

Does a conservative authoritarian regime promote the importance of the family? Trends in the resemblance in educational and occupational attainment of Spanish siblings from different birth cohorts.

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Does a conservative authoritarian regime promote the importance of the family? Trends in the resemblance in educational and occupational attainment of Spanish siblings from different birth cohorts.

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## 1. Introduction

The belief in the reality of family decline, due to modernisation and individualisation is by no means widespread among sociologists of family. A possible empirical indication of the declining importance of the family is the decreasing effect of the family on the life chances of its offspring in successive birth cohorts. If the family has become less successful in this transmission of educational and occupational attainment, this can be seen as an indication for a decline in the importance of the family. A possible indication of this decline of the importance of the family is the resemblance of educational and occupational attainment by siblings. If this resemblance in educational and occupational attainment between siblings is smaller in younger cohorts compared with that of older cohorts, this indicates a decline in the importance of the family. This means that the within-family variance, controlled for measured parental characteristics like education and occupation, increases in younger cohorts. The aim of this article is to test whether trends in within-family and between-family variance can be found in Spain, as these trends has already be analyzed for Australia, Germany, Hungary, the Netherlands, Poland and the USA.

A study for the Netherlands (Dronkers, 1992) showed a declining resemblance between the educational attainment of siblings in different Dutch generations, although Van Eijck & De Graaf (1994) failed to find such generation differences in another Dutch population. De Graaf & Huinink (1992) found for German siblings that their resemblance in educational attainment decreased during the 20th century. Kuo and Hauser (1995) found that the resemblance between the black and white brothers in the USA has decreased in generations born between 1907 and 1946. In contrast of these Western societies the resemblance between the educational and occupational levels of siblings did not decrease in Hungary (Toka & Dronkers, 1996) and Poland<sup>1</sup> (Ruigrok, Dronkers & Mach, 1996) during the 20th century. These authors explain these Hungarian and Polish deviances by the oppressive nature of the communist regime. They suggest that the importance of the family increases during materially and immaterially difficult times, like in Hungary and Poland, and that the declining sibling resemblance in Germany, the

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Netherlands and the USA only implies that at least an important segment of the population in those societies needs their family no longer in order to improve their own individual life chances. Borgers, Dronkers, Rollenberg, Evans & Kelley (1995) show that resemblance between the educational attainment of siblings did not decrease in Australia. Their explanation of this Australian deviance is that the large migration to Australia and the importance of the family for this difficult transition of migration counterbalances the decline of the importance of the family, due to modernisation and individualisation.

The aim of this paper is to replicate these earlier siblings studies for Spain. During the 20th century Spain underwent a civil war and a conservative authoritarian regime. Our hypothesis is that just like in Hungary and Poland *the resemblance between the educational and occupational attainment between Spanish siblings from different birth cohorts doesn't change systematically*. We base this hypothesis on the difficult material and immaterial circumstances in Spain during the major part of the 20th century. A rejection of our hypothesis by our analysis combined with a decline in sibling resemblance would suggest an interesting difference between the effects of a conservative authoritarian and a communist regime.

As an introduction to the testing of this hypothesis of unchanged resemblance between the educational and occupational attainment between Spanish siblings of different birth cohorts, we first compare the resemblance in educational and occupational attainment of Spanish siblings of similar and different gender. If the resemblance between Spanish siblings of similar and different gender is large, in correspondence with the results from the earlier sibling studies, we need not to make the distinction between siblings of similar and different gender in our subsequent analysis of the resemblance between birth cohorts. Our hypothesis is that *the resemblance between siblings of similar and different gender is large*, indicating that social class and family have nearly the same effect on the educational and occupational attainment of Spanish men and women.

Resemblance in educational and occupational attainment between siblings can also be used to establish the strength of bonds within families. If those bonds are weak, the resemblance in educational and occupational attainment between siblings are lower than if the bonds within the family are strong. The explanation of this difference is that strong bonds within a family promote that members of that family help each other in difficult times or transitions and thus resemble more to each other. However, strong bonds can also hamper members of that family to escape on an individual base from the restraints of that family and thus also increase the resemblance between siblings. In any case the higher resemblance in educational and occupational resemblance is a good indicator of the strength of family bonds. Sometimes it is suggested in the (popular) literature that families with mothers working outside home while having young children have less strong family bonds than families with mothers only working at home. The explanation of this suggestion is that children with working mothers are less monitored by adults and thus have larger opportunities to derailed in some way. The empirical evidence of these weaker bonds in families with working mothers is scarce. Doornik & Dronkers (1996) summarize their results and those of a number of Dutch studies (Diederik & Dronkers, 1996; Dronkers, 1989, 1995; Schrasser, 1990): "The discussion about working outside the home or working as a housewife regarding the well-being of children seems to be outdated. First, regarding the well-being of children it does not matter whether mother works. Secondly, generally it does not matter how many hours she works. However, there are certain combinations of occupation (specially low ranking occupations; HR & JD) and working hours which cause small but yet significant negative effects on the well-being of children". Studies in the USA generally confirm these conclusions. Kalmijn (1994) found that in the USA mother's occupational status has a substantial effect on children's schooling. This effect is independent

