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„ Integration through marriage: a multivariate analysis of citizenship and religious intermarriage by the example of Switzerland. “

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1. Title

Integration through marriage: a multivariate analysis of citizenship and religious intermarriage by the example of Switzerland.

2. Abstract

Homo Sapiens is a highly migratory species which managed to populate the entire planet. Nowadays, migration is still happening, and its reasons and consequences influence national and international politics and are therefore being scientifically investigated. The integration of newcomers into their target society is key to the migration discourse. Intermarriage is a good way of measuring integration and can easily be accessed through census data. In this paper, we show the effects of a selection of variables on marital status in general on the one hand and on citizenship and religious intermarriage on the other. The results indicate that mate selection is always related to the opportunity of meeting a partner of a certain kind, which is again influenced to different degrees by the chosen predictor variables, e.g. education, religion or employment status.

Homo Sapiens ist eine stark wandernde Spezies, welche den ganzen Planeten dauerhaft bevölkert. Heutzutage migrieren weiterhin viele Menschen in andere Regionen. Die Gründe und Folgen der Migration beeinflussen nationale und internationale Politik und werden wissenschaftlich untersucht. Die Integration der Neuankömmlinge in ihre neue Gesellschaft ist ein wichtiger Teil des Migrationsdiskurses und kann durch die Heirat von Menschen unterschiedlicher Herkunft gemessen werden. Diese Arbeit zeigt den Einfluss einer Auswahl an Variablen auf den Familienstand sowie auf die Heirat von Menschen unterschiedlicher Herkunft bzw. unterschiedlichen Glaubens. Die Ergebnisse deuten darauf hin, dass die Partnerwahl immer von der Gelegenheit abhängt, einen bestimmten Partner zu treffen. Die Gelegenheit wiederum wird zu unterschiedlichen Teilen von den ausgewählten, unabhängigen Variablen beeinflusst, z.B. Bildung, Religion oder Arbeitsstatus.

Keywords: migration, integration, intermarriage, marital status

3. Introduction

Homo Sapiens is and has always been a highly migratory species. The tendency to explore new lands in search of more favourable life conditions is core to the successful conquest of the entire planet. Starting in Africa, our species has managed to long-term populate every single continent apart from the Antarctic (Reich, 2018). Nowadays, some people still strive to settle in different parts of the planet. Migration flows increasingly influence political agendas and thus solutions for its reasons and consequences are being investigated.

One important part of migration is the integration of newcomers into the societies of the target countries. Integration represents the social and cultural approximation of a certain minority to the norms and values of the native population. One reliable way of measuring integration is intermarriage, this being defined as the marriage between one person of the target community and one person of a minority, which can be seen as "an intimate link between social groups" (Kalmijn, 1998).

Based on census data from Switzerland, this study aims first at showing which factors influence the marital status of a person in general. Socioeconomic status has been shown to be a reliable predictor of reproduction and as the latter is correlated with marital status (Huber & Fieder, 2007), we assume that socioeconomic status will influence marriage rates in the sample used as well (Huber & Fieder, 2007; Fieder & Huber, 2012; Fieder, Huber & Bookstein, 2011; Burgess, Propper & Aassve, 2003). In this case, status will be represented by educational attainment and employment status. The effect of status on marital status supposedly differs between men and women, a positive effect is expected for men and a negative one for women (Huber & Fieder, 2007; Fieder, Huber & Bookstein, 2011; Burgess, Propper & Aassve, 2003). People adhering to any religion are expected to be more prone to marriage formation than atheists for all religions analysed (Wolfinger & Wilcox, 2006). No assumptions were made regarding the rest of the variables used.

In a second part of the study, the effects of the chosen variables on intermarriage were targeted. Two kinds of intermarriage were examined, namely citizenship intermarriage and religious intermarriage. The former analysing the marriage rates between people of different citizenships and the latter between people belonging to different religious groups.

In general, it is to be expected that people tend to marry someone of their own community, in this case nationality or religion (Blau, Blum & Schwartz, 1982; Kalmijn, 1998). But there may be factors leading to a higher or lower probability of marrying outside one's own community. Education, for example, should have a positive effect on intermarriage rates as it leads to a weakening of social bonds towards one's own community (Kalmijn, 1998; Qian, 1997; González-Ferrer, 2006). Especially

university graduates are expected to have higher intermarriage rates, even more because the university represents an international space in which it is more likely for someone to meet people of different cultures and potentially leading to intermarriage (Kalmijn, 1998; Qian, 1997). Again, for the rest of the selected variables, no assumptions were made.

