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New Times, Old Beliefs: Projecting the Future Size of Religions in Austria

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Abstract

Projecting the religious composition of the population is relevant for several reasons. It is a key characteristic influencing several aspects of individual behaviour, including marriage and childbearing patterns. The religious composition is also a driver of social cohesion and increased religious diversity could imply a more fragmented society. In this context, Austria finds itself in a period of transition where the long-time dominant Roman-Catholic church faces a serious decline in membership, while other groups, particularly the seculars and the Muslims, increase their influence. We project religions in Austria until 2051 by considering relative fertility rates, religion-specific net migration, and the rate of conversion between religions and transmission of religious beliefs from parents to children. We find that the proportion of Roman Catholics is likely to decrease from 75% in 2001 to less than 50% by the middle of the century, unless current trends in fertility, secularisation or immigration are to change. The share of Protestants is estimated to reach a level between 3 and 5% in 2051. The most uncertain projections are for those without religious affiliation: they could number as little as 10% and as many as 33%. The Muslim population—which grew from 1% in 1981 to 4% in 2001—will, according to our estimates, represent 14 to 26% of the population by 2051. If current fertility trends remain constant, Islam could represent the majority religion for those below 15 years of age in 2051. Other religion categories are estimated to constitute 7-12% of the population by 2051.

Keywords

Austria, religion, projections, Catholics, secularization, Muslim, migration

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1. Religions in Austria: The past, the Present, the Prospects

Austria was in the past—as it is today—predominantly Roman-Catholic, though several religious minorities, in particular Jewish and Orthodox communities, have existed for many centuries. From the beginning of the sixteenth century, following the reformation, many Austrians converted to Protestantism, though the Habsburg emperors remained Roman Catholic. The Counter-Reformation, lead by Ferdinand II around 1600, had the effect that Austria again become almost exclusively Roman-Catholic. It was only on the force of the Tolerance Patent enacted by Joseph II in 1781 that Protestant, Orthodox Christian and Jewish faiths ceased to be forbidden. (Reingrabner 1981; Bundespressedienst 2004). However, most Austrians remained Roman-Catholic, and the 1869 census reveals that the proportion Catholics varied between 94.8% and 99.8%, depending on the region of the country[1] (Flora 1983).

In 1900 about 92% of Austria's population was Roman-Catholic, as shown in Table 1. During the twentieth century substantial religious change took place, and by 2001, the share of Roman Catholics had decreased to 74%. The main reason for the change in beliefs in Austria was the high degree of secularisation. Immigration of individuals with other religions and the differences in fertility levels between religious groups also contributed to the phenomenon, but to a lesser extent than secularisation. The main changes took place late in the twentieth century, and whereas in 1971, 93% of the Austrian population were either Roman-Catholic or Protestant, this share dropped to only 78% by 2001. During the same period, the share of those without religious affiliation rose from 4 to 12%, the Muslim community from 0 to 4% and other religious groups from 3 to 5%[2].

Table 1. Resident population Austria by religion 1900-2001

Year	Roman-Catholic (%)	Protestant (%)	Muslim (%)	Other Religion (%)	Without Religion (%)	Unknown (%)	Total (absolute)
1900	91.6	2.7	0.0	5.4	0.2	0.2	6003780
1971	87.4	6.0	0.3	1.5	4.3	0.6	7491526
1981	84.3	5.6	1.0	2.0	6.0	1.0	7555338
1991	78.0	5.0	2.0	2.9	8.6	3.5	7795786
2001	73.6	4.7	4.2	3.5	12.0	2.0	8032926

Source: Statistics Austria, Census 1900, Census 1971, Census 1981, Census 1991, and Census 2001

[1] Includes only regions on the present territory of the Austrian Republic, not the entire Austro-Hungarian Empire.

[2] We divide the population into five main categories: Roman Catholics, Protestants, Muslims, Other religions, and individuals without religion.

Table 2 shows the religious groups by age. The Roman Catholics is the largest religion for all age groups. The bulk of those without any religion is aged 30-60 years. As discussed in section 4.4, many are not members of the Roman-Catholic church in active labour market years. However, they seem to be re-entering the church as they age beyond 60, based on observations from our longitudinal data. One potential explanation is that they are more reluctant to pay taxes in peak-income years.[3]

Table 2. Share of population by age and religion in Austria in 1981, 1991, and 2001

		Roman-Catholic	Protestant	Muslim	Other religions	Without religions	Population
1981	Population	6372645	423162	76939	230553	452039	7555338
	0-9	88.7	4.7	2.0	2.8	1.8	910515
	10-19	91.5	5.0	0.9	1.7	0.9	1258231
	20-29	86.0	5.2	1.4	3.7	3.6	1124280
	30-39	80.0	6.2	1.8	4.6	7.3	1016078
	40-49	82.4	5.7	1.0	3.4	7.4	903131
	50-59	80.2	6.0	0.3	2.8	10.6	889445
	60-69	79.7	6.4	0.1	2.5	11.3	657617
	70+	81.8	6.1	0.0	2.9	9.2	796041
1991	Population	6081454	388709	158776	494596	672251	7795786
	0-9	83.9	4.2	3.3	5.5	3.2	915017
	10-19	85.1	4.5	3.2	5.1	2.1	944238
	20-29	79.2	4.5	2.8	7.2	6.2	1347278
	30-39	75.0	4.6	2.6	8.3	9.4	1153678
	40-49	71.5	5.6	2.1	7.7	13.2	1008043
	50-59	76.1	5.3	1.0	5.5	12.2	862804
	60-69	75.6	5.6	0.2	4.9	13.7	790436
	70+	77.7	6.1	0.1	5.2	10.8	774292
2001	Population	5915421	376150	338988	439104	963263	8032926
	0-9	76.5	4.2	8.1	5.8	5.4	879759
	10-19	81.4	4.2	6.0	4.7	3.7	957680
	20-29	73.5	4.1	6.3	6.4	9.6	1011808
	30-39	70.7	4.3	5.0	6.4	13.7	1373153
	40-49	70.0	4.5	3.8	6.6	15.1	1150990
	50-59	67.7	5.3	2.5	6.1	18.5	966800
	60-69	74.8	5.2	1.0	3.7	15.3	783653
	70+	77.2	6.0	0.2	2.9	13.6	909083

Source: Statistics Austria, Census 2001, Census 1991, and Census 1981.

In this study, we project the future religious composition in Austria using a set of scenarios that take into account age-specific fertility, migration and secularisation. We base our estimates on a rich set of data covering the entire Austrian population from 1981 to 2001. The dataset allows us to estimate age-, sex- and religion-specific migration and fertility in addition to rates of conversion between religions.

[3] Austria has special tax regulations for Catholics and Protestants. People have to pay "church taxes" directly to the church. The Roman-Catholic church automatically receives 1.1% of the net pre-tax income, while the members of the Protestant Church have to pay 1.5% of the self-reported income. Muslims do not pay taxes but are encouraged to dedicate gifts to their religious community.

Our projections for Austria 2001 to 2051 indicate that the proportion of Roman Catholics is likely to decrease from 75% in 2001 to less than 50% by the middle of the century, unless current trends in fertility, secularisation or immigration change. The share of Protestants is estimated to reach a level between 3 and 5% in 2051. The most uncertain projections are for those without religious affiliation: they could number as little as 10% and as many as 33%. The Muslim population—which grew from 1% in 1981 to 4% in 2001—will, according to our estimates, represent 14 to 26% of the population by 2051.

2. Data Collection on Religions and Projections

In addition to Austria, countries such as India, Israel, Canada and United Kingdom include religion in their censuses (Statistics Austria 2003; Statistics India 2001; Statistics Israel 2004; Statistics Canada 2001; Statistics United Kingdom 2001). Among the countries that omit the question about religious affiliation in their censuses, some consider it a violation of personal freedom.[4]

Survey data from the United States suggest that the proportion of Protestants in the United States decreased strongly over time (Smith and Kim 2004). Their share of the population fell below 50% in 2004, which is the first time that Protestants are in minority in the United States.

Detailed projections on the population by religion are rare, and to our knowledge, no earlier projection of religions based on a complete census takes into account both differential fertility, migration, conversion rates as well as the impact of mixed-religious marriages on children's religion.

Fliegenschnee *et al.* (2004) project the future size of the Protestant population in Austria. They foresee a substantial decrease, partly because of secularisation and partly because of the conversion of children of mixed couples (where one partner is non-protestant). The analysis reveals substantial differences especially between the capital Vienna and other regions in the rate of secularisation, where secularisation trends in Vienna are much stronger.

Barret *et al.* (2001) contains extrapolations for the size of religions in most countries in the world. Barret *et al.'s* Austrian projection suggested that Christians will continue to decline, perhaps falling as low as 75% by 2050. This finding clearly contrasts

[4] In the United States, the question on religion was collected from religious organisations in the beginning of the 20th century, but, for privacy reasons, the law prohibits the United States Bureau of the Census from asking a question on religious affiliation on a mandatory basis. Other countries, such as Nigeria, omit the census "since each religious and ethnic group would prefer numerical superiority over the other, it might be safer to ignore religion and ethnicity since there would be the temptation by each group to explore ways to have an edge over the other", according to the head of the National Population Commission, Samaila Makama (United Nations Office for the Coordination of Humanitarian Affairs 2005).
In Austria, there is a question on religion in the census but the information is not available to church tax authorities. The Catholic and Protestant churches collect the taxes by themselves. Hence, there are always more Roman Catholics and Protestants in the census than in the churches' statistics. However the difference is minimal e.g., 5.89 millions Roman Catholics have registered by the Church in 2001 whereas the census counted 5.92 millions.

our results, which may be due to the fact that they are based on findings from the 1991 census, and that their projection is less detailed. According to our projection, the share of Christians decreases below 75% for all scenarios.

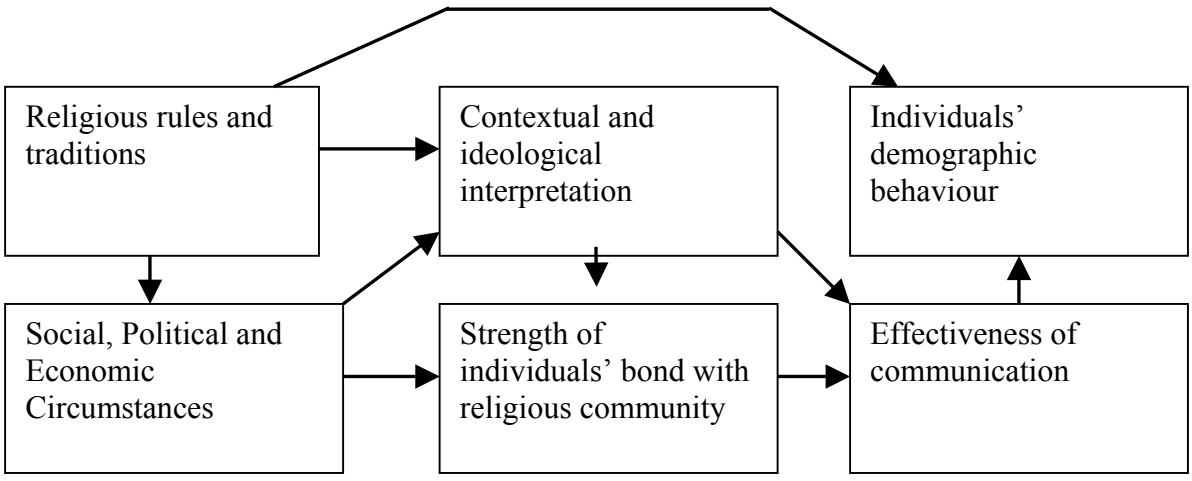
Projections were also made in Switzerland in the framework of a larger study on the demographic characteristics of linguistic and religious groups in Switzerland (Haug and Wanner 2000). The authors only consider three religious groups, Catholics, Protestants, and "other religions". The implies that secularization trends and changes in other religions are overlooked, as the "other religions" contains a range of different faiths in addition to secularised individuals.

