

# Culture and Biology: Surnames in Evaluating Genetic Relationships Among the Ethnic Minorities of Southern Italy and Sicily

A. Vienna<sup>1</sup> and G. Biondi<sup>2</sup>

<sup>1</sup> Department of Animal and Human Biology, University of Rome »La Sapienza«, Rome, Italy

<sup>2</sup> Department of Animal and Human Biology, University of Turin, Turin, Italy

## ABSTRACT

*Surnames of grandparents were collected from children in the primary schools of the Albanian-Italian, Croat-Italian, and Greek-Italian villages. The coefficients of relationships by isonymy show almost no relationship with ethnicity. Ethnolinguistic minorities of Southern Italy and Sicily are geographically subdivided in two main clusters: the first cluster comprises the Albanian, Croat, and Greek communities of the Adriatic area; and the second cluster comprises the Albanian communities of the Ionian, Thirrenian and Sicilian area. The Greeks of Reggio Calabria Province are completely separated from the other communities.*

## Introduction

In 1977 Lasker extended the logic of the random component of inbreeding coefficient ( $F_r$ ) through surnames to measure the relationships between two populations<sup>1</sup>. Lasker defined the coefficient of relationship by isonymy ( $R_i$ ) merely as a measure of the random component of inbreeding ( $R_i = 2F_r$ ), under the assumption of the monophyly of the surnames to populations. One would be hesitant of validity of this assumption, because the mo-

re diverse the populations the less likely is the common origin of the shared surnames. This is not the case with populations of long, common history, living in the same geographic area.

The Albanians began to settle in Italy during the second half of the 14th century in the territory of the Republic of Venice and that of Apulia. Afterwards, in the course of the first half of the 15th century contingencies of armies joined the territory of the Kingdom of Naples. These migrations were modest, but served as a ref-

---

Received for publication October 26, 1999.

erence to the exodus which brought numerous Albanian groups to Southern Italy and Sicily following the Turkish occupation of the Balcan area. The Albanian population that live in Italy has been subjected, since their arrival, to a strong pressure of integration that first imposed the abandoning of Greek religious ritual and after of many other cultural manifestations. Today only the use of the language survives in forty-five villages of eight Provinces (Campobasso Province in Molise Region, Foggia and Taranto Provinces in Apulia Region, Potenza Province in Basilicata Region, Cosenza and Catanzaro Provinces in Calabria Region, Catania and Palermo Provinces in Sicily Region) and represents the most important, and in many cases the only, element which is culturally characteristic to this community<sup>2</sup>.

The immigration of Croat groups to the Adriatic side of Central-Southern Italy began in the 15th century as a consequence of the Turkish invasion of the Balcan belt. This population founded many villages, but during the following centuries mixed with the Italians almost enterily. The memory of the Croat culture is only shown by few words in the dialects of some villages of the Central-Southern Adriatic coast. At the present time only in three villages of Campobasso Province (Molise Region) the population retains the use of Croat language. This community is the smallest ethnolinguistic minority in Italy<sup>2</sup>.

Greek immigration to Southern Italy and Sicily goes back to the beginning of the Greek expansion during the 5th century BC when great numbers of Greeks founded several towns and villages. The Italian area inhabited by this population was called *Magna Graecia*. During the Byzantine period (5th-8th centuries) a new migratory wave reached Greek towns of Italy, and their descendants mixed almost completely with the surrounding

indigenous population. At present only therteen villages in two Provinces (Lecce Province in Apulia Region and Reggio Calabria Province in Calabria Region) preserve the use of the Greek language<sup>2</sup>.

In this paper we present the results of the study of relationship by isonymy among the ethnolinguistic minorities of Southern Italy and Sicily. Our main purpose is to study if ethnic consciousness can be thought of as a pattern of biosocial interaction among groups or as a tool to isolate people, preventing mixed marriages.

### Materials and Methods

Surnames on Albanians, Croats and Greeks were obtained at the beginning of the 1990s from schoolchildren's aged from eleven to fifteen grandparents<sup>3-5</sup>. The historical period under investigation covered the second quarter of the XX century, and data were collected from eleven Provinces (Albanians: Campobasso Province, 4 villages and 1515 surnames; Cosenza Province, 20 and 4167; Catania Province, 1 and 446; Catanzaro Province, 6 and 1150; Foggia Province, 2 and 690; Palermo Province, 5 and 1576; Potenza Province, 5 and 1408; Taranto Province, 1 and 658. Croats: Campobasso Province, 3 and 603. Greeks: Lecce Province, 9 and 5540; Reggio Calabria Province, 4 and 1318). In the analysis of relationships the villages of each province were treated as a single population. The study of between-province relationships by isonymy ( $R_i$ ) was carried out by analysing the combinations of surnames between two provinces (for each province a list of the four surnames of schoolchildren's grandparents). The coefficient of relationship by isonymy was calculated as<sup>1</sup>:

$$R_i = \frac{S_{i1}S_{i2}}{2N_1N_2}$$

in which  $S_{i1}$  is the number of individuals of the  $i$ th surname in the list of surnames