4. Material and Methods

Methods

The data used for this study were provided by IPUMS international. It consists of census data from Switzerland for the years 1990 and 2000, originally collected by the Federal Statistical Office of Switzerland.

The selected variables provide information about demography, education, employment and religion. Some variables needed to be recoded in order to facilitate the following analysis. This was done in IBM SPSS Statistics 24. The codification is as follows:

- *Age*: continuous;
- *Sex*: 1 = male, 2 = female;
- *Region of citizenship*: 1 = Switzerland, 2 = Europe, 3 = Africa, 4 = Americas, 5 = East Asia, 6 = West Asia, 7 = Oceania;
- *Religion*: 1 = no religion, 2 = Muslim, 3 = Christian, 4 = other;
- *Educational attainment*: 1 = less than primary, 2 = primary completed, 3 = secondary completed, 4 = university completed;
- *Employment status*: 1 = unemployed, 2 = employed;
- *Sample year*: 1 = 1990, 2 = 2000.

In the first part of the study, a general linear model was computed describing the effects of the variables *age*, *sex*, *region of citizenship*, *religion*, *educational attainment* and *employment status* on the marital status of the people in the sample. The year of the census count was included as well.

The second part of the study was about analysing which factors have an impact on intermarriage, in this case *region of citizenship* and *religion*. Similar to the first part of the study, two general linear models were computed to show the effects of *age*, *sex*, *region of citizenship*, *religion*, *educational attainment*, *employment status* and *sample year* on religious and citizenship intermarriage. Two new target variables were needed to compare the citizenship and religion of the subject and their spouse and are coded as follows:

- *Citizenship intermarriage*: 0 = not the same citizenship, 1 = same citizenship (as spouse);
- *Religious intermarriage*: 0 = not the same religion, 2 = same religion (as spouse).

The analysis was done in R Version 3.5.1. To compute the coefficient of determination R^2 in both parts of the study, the "MuMIn" package (by Kamil Bartoń) was used (Nakagawa & Schielzeth, 2013).

Sample

Originally, the downloaded file consisted of 706,883 individuals from Switzerland. The sample size was narrowed down to 217,970 by choosing only people aged 20 – 39 years, which represents the period when most people enter marriage.

The frequencies of the different variables are as follows:

- *Age*: *mean* = 29.85 years, *SD* = 5.655, *N* = 217,970;
- *Sex*: 50.9% male, 49.1% female, *N* = 217,970;
- *Region of citizenship*: Switzerland = 74.6%, Europe = 20%, Africa = 0.9%, Americas = 0.9%, East Asia = 0.4%, West Asia = 3.2, Oceania <1%, *N* = 217,957;
- *Religion*: no religion = 11.1 %, Muslim = 4.7%, Christian = 83%, other = 1.2%, *N* = 211,288
- *Educational attainment*: less than primary = 1.6%, primary completed = 0%, secondary completed = 90.9%, university completed = 7.5%, *N* = 209,173;
- *Employment status*: unemployed = 20%, employed = 80%, *N* = 217,970;
- *Sample year*: 1990 = 51%, 2000 = 49%, *N* = 217,970;
- *Marital status*: not married = 51%, married = 49%, *N* = 217,970;

Of the 106,893 (51%) of married subjects in the sample, intermarriage portrays itself as follows:

- *Citizenship intermarriage*: not the same region = 12.4%, same region = 87.6%, *N* = 119,753;
- *Religion intermarriage*: not the same religion = 9.2%, same religion = 90.8%, *N* = 115,179.

5. Results

Part 1: effects on marital status

A summary of the first model can be found in *Table 1.1.*

The age of the subjects was the strongest predictor for their marital status with a coefficient of determination (R^2) of 0.2541, explaining 25.41% (p<0.001) of the variance in marital status within this model. The older the participant, the more likely it was for him or her to be married.

The women in the study were more often married than men, the variable *sex* explaining 1.2% of the variance in marital status (R^2=0.012, p<0.001).

People from all regions were more likely to be married than people from Switzerland itself, with *region of citizenship* explaining 2.9% (R^2=0.029) of the model. Americans (both South and North Americans) were the most likely to be married in this sample (p<0.001), closely followed by people from Oceania (p<0.01). East Asians (p<0.001) and Europeans (p<0.001) were also more likely to be married than the Swiss. West Asians (p<0.001) and Africans (p<0.001) were the least different from the Swiss but were still more often married than they were.