3. Religious Determinants of Demographic Events

Regulating sexuality and fertility is central in the teachings of most major religions, and religious beliefs are powerful determinants of marriage, childbearing, divorce and other events related to family formation and dissolution. Examples of such rules are those regulating the minimum age at first sexual union, the number of wives or whether non-marital childbearing is prohibited. Such forces can influence the changing religious composition of a population over time, and could affect relative fertility rates, religion-specific net migration, and the rate of conversion between religions and transmission of religious beliefs from parents to children.

The religions differ in their emphasis on marital obligations, divorce rights, fertility demands and individual self-determination. As Figure 1 shows, religion could affect demographic patterns both due to directly expressed doctrines (e.g., that religious leaders forbids contraceptive) or indirect suggestions (e.g., promotion of early marriages which can lead to higher fertility). Moreover, beliefs expressed by religious leaders and religious texts matter only as long as the population is receptive and submissive to religious teachings.

Figure 1. Influences of religion on demographic behaviour



Studies looking at the effects of religion are prone to be upwards biased if variables that are associated with, although not caused by, religious beliefs affect demographic behaviour (Sander 1992). Religious influence tends to be contextual and often mixed with politics and ideologies, to an extent that religions' effects can rarely be estimated without considering a religious groups' social, geographic and economic circumstances. Poverty, low education levels, resource availability and political stability may be the cause of demographic behaviour, and not necessarily religion (Cohen 1996). Nevertheless, although controlling for other factors softens the estimated influence of religious beliefs, religions is still often found to have an independent effect on various demographic and economic outcomes (Lehrer 2005). Furthermore, religious beliefs can affect education, income and political stability, and hence assuming that such variables are fully exogenous could imply that the religion effects are biased downwards.

Definition of adherence to religious groups is a tricky issue as well, as some individuals may be intensely religious, while others are uncertain whether to define themselves as religious or not. Most datasets on religion are based on surveys, and very few contain the whole population. Surveys can be biased as it is may be difficult to get a representative sample of a nation's population with respect to religious affiliation. The Austrian dataset used in this study may overcome problems associated with potentially biased surveys, as it is based on census information for the complete Austrian population, rather than a small sub-sample of the population.

Further, although bivariate analyses suggest there are differences in mortality rates between individuals adhering to different religions, it is uncertain whether this relation is causal. Studies that control for confounding factors find that differences in mortality by religion are much smaller or insignificant (Hummer *et al.* 2004; Strawbridge *et al.* 2000). It is also highly uncertain if any such longevity differences will remain over time. We therefore assume equal life expectancy between members of different religions.

3.1. Fertility

We describe below the religious beliefs and practices in the order of their size in the Austrian population from the 2001 census. Hence, we describe the religious beliefs and practices first of the Roman-Catholics, then of the Protestants and finally of the Muslims. Understanding differences in fertility patterns between religious groups is important as they have a reinforcing effect over time on the size of the different religions (lower/higher fertility leads to smaller/larger groups which in turn have fewer/more children).

The Bible encourages high fertility. It states (Bible, Gen 1:28), "And God blessed them, and God said unto them, Be fruitful, and multiply, and replenish the earth". The only permitted form of contraception in the Catholic church is the "calendar method" where one does not have sex on the days of the month with the highest conception risk. However, pronatalist measures may have been listened to among Christians historically. However, in contemporary western Christian populations, only a minority believe the church should influence family decisions and Church attendance is low and decreasing (Berghammer 2003).

Sander (1992) analyses American Roman Catholics born during the twentieth century and finds that from 1920 and onwards, they no longer had higher fertility than the protestant majority, but had adopted the same fertility patterns. This may be caused by the fact that despite the clear opposition to contraception and abortion of the Roman-Catholic church, as many as 87% of American Catholics believe that individual choice should prevail in family formation choices (Noonan 1986). Also, Roman-Catholic European countries are currently well represented among those with "lowest-low fertility" (total fertility rate below 1.3), including Spain and Italy (United Nations 2004).

The Protestant church does not have the same hierarchical structure as Catholicism[5]. As the role of the church and religious leaders are generally weaker among Protestants (partly because of the emphasis on a direct relation to God), independent interpretation of the Bible and self-determination of faith has become central for this group. Protestants disfavour contraception and condom use to a much lower extent than other religious groups. In contrast to the Catholic church (which is based on Bible and tradition), a Protestant looks to the Bible for answers to religious questions. As a consequence there are no universal binding clerical teachings on topics such as contraception, cohabitation or abortion, all of which are seen as private decisions. Protestant churches across countries are rather autonomous e.g. the Protestant church in Austria is mainly liberal orientated: acceptance of divorce and out-of-wedlock fertility as well as accepting female heads of church are more, and have been sooner, accepted than in most other religions. The Protestant church recognises divorce and allows its followers to dissolve unions if marriage cannot be continued (Miklas 2005).

Islam is supportive of family formation, where marriage and childbearing represent central elements in the religion. Muhammad strongly supported marriage, remarriage and fertility. He endorsed polygyny as a way of allowing widowed fecund women the opportunity to have children, which would increase the number of his followers and strengthen the religion: "Marry women who are loving and very prolific for I shall outnumber the peoples by you" (al-Masabih 1963). Additionally, a *hadith* states, that on the day of resurrection, the Prophet would be proud of the number of his community compared with other communities and that he admonishes his followers to reproduce and increase in number (Bakar 1998). Implications of Islam for fertility patterns may be stronger than for Christians as mosque attendance seems to be relatively high, and the bond between the individual and the religious community relatively strong. Muslims have relatively high fertility in a number of societies and many Muslims attribute their high fertility to their religion (Borooah 2004; McQuillan 2004; Reynolds and Tanner 1995).

At the same time, most Muslims in Austria are first or second-generation immigrants, and the fertility of immigrants tend to converge towards the host country fertility patterns over time (Nahmias 2004; Ram and George 1990). However, as e.g. Abbasi-Shawazi

[5] The Protestant Church lacks a central authority and there is a large degree of autonomy even at lower levels in the church hierarchy. The Protestant church relies on Luther's principles of Sola Fide, Sola Christus, Sola Gratia and Sola Scriptura (Only Faith, Only Christ, Only Grace and only the Scripture), and takes the Bible as its source in religious questions. Both men and women can become priests, cohabitation is allowed, and so is divorce and remarriage.

(1998) shows when studying immigrants in Australia, the fertility trends and levels in the country of origin also influence the immigrants' fertility levels.

There do not seem to exist any specific doctrinal prohibitions of contraception in Islam, which is supported by surveys of religious leaders and religious writings for example in Jordan (Underwood 2000). It is difficult to identify the official view due to the lack of a universal religious hierarchy. There is considerable support among many religious leaders for certain family planning practices, such as coitus interruptus or contraceptive pills, while substantial opposition exists against abortion and sterilisation (Chamie 1981; Simmons 2003). However, the Koran also includes advice that reduces fertility, including long nursing periods, which substantially decreases conception rates. Children should, according to the Koran, be nursed for two full years (Koran, Sura 2,233).

3.2. Marriage

Marriage is the only permitted form of living together and sexual unions for Catholics. The Roman-Catholic church describes marriage as a sacrament between a man and a woman originally founded by God (Catechism of the Catholic church 2005: 1603). The marriage consists of "conjugal fidelity, offspring, and the unbreakable union between the spouses." (Martos 1997)

The Bible, influencing the views of both Catholics and Protestants, emphasises the link between leaving the parental home and forming a marriage; "That is why a man leaves his father and mother and unites with his wife, and they become a new family." (Bible, Gen 2,24). Hence, the church encourages leaving home, marrying and founding a new family.

In Islam, marriage has a very high significance. Fitzgerald *et al.* (1976) argue that "The Koran demands that every healthy believer has to marry." Muhammad says in the traditions (al-Massabih 1963), "Those of you who can support a wife should marry, for it keeps you from looking at strange women and preserves you from immorality". Polygamy is often mentioned in the Koran (e.g., Koran, Sura 4:3), where a man is allowed to marry up to four wives if he can do justice between them all. However, when there is a difference between Islamic and public law, Western Muslim organisations such as the "Zentralrat der Muslime in Deutschland" argue that one should follow the laws of the country as long as it does not contradict Islamic law.

3.3. Divorce

In Catholic church, there is no divorce, only nullification of marriage. "… [T]he Church maintains that a new union cannot be recognised as valid, if the first marriage was. If the divorced are remarried civilly, they find themselves in a situation that objectively contravenes God's law."(Catechism of the Catholic church 2005: 1650) People can have their marriage nullified, for example if the vow of fidelity was broken or if they can show that one partner was not willing to get children (Veitschegger 2004).

Unlike the Catholic church, marriage is not a sacrament for Protestants, it is possible to divorce and remarry. Of course family and marriage are part of the Protestant faith. However, central in Protestant teachings is a merciful God who will forgive mistakes (Miklas 2005), which implies that divorces are a possibility.

The Koran describes rules for divorce, and Mohammed characterised divorce as "the thing most hated by God". It may be particularly difficult for women to cancel marriages, which may partly explain Muslims' lower divorce rates (Fitzgerald *et al.* 1976).

3.4. Interreligious Marriage and Transmission of Religion to Children

Whether intra-religious marriages are accepted—and under what conditions—is another important aspect, which determines the relative survival rate of a religion. To which degree religion is transmitted from parents to children is also of fundamental importance to the long-term development of a religion. Some religions encourage strict upbringing of children and leave little opportunity to leave their religion. Others are more tolerant and allow people to exit the church, without being subject to sanctions.

Table 3. Marriage by religion according to the religion of bride and groom in 2003

Religious denomination of:		The bride				
		Roman-Catholic	Protestant	Muslim	Other religion	Without religion
The groom	Roman-Catholic	77.3	56.2	8.9	36.4	30.8
	Protestant	3.7	15.7	1.0	2.3	3.0
	Muslim	3.9	4.6	83.6	4.5	4.6
	Other religion	1.7	1.7	1.1	40.5	2.9
	Without religion	13.4	21.8	5.4	16.4	57.9

Source: Statistics Austria 2003

For members of the Roman-Catholic church in Austria, the impact of mixed marriages is not that important as almost 80% of Roman Catholics get married to a Roman-Catholic partner and their children are given the same religion (as shown in Table 3). The picture is however very different for the Protestant population where 80% of Austrian Protestants marry a non-Protestant partner, mostly a Roman-Catholic (56%) or a person without religion (22%). Lutz and Uljas-Lutz (1998) estimated that only half of the children of these couples become Protestant.

Table 2 reveals that for the smaller religious groups, there are generally fewer who marry individuals from their own religion. The exception is for Muslims, where only 16% marry an individual from another religion, which could be because intra-religious marriages are discouraged in Islam (Fitzgerald *et al.* 1976). For members of other religious groups around 60% get married to a person of another religion. Many individuals from other religions (36%) marry a Roman-Catholic. A little more than 40% of people without religion get married to a religious partner.

