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Comparative study of the endogamy index between two portuguese parishes

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RESUMO

O presente trabalho analisa o coeficiente de endogamia em duas paróquias rurais do Município de Coimbra entre 1876 e 1980.

Dividimos o período em três sub-períodos para analisar a variação do coeficiente de endogamia.

Também utilizámos o índice de endogamia proposto por Segalen e Jaquard (1971) para calcular a endogamia dentro das paróquias considerando os lugares como unidades.

O estudo foi realizado tomando em consideração os locais de nascimento e residência no dia de casamento.

Palavras-chave: Almalaguez; Ceira; Endogamia; Exogamia.

ABSTRACT

This study examines the endogamy level and index in two parishes from the Municipality of Coimbra between 1876 and 1980.

We divided the period into three sub-periods in order to analyse the endogamy index variation.

We also have used the homogamy index proposed by Segalen and Jacquard (1971) to calculate the endogamy inside the parishes considering the places as units.

All this studies have been done taking account the birthplace and residence at wedding day.

Key-words: Almalaguez; Ceira; Endogamy; Exogamy.

INTRODUCTION

In this study we examined two rural parishes in the municipality of Coimbra: Ceira and Almalaguez during the period from 1876 to 1980.

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Ceira is located about 8 Km southeast from Coimbra, in the center of Portugal, and has 4285 inhabitants being 2116 masculines and 2169 feminines.

Almalaguez is 14 Km distant from Coimbra, has 3552 inhabitants, 1746 man and 1806 woman.

Although Almalaguez is located near Coimbra it's roads, being recent and bad, are the main factor contributing to it's isolation.

In both populations, the main activity is agriculture; this circumstance has changed a bit in the last few years, specially in the parish of Ceira which suffered a bigger industrialization than Almalaguez.

MATERIAL AND METHODS

Our study material was:

2429 marriages occurred in Ceira in the referred period and 2116 marriages occurred in the same period in Almalaguez.

The data to both populations were taken out from the record books in the parishes and from the Civil Register in Coimbra. Having the data we gathered it in groups of five years. The purpose of this study is to examine the endogamy level in both birthplace and residence of the bride and groom at wedding day.

After this we compared the results obtained in the two parishes. We chose these parishes because the majority of exogamous marriages in Ceira is with individuals coming from Almalaguez.

In the first stage we considered endogamous all the unions in which both, the man and the woman, were born in each parish, without taking into account the place in the parish they were natural from. With these results we obtained the percentage of endogamous marriages. We have done the same analysis taking into account the residence at wedding day.

To each parish and to both birthplace and residence we studied the exogamous marriage distributed in three types:

- Type 1 — husband foreigner to the parish, wife belonging to the parish.
- Type 2 — husband belonging to the parish, wife foreigner to the parish.
- Type 3 — both foreigners.

Then we analysed the groups of places from each parish so that we could get a clear idea of its participation in each parish social structure. We considered the total number of marriages between the naturals and the residents in three periods of time: 1876-1900; 1901-1920; 1941-1965.

To obtain the structure of marriages in and between places of each parish we build a 14 per 14 matrix — because each parish has 14 places. In this matrix the element n_{ij} related to the number of marriages between a man coming from the place i and a woman coming from the place j , getting in the diagonal the marriages between the same places.

We build 12 matrixes of this kind refering to birthplaces and residences in both parish to each of the three periods of time. For each matrix we calculated the homogamy index introduced by Segalen and Jacquard in 1971 which reflects the endogamy index.

Based in each of these matrix we calculated a panmitic matrix (P) and a homogamic matrix (H) being the first one the example of a population that behaves in panmitic way and the second on the example of a population that behaves in a homogamic way.

To calculate each P matrix we used the following relation:

$$P_j^i = \frac{t_i t_j}{T}$$

in which t_i is the number of man in the class i , t_j is the number of woman in the class j and T is the total.

To build the H matrix we put in diagonal the greater possible number of marriages in the place, distributing the rest by the disposable classes in a homogamic way.