Religion explained 2.4% of the variance in marital status (R^2=0.024). Muslims were far more likely to be married than people with no religion (p<0.001). Christians were also more likely to be married than people with no religion, albeit not as much as Muslims (p<0.001). Members of other religions were slightly less likely to be married than Christians (p<0.001).

Educational attainment explained much less variance in marital status, to wit 0.2% (R^2=0.0023). People who completed secondary education did not differ significantly from people who completed less than primary (p=0.309). However, university graduates were significantly less likely to be married than people with no education (p<0.001).

Employment status explained 1.5% (R^2=0.0151) of the variance in marital status, with employed people being more likely to be married than unemployed people (p<0.001).

The year of the census count explained 0.1% (R^2=0.0019) of the variance in marital status. People who participated in the census count in 2000 were less likely to be married than people who participated in 1990 (p<0.001).

A summary of the difference between men and women in regard of the discussed variables can be found in *Table 1.2.*

The influence of *age* on *marital status* of the subjects was weaker for women but had the same positive direction (p<0.001).

Region of citizenship had a weaker positive effect on the marital status of women from Europe (p>0.001), the Americas (p<0.001) and East Asia (p<0.01), in contrast to West Asia (p<0.001), where the effect was stronger for women than for men. There was no difference between men and women from Africa (p=0.211) and Oceania (p=0.307).

Religion showed no significantly different effect on Muslim (p=0.368) and Christian (p=0.112) men and women. However, the effect of other religions on *marital status* was stronger for women (p<0.001).

The effect of *educational attainment* on *marital status* was stronger for women with a university degree (p<0.05).

Employment had the opposite effect on the *marital status* of women, who were less likely to be married when they were employed (p<0.001).

As a whole, this model explains about 41.3% (R^2=0.4132) of the variance in marital status.

Part 2: effects on intermarriage

Region of citizenship

A summary of the second model can be found in *Table 2.1.*

The strongest predictor of citizenship intermarriage was the *region of citizenship* itself, explaining 11.3% (R^2=0.1135) of the variance of this model. People from all regions were less likely to be married to someone from their own region than people from Switzerland, thus showing higher rates of citizenship intermarriage. Africans showed the highest citizenship intermarriage rates compared to Switzerland (p<0.001), closely followed by Oceania (p<0.001). Americans were slightly more (p<0.001) likely to be in a citizenship intermarriage situation than Europeans (p<0.001) and West Asians (p<0.001). The least different from the Swiss were East Asians, who still had significantly higher intermarriage rates (p<0.001).

Sample year explained 3.2% of the variance in citizenship intermarriage (R^2=0.0326, p<0.001). In the year 2000, people were less often in a same-citizenship marriage than in the year 1990, hence the intermarriage rates were higher.

Religion explained 1.9% of the variance in citizenship intermarriage (R^2=0.0193). Muslims had more same-citizenship marriages than people with no religion (p<0.001). Christians (p<0.001) and people from other religions (p<0.01) were also less likely to be married to a person of another region of citizenship but the effect was weaker.

Educational attainment explained 0.9% of the variance in citizenship intermarriage (R^2=0.0099). People who completed secondary education showed higher rates of intermarriage than people with the least possible education (p<0.001). The effect was stronger for people who went to university (p<0.001).

The *age* of the subjects also explained 0.9% of the variance in citizenship intermarriage (R^2=0.0095, p<0.001).

Employment status explained only 0.08% of the variance in citizenship intermarriage (R^2=0.0008). Employed people were less likely to be intermarried than people who were unemployed (p<0.001).

The *sex* of the subjects explained the least variance of the model, namely 0.01% (R^2=0.0001, p<0.001). Women in this study were more likely to be intermarried than men.

A summary of the difference between men and women in regard of the variables discussed can be found in *Table 2.2.*

The *region of citizenship* of the subjects showed similar effects for men and women. However, the influence was weaker for women from Europe (p<0.001), Africa (p<0.001), the Americas (p<0.01), West Asia (p<0.001) and Oceania (p<0.05). The difference between men and women from East Asia was not significant (p=0.052). This means that women from said regions were less likely to be married to a person from their own region of citizenship than the men from that same region, but the direction of the influence was the same.

Religion showed no significantly different effect on Muslim (p=0.062) and Christian (p=0.087) men and women. However, the effect of other religions on intermarriage was weaker for women (p<0.05). Women from other religions were more likely to be in an intermarriage than the men from other religions.