3.5. Acceptance of Conversion to Other Religions and Secularisation

Most religions have a negative outlook on those who leave their faith. The largest group of church leavers are those who go away from religion as such, as large proportions of individuals in Western societies have decided to substitute their religious beliefs with secular views. (Schluchter 1991)[6]

Our hypothesis is that as a result of this secularisation, which became a mass movement in the late 1960s, active participation in the churches was reduced. The decline of Roman Catholics is a typical European phenomenon. In Latin America and Africa, the number of Roman Catholics is expected to increase, while "only one European country (France) appears in the top 25 in terms of growth, at the 22nd for the 2004-2025 period." (Saenz 2004)

There are religious determinants for leaving church for good as well as for the transmission of religion from parents to children. For example the Protestant attitude concerning children is deduced from the Bible, especially from Jesus' behaviour and teaching towards children: "Let the little children come to me and do not try to stop them, for the kingdom of God belongs to such as these." (Bible, Mark 10,14)

In Islam, leaving one's religion (apostasy) is strongly opposed, and can be sanctioned. Some Muslim organisations promote a more tolerant view, where also the right to convert should be allowed without penalties (Ahmad Faiz bin Abdul Rahman 1998; Rahman 1986).

4. Projections

The projections of the population by religion status from 2001 to 2051 were created using the PDE Population Software[7], a simplified multi-state population projections program for states interacting with one another. The inputs required for the projections are the following:

- Base year parameters: population by age, sex, and religion status, age- and religion-specific fertility rates, age-, sex- and religion-specific mortality rates, age-, sex- and

[6] Secularisation has been part of Austrian philosophy since the age of enlightenment (Schluchter 1991). The church is losing its exclusive right to settle the norms, because there are other value systems, which can guide one's beliefs and lifestyle. "The result of the secularisation is that faith is getting more and more subjective as a consequence of alternative lifestyles." (Schluchter 1991) Many spheres such as economy, policy, and science are not under the control of the church any more (Schluchter 1991; Zulehner 1993).
More and more people are leaving the church because they find their moral concepts somewhere else and individuals are largely free to choose which view fits best for them (Schluchter 1991). Today we can say we have two tendencies, „the religion's view of the world views only part of the world, and faith is subjective." (Schluchter 1991) But also the possible religious views have become more multifarious. People have access to different religions, even within the Christian church or the Islamic world (Schloz *et al.* 2003).

[7] The software is available free of charge at http://www.iiasa.ac.at/Research/POP/pub/software.html

religion-specific net migration numbers, and transition rates between religion groups.
- Scenario assumptions as to the future of the parameters listed above.

Table 4. Definition of the religion categories used in the projections

Categories	Census categories
Roman-Catholic	Roman-Catholic church
Protestant	Protestant church
Muslim	Islamic religious community
Other religion	Other Catholic (united) churches
	Orthodox churches
	Other Christian communities
	Jewish religious community
	Other non-Christian communities
	Not indicated
	Others (before 2001)
Without religion	Individuals who declare no religious affiliation

The base-year population was taken from the 2001 census. As mentioned above, we aggregated the population into five main religion categories: Roman Catholics, Protestants, Muslims, Other religions, and Without Religion. A definition of the categories is given in Table 4.

4.1. Base-year Fertility

The base-year fertility is estimated from the census data on children ever born to women residing in Austria in 1981, 1991 and 2001.

The methodology for calculating age-specific fertility differentials by religion is detailed in Appendix 1. Tables 5 and 6 as well as Figures 2a-2f present the main results. In the period 1981-2001, the TFR in Austria declined from 1.7 to 1.3. Fertility declined for all religious affiliations. In absolute terms, the largest decrease of the TFR was observed among Muslims (by about 0.8), and the lowest among "other religions" (by about 0.3). The total number of children born in Austria was most strongly influenced by the declining fertility among Roman-Catholics who constitute the major part of the Austrian population. The increasing number of persons without religious affiliation who have a significantly lower fertility than other groups also influenced the total decrease. The analysis also reveals that the population without religion had a very low fertility throughout the period observed with a TFR of 1.1 children in 1981 and 0.9 in 2001.

Detailed analysis by age (see the figures 2a-2f) shows two main tendencies in all religion groups: postponement of the age of having children and the decline in total fertility rates. The postponement of having children was common to all groups except the Muslim population who in 2001 still had higher age-specific fertility rates at age 20-24 than those aged 25-29. The changes in the ASFR among religions had two main patterns. The Roman-Catholic and Protestant populations in the first period 1981-1991 postponed the main age

period of childbearing from 20-24 to 25-29. Then in the second period 1991-2001 the postponement of fertility continued (higher fertility at age 30+) but the stronger trend was the huge fertility decline at ages 20-30.

Table 5. TFR and proportion by religion in the female population aged 15-49

	1981		1991		2001	
	TFR	Proportion	TFR	Proportion	TFR	Proportion
Roman-Catholic	1.70	85.7	1.52	78.8	1.32	74.5
Protestant	1.51	5.8	1.37	5.1	1.21	4.5
Islam	3.09	0.9	2.77	1.9	2.34	4.6
Other religion	1.70	3.4	1.61	7.1	1.44	6.2
Without religion	1.12	4.2	1.04	7.1	0.86	10.2
Total	1.67	100	1.51	100	1.33	100

Source: Authors' calculations and Statistics Austria Datenbank ISIS

The results show that the fertility patterns of different religion groups tend to follow similar trends, albeit at different times and with different scales. The sources of the differences in fertility patterns beside the impact of religion on sexual behaviour are also other features correlated with religion that diversify the women, like education level, immigration status or labour market participation.

Table 6. Fertility differentials by religion, 2001

	Roman-Catholic	Protestant	Muslim	Other religion	Without religion
15-19	0.056	0.058	0.174	0.168	0.069
20-24	0.261	0.228	0.843	0.452	0.217
25-29	0.465	0.417	0.811	0.484	0.244
30-34	0.376	0.350	0.318	0.213	0.206
35-39	0.135	0.130	0.148	0.095	0.104
40-44	0.024	0.025	0.042	0.029	0.023
45-49	0.001	0.001	0.002	0.001	0.001
TFR	1.32	1.21	2.34	1.44	0.86

Source: Authors' calculations and Statistics Austria Datenbank ISIS

Figures 2a-2f. Age-specific fertility rates of the total population and of different religion groups in Austria in the period 1981-2001

Figure 2a. Total population

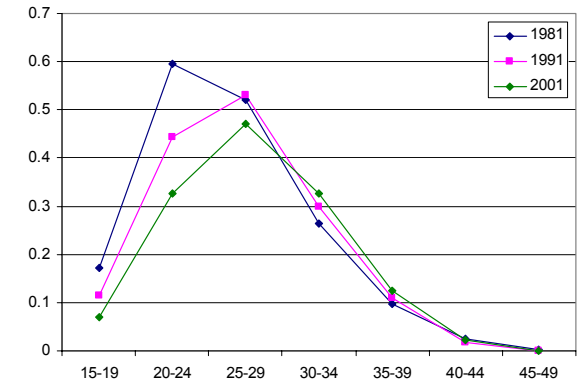


Figure 2b. Roman-Catholic

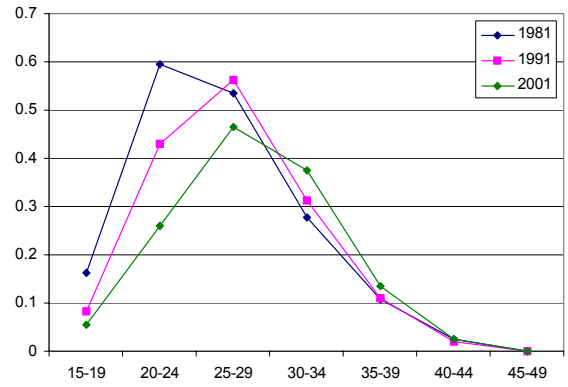


Figure 2c. Protestant

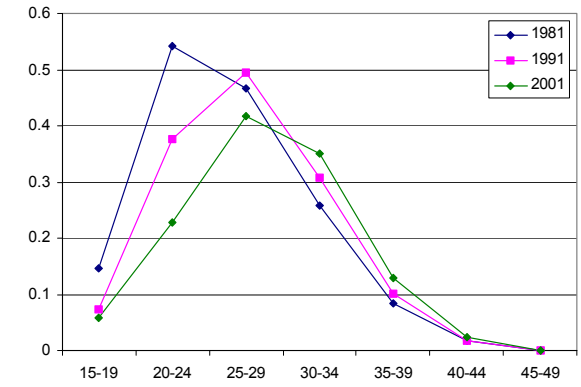


Figure 2d. Muslim

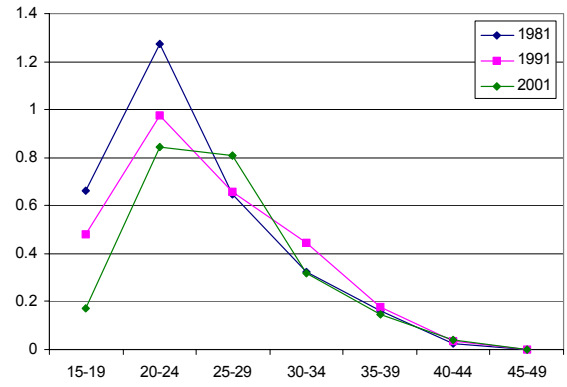


Figure 2e. Other religion

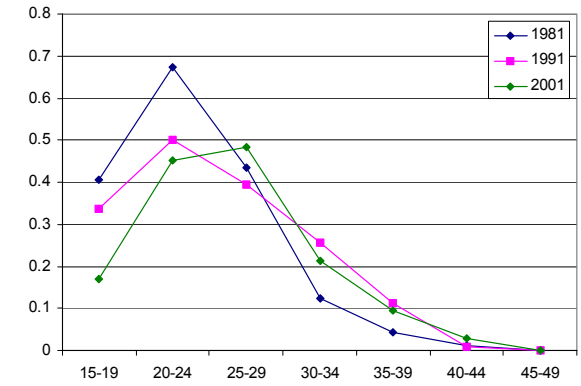
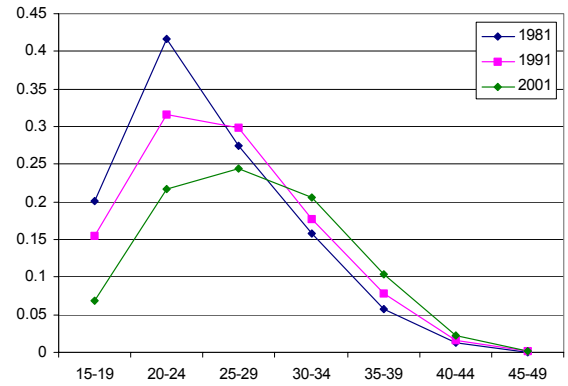


Figure 2f. Without religion



Source: Authors' calculations and Statistics Austria Datenbank ISIS

4.2 Base-year Mortality

Mortality differentials by religion were not considered in this project, as the data are not available, the religion of the deceased not being entered in the death register. Although it would be possible to link the census data to the death register, this was not feasible in the framework of this survey. Mortality rates are extracted from life tables available at Statistics Austria and are kept equal across all religious affiliations (Statistics Austria 2003)

4.3 Base-year Migration

Migration is a key factor in Austria's changing religious landscape. Unfortunately we lack data on the faith of immigrants and/or emigrants in Austria. Religious affiliation was inferred from the country of origin. In a first step, we selected the countries with the highest in- and out-migration and retrieved the net numbers of migrants for them. In a second step, we used the Central Intelligence Agency (CIA)-World Factbook (2005) that gives statistics on all the countries in the world to retrieve the shares of the population by religious affiliations. These shares were then applied to the flows to distribute the net migrating population according to religious beliefs as shown in Table 7. The exercise shows that in 2001, 18% of the migrants were Roman Catholics, 8% were Protestants, 38% were Muslims, 28% followed another religion, and 9% are without religion. Figure 3 shows the age composition of the migrants by religion. The assumption that the migrants have the same distribution as the rest of the population in their country of origin is, of course, quite daring. In certain cases, ethnic or religious conflicts could affect outbound migration of a specifically persecuted group. However, in the absence of better information, this was felt to be the best approximation method.