from, and as strong as, the effects of father's occupation. This effect is especially positive when the mother has an occupation of high status. Parcel and Menaghan (1994) found an interaction-effect between the occupation of both parents. If there are two working parents in a family, the effect caused by the work of the one parent is weakened or strengthened by the work of the other parent. The effect of the salary of the mother, which is significant and positive, is also effected by the amount of hours the father works. If father works less then fulltime the level of his wages influences the (positive) effect of the level of mothers wages. Arguing the other way round, the negative effect of a badly paid job of the father can be abolished when mother earns a lot of money. Borgers et al (1995) analyzed the difference in resemblance in educational attainment of Australian siblings. They concluded that educational resemblance of the Australian siblings in families with a working mother is not lower and that the degree of educational resemblance of the siblings is not influenced by the age of siblings on which the mother worked (6 years and 10 years) and whether the mother worked full-time or part-time. Our spanish data gives us the opportunity to test this possible difference in resemblance in educational and occupational attainment between families with and without mothers working outside their homes. Borgers et al explain their results in most modern societies mothers choose between work outside her home or full-time house-wife more or less freely, not forced by financial hardship or social policy. In such situations, mothers tend only to work outside her home if she can be sure that it will not harm her children, for instance by extra help in monitoring of and caring for her dependent children. Our hypothesis is therefor that *the resemblance in educational and occupational attainment between Spanish siblings is equal for families with and without working mothers.*

## 2. Data

Our data comes from the Spanish CIRES survey (Education and Social Mobility) carried out by the Centre for Research on Social Reality in may 1991. This survey of 1200 respondents was nationally representative for the population aged 18 years and more.

Information was collected about the respondent's educational and occupational attainment, education and occupation of the parents and siblings, the parental family size. The respondent answered all these questions, also about his or her parents and brothers and sisters. The respondents gave information about him or herself and about the oldest and the youngest sibling.

We selected those respondents who formed a pair with at least one adult sibling. Single children or respondents whose sibling died at an immature age were deleted.

A respondent with only one sibling gives one pair; a respondent with two siblings gives three pairs (the respondent with sibling A; the respondent and sibling B; and sibling A and B). We added all the pairs of siblings together to a new data-set. We ordered the respondents and siblings in such a way that the oldest of each pair became the older sibling and the youngest the younger sibling. We deleted all pairs of siblings on which one of the pairs had no valid information on sexe and age.

The unit of this new data set is not longer the individual respondent but a pair of siblings (N=2236). Because larger families as a consequence of the pair formation contribute more pairs than smaller families, one has to reweigh the sample of pairs in order to avoid a bias in the results. We have chosen the same weighing procedure as De Graaf & Huinink (1992), Dronkers

(1992) and Toka & Dronkers (1996). This weighing procedure results in an equal representation of all families in the sibling pairs. If there were six possible sibling pairs, the their weight is 1/6, if there were three possible pairs their weight is 1/3, if there was one possible pair then the weight is one. After the weighing procedure we ended with 914 weighted pairs for our analysis.

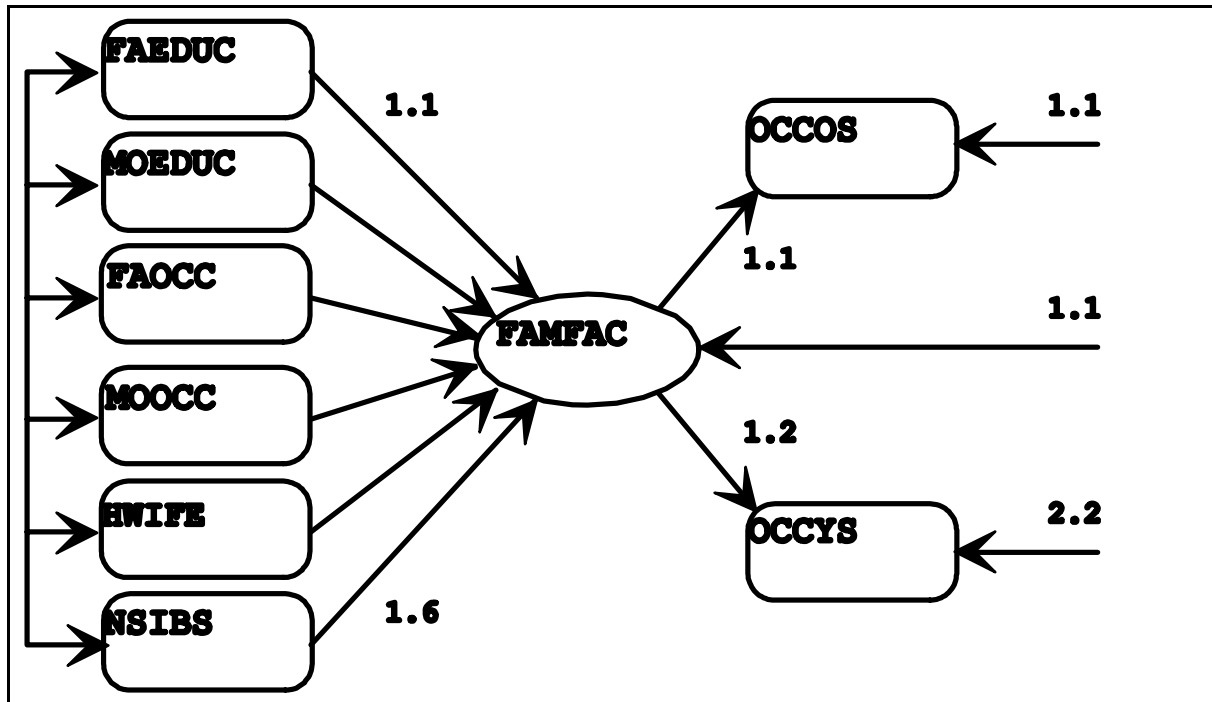
Variables	Coding
Father's educational attainment	Level of education, ranging from 0=lowest to 8=highest
Mother's educational attainment	Level of education, ranging from 0=lowest to 8=highest
Father's occupational prestige	ISEI International Socio-Economic Index of Occupational Status (Ganzeboom & Treiman, 1996)
Mother's occupational prestige	ISEI International Socio_Economic Index of Occupational Status (Ganzeboom & Treiman, 1996)
Mother is housewife	*0 Mother is no housewife, she has a job *1 Mother is housewife
Number of siblings	Number of father's children range 1 - 18
Gender	*1 oldest sibling male / youngest sibling male *2 oldest sibling female / youngest sibling female *3 oldest sibling male / youngest sibling female *4 oldest sibling female / youngest sibling male
Generations	*1 < 1930 *2 1931 - 1945 *3 1946 - 1960 *4 1961 >
Siblings with/without working mother	*0 mother does not work, she is housewife *1 mother has a job