The λ homogamy index is calculated based on the three matrixes and allows the building of a fourth type of matrix, which, very similar to the first matrix, is a teorotical model that gives information about the distance between the natural matrix and the other types of matrixes.

This λ index is interpreted as the propension of individuals to get married in a homogamous way.

RESULTS AND DISCUSSION

The frequencies of endogamy, expressed in the percentage of endogamous marriages have high values in the two parishes.

As we can see in the Table 1, which is expressed in percentages, in Ceira the maximum values were found in the periods of 1911-1915 and 1976-1980 in which they achive 76,6% and 68,2%, refering the first value to residence and the second one the birthplace.

In Almalaguez we obtained even higher values: 85,7% in the period of 1926-1930 refering to birthplace and 42,8% in the period of 1971-75 and refering to residence. The lower values were observed in the periods of 1971-75 and 1926-30 in which we obtained 57,2% refering to birthplace and 14,3% refering to residence. All these results are represented in the Fig. 1.

We noticed in this study that, as usual and as can be observed in Table 2 and 3 and Figs. 2 and 3, the contribution of man to the values of exogamy is higher. Though these values can be betrayed by the cultural prattice of marriage in the parish where the bride was born or is resident.

The matrix previously refered and the λ index of homogamy gave us a clear ideia of the demographic structure of the two populations.

TABLE 1. *Endogamy and exogamy percentage comparasion, taking in account the birthplace and residence, at Almalaguez and Ceira.*

TIME PERIOD	ALMALAGUEZ				CEIRA			
	ENDOGENOUS MARRIAGES		EXOGENOUS MARRIAGES		ENDOGENOUS MARRIAGES		EXOGENOUS MARRIAGES	
	BIRTHPLACE %	RESIDENCE %	BIRTHPLACE %	RESIDENCE %	BIRTHPLACE %	RESIDENCE %	BIRTHPLACE %	RESIDENCE %
1876/80	66,28	33,72	75,58	24,42	71,28	28,2	75,7	24,3
1881/85	71,88	28,12	77,09	22,91	66,0	44,0	76,6	23,4
1886/90	61,73	38,27	66,67	33,33	58,4	41,6	68,8	31,2
1891/95	64,29	35,71	76,19	23,81	61,6	38,4	63,5	36,5
1896/1900	75,34	24,66	82,19	17,81	66,3	33,7	73,7	26,3
1901/05	61,87	38,13	73,73	26,27	65,5	34,5	79,8	20,2
1906/10	60,98	39,02	79,25	20,75	61,0	39,0	69,5	30,5
1911/15	72,83	17,17	81,52	18,48	76,6	23,4	78,4	21,6
1916/20	68,97	31,03	86,68	13,32	72,0	28,0	77,9	22,1
1921/25	64,29	35,71	76,53	23,47	62,2	37,8	74,6	25,4
1926/30	85,72	14,28	84,52	15,48	66,5	33,5	74,3	25,7
1931/35	77,89	22,11	81,05	18,95	65,3	34,7	76,3	23,7
1936/40	80,20	19,8	91,09	8,91	69,6	30,04	77,6	22,4
1941/45	75,00	25,00	83,66	16,34	67,2	32,8	79,7	20,3
1946/50	71,57	28,43	77,45	22,55	62,9	37,1	75,5	24,5
1951/55	65,69	34,31	78,43	21,57	54,7	45,3	65,7	34,3
1956/60	61,48	38,52	74,59	25,41	56,1	43,9	67,7	32,3
1961/65	64,06	35,94	71,83	28,17	46,3	53,7	57,3	42,7
1966/70	58,97	41,03	71,65	28,35	35,2	64,8	47,2	52,8
1971/75	57,16	42,84	72,95	27,05	34,2	65,8	55,9	44,1
1976/80	61,11	38,89	63,34	36,66	31,8	68,2	47,7	52,3