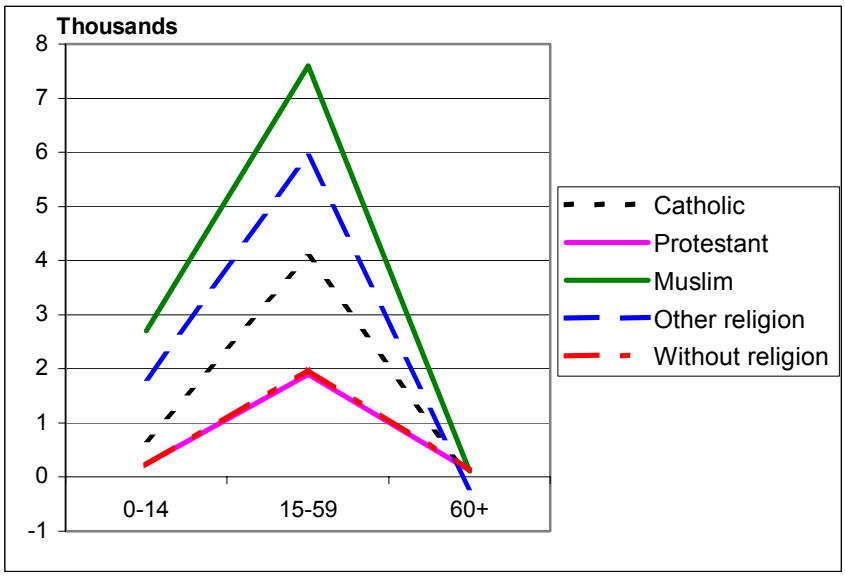
Table 7. Share of population by religion in the main countries of net-migration to Austria

Country of origin	Roman-Catholic	Protestant	Muslim	Other religion	Without religion
Bosnia Herzegov.	15		40	45	
China	3		2		95
Croatia	88	0	1	6	5
Egypt			94	6	
Germany	34	34	4	16	12
Hungary	52	16	1	17	14
India	2		13	85	
Iran			98	2	
Macedonia	1 [a]		17	82	
Pakistan	1		97	2	
Poland	90			10	
Serbia	4	1	19	76	
Switzerland	42	35	4	8	11
Turkey			99.8	0.2	

Source: Central Intelligence Agency (2005)

[a] Source: http://www.Catholic-hierarchy.org/country/sc1.html

Figure 3. Age structure of net migration by religious affiliation



4.4 Base-year Transitions

The transitions measure the flows occurring between religions, meaning moving from one religious affiliation to another one. The transitions in Austria from 1991 to 2003 are given in Table 8. Out of the twenty flows possible between the five religion categories, two seem essential and will shape the future composition of the religions landscape of the country.

Table 8. Annual Conversion Flows of Roman Catholics, Protestants, and all other religions, 1991-2003

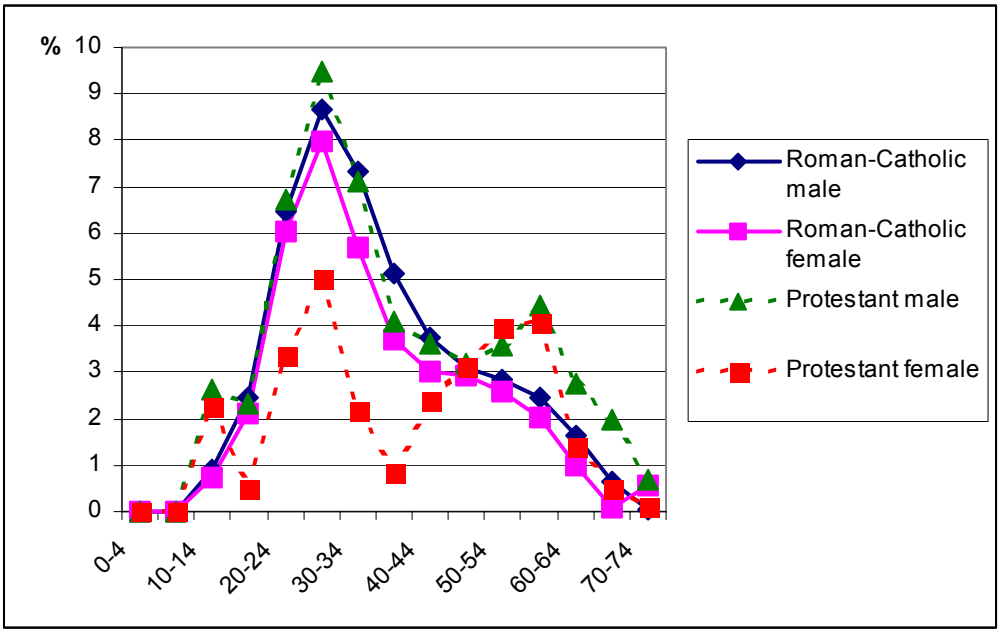
Flow	Religion	1991	1993	1995	1997	1999	2001	2003
Exit	Roman Catholics	33914	35845	43527	32195	43632	33863	39588
	Protestants	3641	2902	2843	2694	3468	3062	3193
	Other religions	221	134	165	166	162	157	118
Entrance	Roman Catholics	4372	3709	3792	4017	3387	3801	3848
	Protestants	873	869	1024	838	1015	765	779
	Other religions	598	372	374	361	365	679	543
Net	Roman Catholics	-29542	-32136	-39735	-28178	-40245	-30062	-35740
	Protestants	-2768	-2033	-1819	-1856	-2453	-2297	-2414
	Other religions	377	238	209	195	203	522	425

Source: Statistics Austria Yearbooks, 1992 to 2005.

Those flows reflect the progressing secularisation of the country, especially through the exodus of members of the Roman-Catholic church. These were estimated to be around 34,000 on average per year for the period 2001-2006. About 2,200 are moving out of the Protestant church every year for the same period. Abandonment of religion is much harder in other religions such as Islam, the Jewish faith, and Hinduism. Changes in the Muslim and 'other' religious categories will occur mainly through fertility and migration.

The age patterns of transition, shown in Figure 4, were calculated based on comparison between censuses 1981-1991 and 1991-2001 using the estimates of net-migration by age for sub-national population applying the census survival rate method[8].

Figure 4. Age pattern of secularisation rates (in percentage) for Roman Catholics and Protestants, male and female, 2001



Source: Authors' calculations

4.5 Scenarios

The scenarios should help in answering the main questions we have about the future of religions in Austria:

Question 1: If secularisation and the increase of other religions in the population continue, when will the Roman Catholics become a minority?
Question 2: Will Islam or those without religion become the dominant group in Austria?
Question 3: What is the influence of migration on the religious structure of the country?
Question 4: Could a change in the religious composition lead to increased fertility in Austria?

We developed a matrix of thirty-six scenarios emerging from the combination of several hypotheses on the different demographic determinants and the determinants of religious compositional change that is fertility, migration, and transition/secularisation.

[8] Calculated with the help of the U.S. Census Bureau Population Analysis spreadsheets (PAS).

Fertility[9]: Scenario "stable fertility" (Fs): Fertility by religion remains constant at the levels observed in 2001. Hence, the Muslim population keeps at a higher fertility level than the rest of the population with a TFR above 2.3 children per woman. This scenario is coherent with the hypothesis that dependents (mainly wives) of new migrants may rely on child benefits rather than on employment, and therefore keep a somehow higher fertility.[10] This scenario also implies that the secularised population maintains its very low fertility, which may be unlikely in a situation of diffusion where more and more people move to this group, coming from different fertility backgrounds.

Scenario "converging fertility" (Fc): Fertility by religion converges to a TFR of 1.4 children by 2026-2031, and remains constant afterwards. This TFR is in accordance with the medium variant of the Austrian population projection. The convergence scenario implies three main assumptions. First, fertility in Austria will stay at very low levels at least until the middle of next century. Second, the different generations of migrants will rapidly adopt the low fertility pattern existing in Austria. And third, the population without any religion will increase its fertility.

Scenario "half-converging fertility" (Fh): This scenario provides an alternative between constant and converging fertility. Fertility starts converging but stops half way through on the way to convergence. In 2026-31, the TFR of Muslims will be 1.9 children, that of those without religion, 1.1 children. Population in the other religious affiliations gravitate around 1.4 children. As in scenario Fc, fertility remains constant at the above-mentioned level during the 2031-2051 period.

Mortality: One single trend, following the medium variant of population projections for mortality of the Austrian Statistical Office (Statistics Austria 2003). All religions follow the same mortality pattern with an increase in life expectancy between 2001-2006 and 2046-2051 from 76 to 83 years for male and from 82 to 88 for females.

Migration: Scenario "Medium migration" (Mm): The net number of migrants follows the medium variant for population projections of the Austrian Statistical Office. It fluctuates between 19,000 and 28,000 each year during the 2001-2051 period. The age and sex patterns of migrants follow those observed in 2001. The religions affiliation of migrants is kept at levels observed in 2001: 18% are Catholics, 8% are Protestants, 38% are Muslims, 28% have another religion and 9% are without religion.

Scenario "Muslim migration" (Mi): Same as in Mm except that the share of Muslims among migrants increases linearly up to 100% in the period 2026-31, and then remains

[9] Children are born in the same category as their mother. This is consistent with several studies that show the mother is more influent for the choice of children's religion, especially in the case of mixed marriages (Lutz 1985). However, we do not consider what could happen within a more balanced religious composition of the country where the rate of mixed marriages may increase and affect the choice of one or no religion for the children.

[10] This scenario does not take into account tempo-effects, where postponement leads to a temporary increase in period fertility at later stages (see e.g. Sobotka 2004). The stable relatively high fertility among Muslims can be partly explained by the fact that parental leave in Austria since 2002 has been made available for all women, regardless of whether they had an employment contract before they get a child. (Bundesministerium für soziale Sicherheit 2005)

constant at this level. This scenario illustrates the relative influence of immigration of a specific group on the overall religious composition of the country.

Scenario "High migration" (Mh): Same as in Mm, except that the net number of migrants follows the high variant for migration stated in the population projections of the Austrian Statistical Office. The net number of migrants per year fluctuates between 27,000 and 38,000 during the 2001-2051 period.

Transition/Secularisation:

Scenario "Constant secularisation" (Tc): This scenario implies constant transition rates at the levels observed in 2001 for transitions from Catholics to 'without religion' and from Protestants to 'without religion' (as shown in Figure 5). In the 2001-2006 period, this means 34,000 are leaving the Roman-Catholic church and about 2,200 are leaving the Protestant church every year. This scenario mainly shows the depletion of the Roman-Catholic and Protestant churches due to present trends in secularisation.