**Figure 1** Variables and their codings

The definitions of all available variables and their coding are given in figure 1. The occupation of the father and the mother is asked for that moment at which the respondent was 16 years old. If the mother did not had an occupation, she got the average prestige score of all mothers.

The generations are made on the average birth year of both sibling in the relevant pair.

### 3. Model



**Figure 2** The causal model of the relations between parental characteristics, the common educational family factor and the educational attainment of the older and younger sibling

A model to distinguish between the effects of parental background, common family factor and individual educational attainment was developed by Hauser & Wong (1989) and this model has been used by nearly all siblings studies. The model is a Multiple Indicators, Multiple Causes (MIMIC) model and is given in figure 2.

This model assumes no direct effects of factors of the causes (parental characteristics) on the indicators (educational level of the individual siblings). The MIMIC model specifies that exogenous background characteristics affect educational attainments of siblings through a single, unmeasured common family factor, which accounts for the resemblance in educational attainment.

A more technical explanation of this model can be found in Hauser & Wong (1989). We give here only a simple explanation to help understand our analyses. The common family factor is a latent variable, of which the educational attainments of both siblings are the indicators (paths  $\lambda_{1,1}$  and  $\lambda_{2,1}$ ). This common family factor is affected by the educational and occupational levels of both parents, mother housewife and number of siblings, (the coefficients  $\gamma_{1,1}$  to  $\gamma_{1,6}$ ) which are also correlated ( $\Phi$ -matrix).  $\zeta_1$  indicates the variance of the unmeasured common family factor which parental characteristics are unable to explain. This coefficient is the indicator for the degree of between-family variance. The error terms of the educational attainment of the oldest and the youngest sibling ( $\varepsilon_{1,1}$  and  $\varepsilon_{2,2}$ ) indicate the effect of factors unique to the educational attainment of each sibling and unrelated to the common family factor or parental characteristics. These error terms are the indicators of the within-family variance and the main indicator of differences in sibling resemblance between different groups. If these error terms can be set equal for different groups of siblings, the within-family variance is equal for these different groups. The coefficient from  $\lambda_{1,1}$  is fixed to 1.0 in order to identify the latent

variable family factor. So the coefficients  $\gamma_{1,1}$  to  $\gamma_{1,6}$  give us the effect from parental characteristics on the educational level of the oldest sibling and the coefficient  $\lambda_{2,1}$  is the proportional adjustment for the parental characteristics on the educational level of the youngest sibling. All the models are estimated with LISREL VIII (Jöreskog & Sörbom, 1993).

A similar MIMIC model can be made for the occupational level of both siblings, if we replace the educational level of both siblings by their occupational level. The common family factor has in this case the occupational levels of both siblings as their indicator. We do not present one more elaborated model, which contains both educational and occupational attainment of both siblings. In order to test our hypothesis we do not need such a more elaborated model.

## 4. Results

### 4.1 Resemblance between siblings of similar and different gender

We start with our hypothesis that the resemblance in educational and occupational attainment is large between siblings of similar and different gender.

