birth and random religious distribution

Four datasets

Internal migration from and to Vienna by country of birth, 2002-2011

International migration from and to Vienna by country of birth, 2002-2011

Migration balance to Vienna

World Religion Database *

Net number of migrants (NNM) by country of birth

Adjusted NNM by country of birth

Net number of migrants by religion

* Courtesy of Marcin Stonawski

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  - Step 4: Project the population by age (5-year age groups), sex, and religion using available statistics on births by religion, deaths (randomly distributed), and secularization, and estimated migrant statistics.
  - Steps 5 & 6: Same as steps 2 & 3.