TABLE 2. *Percentage of endogamy and exogamy taking in account the birthplace.*

TIME PERIOD	ALMALAGUEZ				CEIRA			
	ENDOGAMOUS MARRIAGES %	EXOGAMOUS MARRIAGES			ENDOGAMOUS MARRIAGES %	EXOGAMOUS MARRIAGES		
		TYPE 1 %	TYPE 2 %	TYPE 3 %		TYPE 1 %	TYPE 2 %	TYPE 3 %
1976/80	66,28	27,91	4,65	1,16	71,8	22,6	2,8	2,8
1881/85	71,88	21,87	3,12	3,12	66,0	14,9	19,1	—
1886/90	61,73	32,10	4,94	1,23	58,4	28,6	6,5	6,5
1891/95	64,29	30,95	4,75	—	61,6	21,9	9,6	6,9
1896/1900	75,34	21,92	2,74	—	66,3	27,4	6,3	—
1901/05	61,87	32,20	3,39	2,54	65,5	26,2	7,1	1,2
1906/10	60,98	23,58	7,55	1,89	61,0	32,9	1,2	4,9
1911/15	72,83	20,65	3,26	3,26	76,6	19,8	2,7	0,9
1916/20	68,97	21,83	8,05	1,15	72,0	21,9	3,7	2,4
1921/25	64,29	26,53	6,12	3,06	62,2	26,1	7,2	4,5
1926/30	85,72	7,14	3,57	3,57	66,5	21,2	8,8	3,5
1931/35	77,89	13,68	6,32	2,11	65,3	18,6	10,2	5,9
1936/40	80,20	14,85	4,95	—	69,6	20,8	7,2	2,4
1941/45	75,00	14,42	8,65	1,93	67,2	21,9	8,6	2,3
1946/50	71,57	20,59	4,90	2,94	62,9	23,1	10,5	3,5
1951/55	65,69	25,49	7,84	0,98	54,7	29,4	9,8	6,1
1956/60	61,48	30,33	7,38	0,81	56,1	26,4	12,6	4,9
1961/65	64,06	25,78	6,25	3,91	46,3	35,4	12,2	6,1
1966/70	58,97	29,85	10,44	0,74	35,2	34,7	14,2	15,9
1971/75	57,16	26,31	11,27	5,26	34,2	31,6	17,8	16,4
1976/80	61,11	35,56	1,11	2,22	31,8	40,2	15,2	12,8

TYPE 1 — *Husband foreigner to the parish, wife belonging to the parish.*TYPE 2 — *Husband belonging to the parish, wife foreigner to the parish.*TYPE 3 — *Both foreigners.*

TABLE 3. *Percentage of endogamy and exogamy taking in account the residence.*

TIME PERIOD	ALMALAGUEZ					CEIRA		
	ENDOGAMOUS MARRIAGES %	EXOAMOUS MARRIAGES			ENDOGAMOUS MARRIAGES %	EXOAMOUS MARRIAGES		
		TYPE 1 %	TYPE 2 %	TYPE 3 %		TYPE 1 %	TYPE 2 %	TYPE 3 %
1976/80	75,58	22,09	—	2,33	75,7	20,0	1,44	2,9
1881/09	77,09	20,83	2,08	—	76,6	12,8	10,6	—
1886/90	66,67	28,40	3,70	1,23	68,8	27,3	2,6	1,3
1891/95	76,19	22,62	1,19	—	63,5	21,6	8,1	6,8
1896/1900	82,19	16,44	1,37	—	73,7	22,1	3,2	1,0
1901/05	73,73	24,57	0,85	0,85	79,8	20,2	—	—
1906/10	79,25	17,92	1,89	0,94	69,5	23,2	3,7	3,6
1911/15	81,52	18,48	—	—	78,4	18,9	1,8	0,9
1916/20	86,68	18,18	1,14	—	77,9	18,2	1,3	2,6
1921/25	76,53	21,43	1,02	1,02	74,6	20,0	2,7	2,7
1926/30	84,52	13,09		2,39	74,3	18,6	6,2	0,9
1931/35	81,05	15,79	3,16		76,3	15,3	6,7	1,7
1936/40	91,09	7,92	0,99		77,6	19,2	0,8	2,4
1941/45	83,66	12,50	1,92	1,92	79,7	16,4	3,9	—
1946/50	77,45	20,59	1,96	—	75,5	17,5	4,9	2,1
1951/55	78,43	20,59	0,98	—	65,7	27,6	4,9	1,8
1956/60	70,59	24,59	—	0,82	67,7	24,7	6,0	1,6
1961/65	71,88	26,56	1,56	—	57,3	31,7	6,1	4,9
1966/70	71,65	23,13	5,22	—	47,2	40,9	9,1	2,8
1971/75	72,95	21,05	3,00	3,00	55,9	29,6	9,2	5,3
1976/80	63,34	31,11	2,22	3,33	47,8	38,6	9,1	4,5