**TABLE 1**  
MATRIX OF VALUES OF  $R$  DISTANCE  $10^7$  CALCULATED FOR ALL PAIRS OF PROVINCES

N	ALCB	ALCS	ALCT	ALCZ	ALFG	ALPA	ALPZ	ALTA	CRCB	GRLE	GRRC
1515	ALCB	–									
4167	ALCS	1352	–								
446	ALCT	895	1829	–							
1150	ALCZ	1463	2395	2671	–						
690	ALFG	2855	1443	503	825	–					
1576	ALPA	927	1223	3236	904	675	–				
1408	ALPZ	1357	1837	613	932	1250	1065	–			
658	ALTA	1449	1389	3032	3032	583	371	1079	–		
603	CRCB	2512	569	1821	937	913	489	388	2268	–	
5540	GRLE	1494	1534	2806	1827	1897	561	898	3599	1267	–
1318	GRRC	405	886	995	969	258	1023	439	270	679	407

Albanian-Italians: ALCB = Campobasso Province, ALCS = Cosenza Province, ALCT = Catania Province, ALCZ = Catanzaro Province, ALFG = Foggia Province, ALPA = Palermo Province, ALPZ = Potenza Province, ALTA = Taranto Province; Croat-Italians: CRCB = Campobasso Province; Greek-Italians: GRLE = Lecce Province, GRRC = Reggio Calabria Province. N means the list of surnames of the four schoolchildren’s grandparents.

of the first province,  $S_{i2}$  is the number of individuals of the same surname in the list of the second province, and  $N_1$  and  $N_2$  are  $S_{i1}$  and  $S_{i2}$  respectively (i.e. the total number of surnames in each list). The factor 2 makes the formula equivalent to genetic relationship. To provide a graphic representation of the 11  $11 R_i$  matrix obtained, a non-metric Multidimensional Scaling technique was applied<sup>6-7</sup>.

**Results**

The examined provinces can be geographically subdivided in the Adriatic area: Campobasso, Foggia, Taranto, and Lecce; in the Ionian area: Potenza; in the Tyrrhenian area: Cosenza, Catanzaro, and Reggio Calabria; and in the Sicilian area: Catania and Palermo. The Ionian area is intermediate between the Adriatic and Tyrrhenian coasts. As shown in Table 1 and Figure 1, the Albanian, Croat, and Greek communities of the Adriatic area

cluster together (ALCB, ALFG, ALTA, CRCB, and GRLE). A second cluster comprises the Albanian communities of the Ionian, Thirrenian, and Sicilian area (ALPZ, ALCS, ALCZ, ALCT, and ALPA); while the Greek community of Reggio Calabria Province (GRRC) is completely separated from the two main clusters. Probably, the genetic isolation of the Greeks of Reggio Calabria is due to the geographic location in the Apennines and the small demographic dimension of three out of the four villages which constitute the community<sup>4</sup>.

**Discussion**

Ethnic groups are not static entities, and pure ethnic groups, in the sense of cultural and/or genetic homogeneous groups of people, do not exist<sup>8</sup>. Ethnicity is a sociocultural construct which discernible features involving language, religion, patterns of social interaction, etc.<sup>9</sup>,