**Table 1** Selection of the most parsimonious model for gender like and cross-gender sibling pairs and their educational attainment

model	$\chi^2$	df	p	diff	$\chi^2$	df	p	
a. all parameters free	19	20	.50					
b. $\gamma_{1,1}$ to $\gamma_{1,6}$ equal in all groups equal	27	38	.91	b-a	8	18	.98	ns
c. $\lambda_{2,1}$ equal in all groups equal	21	23	.60	c-a	2	3	.57	ns
d. $\psi_{1,1}$ in all groups equal	27	23	.28	d-a	8	3	.04	s
e. $\theta_{1,1}$ and $\theta_{2,2}$ in all groups equal	34	26	.13	e-a	15	6	.02	s
f. $\lambda_{1,1}=\lambda_{1,2}=1$ in all groups equal	25	24	.42	f-a	6	4	.20	ns
g. $\gamma_{1,1}=\gamma_{1,1}$ in all groups equal	21	21	.49	g-a	2	1	.16	ns
h. $\gamma_{1,1}=\gamma_{1,1}$ in all groups equal	19	21	.56	h-a	0	1	1.0	ns
i. final model b+c+f+g+h	36	44	.80	g-a	17	24	.85	ns

note: we show the truncated  $\chi^2$

In order to test this hypothesis we divided 914 sibling pairs into four gender combinations: elder brother-younger brother (n=192); older sister-younger sister (n=194); older brother-younger sister (n=210); older sister-younger brother (n=185). In table 1 we show our procedure to select the most parsimonious model. The basic model is model a, in which all unstandardized coefficients can be different between the gender combinations. The models b to h equalize one or more unstandardized coefficients between the different gender combinations. Model i adds all acceptable equality constraints together. The degree of change in the  $\chi^2$ , given the gain of degrees of freedom, gives information whether or not this equalizing is justified by the data. Only non-significant changes in the  $\chi^2$  justify the equalization of the unstandardized coefficients. Model b shows that all effects of the parental characteristics are equal for the four gender combinations. Model c shows that the effect of the common family factor on the educational level of the younger sibling ( $\lambda_{2,1}$ ) is equal in all four gender combinations. Model f shows that the effects of the common family factor on the educational level of both siblings are 1.00 in the four gender combinations. Models g and h indicate that the effects of the educational level of both parents are equal in the four gender combinations, just like the effects of the occupational status of both parents.

**Table 2** The resemblance in educational attainment between four gender combinations: unstandardized parameters of the most parsimonious model with t-values

	older brother/ younger brother	older sister/ younger sister	older brother/ younger sister	older sister/ younger brother
Education father ( $\gamma_{1,1}$ )	.31	.31	.31	.31
t-value	11.81	11.81	11.81	11.81
Education mother ( $\gamma_{1,2}$ )	.31	.31	.31	.31
t-value	11.81	11.81	11.81	11.81
Occupation father ( $\gamma_{1,3}$ )	.026	.026	.026	.026
t-value	6.39	6.39	6.39	6.39
Occupation mother ( $\gamma_{1,4}$ )	.026	.026	.026	.026
t-value	6.39	6.39	6.39	6.39
Housewife mother ( $\gamma_{1,5}$ )	.061	.061	.061	.061
t-value	.50	.50	.50	.50
Number siblings ( $\gamma_{1,6}$ )	-.18	-.18	-.18	-.18
t-value	-7.88	-7.88	-7.88	-7.88
Variance between family ( $\psi_{1,1}$ )	1.48	2.30	1.55	1.37
t-value	5.89	7.68	6.12	5.19
Effect education oldest sibling ( $\lambda_{1,1}$ )	1.	1.	1.	1.
Effect education youngest sibling ( $\lambda_{2,1}$ )	1.	1.	1.	1.
Variance oldest sibling ( $\theta_{1,1}$ )	1.57	1.09	1.82	1.87
t-value	6.11	5.03	6.76	6.34
Variance youngest sibling ( $\theta_{2,2}$ )	1.76	1.24	1.70	2.0
t-value	6.52	5.5	6.5	6.57

On the base of the  $\chi^2$  outcomes of model b to h we estimate model i, which gives us an acceptable, final model l. The unstandardized coefficients of this final model i are given in table 2. There are only two differences between the four gender differences: 1. the error variance

( $\theta_{1,1}$ ;  $\theta_{1,2}$ ) differs: in the older sister-younger sister is the error variance comparatively small; 2. the unexplained variance of the common family factor is comparatively larger in the older sister-younger sister combination. These two differences suggest that the common educational level of female Spanish siblings can be less well predicted by the measured characteristics of their parents and family (educational and occupational level; family size) compared to the other sibling combinations. But that the common family factor effects stronger the individual educational level of female Spanish siblings, leaving less room for individual deviance in educational level. With other words: the between family differences in educational level is for Spanish siblings larger, but the with-in family differences are smaller. However, one should not overestimate these differences, because most parameters are equal in the four gender combinations. Mothers' and fathers' educational level and occupational prestige and family size effects the common family factor in all gender combinations in a similar way. The same holds for the effect of the common family factor on the educational level of the youngest sibling. What ever their gender, the effect is equal to that of the oldest sibling. Despite the two differences we believe that our hypothesis on the large resemblance in educational attainment between Spanish sibling of similar and different gender are confirmed. Spanish families do not function in this respect differently from other modern societies.