The effect of *educational attainment* was stronger for women, at least in the comparison of people who completed secondary school with people who did not finish primary school (p<0.05). There was no difference between men and women with a university degree (p=0.517).

Employment showed an opposite effect on intermarriage for men and women (p<0.001). Women were more likely to be married to a person from a different region when they were employed, men less likely.

There was no significant difference between men and women regarding the effect of *age* on intermarriage.

As a whole, this model explains about 19.6% (R^2=0.1964) of the variance in citizenship intermarriage.

Religion

A summary of the third model can be found in *Table 3.1*.

The strongest predictor of religious intermarriage in this model was *religion* itself, explaining 15.4% of the variance (R^2=0.1541). Christians were the least likely to be married to a person of another religion (p<0.001). Muslims were also less likely to be intermarried than people with no religion, but the effect was less strong (p<0.001). People with other religious beliefs were more likely to be intermarried than people with no religion (p<0.001).

Region of citizenship explained 1.7% of the variance in religious intermarriage in this model (R^2=0.0175). People from Africa (p<0.001) were the most likely to be married to someone of different religious beliefs. East (p<0.001) and West (p<0.001) Asians were the least likely to be married to someone of different beliefs, closely followed by Europeans (p<0.001). Americans were the least different from the Swiss, but still had lower religious intermarriage rates (p<0.001). There was no significant difference in religious intermarriage between the Swiss and people from Oceania (p=0.782).

Sample year explained 1.5% of the variance in religious intermarriage (R^2=0.0152). Subjects of the 2000 sample were more likely to be intermarried than people of the 1990 sample (p<0.001).

Educational attainment explained 1.0% of the variance (R^2=0.0101). Subjects who completed secondary education were more often married to someone of different religious beliefs than people with no education (p<0.001). The effect was even stronger for university graduates (p<0.001).

Age explained 0.1% of the variance (R^2=0.0014, p<0.001), the older the subjects the less likely to be married to someone of a different religion. The same goes for *employment status* (R^2=0.0017). Employed people were more likely to be married to someone of equal religious beliefs than unemployed people (p<0.05).

The *sex* of the subjects explained less than 0.01% of the variance in religious intermarriage (R^2<0.00001). Women were less likely to be intermarried than men (p<0.001).

A summary of the difference between men and women in regard of the discussed variables can be found in *Table 3.2.*

The influence of *religion* on *religion intermarriage* varied between men and women of the different religions. Muslim women were even less likely to be married to someone of different religious beliefs than Muslim men (p<0.001). As for Christians, women were more likely to be married to someone of another religion than men (p<0,001). The same sex difference was found in other religions (p<0.001).

Region of citizenship only showed significant sex differences for people from the Americas (p<0.01) and East Asia (p<0.05). Women from these regions were more likely to be married to someone of different religious beliefs than their male compatriots. There was no sex difference for Europeans (p=0.161, Africans (p=0.075), West Asians (p=0.875) and people from Oceania (p=0.849).

The influence of *age* on *religion intermarriage* of the subjects was weaker for women but had the same positive direction (p<0.01), a positive direction in this case meaning lower religion intermarriage rates.

There were no significant sex differences in the influence of educational attainment on religion intermarriage.

As a whole, this model explains about 21.3% of the variance in religious intermarriage (R^2=0.2135).

6. Discussion

Part 1: effects on marital status

The age of the subjects was by far the strongest predictor of marital status in this model. This is not surprising, as the probability of being married increases with the amount of time a person has been "on the market". Nonetheless, I assume that this fact does not explain the whole 25.4% of the explained variance and that age influences marital status on other levels as well.

Region of citizenship was a strong predictor for marital status as well, with an explained variance of 2.9%. People from any region of the world seem to get married more often in Switzerland than the Swiss. Partly, you could explain this by a general decline in marriage rates, at least in Europe (Eurostat, link in references). This does not, however, explain the differences between other Europeans and the Swiss in this regard. One possible explanation might be that some people actually migrate to another country to be with their (future) spouse and thus contribute to the difference shown between the Swiss and people from other regions.

Another strong predictor of marital status was the religion of the subjects, explaining 2.4% of the variance. Marriage originally being a religious institution, it is not surprising that atheists are married the least in this sample (Wolfinger & Wilcox, 2006). Muslims, Christians and people from other religions were more likely to be married than atheists. However, Muslims were the most likely to be married, even more compared to other religions.