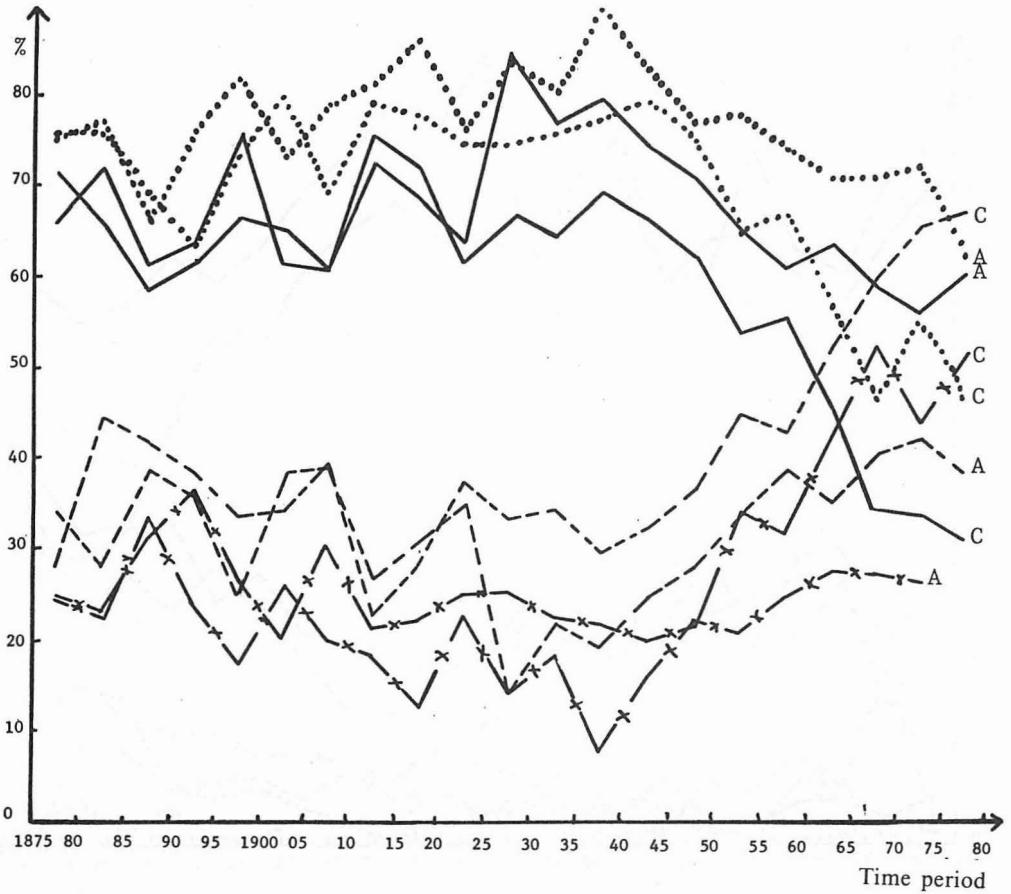


FIG. 1—Endogamy and exogamy comparasion, taking in account the residence and the birthplace.

- A—♂♀ born at Almalaguez.
- C—♂♀ born at Ceira.
- A—♂♀ born out of Almalaguez.
- C—♂♀ born out of Ceira.
- - - - - A—♂♀ residents at Almalaguez.
- - - - - C—♂♀ residents at Ceira.
- x - x - A—♂♀ residents out of Almalaguez.
- x - x - C—♂♀ residents out of Ceira.