Table 2 shows some other interesting outcomes. The effect of fathers' educational level on the educational level of his children is equal to the effect of mothers' educational level. Although the educational level of Spanish mothers is lower than that of Spanish fathers, it is equally important for the educational attainment of their children. Also, the effect of fathers' occupational level on the educational level of his children is equal to the effect of mothers' occupational level. Despite the ideological preference of the conservative authoritarian Franco regime for mother staying at home as housewife, the occupational status of Spanish mothers is as important as the occupational status of fathers for the educational attainment of their children. The insignificant nearly zero effect of the variable housewife on the educational attainment of their children means that the quality of mothers work is more important for her children than whether she is housewife or not. Because housewives got an average score on the occupational status our results also mean that having an occupation with a status lower than the average occupational status of Spanish mothers has negative consequences for the educational level of her children. Also in this respect these Spanish result doesn't differ from that in the USA and the Netherlands.

We applied the same procedures on occupational attainment of Spanish siblings. Table A of the appendix shows the procedure to select the most parsimonious model. All effects between the four gender combinations were equal. Table B of Appendix shows the unstandardized parameters of the four gender combinations in the most parsimonious model. The result support our hypothesis on the large similarity in sibling resemblance between gender combinations fully.

#### **4.2. Systematic differences in resemblance between siblings from different birth cohorts**

**Table 3:** The unstandardized parameters and their t-values of the most parsimonious model for resemblance in educational level between Spanish siblings of different birth cohorts

	-1930	1931- 1945	1946- 1960	1961-
Education father ( $\gamma_{1,1}$ )	.44	.34	.22	.18
t-value	9.32	7.64	4.08	4.33
Education mother ( $\gamma_{1,2}$ )	.44	.34	.22	.18
t-value	9.32	7.64	4.08	4.33
Occupation father ( $\gamma_{1,3}$ )	.0056	.021	.043	.022
t-value	.90	3.38	5.06	3.02
Occupation mother ( $\gamma_{1,4}$ )	.0056	.021	.043	.022
t-value	.90	3.38	5.06	3.02
Housewife mother ( $\gamma_{1,5}$ )	.096	-.026	.36	.24
t-value	.55	-.13	1.48	1.03
Number of siblings ( $\gamma_{1,6}$ )	-.061	-.055	-.17	-.21
t-value	-2.09	-1.83	-3.56	-3.71
Variance between family ( $\psi_{1,1}$ )	.45	.73	1.32	1.83
t-value	3.60	4.81	4.93	6.59
Effect education oldest sibling ( $\lambda_{1,1}$ )	1.	1.	1.	1.
Effect education youngest sibling ( $\lambda_{2,1}$ )	1.	1.	1.	1.
Variance oldest sibling ( $\theta_{1,1}$ )	1.32	.94	1.89	1.94
t-value	7.30	5.77	6.30	6.81
Variance youngest sibling ( $\theta_{2,2}$ )	1.05	1.50	2.53	1.60
t-value	6.56	7.37	7.34	6.07

In this section we apply the same procedures to select the most parsimonious model as in the previous section. Now we have four birth cohorts in stead of gender combinations: born before 1931 (n=183); born between 1931 and 1945 (n=187); born between 1946 and 1960 (n=198);

born after 1960 (n=212). Table C of the Appendix shows the procedure to select the most parsimonious model for the resemblance in educational attainment between siblings from different birth cohorts. The effect of the common family factor on the educational attainment of the youngest sibling is equal in the four birth cohorts ( $\lambda_{2,1}$ ) and is equal to the effect on the educational level of the oldest sibling ( $\lambda_{1,1}$ ). Also is within each birth cohorts the effect of fathers' education equal to that of mothers' education, but these effects variate in the same way between birth cohorts. The same holds for the effect of fathers' and mothers' occupational status. In table 3 we show the unstandardized parameters of the most parsimonious model for resemblance in educational level between Spanish siblings of different birth cohorts.

Table 3 shows interesting results. The between family variance ( $\psi_{1,1}$ ) increases from .45 for siblings born before 1931 to 1.83 for siblings born after 1961, indicating that the explanatory power of parental education and occupation is lower in a more modern Spain. This decrease of the importance is reflected by the decreasing effect of parental educational level ( $\gamma_{1,1}$ ;  $\gamma_{1,2}$ ) from .44 to .18. This decline is however counterbalanced by an increasing effect of parental occupation from an insignificant effect to a peak for the cohort born between 1946-1960 (.043) and a lower level for the youngest cohort (.022). Also the effect of family size has increased between the oldest and the youngest birth cohort. But the combination of all these rising and falling parameters is that the unexplained between-family variance has increased during the 20th century in Spain, which indicates that the measured parental background became less important.

The error variance of the oldest sibling ( $\theta_{1,1}$ ) has risen from 1.32 in the cohort born before 1931 to 1.94 in the youngest cohort, but with a downswing for the cohort born between 1931-1940. The error variance of the youngest sibling ( $\theta_{1,1}$ ) has also risen from 1.05 for the oldest birth cohort to 2.53 for the cohort born between 1946-1960, but with a fall for the youngest cohort to 1.60. Although there are some deviating outcomes, the general line is that the error variance in the individual educational attainment and thus the within-family variance has increased during the 20th century in Spain. At this point Spain is in line with the tendency in Germany, the Netherlands and the USA that the family has become less important for the educational attainment in younger, more modern generations. Spain deviates at this point from Hungary which has also experienced during the 20th century an authoritarian regime. This conclusion does not support our hypothesis on the unchanged similarity of sibling resemblance between different birth cohorts.