Scenario "High secularisation" (Th): The transition rates double between 2001-2006 and 2026-2031 and remain constant afterwards. As in scenario Tc, the overall age pattern is kept constant. This shows a strengthening of the current trend where people are leaving the Protestant and Roman-Catholic churches.

Scenario "Low secularisation" (Tl): The transition rates converge to zero by 2026-2031 so that by 2031, everybody stays in the religious groups he/she was born into. This scenario describes a reversal of the present trend over a rather long period of 25 years.

Scenario "Muslim secularisation (Tm): This scenario replicates scenario Tc and adds a possibility of a secularisation among the Muslim population. The transition rates of the Muslim population to secularisation equal that of the Roman Catholics in Scenario Tc. Because the concept of secularisation does not really apply to the Islamic world, where it is rather an exit from religion, it is meant in the sense of a state where individual life is no longer structured and determined by Islam, as observed in some North African countries and migrants from these regions to France (Akgüngör and Bayraktar 2005).

The matrix of the 36 scenarios emerging from the combination of the hypothesis on the different demographic determinants is shown in Table 9.

4.6 Scenario Results

We will look at three main indicators to reflect upon the changes induced by changes in the religious composition of the population. Although we are considering thirty-six scenarios, we will show that the results group themselves quite nicely around the main determinants of the indicators under consideration, above all secularisation trends and migration composition and levels.

Table 9. Matrix of scenarios

Fertility	Transition/ Secularisation	Migration		
		Medium (Mm)	Muslim (Mi)	High (Mh)
Stable (Fs)	Constant (Tc)	FsMmTc	FsMiTc	FsMhTc
	High (Th)	FsMmTh	FsMiTh	FsMhTh
	Low (Tl)	FsMmTl	FsMiTl	FsMhTl
	Muslim (Tm)	FsMmTm	FsMiTm	FsMhTm
Converging (Fc)	Constant (Tc)	FcMmTc	FcMiTc	FcMhTc
	High (Th)	FcMmTh	FcMiTh	FcMhTh
	Low (Tl)	FcMmTl	FcMiTl	FcMhTl
	Muslim (Tm)	FcMmTm	FcMiTm	FcMhTm
Half-converging (Fh)	Constant (Tc)	FhMmTc	FhMiTc	FhMhTc
	High (Th)	FhMmTh	FhMiTh	FhMhTh
	Low (Tl)	FhMmTl	FhMiTl	FhMhTl
	Muslim (Tm)	FhMmTm	FhMiTm	FhMhTm

Population

The Austrian population will start shrinking in all thirty-six scenarios, as shown in Figure 5. The time at which this will happen varies within the period from 2031 to 2051. Only in the case that combines stable fertility (Fs), high migration, and low secularisation would the population not start its decline before the middle of the century. The critical question is whether such a scenario is likely or not. We can identify two main groups of scenarios when looking across total population size results. The top group of scenarios leading to higher population growth is those combining high migration with the different fertility and transition scenarios. Religion will contribute to population growth if migrants keep having a differentiated pattern of fertility, especially regarding the fertility of the Muslim population. It is clear that unless there is high migration, the population will level off before 2030.

Fertility

In terms of total fertility rate, the range would vary between 1.4 and 1.7 children in 2046-51, as shown in Figure 6. In case of constant fertility differentials within religious categories, the total fertility rate would still increase to 1.5 children because of the changing weights of the different religious categories with increasing weight of the more fertile groups (Muslims). The convergence of fertility scenario obviously leads to a smaller increase in fertility, to the target level of 1.4 children in 2026-32.

Figure 5. Austria's total population, 2001-2051, 36 scenarios

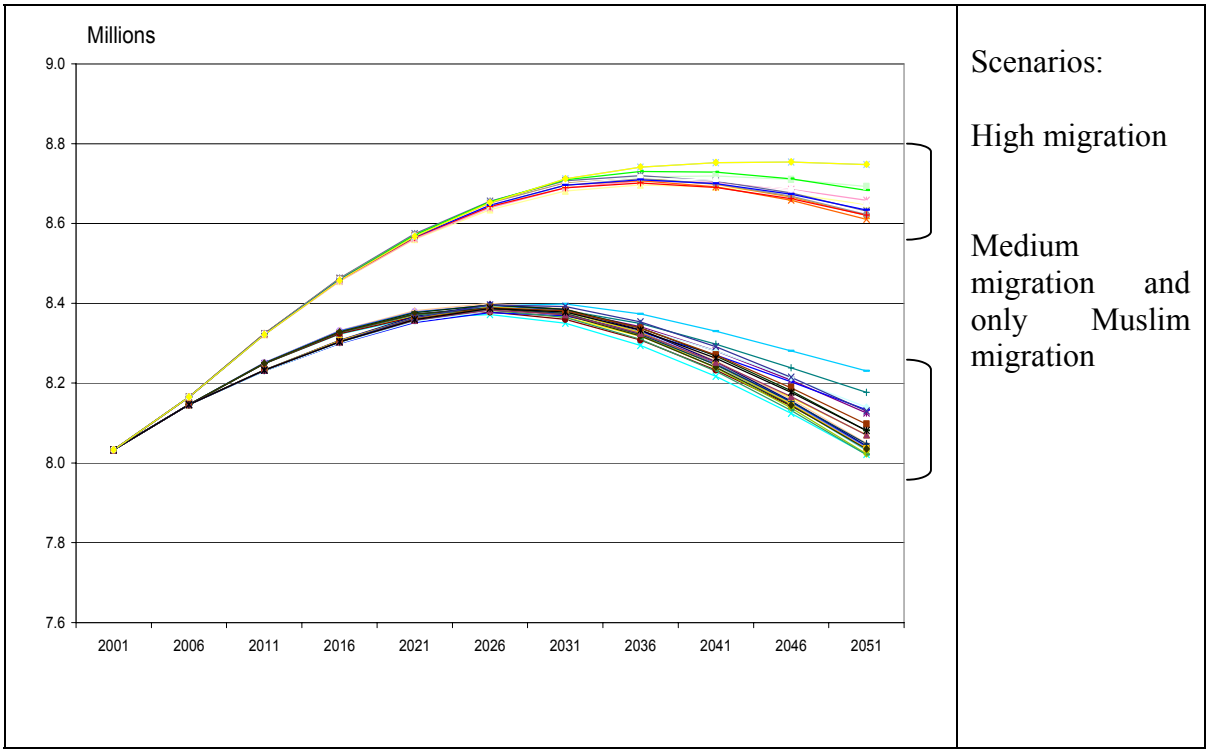
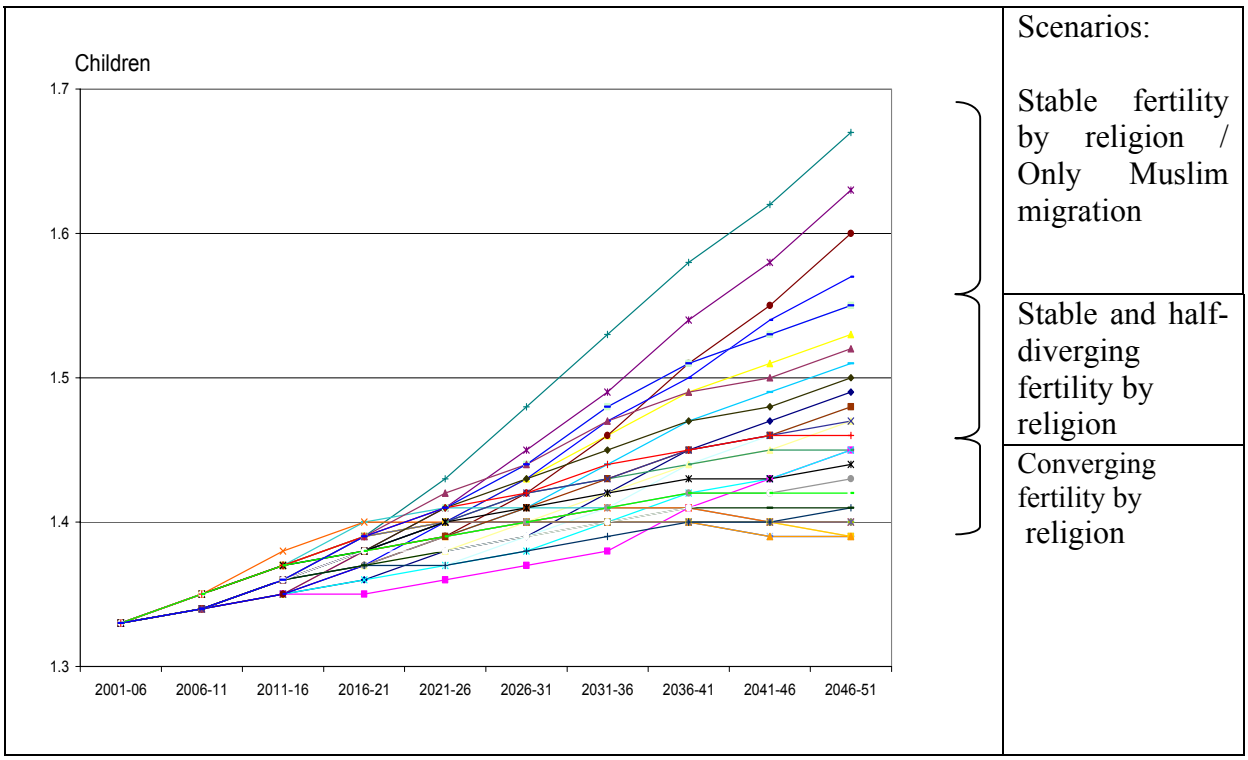


Figure 6. Austria's TFR, 2001-2051, 36 scenarios (Source: Authors' calculations)



Religious composition

The different scenarios will affect the religious composition of the population. All scenarios show a severe decline of the Roman-Catholic population, see Figure 7. Only if this downward trend can be stopped by 2031, due to a less pronounced secularisation trend (Tl), the Roman Catholics will still have a chance to have a share in the total population above 50% in 2051 as shown by the nine upper lines in figure 7. In all the other 27 scenarios, the Roman-Catholic church would have less than 50% of all religious affiliations by 2051, and it could fall below 40% if secularisation rates were to double between 2001 and 2051 (the lowest value is 35.6% according to scenario stable fertility/Muslim migration/High secularisation). However, it is important to note that Catholicism would still be the dominant religion, as no other religion by itself would have a share above 35%.