Employed people are more likely to be married than unemployed people, the variable employment status explaining 1.5% of the variance in marital status. This result is supported by previous research. Employment is, at least for men, one way of gaining socioeconomic status, which is an important factor in finding a partner. It has been shown that socioeconomic status predicts marital status (Fieder, Huber & Bookstein, 2011). Previous research has also focused on correlations between income and reproductive success and have found a positive association between status (in the form of income or higher positions in employment) and reproductive success, at least for men (Huber & Fieder, 2007; Fieder & Huber, 2012; Fieder, Huber & Bookstein, 2011; Burgess, Propper & Aassve, 2003). As income and employment are bound to be correlated and reproductive success and marital status as well (Huber & Fieder, 2007), it is safe to draw similar conclusions from the data of this study.

As for women, the general consensus is that high socioeconomic status has a negative effect on reproduction and marriage, or at least delays them (Huber & Fieder, 2007; Fieder, Huber & Bookstein, 2011; Burgess, Propper & Aassve, 2003). Our findings confirm this, as employment had a negative effect on marital status for the women in our study.

Even though earnings and employment are known to be correlated with educational attainment, the latter shows a negative effect (compared to a positive one for employment) on marital status and explains 0.2% of its variance. People with an academic degree marry less than people who have finished less than primary school. However, there is no significant difference between people who finished secondary school and university graduates. These results conflict with socioeconomic status, also in the form of education, supposedly having a positive effect on marital status (Huber & Fieder, 2007; Fieder, Huber & Bookstein, 2011).

The effect shown was even stronger for the women in the study, at least concerning the difference between university graduates and people with next to no education. As women, in an evolutionary context, prefer men with higher socioeconomic status, it would be increasingly harder to find a spouse with higher educational attainment for women who are well educated themselves (Kalmijn, 1998; Blossfeld, 2009; Van Bavel, 2012).

The computed model also shows a difference between men and women in marital status. Women are more likely to be married than men, sex hereby explaining 1.2% of the variance in marital status.

The year of the sample also had an effect on marital status. Fewer people were married in 2000 than there were in 1990, explaining 0.1% of the variance in marital status. This shows a potential decrease in the frequency of marriage (Eurostat, link in references).

The rest of the differences between men and women, which were presented in the results section, could not be logically interpreted by the author and remain to be analysed in future research.

Part 2: effects on intermarriage

Region of citizenship

Region of citizenship explaining as much variance (11.3%) fits perfectly with previous research, stating that foreign minorities always show higher intermarriage rates as the population of a country. As minorities are fewer in numbers, the chance of finding a spouse of their own origin is relatively low which leads to more intermarriage and vice versa (Blau, Blum & Schwartz, 1982; Kalmijn, 1998; Collier, 2013; Qian, 1997; Lievens, 1998; González-Ferrer, 2006). Still, this does not explain the entirety of the results. For example, there were roughly as many people from Africa and from the Americas in the sample, they did however differ in intermarriage rates. Thus, there have to be other factors influencing the difference between the different regions besides just the size of the minority. One possible explanation would be that of cultural/ethnic differences between the different regions in this case.

Africans are in general visually more different from Europeans than people from the Americas, especially if you take into consideration that there was no difference made between South and North America. This may complicate integration for Africans on this level. This could potentially explain a part of the differences seen here, as Europeans are better integrated and people from Oceania seem to struggle in a way similar to Africans. The only antagonists to this theory are both West and East Asians in this study. Both are even better integrated than the rest of Europeans, which seems counter-logical. An explanation for this may be that most of the Asians coming to Europe are well educated and therefor may struggle less to integrate themselves into their new home country.

The positive effect (R^2=3.2%) of time, here represented by sample year, on intermarriage rates reflects a potential tendency to more openness and acceptance towards different people, which subsequently may lead to higher intermarriage rates as well.

Religion also plays a part in citizenship intermarriage, explaining 1.9% of its variance. People adhering to any religion were all less likely to intermarry than atheists, who may identify themselves less by their country/region of origin and therefor be more inclined to interact with and potentially marry an immigrant.

Education has a positive effect on citizenship intermarriage, explaining 0.9% of the variance. The better educated people are, the less they identify themselves with their citizenship and the more they may be inclined to commit themselves to relations with people of different origins. Also, university is an international environment where the opportunities for meeting foreign people are relatively high (Kalmijn, 1998; Qian, 1997; Lievens, 1998).