We applied the same procedures on occupational attainment of Spanish siblings from different birth cohorts. Table D of the Appendix shows the procedure to select the most parsimonious model. All effects between the four birth cohorts were equal. Table E of Appendix shows the unstandardized parameters of the four birth cohorts in the most parsimonious model. Contrary to the resemblance in educational attainment does this conclusion on resemblance in occupational status support our hypothesis on the unchanged similarity of sibling resemblance between different birth cohorts. As far as the resemblance between the occupational levels the absent trend in Spain resembles the results in the other European countries like Hungary and Poland which have also experienced during the 20th century an authoritarian regime.

### **4.3 Resemblance between siblings from families with and without working mothers**

In this section we apply the same procedures to select the most parsimonious model as in the

previous sections. Now we have two groups: siblings from families in which mother doesn't work (n=542); siblings in families in which mother works (n=303). Table F of the Appendix shows the procedure to select the most parsimonious model for the resemblance in educational attainment between siblings from these two family types. The effects of the parental background on the educational attainment of the siblings ( $\gamma_{1,1}$  to  $\gamma_{1,6}$ ) are equal in both groups. Also the unexplained variance of the common family factor ( $\psi_{1,1}$ ) is equal in both groups. All other parameters are different in both family types.

**Table 4** The unstandardized parameters of the most parsimonious model of the resemblance in educational attainment between Spanish siblings from families with and without a working mother

	mother does not work	working mother work
Education father ( $\gamma_{1,1}$ )	.29	.29
t-value	5.86	5.86
Education mother ( $\gamma_{1,2}$ )	.38	.38
t-value	6.64	6.64
Occupation father ( $\gamma_{1,3}$ )	.033	.033
t-value	6.35	6.35
Number of siblings ( $\gamma_{1,6}$ )	-.19	-.19
t-value	-8.13	-8.13
Variance between family ( $\psi_{1,1}$ )	1.82	1.82
t-value	10.88	10.88
Effect education oldest sibling ( $\lambda_{1,1}$ )	1.	1.
Effect education youngest sibling ( $\lambda_{2,1}$ )	.88	.99
t-value	17.15	16.95
Variance oldest sibling ( $\theta_{1,1}$ )	1.47	1.36
t-value	7.64	5.96
Variance youngest sibling ( $\theta_{2,2}$ )	2.10	1.18
t-value	11.06	5.30

Table 4 shows the unstandardized parameters of the most parsimonious model of the resemblance in educational attainment between Spanish siblings from families with and without

a working mother. The effect of the common family factor on the educational attainment of the younger sibling ( $\lambda_{2,1}$ ) in a family without a working mother is smaller than the comparable effect on the educational attainment of the younger sibling in a family with a working mother. This means that the parental background influences the educational attainment of the younger sibling in a family without a working mother. Also the unexplained variance in the educational attainment of the younger sibling ( $\theta_{2,2}$ ) is larger in a family without a working mother. These results suggest that the resemblance in educational attainment between siblings in families without a working mother is less strong than in families with a working mother.

We applied the same procedures on occupational attainment of Spanish siblings from these two family types. Table G of the Appendix shows the procedure to select the most parsimonious model. All effects between the two types were equal. Table H of Appendix shows the unstandardized parameters of the two types in the most parsimonious model. These equal parameters confirms our hypothesis on the equal resemblance in occupational attainment between Spanish siblings for families with and without working mothers.

## 5. Conclusions

The second hypothesis (the resemblance between the educational and occupational attainment between Spanish siblings of similar and different gender is large) is confirmed by our data. Given this result the Spanish parents and brothers and sister didn't behave differently in the educational and occupational similarity than other modern societies in Europe, America and Australia. The Spanish conservative authoritarian regime, which gave much attention to the different gender roles, did not succeed in their efforts to protect the Spanish women against the perils of modern times and libertine behaviour.

This conclusion is underlined by the non-significant effects of the variable 'housewife' on the educational and occupational attainment of her children. The equal effect of the status of mothers' occupation underlines the importance of the quality of her work for the well-being of her children. A job with a higher status than the average status of the occupations of all mothers promotes the educational and occupational attainment of her children, while a job with lower than average status injures the educational attainment of her children. From this point of view mothers' occupation has a similar effect on children as fathers' occupation: one with a low status harms children, another with a high status helps children.

The acceptance of the third hypothesis (the resemblance in educational and occupational attainment between Spanish siblings is equal for families with and without working mothers) also gives no support to conservative ideas that a working mother is bad for the well-being of her children. There are no indications that the resemblance differs between families with and without working mothers and thus the strength of bonds within families.