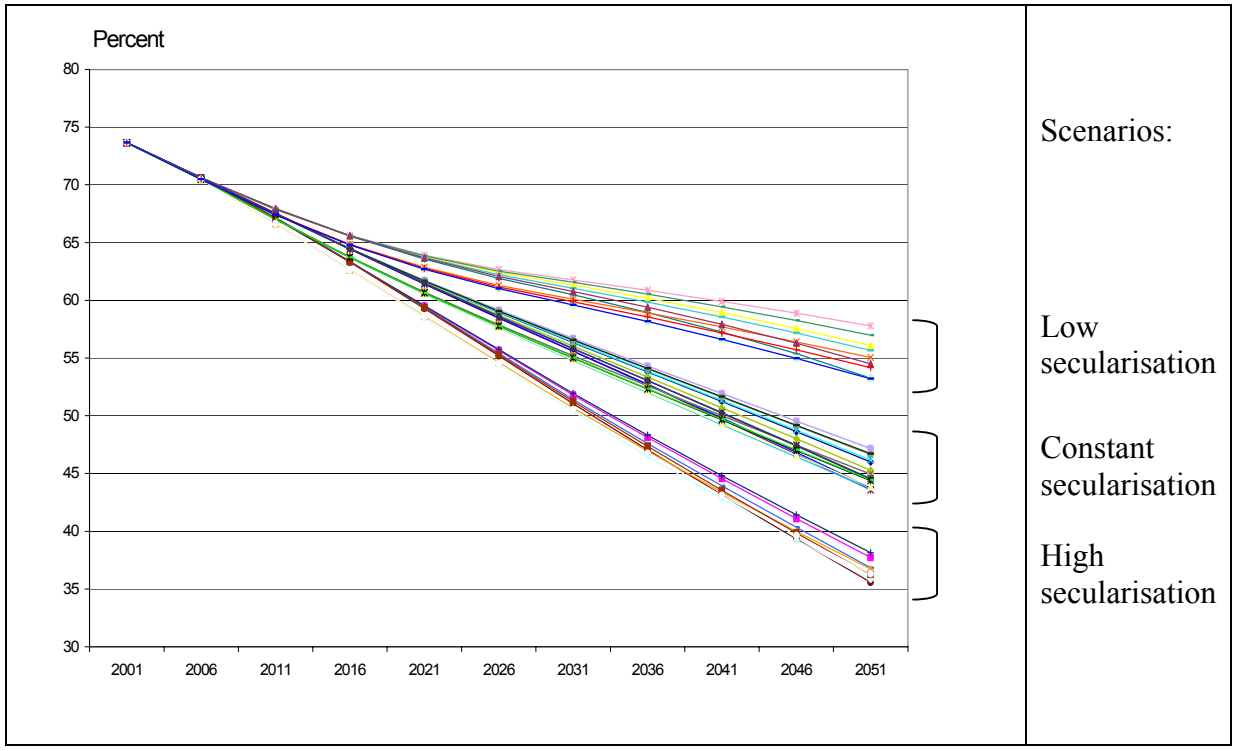
The projections show in most cases a diminishing share for the Protestant population. It could fluctuate between 2.8% and 5.2% of the total population by 2051 (see Figure 8). However and contrary to what we have seen for the Roman-Catholic church, the Protestant church may witness a rise of its membership—and this in eleven scenarios—mostly due to the benefit of a higher share of Protestants in the migrants (above 8%) than in the population living in Austria (at present 4%).

The fastest increase will definitely be that of the Muslim population, which was the smallest religious group in Austria in 2001 (see Figure 9). From 4% of the population in 2001, its share could be as high as 26% in 2051—this, however, in case of an exclusively Muslim migration by 2031 (Mi), which is rather unrealistic. In twenty-four scenarios, the proportion of the Muslim population would not exceed 14% by 2031, and 20% by 2051.

Migration will increase the diversity of religion in Austria as can be seen from the share of 'other religions' shown in Figure 10. This would be mostly due to the migration of Orthodox Christians from former Yugoslavia and Hindus coming from India. Whereas in 2001, about 5% of the population were observing an "other religion", they could be as many as 10-12% in 2051 if a high or central migration hypothesis is taken into consideration (Mh). Only if the migration were exclusively composed of Muslims would the share of other religion reach a ceiling of 7% between 2026 and 2051.

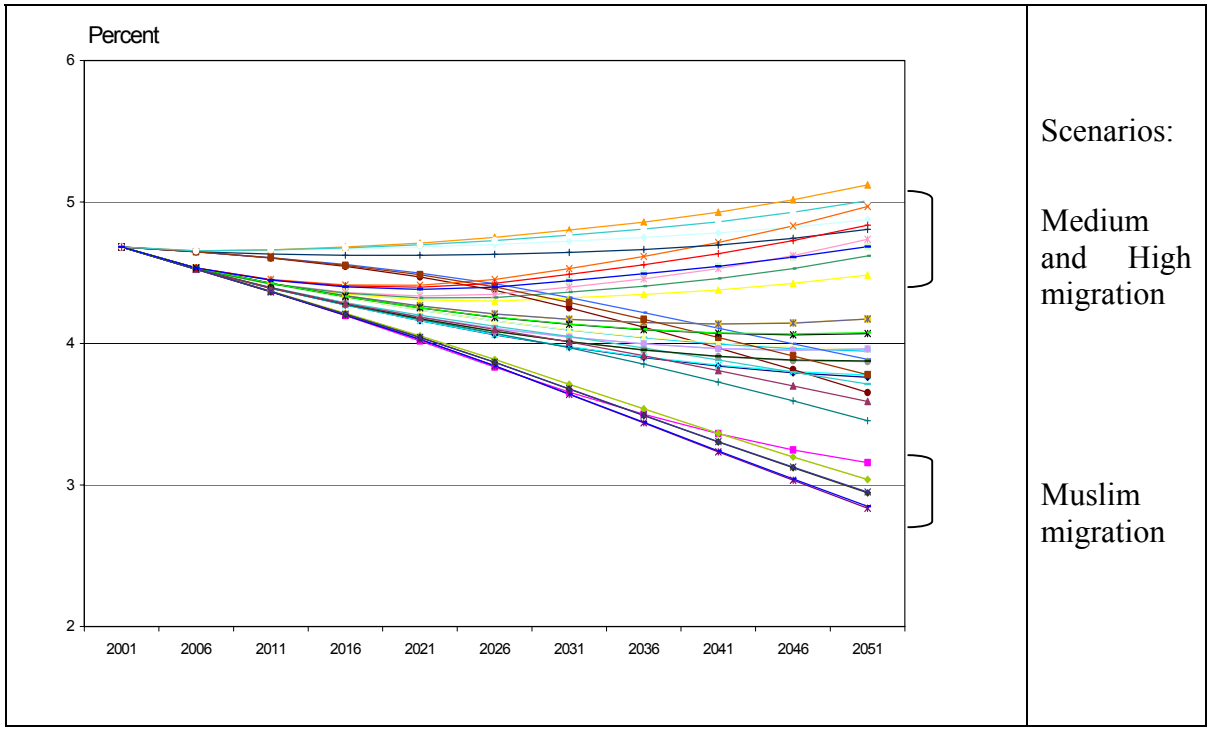
The future of the group 'without religion' will be highly dependent on the transition from the Roman-Catholic, and—to a lesser extent—from the Protestant and Muslim groups. The secularised population will be the second largest "religious group" by the middle of the century in most scenarios. The scenario lines in Figure 11 can be divided into three main groups. If the secularisation rate increases further (Th) and/or if the Muslim population starts secularising too, the share of the population without any religion could be as high as 28–32%. The constant secularisation scenario gives an intermediate picture, in which the group 'without religion' will still grow considerably to 20–26% of the population. Only if the rate of secularisation were to come to a complete stop by 2030 (Tl) this category would stagnate around 10–15% during the 50-year projection period.

Figure 7. Proportion Roman Catholics in total population, 2001-2051, 36 scenarios