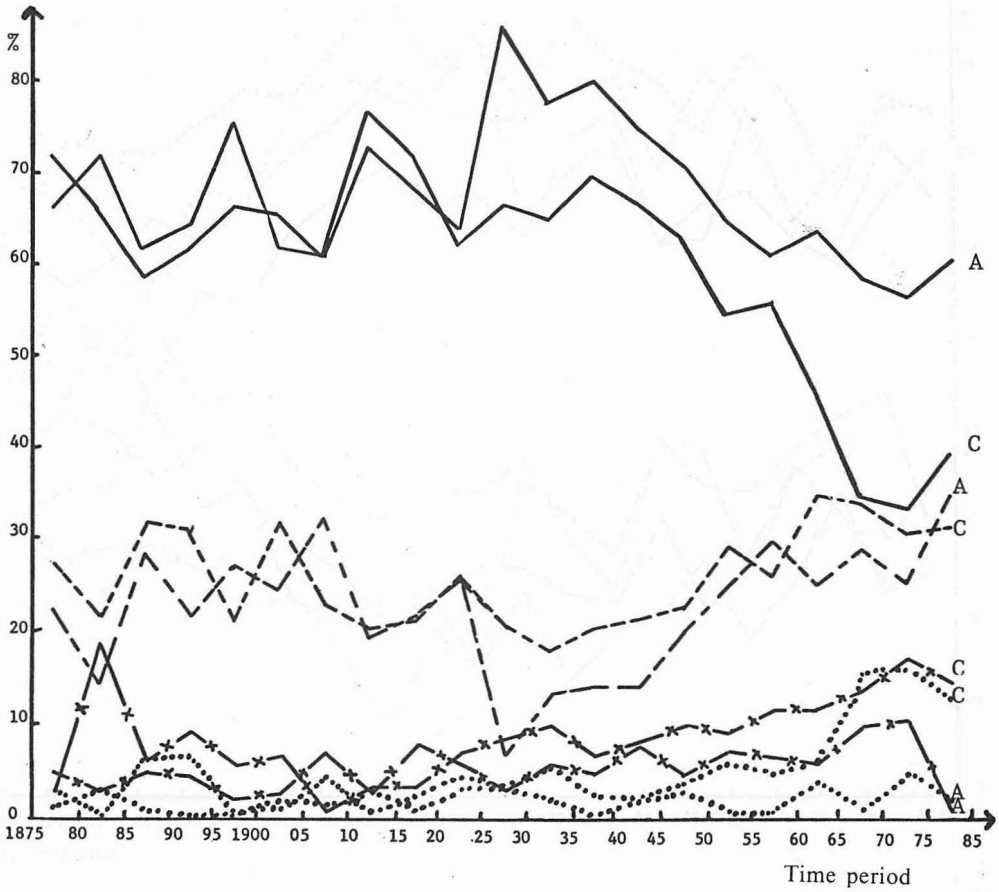


FIG. 2 — Endogamy and exogamy taking in account the birthplace.

- A — Endogamous marriages at Almalaguez.
- C — Endogamous marriages at Ceira.
- A — ♂ foreigner to Almalaguez.
- C — ♂ foreigner to Ceira.
- - - - - C — ♀ foreigner to Ceira.
- - - - - A — ♀ foreigner to Almalaguez.
- C — ♂ ♀ foreigners to Ceira.
- A — ♂ ♀ foreigners to Almalaguez.