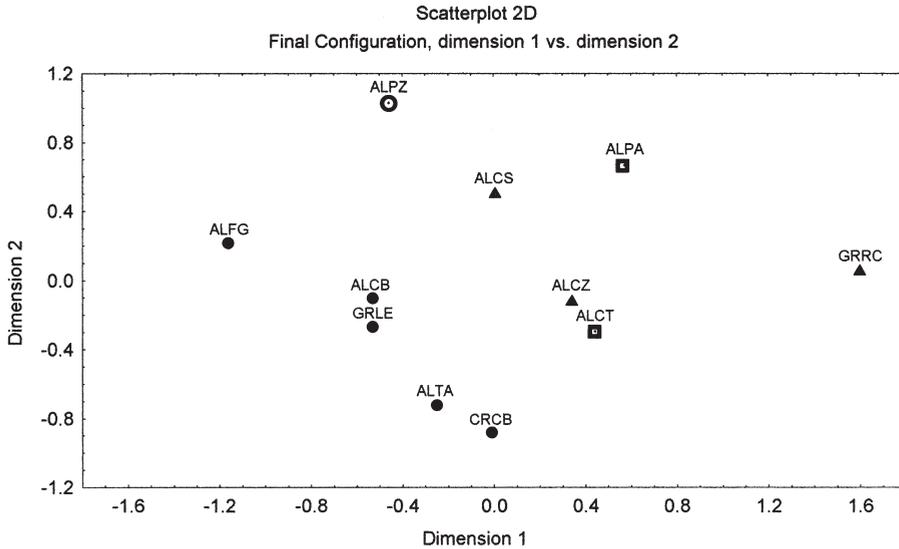


Fig. 1. Configuration of the first two dimensions. First cluster: ALFG (Albanians of Foggia Province), ALCB (Albanians of Campobasso Province), GRLE (Greeks of Lecce Province), ALTA (Albanians of Taranto Province), and CRCB (Croats of Campobasso Province); second cluster: ALPZ (Albanians of Potenza Province), ALCS (Albanians of Cosenza Province), ALPA (Albanians of Palermo Province), ALCZ (Albanians of Catanzaro Province), and ALCT (Albanians of Catania Province); GRRC (Greeks of Reggio Calabria Province) are completely separated. Dots mean the provinces of the Adriatic area, circle of the Ionian area, triangles of the Tyrrhenian area, and squares of the Sicilian area.

that may influence the genetic structure of populations. In the case of ethnolinguistic minorities living in Southern Italy and Sicily, it seems that their population structure is not affected by ethnicity, as might be expected. On the contrary, the clusterization of communities seems only due to their geographic localisation. The three ethnic minorities behave with respect to mate selection regardless of ethnicity. This behavior agrees with the idea that ethnic boundaries seem to define only the sociocultural meaning that different sub-groups of people assign to a limited set of features. These features include historical events (their migration

from the Balkan area), spoken language, religion, and social interactions. We can think of ethnic boundaries as patterns of biosocial interactions among groups of different ethnicity rather than as tools to isolate people. These ethnic groups do not seem to be biologically distinct entities, probably because ethnic consciousness does not prevent mixed marriages.

### Acknowledgements

Funding was provided by the Italian CNR (95.01715.CT10, 97.01319.CT10) and MURST (1997–1998/9705276637.005 and 60%: 1994, 1995, 1996, 1997, 1998).

## REFERENCES

1. LASKER, G. W., *Hum. Biol.*, 49 (1977) 489. —
2. SALVI, S.: *Le lingue tagliate*. (Rizzoli, Milano, 1975).
- 3. BIONDI, G.: Population structure of the Croatian-speaking Italian population using surname analysis. In: ARGANO, R., C. CIROTTA, E. GRASSI MILANO, E. MASTROLIA, (Eds.): *Contributions to animal biology*. (Halocynthia Association, Palermo, 1994).
- 4. BIONDI, G., E. PERROTTI, C. G. N. MASCIE-TAYLOR, G. W. LASKER, *Ann. Hum. Biol.*, 17 (1990) 543. — 5. BIONDI, G., G. W. LASKER, P. RASPE, C. G. N. MASCIE-TAYLOR, *J. Biosoc. Sci.*, 25 (1993) 63.
- 6. CRUSKAL, J. B., M. WISH.: *Multidimensional scaling*. (Sage, Beverly Hills, 1978).
- 7. YOUNG, F. W.: *Multidimensional scaling: History, theory, and applications*. (Lawrence Erlbaum Ass., London, 1987).
- 8. BOGIN, B.: *Biocultural studies of ethnic groups*. In: LASKER G. W., C. G. N. MASCIE-TAYLOR, (Eds.): *Research strategies in human biology*. (Cambridge University Press, Cambridge, 1993).
- 9. CREWS, D. E., J. R. BINDON, *Ethnicity and Disease*, 1 (1991) 42.

*G. Biondi*

*Via M. Dionigi 57, 00193, Roma, Italia*

## KULTURA I BIOLOGIJA: PREZIMENA U EVALUACIJI GENETIČKE POVEZANOSTI MEĐU ETNIČKIM MANJINAMA JUŽNE ITALIJE I SICILIJE

### SAŽETAK

Prezimana djedova sakupljana su među djecom osnovnih škola u albansko-talijanskim, hrvatsko-talijanskim i grčko-talijanskim selima. Koeficijent povezanosti kod izonimije ne pokazuje gotovo nikakvu povezanost s etnicitetom. Etnolingvističke manjine Južne Italije i Sicilije su geografski podijeljene u dva glavna ogranka: prvi ogranak obuhvaća albanske, hrvatske i grčke zajednice jadranskog područja; a drugi ogranak obuhvaća albanske zajednice jonskog, tirenskog i sicilijanskog područja. Grci provincije Kalabrija potpuno su odvojeni od ostalih zajednica.