The first hypothesis (the resemblance between educational and occupational attainment between Spanish siblings from different birth cohorts doesn't changed systematically) has to be rejected for the educational attainment but can be accepted for the occupational attainment. The between-family variance in educational attainment has become larger for the younger birth cohorts, just like in the Netherlands, Germany and the USA but contrary to Hungary and Australia. However, the between family-variance in occupational attainment has remained stable, just like in Poland and Hungary. This means that a conservative authoritarian regime as has existed in Spain could not stop a growing individualism and the decline of the importance of

the family, specially in relation to educational attainment. This difference between Spain with its conservative authoritarian regime and Hungary and Poland with their communist authoritarian regimes can be explained in two ways: 1. A conservative regime is less effective and more tolerant compared to communist regimes, because the former is more dependent on the cooperation of other groups in their societies and non-conservative societies which makes families less essential. 2. A conservative regime leaves the economic sectors free and focus on the social and cultural sectors (church, morals, family, education), while communist regimes regulate also the economic sectors. This makes the communist regimes more powerful and totalitarian in their relations with their citizens compared to conservative regimes and thus promote the importance of families to survive in these societies.

If this conclusion is right, one cannot say that a conservative authoritarian regime promotes the importance of the family better than a democratic society. Only communist boost the importance of families in their societies, probably because they are more totalitarian than conservative regimes. From this point of view one is not allowed to equate conservative authoritarian regimes with communist regime. The latter left less room for their citizens than the former and thus unintended promoted the importance of families, contrary to the original communist ideology.

## Notes

1. In the study of the resemblance between Polish siblings only the occupational level of the siblings was available and analyzed.

## Literature

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Table A. selection of the most parsimonious model for gender like and cross-gender sibling pairs occupation

model	$\chi^2$	df	p	diff	$\chi^2$	df	p	
a. all parameters free	17	20	.68					
b. eff parents on famfac for all groups equal	32	38	.75	b-a	15	18	.66	ns
c. eff famfac on occys for all gr. eq.	18	23	.77	c-a	1	3	.80	ns
d. variance famfac for all gr. eq.	22	23	.53	d-a	5	3	.17	ns
e. errorvariance occos occys for all groups equal	24	26	.56	e-a	7	6	.32	ns
f. occos=occys=1*famfac for all gr. eq.	18	24	.78	f-a	1	4	.91	ns
g. effect educpa=educma for all gr. eq.	18	21	.66	g-a	1	1	.31	ns
h. effect occpa=occma for all gr. eq.	17	21	.71	h-a	0	1	1.0	ns
i. final model b+c+d+e+f+g+h	51	53	.54	i-a	34	33	.42	ns

note: we show the truncated  $\chi^2$

Table B. gender: parameters of the most parsimonious model with t-values occupation

	osmale / ysmale n=159	osfemale /ysfemale n=87	osmale / ys- female n=112	osfemale / ysmale n=103
Education father ( $\gamma_{1,1}$ )	1.24	1.24	1.24	1.24
t-value	5.18	5.18	5.18	5.18
Education mother ( $\gamma_{1,2}$ )	1.24	1.24	1.24	1.24
t-value	5.18	5.18	5.18	5.18
Occupation father ( $\gamma_{1,3}$ )	.25	.25	.25	.25
t-value	7.11	7.11	7.11	7.11
Occupation mother ( $\gamma_{1,4}$ )	.25	.25	.25	.25
t-value	7.11	7.11	7.11	7.11
Housewife mother ( $\gamma_{1,5}$ )	1.37	1.37	1.37	1.37
t-value	1.31	1.31	1.31	1.31
Number of siblings ( $\gamma_{1,6}$ )	-1.01	-1.01	-1.01	-1.01
t-value	-5.08	-5.08	-5.08	-5.08
Variance between family ( $\psi_{1,1}$ )	51.87	51.87	51.87	51.87
t-value	6.15	6.15	6.15	6.15
Effect occupation oldest sibling ( $\lambda_{1,1}$ )	1.	1.	1.	1.
Effect occupation youngest sibling ( $\lambda_{2,1}$ )	1.	1.	1.	1.
Variance oldest sibling ( $\theta_{1,1}$ )	114.35	114.35	114.35	114.35
t-value	10.59	10.59	10.59	10.59
Variance youngest sibling ( $\theta_{2,2}$ )	127.62	127.62	127.62	127.62
t-value	11.16	11.16	11.16	11.16

Table C. Selection of the most parsimonious model for generation sibling pairs education

model	$\chi^2$	df	p	diff	$\chi^2$	df	p	
a. all parameters free	8	20	.99					
b. eff parents on famfac for all groups equal	51	38	.071	b-a	43	18	.00	s
c. eff famfac on occys for all gr. eq.	13	23	.96	c-a	5	3	.17	ns
d. variance famfac for all gr. eq.	30	23	.15	d-a	22	3	.00	s
e. errorvariance occos occys for all groups equal	40	26	.039	e-a	32	6	.00	s
f. occos=occys=1*famfac for all gr.eq	15	24	.93	f-a	7	4	.14	ns
g. effect educpa=educma for all gr. eq	9	21	.99	g-a	1	1	.32	ns
h. effect occpa=occma for all gr. eq	9	21	.99	h-a	1	1	.32	ns
i. final model c+f+g+h	22	32	.90	i-a	14	12	.30	ns

note: we show the truncated  $\chi^2$

Table D. selection of the most parsimonious model for generations occupation

model	$\chi^2$	df	p	diff	$\chi^2$	df	p	
a. all parameters free	13	20	.87					
b. eff parents on famfac for all groups equal	32	38	.76	b-a	19	18	.39	ns
c. eff famfac on occys for all gr. eq.	18	23	.75	c-a	5	3	.17	ns
d. variance famfac for all gr. eq.	17	23	.82	d-a	4	3	.26	ns
e. errorvariance occos occys for all groups equal	19	26	.84	e-a	6	6	.42	ns
f. occos=occys=1*famfac for all gr. eq.	19	24	.74	f-a	6	4	.20	ns
g. effect educpa=educma for all gr. eq.	14	21	.87	g-a	1	1	.31	ns
h. effect occpa=occma for all gr. eq.	15	21	.82	h-a	2	1	.16	ns
i. final model b+c+d+f+g+h	56	53	.38	i-a	43	33	.11	ns

note: we show the truncated  $\chi^2$

Table E. generations: parameters of the most parsimonious model with t-values occupation