Older people are less likely to form an international relationship (R^2=0.9%). This can be partly explained by age usually reducing flexibility and openness. As people tend to marry someone of their own age, it is harder to find a foreign partner because they may face difficulties in integrating, as overcoming language and cultural barriers gets harder the older one is (Kalmijn, 1998).

Employment status seems to have a negative effect on citizenship intermarriage for men and a positive one for women. The reason behind this remains unknown to the author for now.

The rest of the differences between men and women, which were presented in the results section, could not be logically interpreted by the author and remain to be analysed in future research.

Religion

The one strongest predictor of religious intermarriage was religion itself (R^2=15.4). Again, opportunity of meeting a partner of the same religious background seems to play a decisive role in religious intermarriage (Blau, Blum & Schwartz, 1982; Kalmijn, 1998; Qian, 1997; González-Ferrer, 2006). Subjects belonging to a religion different from Christianity or Islam were the most likely to intermarry, even more so than atheists. Christians on the other hand were the least likely to be married to someone of different religious beliefs, Muslims located themselves between the others. To a certain degree, these findings can be explained by the relative community sizes of Christians (83%), Muslims (4.7%), atheists (11.1%) and people from other religions (1.2%). Only Muslims do not seem to correspond to this pattern, which may be explained by specific marriage rules provided by the Qur'an, e.g. "It is not lawful by Allah Almighty for Muslim women to marry non-Muslim men of any faith" (Quran 2:221 60:10 4:141). This at least explains the difference between men and women to a certain degree, as Muslim women were even less likely to intermarry than men, which was not the case for Christians or people from other religions, where women intermarried more often than men. Of course, one should not project exact quotes of the Qur'an on the entirety of Muslims as surely not everyone lives strictly by the rules of the Qur'an.

The data also may be slightly biased, as some people convert to the religion of their spouse before or after marrying (Glenn, 1982; Kalmijn, 1998). Unfortunately, the religion in which the subjects were raised was not taken into account in the data used.

As in the previous segment, time (R^2=1.5%) and education (R^2=1.0%) both have a positive effect on intermarriage. Time again pointing towards a general tendency to more openness and acceptance towards people with different backgrounds (Glenn, 1982; Sherkat, 2003). The effect of education can be explained as above, namely by education making people less connected to their religious background and by creating more opportunities for meeting different people (Kalmijn, 1998; Qian, 1997; Sherkat, 2003).

The negative effect (R^2=0.1%) of age on intermarriage manifests itself in religious intermarriage as well. The older the people are, the less likely they are to marry outside their religious community (Sherkat, 2003). Again, this may additionally be explained by a possible decline in openness in higher age.

The difference between men and women is the opposite for religious intermarriage compared to citizenship intermarriage (R^2=0.01%), where women were more likely to intermarry. Here, fewer women tend to marry outside their religious community. Women are in general more religious than

men (Argyle & Beit Hallahmi, 1975) and may therefore be less inclined to marry outside their community than men.

As in the previous model, employment (R^2=0.1%) seems to have a negative effect on intermarriage for men and a positive one for women. Again, the reasons behind this remain unclear for the time being.

The rest of the differences between men and women, which were presented in the results section, could not be logically interpreted by the author and remain to be analysed in future research.

Limitations and potential improvements

First of all, the results found are limited to Switzerland only, even though the author expects little variations in the effects found when compared internationally. There is research on other countries which provides mainly affirmative results for the present study.

All selected variables influence marital status and intermarriage to a certain degree. As the models explain between 19- 41% of the variance, there have to be more factors influencing the choice of entering marriage and marrying inside or outside one's own community. Personal feelings were not taken into account in this analysis and may explain most of the unexplained variance in marital status and intermarriage. On the one hand, personal feelings, which without a doubt contribute an important part to marriage decision-making, would provide more valuable information and improve the explained variance of the models. On the other hand, personal feelings are subjective, which makes them harder to compare and interpret in the context of this study.

Additionally, some variables like *religion* and *region of citizenship* were more detailed in the initial dataset and were reduced to simplify the analysis. The analysis of the data was indeed easier, but it is possible that some information was lost along the way and thus the results might otherwise have been more precise. Moreover, the interpretation of the effects between religion and citizenship was made more difficult by narrowing citizenship down to region. Most countries have one main religion which would allow to explain the effect of religion on citizenship intermarriage. As it is impossible to assign one single religion to a whole region of citizenship, the interpretation of the effect is complicated. The same goes for the effect of region of citizenship on religion intermarriage.