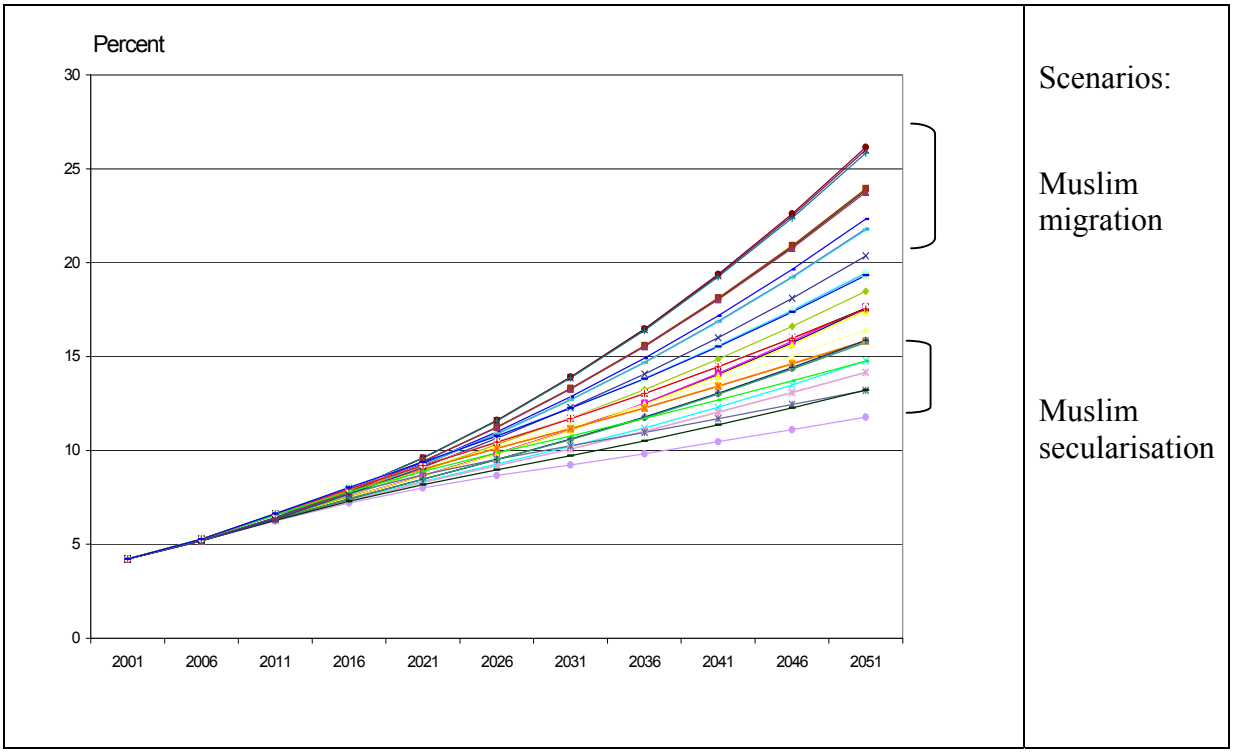
Source: Authors' calculations

Figure 8. Proportion Protestants in total population, 2001-2051, 36 scenarios



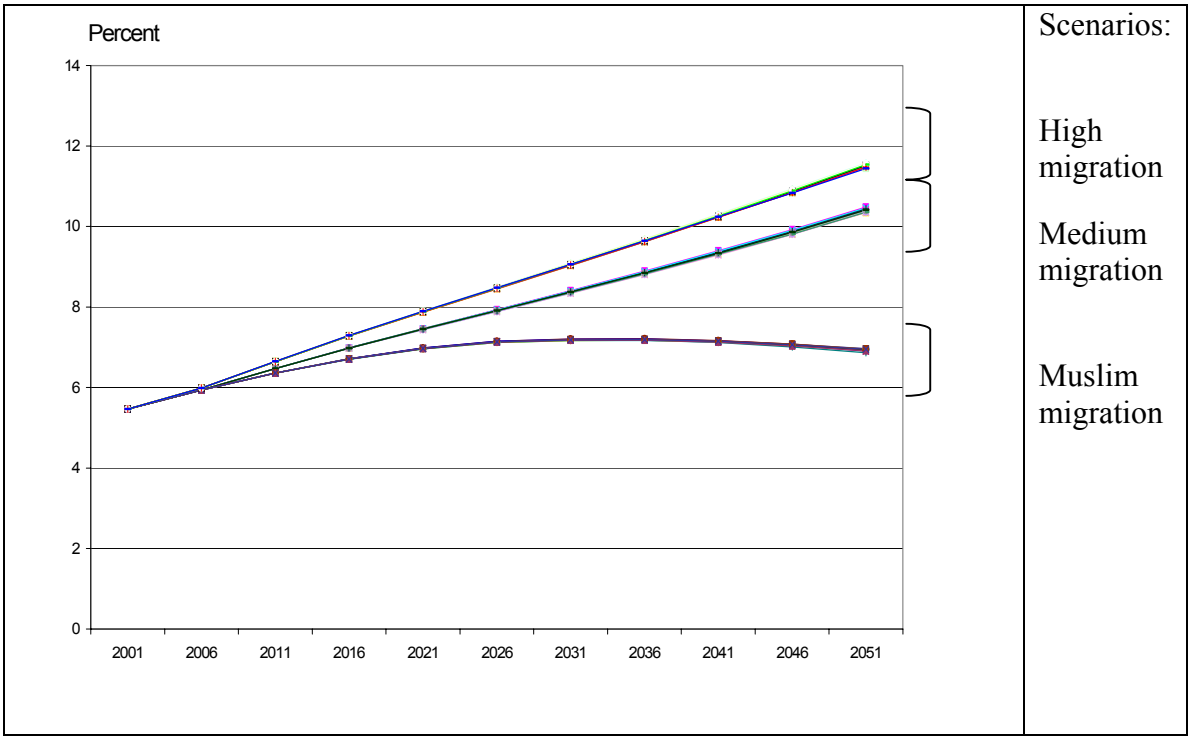
Source: Authors' calculations

Figure 9. Proportion Muslims in total population, 2001-2051, 36 scenarios



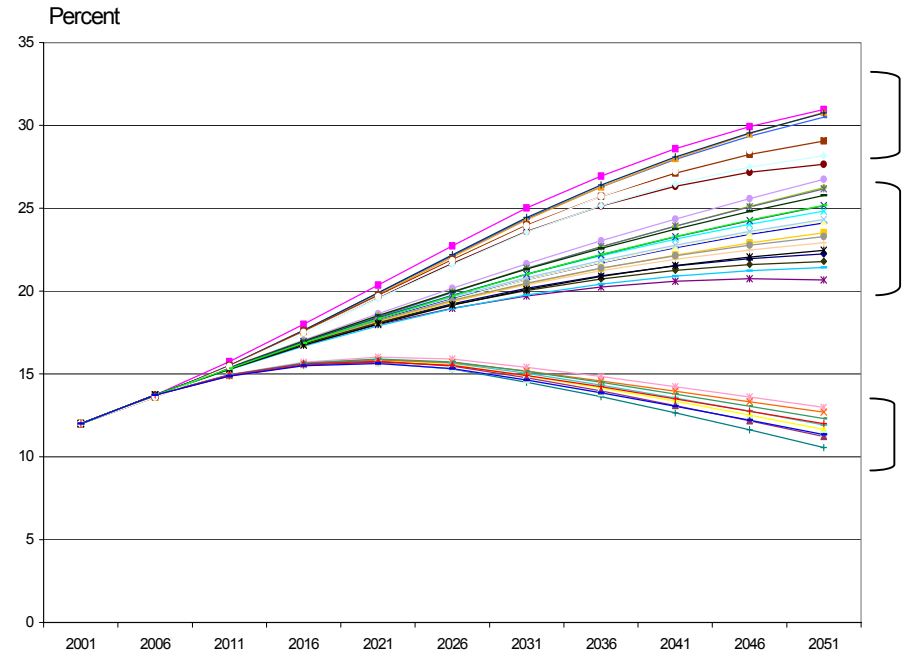
Source: Authors' calculations

Figure 10. Proportions Other Religions in total population, 2001-2051, 36 scenarios



Source: Authors' calculations

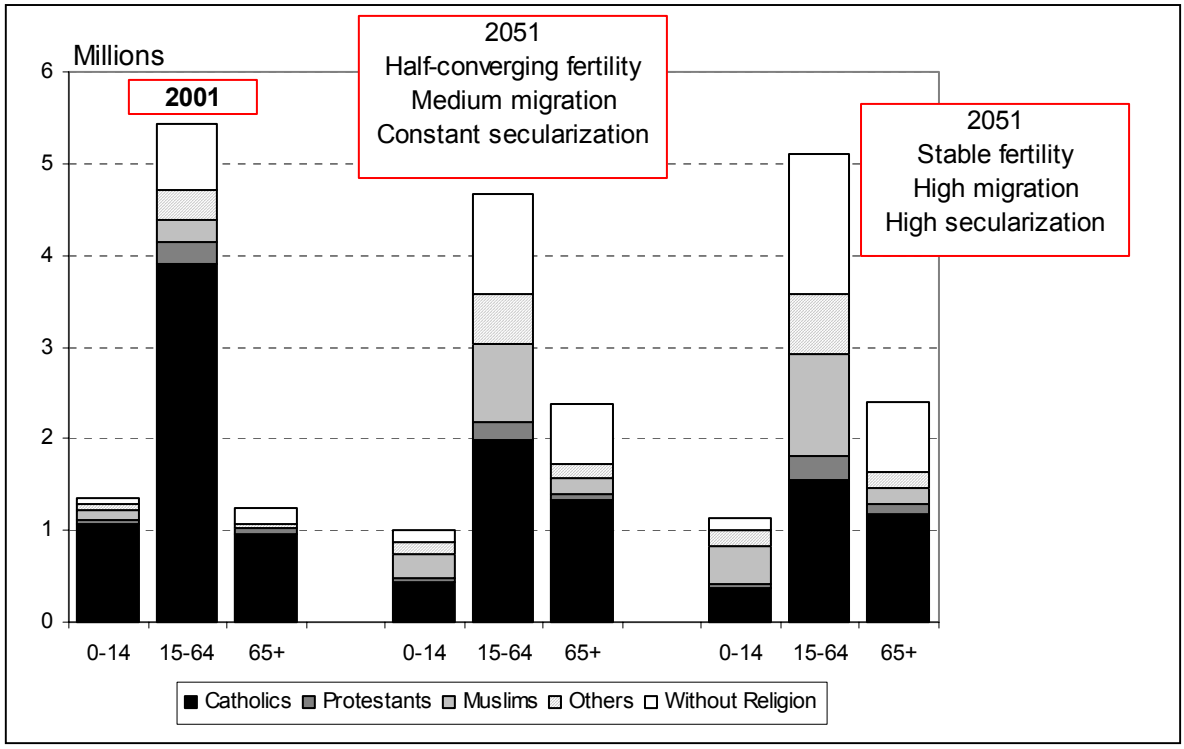
Figure 11. Proportions Without Religion in total population, 2001-2051, 36 scenarios



The religious landscape of the country will change greatly in the next 50 years and this will also have some repercussions at the age group level as can be seen from Figure 12 (complete results available in Appendix 2) showing the division between different age groups representing the young, the working and the old generations. In 2001, there were very little differences in the distribution by beliefs across generations. In 2051, if we consider the "central" scenario (FcMmTc: Medium fertility/secularisation/migration), whereas 56% of the 65+ generation were Roman Catholics, only 43% of the working age population will have this belief. The 0-14 will consist of 18% Muslims whereas only 7% will have this affiliation in the old generation.

The differences could even be more extreme if migration and secularisation increase. Scenario FsMiTh shows that only 30% of the young generation are Roman-Catholics compared to 50% of the old generation. In the same manner, the proportion of Muslims is eight times higher in the young age group than in the old one.

Figure 12. Age and Religion in Austria, 2001 and two scenarios for 2051



Conclusion

The dominance of the Roman-Catholic church in Austria has been challenged during the last thirty years. The projections presented in this paper show some interesting results as to the future religious composition of the country.

In our calculations we find that even if the share of Roman Catholics is likely to fall below 50% by 2051. Some scenarios even show a decline below the 40% line. However, in all cases they will still be the largest religious community in Austria for the first half of the twenty first century. The share of the Protestants will remain relatively stable over the period, around 3-5%.

Our projections show that Austria will not have a secularised or a Muslim majority by 2051. The share of the population without religion in 2051 is nevertheless highly uncertain: It could be as low as 10% and as high as 33%. The Muslim population has already experienced a sharp increase, from 1% in 1981 to 4% in 2001, and by 2051 will represent 14-26% of the population. Other religion categories will increase their weight in Austria as well, to be around 7-12% by 2051. The rapid changes will also provoke imbalances with regard to the religious composition of the different age categories.

The implications of those compositional changes will certainly play an important role for the societal future of Austria. We would like to apply further the methodology of multi-

state population projection by level of religion to other countries where similar data would be available such as Canada and Switzerland in order to gain some comparative knowledge on the future religious composition of those countries.

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Appendix 1. Methodology for Estimating the Fertility by Religion of Mothers

The database for this analysis was the data from Austrian censuses in 1981, 1991 and 2001 that contained the information about religious affiliation. These data included the population by age and sex and the average number of children per woman. The second source was the aggregate data: TFR (Total Fertility Rates) and ASFR (Age-Specific Fertility Rates). The method described below was used in order to calculate the TFR and ASFR in different religion groups. It is based on the decomposition of the aggregated TFR, which assures the consistency of the results with aggregate data. First TFR is decomposed into the weighted average of religion-specific TFRs and then the age and religion-specific relative fertility rates are introduced:

$$TFR = \sum_r TFR_r \cdot W_r = \sum_r \sum_a ASFR_{r,a} \cdot W_{r,a} = \sum_r \sum_a RASFR_{r,a} \cdot ASFR_a \cdot W_{r,a} = \sum_a ASFR_a \sum_r RASFR_{r,a} \cdot W_{r,a}$$

In this formula *r* is a subscript of religion group, *a* is a subscript of age group, $W_{r,a}$ is a weight of religion *r* in the age *a* in total population, $ASFR_{,a}$ is an age-specific fertility rate in the age a, $ASFR_{r,a}$ *and* $RASFR_{r,a}$ are Age-Specific Fertility Rate and Relative Age-Specific Fertility Rate of religion group *r* in the age *a*. $RASFR_{r,a}$ could be received from the following equation:

$$RASFR_{r,a} = \frac{ASFR_{r,a}}{\sum_r ASFR_r \cdot W_r^a}$$

Where

$$\sum_r W_r^a = 1$$

Approximated values of *RASFR*s are then calculated based on the results of calculations made on spreadsheet PAS used by the United States Census Bureau. It uses a technique developed by Arriaga for estimating fertility rates based on information on the average number of children ever born and pattern of fertility. Patterns of fertility were estimated using the information from censuses about the average number of children ever born and the assumption that patterns of fertility between censuses are not very different from those in census years themselves. Relative fertility rates were used in order to receive results consistent with observed TFR and ASFR. This was necessary because in the analysis mortality and migration were not taken into consideration. At first the approximated numbers of children born to women of a certain age and religion $ACB_{a,r}$ were calculated for each age and religion from the equation:

$$ACB_{a,r} = CEB_{a,r} - CEB_{a-1,r}$$

where $CEB_{a,r}$ means the number of children ever born to women with religion *r* and age group *a*. And *a-1* means the age group5 years younger. Then the result of this formula was used to calculate the $RASFR_{a,r}$ as follows:

$$RASFR_{a,r} = \frac{ACB_{a,r}}{\sum_r ACB_{a,r} \cdot W_r^a} = \frac{ACB_{a,r}}{ACB_a}$$

The presented method simplifies the calculations; the results, however, are only the approximated values and method requires at least two strong assumptions:

- There are no differences in life tables for different religions,
- There are not very large differences in average number of children ever born to mothers at age *a* and cohort in the same age but one period earlier.