	-1930 n=101	1931-1945 n=106	1946-1960 n=146	1961- n=107
Education father ( $\gamma_{1,1}$ )	1.16	1.16	1.16	1.16
t-value	4.90	4.90	4.90	4.90
Education mother ( $\gamma_{1,2}$ )	1.16	1.16	1.16	1.16
t-value	4.90	4.90	4.90	4.90
Occupation father ( $\gamma_{1,3}$ )	.25	.25	.25	.25
t-value	7.11	7.11	7.11	7.11
Occupation mother ( $\gamma_{1,4}$ )	.25	.25	.25	.25
t-value	7.11	7.11	7.11	7.11
Housewife mother ( $\gamma_{1,5}$ )	1.35	1.35	1.35	1.35
t-value	1.32	1.32	1.32	1.32
Number of siblings ( $\gamma_{1,6}$ )	-.81	-.81	-.81	-.81
t-value	-4.10	-4.10	-4.10	-4.10
Variance between family ( $\psi_{1,1}$ )	46.14	46.14	46.14	46.14
t-value	5.67	5.67	5.67	5.67
Effect occupation oldest sibling ( $\lambda_{1,1}$ )	1.	1.	1.	1.
Effect occupation youngest sibling ( $\lambda_{2,1}$ )	1.	1.	1.	1.
Variance oldest sibling ( $\theta_{1,1}$ )	116.41	116.41	116.41	116.41
t-value	10.80	10.80	10.80	10.80
Variance youngest sibling ( $\theta_{2,2}$ )	126.23	126.23	126.23	126.23
t-value	11.22	11.22	11.22	11.22

Table F. Selection of the most parsimonious model for sibling pairs with working mothers education

model	$\chi^2$	df	p	diff	$\chi^2$	df	p	
a. all parameters free	2	6	.88					
b. eff parents on famfac for all groups equal	11	10	.35	b-a	9	4	.06	ns
c. eff famfac on occys for all gr. eq.	8	7	.37	c-a	6	1	.01	s
d. variance famfac for all gr. eq.	4	7	.75	d-a	2	1	.16	ns
e. errorvariance occos occys for all groups equal	15	8	.07	e-a	13	2	.00	s
f. occos=occys=1*famfac for all gr. eq.	11	8	.23	f-a	9	2	.01	s
g. effect educpa=educma for all gr. eq.	7	7	.41	g-a	5	1	.03	s
h. final model b+d	12	11	.35	h-a	10	5	.07	ns

note: we show the truncated  $\chi^2$

Table G. Selection of the most parsimonious model for sibling pairs with working mothers occupation

model	$\chi^2$	df	p	diff	$\chi^2$	df	p	
a. all parameters free	5	6	.60					
b. eff parents on famfac for all groups equal	6	10	.78	b-a	1	4	.91	ns
c. eff famfac on occys for all gr. eq.	7	7	.45	c-a	2	1	.16	ns
d. variance famfac for all gr. eq.	7	7	.46	d-a	2	1	.16	ns
e. errorvariance occos occys for all groups equal	7	8	.50	e-a	2	2	.37	ns
f. occos=occys=1*famfac for all gr. eq.	8	8	.44	f-a	3	2	.22	ns
g. effect educpa=educma for all gr. eq.	6	7	.56	g-a	1	1	.32	ns
h. final model b+c+d+e+f+g+h	12	16	.74	h-a	7	10	.72	ns

note: we show the truncated  $\chi^2$

Table H. working mothers: parameters of the most parsimonious model with t-values for occupation siblings

	mother does not work n=303	working mother n=158
education father ( $\gamma_{1,1}$ )	1.28	1.28
t-value	5.5	5.5
Education mother ( $\gamma_{1,2}$ )	1.28	1.28
t-value	5.5	5.5
Occupation father ( $\gamma_{1,3}$ )	.33	.33
t-value	7.61	7.61
Number of siblings ( $\gamma_{1,6}$ )	-1.05	-1.05
t-value	-5.39	-5.39
Variance between family ( $\psi_{1,1}$ )	50.65	50.65
t-value	6.03	6.03
Effect occupation oldest sibling ( $\lambda_{1,1}$ )	1.	1.
Effect occupation youngest sibling ( $\lambda_{2,1}$ )	1.	1.
Variance oldest sibling ( $\theta_{1,1}$ )	112.74	112.74
t-value	10.53	10.53
Variance youngest sibling ( $\theta_{2,2}$ )	131.71	131.71
t-value	11.34	11.34