Some of the effects found may not be of causal nature. There may, for example, be other variables influencing both marital status and employment status.

For future research, it would be advisable to gather more precise and consistent data on the matter, if possible. Improving precision of different variables and comparing data among a number of different countries would certainly yield a more complete idea of how integration works.

The author would like to clarify that the results and interpretations presented are merely an attempt at explaining integration trends and should not be generalized or used as a populist tool.

7. Conclusions

In general, the findings of this study confirm previous research on marital status on the one hand and on intermarriage on the other.

People do tend to marry inside their own community, both for citizenship (87.6%) and for religion (90.8), fitting known patterns of assortative mating.

Nevertheless, there are factors which seem to consistently raise the probability of marrying outside one's own community, for example time and education. The former indicates a general change towards a more open world, where people increasingly tolerate fellow citizens from different backgrounds and become more willing to interact and potentially form relationships. The latter may even increase openness and tolerance, as well as creating more opportunities for meeting new people.

This leads us to one of the biggest factors influencing intermarriage, namely opportunity. Throughout previous research and the different results of the present study, the probability of meeting a certain kind of spouse manifests itself as a key factor in spouse selection. The more people of one's own community of any kind, the less likely one is to marry outside that community and vice versa.

Of course, opportunity is not solely represented by sheer numbers. There are other factors which may influence such opportunities one way or the other. These factors can be of socioeconomic nature, as social boundaries are often hard to overcome, no matter how many people of other social classes one may encounter. Religious and ethnic boundaries also influence intermarriage rates in combination with opportunity, but the interaction of the two remains unclear for now and could be an objective for future research.

Finally, the results of this paper which were not explained in the discussion represent interesting material for further investigation and could provide valuable information on intermarriage effects, especially if compared in an international context.

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9. Appendix

Table 1.1.

General linear model: effects on marital status

Variable	Reference	Value	Estimate	Std. Error	Z-value	*p*	R^2	R^2 in %
sample	1990	2000	-.411217	.010864	-37.852	<.001	.001947759	0.1
age			.229578	.001605	142.996	<.001	.2541170	25.4
sex	male	female	3.940052	.123502	31.903	<.001	.0123820	1.2
country of citizenship	Switzerland	Europe	.946749	.019144	49.453	<.001	.02921168	2.9
		Africa	.637886	.082532	7.729	<.001		
		Americas	1.195158	.093534	12.778	<.001		
		East Asia	.995504	.147149	6.765	<.001		
		West Asia	.694973	.055029	12.629	<.001		
		Oceania	1.089032	.375743	2.898	<.01		
religion	no religion	Muslim	1.742941	.048330	36.063	<.001	.02402154	2.4
		Christian	.477274	.023466	20.339	<.001		
		other	.418908	.079735	5.254	<.001		
education	less than primary	secondary	-.063493	.062452	-1.017	.309	.002398895	0.2
		university	-.317395	.066385	-4.781	<.001		
employment	unemployed	employed	1.302867	.035142	37.074	<.001	.01513829	1.5

Note: Results of the general linear model as computed in R Version 3.5.1. Coefficient of determination R^2 calculated with help of the "MuMIn"-package. Total *N* of the model: 206,306.

Table 1.2.

Gender differences in the effects on marital status

Variable	Value	Estimate	Std. Error	Z-value	*p*
age		-.034349	.002181	-15.748	<.001
citizenship	Europe	-.104230	.028220	-3.694	<.001
	Africa	-.170708	.136618	-1.250	.211
	Americas	-.480479	.121652	-3.950	<.001
	East Asia	-.515095	.198344	-2.597	<.01
	West Asia	.628514	.090790	6.923	<.001
	Oceania	-.566900	.555969	-1.020	.307
religion	Muslim	.070641	.078474	0.900	.368
	Christian	.053875	.033952	1.587	.112
	other	.567983	.118580	4.790	<.001
education	secondary	-.050355	.091251	-0.552	.581
	university	-.208991	.097970	-2.133	<.05
employment	employed	-2.779375	.039386	-70.568	<.001

Note: Gender differences of the general linear model portrayed in *Table 1.1. N* = 206,306.

Table 2.1.