In order to check the consistency, the results of that method were compared with the results of calculations made on Population Analysis Spreadsheets (PAS) developed by the United States Census Bureau. It uses a technique developed by Arriaga for estimating fertility rates based on information on the average number of children ever born and pattern of fertility.

Appendix 2. Tabular Results of Age and Religion

Table A2. Proportion by age and religion in 2001 and 2051 according to 36 scenarios

Year	Fertility	Migration	Transition	Age-groups	Religion				
					Catholic	Protestant	Muslim	Other	Without
		2001		0-14	78.2	4.2	7.4	5.4	4.7
				15-64	71.7	4.6	4.3	6.0	13.4
				65+	77.1	5.7	0.4	3.0	13.8
2051	Stable	Medium	Constant	0-14	40.7	4.0	33.6	12.5	9.3
	Stable	Medium	Constant	15-64	42.3	4.0	19.5	11.7	22.6
	Stable	Medium	Constant	65+	55.6	3.3	6.9	7.0	27.3
	Stable	Medium	High	0-14	35.4	3.7	34.5	12.8	13.6
	Stable	Medium	High	15-64	32.2	3.3	19.6	11.8	33.2
	Stable	Medium	High	65+	49.5	2.7	6.9	7.0	33.9
	Stable	Medium	Low	0-14	46.5	4.2	32.6	12.1	4.6
	Stable	Medium	Low	15-64	55.0	4.8	19.4	11.6	9.1
	Stable	Medium	Low	65+	62.4	4.0	6.9	7.0	19.7
	Stable	Medium	Muslim	0-14	41.6	4.0	30.8	12.7	10.8
	Stable	Medium	Muslim	15-64	42.4	4.0	15.8	11.7	26.1
	Stable	Medium	Muslim	65+	55.6	3.3	6.0	7.0	28.2
	Stable	Muslim	Constant	0-14	34.5	2.2	50.2	5.9	7.2
	Stable	Muslim	Constant	15-64	39.4	2.7	30.4	6.9	20.5
	Stable	Muslim	Constant	65+	55.9	3.4	6.0	7.3	27.4
	Stable	Muslim	High	0-14	29.5	2.6	51.3	6.0	10.6
	Stable	Muslim	High	15-64	29.7	3.5	30.6	7.0	29.2
	Stable	Muslim	High	65+	49.9	4.4	6.0	7.3	32.4
	Stable	Muslim	Low	0-14	39.9	2.4	48.9	5.7	3.1
	Stable	Muslim	Low	15-64	51.7	3.4	30.3	6.9	7.7
	Stable	Muslim	Low	65+	62.7	4.1	6.0	7.3	19.9
	Stable	Muslim	Muslim	0-14	35.4	2.2	47.3	6.0	9.1
	Stable	Muslim	Muslim	15-64	39.5	2.7	25.4	7.0	25.4
	Stable	Muslim	Muslim	65+	55.9	3.4	5.1	7.3	28.3
	Stable	High	Constant	0-14	37.4	4.2	36.0	13.6	8.8
	Stable	High	Constant	15-64	39.7	4.2	21.5	13.1	21.6
	Stable	High	Constant	65+	55.2	3.3	7.2	7.2	27.2
	Stable	High	High	0-14	32.5	4.6	36.8	13.9	12.2
	Stable	High	High	15-64	30.3	5.2	21.6	13.1	29.9
	Stable	High	High	65+	49.2	4.3	7.2	7.2	32.2
	Stable	High	Low	0-14	42.7	4.4	35.0	13.3	4.6
	Stable	High	Low	15-64	51.5	5.1	21.4	13.0	9.0
	Stable	High	Low	65+	62.0	4.0	7.2	7.2	19.7
	Stable	High	Muslim	0-14	38.2	4.2	33.2	13.9	10.4
	Stable	High	Muslim	15-64	39.8	4.2	17.5	13.1	25.4
	Stable	High	Muslim	65+	55.2	3.3	6.2	7.2	28.2
	Converging	Medium	Constant	0-14	46.3	4.9	19.0	12.6	17.3
	Converging	Medium	Constant	15-64	43.1	4.1	16.9	11.6	24.3
	Converging	Medium	Constant	65+	55.6	3.3	6.9	7.0	27.3
	Converging	Medium	High	0-14	39.3	5.4	19.0	12.6	23.6
	Converging	Medium	High	15-64	32.7	5.1	16.9	11.6	33.7
	Converging	Medium	High	65+	49.5	4.3	6.9	7.0	32.3

Year	Fertility	Migration	Transition	Age-groups	Religion				
					Catholic	Protestant	Muslim	Other	Without
		2001		0-14	78.2	4.2	7.4	5.4	4.7
				15-64	71.7	4.6	4.3	6.0	13.4
				65+	77.1	5.7	0.4	3.0	13.8
2051	Converging	Medium	Low	0-14	54.1	5.3	18.9	12.5	9.2
	Converging	Medium	Low	15-64	56.2	5.0	16.9	11.6	10.3
	Converging	Medium	Low	65+	62.4	4.0	6.9	7.0	19.7
	Converging	Medium	Muslim	0-14	46.2	4.9	17.2	12.6	19.2
	Converging	Medium	Muslim	15-64	43.1	4.1	13.6	11.6	27.6
	Converging	Medium	Muslim	65+	55.6	3.3	6.0	7.0	28.2
	Converging	Muslim	Constant	0-14	42.4	3.0	33.2	6.3	15.1
	Converging	Muslim	Constant	15-64	40.5	2.9	27.4	6.9	22.3
	Converging	Muslim	Constant	65+	55.9	3.4	6.0	7.3	27.4
	Converging	Muslim	High	0-14	35.6	3.5	33.3	6.3	21.3
	Converging	Muslim	High	15-64	30.5	3.7	27.4	6.9	31.5
	Converging	Muslim	High	65+	49.9	4.4	6.0	7.3	32.4
	Converging	Muslim	Low	0-14	50.1	3.4	33.0	6.3	7.2
	Converging	Muslim	Low	15-64	53.3	3.6	27.4	6.9	8.9
	Converging	Muslim	Low	65+	62.7	4.1	6.0	7.3	19.9
	Converging	Muslim	Muslim	0-14	42.3	3.0	30.7	6.3	17.7
	Converging	Muslim	Muslim	15-64	40.5	2.9	22.7	6.9	27.0
	Converging	Muslim	Muslim	65+	55.9	3.4	5.1	7.3	28.3
	Converging	High	Constant	0-14	43.2	5.2	21.0	14.0	16.6
	Converging	High	Constant	15-64	40.6	4.4	18.8	13.0	23.3
	Converging	High	Constant	65+	55.2	3.3	7.2	7.2	27.2
	Converging	High	High	0-14	36.8	5.7	21.1	14.1	22.3
	Converging	High	High	15-64	30.9	5.4	18.8	13.0	31.9
	Converging	High	High	65+	49.2	4.3	7.2	7.2	32.2
	Converging	High	Low	0-14	50.4	5.6	20.9	14.0	9.1
	Converging	High	Low	15-64	52.8	5.3	18.8	13.0	10.2
	Converging	High	Low	65+	62.0	4.0	7.2	7.2	19.7
	Converging	High	Muslim	0-14	43.1	5.2	19.1	14.0	18.6
	Converging	High	Muslim	15-64	40.6	4.4	15.2	13.0	26.9
	Converging	High	Muslim	65+	55.2	3.3	6.2	7.2	28.2
	Half-converging	Medium	Constant	0-14	43.8	4.5	26.1	12.6	13.1
	Half-converging	Medium	Constant	15-64	42.7	4.1	18.2	11.7	23.4
	Half-converging	Medium	Constant	65+	55.6	3.3	6.9	7.0	27.3
	Half-converging	Medium	High	0-14	37.6	5.0	26.5	12.8	18.2
	Half-converging	Medium	High	15-64	32.5	5.0	18.2	11.7	32.6
	Half-converging	Medium	High	65+	49.5	4.3	6.9	7.0	32.3
	Half-converging	Medium	Low	0-14	50.6	4.8	25.6	12.4	6.7
	Half-converging	Medium	Low	15-64	55.6	4.9	18.1	11.6	9.7
	Half-converging	Medium	Low	65+	62.4	4.0	6.9	7.0	19.7

Year	Fertility	Migration	Transition	Age-groups	Religion				
					Catholic	Protestant	Muslim	Other	Without
		2001		0-14	78.2	4.2	7.4	5.4	4.7
				15-64	71.7	4.6	4.3	6.0	13.4
				65+	77.1	5.7	0.4	3.0	13.8
2051	Half-converging	Medium	Muslim	0-14	44.2	4.5	23.8	12.7	14.9
	Half-converging	Medium	Muslim	15-64	42.7	4.1	14.7	11.7	26.8
	Half-converging	Medium	Muslim	65+	55.6	3.3	6.0	7.0	28.2
	Half-converging	Muslim	Constant	0-14	38.6	2.6	41.9	6.1	10.8
	Half-converging	Muslim	Constant	15-64	40.0	2.8	28.9	6.9	21.4
	Half-converging	Muslim	Constant	65+	55.9	3.4	6.0	7.3	27.4
	Half-converging	Muslim	High	0-14	32.7	3.0	42.5	6.2	15.5
	Half-converging	Muslim	High	15-64	30.1	3.6	29.0	6.9	30.3
	Half-converging	Muslim	High	65+	49.9	4.4	6.0	7.3	32.4
	Half-converging	Muslim	Low	0-14	45.0	2.9	41.2	6.0	4.9
	Half-converging	Muslim	Low	15-64	52.5	3.5	28.8	6.9	8.3
	Half-converging	Muslim	Low	65+	62.7	4.1	6.0	7.3	19.9
	Half-converging	Muslim	Muslim	0-14	39.0	2.6	39.1	6.2	13.1
	Half-converging	Muslim	Muslim	15-64	40.0	2.8	24.0	6.9	26.2
	Half-converging	Muslim	Muslim	65+	55.9	3.4	5.1	7.3	28.3
	Half-converging	High	Constant	0-14	40.5	4.7	28.4	13.9	12.5
	Half-converging	High	Constant	15-64	40.1	4.3	20.1	13.0	22.4
	Half-converging	High	Constant	65+	55.2	3.3	7.2	7.2	27.2
	Half-converging	High	High	0-14	34.9	5.2	28.8	14.1	17.1
	Half-converging	High	High	15-64	30.6	5.3	20.2	13.1	30.9
	Half-converging	High	High	65+	49.2	4.3	7.2	7.2	32.2
	Half-converging	High	Low	0-14	46.7	5.0	27.9	13.7	6.6
	Half-converging	High	Low	15-64	52.2	5.2	20.1	13.0	9.6
	Half-converging	High	Low	65+	62.0	4.0	7.2	7.2	19.7
	Half-converging	High	Muslim	0-14	40.9	4.7	26.0	14.0	14.3

Year	Fertility	Migration	Transition	Age-groups	Religion				
					Catholic	Protestant	Muslim	Other	Without
		2001		0-14	78.2	4.2	7.4	5.4	4.7
				15-64	71.7	4.6	4.3	6.0	13.4
				65+	77.1	5.7	0.4	3.0	13.8
2051	Half-converging	High	Muslim	15-64	40.2	4.3	16.4	13.0	26.1
	Half-converging	High	Muslim	65+	55.2	3.3	6.2	7.2	28.2

Source: Authors' calculations.

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