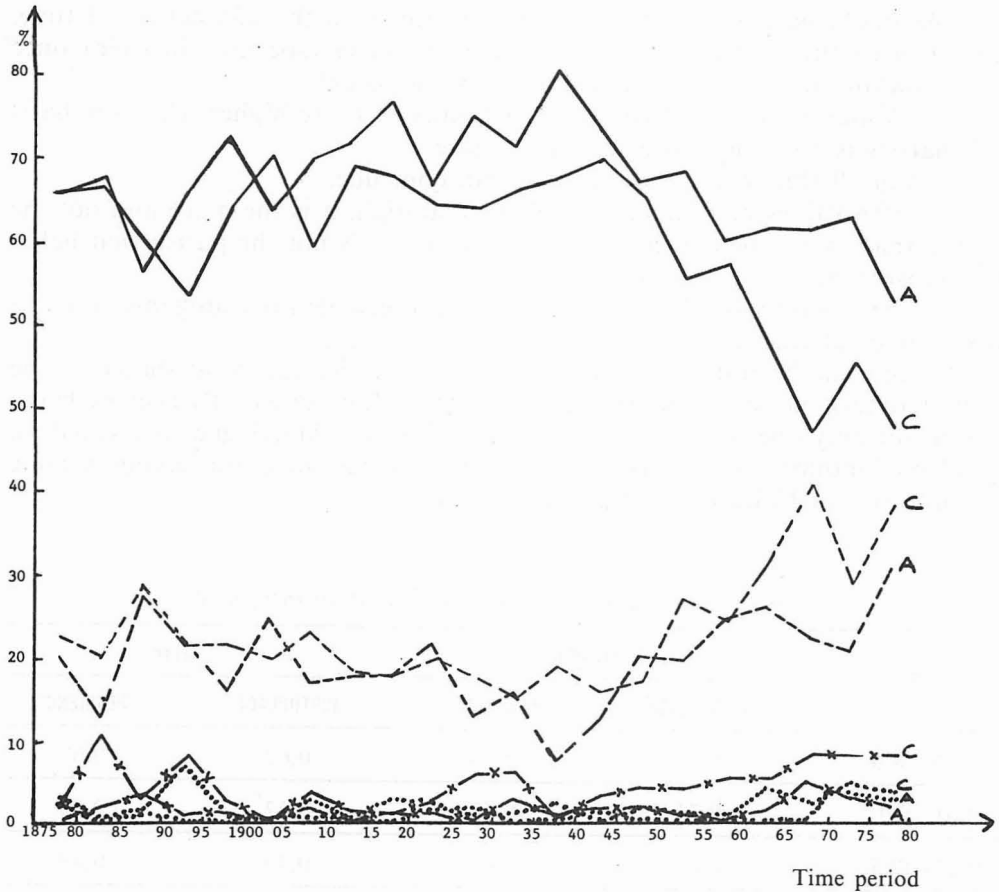


FIG. 3 — Endogamy and exogamy taking in account the residence.

- A — Endogamous marriages at Almalaguez.
- C — Endogamous marriages at Ceira.
- - - - - C — ♂ foreigner to Ceira.
- - - - - A — ♂ foreigner to Almalaguez.
- - - - - C — ♀ foreigner to Ceira.
- - - - - A — ♀ foreigner to Almalaguez.
- C — ♂♀ foreigner to Ceira.
- A — ♂♀ foreigner to Almalaguez.

As can be observed in the Table 4 there is a strong endogamy in each place of the two studied parishes; the majority of marriages are consumed in those places and there are few cases in which individuals marry with individuals from other places in the parish.

It can also be noticed that the higher values can be found in Almalaguez (where the lowest value are almost so high as the higher value in Ceira).

As could be expected these values are lower in the last period of time, that reveals the decreasing isolation of each places (specially in Ceira once the variation of λ is not as strong as in Almalaguez).

In Almalaguez we noticed that the values of λ are higher when the basis of analysis is residence instead of birthplace.

From all this results we think we can conclude:

— with values of endogamy coeficient so high, it is the place and not the parish that should be considered the unity, once it's not the parish that behaves as isolated.

— the isolation of places, main factor responsible for endogamy tends to disappear or at least is decreasing.

— this can be noticed in the parish of Ceira and can be attributed to the fact that this parish is located closer to an urban center, it's acesses being easier not only due to better roads but also because Almalaguez is located on a ridge of mountains. It's also probable that the fact of Ceira having become a dormitory of Coimbra is important.

TABLE 4. — *Values of the λ index of homogamy.*

TIME	ALMALAGUEZ		CEIRA	
	BIRTHPLACE	RESIDENCE	BIRTHPLACE	RESIDENCE
1876-1900	0,69	0,73	0,62	0,68
1901-1920	0,71	0,72	0,67	0,66
1914-1965	0,63	0,64	0,40	0,49

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