General linear model: effects on citizenship intermarriage

Variable	Reference	Value	Estimate	Std. Error	Z-value	*p*	R^2	R^2 in %
sample	1990	2000	-.671226	.020124	-33.354	<.001	.03261616	3.2
age			.045887	.002031	22.592	<.001	.009596348	0.9
sex	male	female	-.604143	.170819	-3.537	<.001	.0001885335	0.01
country of citizenship	Switzerland	Europe	-2.131369	.031960	-66.688	<.001	.1135209	11.3
		Africa	-4.569697	.122590	-37.276	<.001		
		Americas	-3.580734	.114381	-31.305	<.001		
		East Asia	-1.499300	.214570	-6.987	<.001		
		West Asia	-2.079784	.078833	-26.382	<.001		
		Oceania	-4.041945	.576095	-7.016	<.001		
religion	no religion	Muslim	.935050	.068167	13.717	<.001	.019312038	1.9
		Christian	.388259	.042911	9.048	<.001		
		other	.366575	.130692	2.805	<.01		
education	less than primary	secondary	-.869611	.106595	-8.158	<.001	.009965219	0.9
		university	-1.245981	.114099	-10.920	<.001		
employment	unemployed	employed	.330986	.069888	4.736	<.001	.0008228896	0.08

Note: Results of the general linear model as computed in R Version 3.5.1. Coefficient of determination R^2 calculated with help of the "MuMIn"-package. Total *N* of the model: 114,860.

Table 2.2.

Gender differences in the effects on citizenship intermarriage

Variable	Value	Estimate	Std. Error	Z-value	*p*
citizenship	Europe	1.606075	.044521	36.074	<.001
	Africa	1.966033	.167306	11.751	<.001
	Americas	.398640	.153192	2.602	<.01
	East Asia	.525299	.270616	1.941	.052
	West Asia	1.365385	.114866	11.887	<.001
	Oceania	1.566600	.769222	2.037	<.05
religion	Muslim	.194397	.104341	1.863	.062
	Christian	.098330	.057606	1.707	.087
	other	-.362266	.168589	-2.149	<.05
education	secondary	.308186	.146330	2.106	<.05
	university	.101493	.156899	0.647	.517
employment	employed	-.517441	.075349	-6.867	<.001

Note: Gender differences of the general linear model portrayed in *Table 2.1.* Note that the sex interaction with age was removed from the model because of non-significance. *N* = 114,860.

Table 3.1.

General linear model: effects on religious intermarriage

Variable	Reference	Value	Estimate	Std. Error	Z-value	*p*	R^2	R^2 in %
sample	1990	2000	-.317138	.023169	-13.688	<.001	.015256010	1.5
age			.035600	.003866	9.208	<.001	.0014788153	0.1
sex	male	female	1.515627	.182088	8.324	<.001	.000003104849	<.01
country	Switzerland	Europe	.611998	.048142	12.712	<.001	.017598118	1.7
of		Africa	-1.323794	.116490	-11.364	<.001		
citizenship		Americas	.416997	.161255	2.586	<.01		
		East Asia	.965884	.270785	3.567	<.001		
		West Asia	.637739	.088849	7.178	<.001		
		Oceania	-.174642	.633834	-0.276	.782		
religion	no religion	Muslim	.802693	.067480	11.895	<.001	.15417406	15,4
		Christian	3.114622	.039134	79.589	<.001		
		other	-1.038586	.160039	-6.490	<.001		
education	less than primary	secondary	-.362040	.094380	-3.836	<.001	.010147592	1.0
		university	-.710951	.099639	-7.135	<.001		
employment	unemployed	employed	.205137	.084372	2.431	<.05	.001762361	0.1

Note: Results of the general linear model as computed in R Version 3.5.1. Coefficient of determination R^2 calculated with help of the "MuMIn"-package. Total *N* of the model: 112,949.

Table 3.2.

Gender differences in the effects on religious intermarriage

Variable	Value	Estimate	Std. Error	Z-value	*p*
age		-.013400	.004840	-2.768	<.01
citizenship	Europe	-.090339	.064581	-1.399	.161
	Africa	.317700	.178948	1.775	.075
	Americas	-.605188	.200966	-3.011	<.01
	East Asia	-.689851	.346259	-1.992	<.05
	West Asia	-.021981	.140714	-0.156	.875
	Oceania	.163460	.860514	0.190	.849
religion	Muslim	.588311	.111886	5.258	<.001
	Christian	-1.341926	.052446	-25.587	<.001
	other	-1.233592	.207324	-5.950	<.001
employment	employed	-.505402	.090357	-5.593	<.001

Note: Gender differences of the general linear model as portrayed in *Table 3.1.* Note that the sex interaction with educational attainment was removed from the model because of non-significance. *N* = 112,949.