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Surnames and gene flow in Shahrestan Nowshahr, Northern Iran

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Abstract

Demographic data were collected to estimate the degree of biological kinship within and between the subdivisions of Shahrestan Nowshahr, using Lasker's (1977) isonymy model. The results indicate some degree of surname localization within the dehestans and the contiguous regions. The applicability of the model to Iranian data was also assessed.

Résumé

Des données démographiques ont été récoltées dans le Shahrestan Nowshahr pour déceler le degré de parenté biologique, intra- et inter-subdivisions, en utilisant le modèle d'isonymie de Lasker (1977). Les résultats indiquent un certain degré de localisation des noms à l'intérieur des dehestans et dans les régions contiguës. Les auteurs s'interrogent sur l'application du modèle aux données iraniennes.

INTRODUCTION

Surnames became mandatory in Iran in 1925, when the Civil Registration Office was established. The CRO conducted a nationwide system of registration whereby each inhabitant was issued an Identity Card. In conjunction with this, the adoption of a surname was also required.

Before 1925 family names were limited to a minority. Some traced their origin in the Prophet's line, while others were ascribed by kings in accordance with their services. The Taifeh (a kinship group) referred to numerous tribes that originally inhabited the rural regions of the country. They comprised a network of relatives which originated as an assemblage of families linked by geographic proximity, or loyalty to a common chief (Behnam, 1970). Due to isolation these families eventually intermarried, and the kinship group was enlarged. The Hezerfamil referred to various hereditary families who numbered one thousand. When surnames were adopted, the choice of name was based on various factors. Some chose the name of their village, while others followed their trade, e.g. Khatat (scribe). The suffix "zadeh" (born to) was added to some forenames, e.g. Hosseinzadeh; others added the letter "y" to the name, implying belonging to, e.g. Rassouly. Since then, names have been regularly transmitted from the male parent to the child. Since birth registration is mandatory, a child takes the name of the father. Illegitimate children are usually not given a name unless required by either parent. The wife usually takes the name of her husband at marriage.

A large part of the Caspian littoral remained isolated for long periods of time due to its inaccessibility and lack of good communications. Many of the spatially separated localities were inhabited by small extended families, with marriages confined to the individual villages. However, many of these families intermarried with contiguous families and consequently formed a larger network of kinship. Behnam (1968) defines one type of rural family structure as the "extended patricentral family", where related families are supervised by the extended parental family, and inter-familial marriages are maintained.

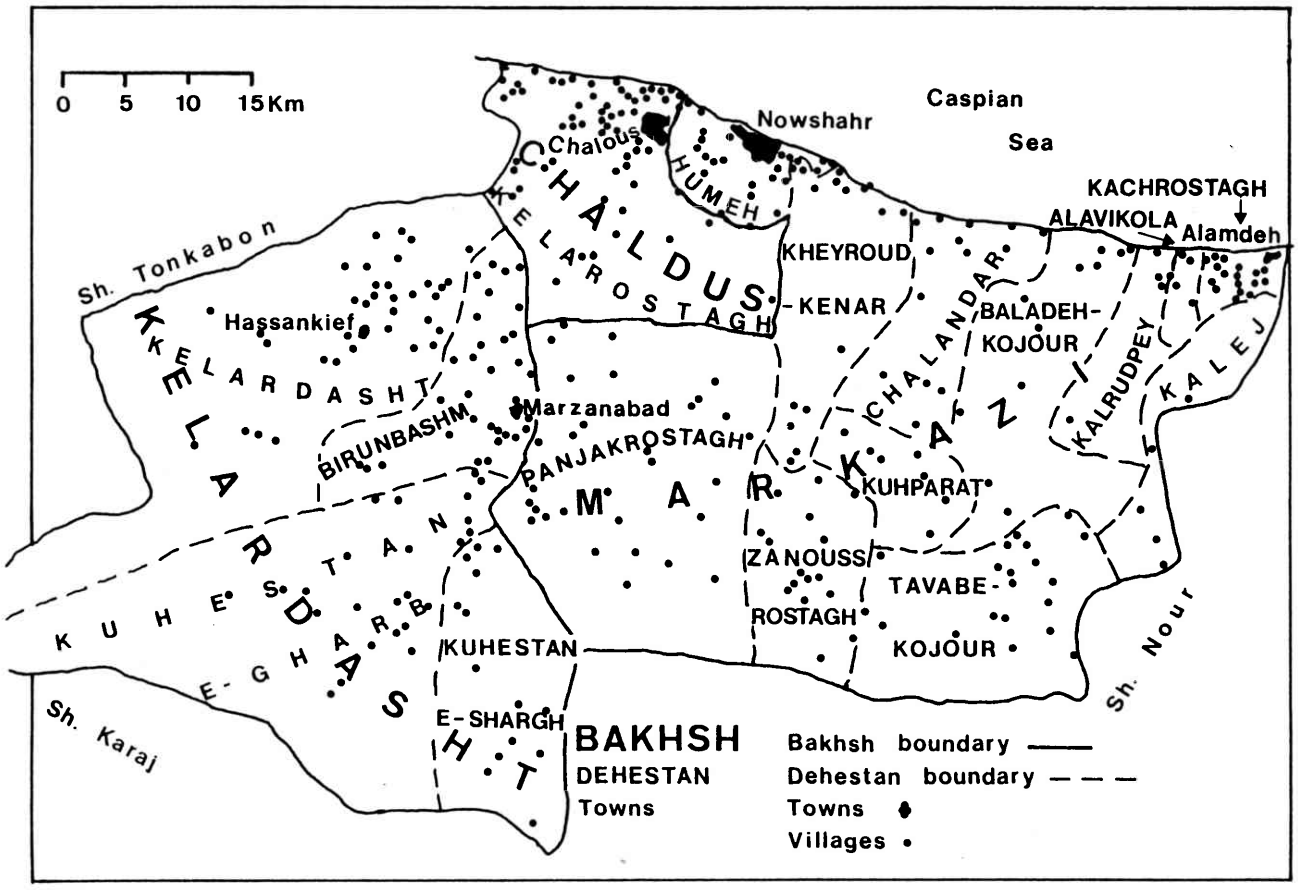
Ancestral names have persisted in these areas, but their frequency varies according to the size of the village, geographic location and the economic structure. In some instances double–surnames appear, indicating the union of two families. In the present study, the samples from each village are too small for analysis, therefore names have been analysed at the dehestan level, which necessarily reduces the significance of the extent of localization of names. Additionally, it would be very difficult to observe distinct clines in surname flow between the dehestans, because of the irregular distribution of the villages within each dehestan. In general, surnames are not very mobile due to the low mobility of the population itself.

One means of examining the degree of biological kinship within a population, or between its subdivisions, is to measure the occurrences of common surnames using Lasker's (1977) isonymy model. The method of measuring genetic lineage through isonymy is useful in studies where information on kinship based on pedigrees and genetic markers is not available. Surname transmission resembles genetic inher-

itance, and can be analysed to indicate the origin of genes, and to delineate breeding populations. Surnames can become extinct, like genes, depending on name frequency, family size, and sex ratio (Dobson and Roberts, 1971).

Communities with few surnames at high frequencies indicate greater localization of genes, and consequently high inbreeding coefficients. Estimates of rates of inbreeding can be obtained through marriages between persons of the same name. Crow and Mange (1965) elaborated this idea, and examined the random (attributed to population size and surname distribution), and non-random (special proclivity to marry one's own cousin) components of inbreeding. Lasker (1977) extended the method of isonymy from intracommunity inbreeding to inter-population relationship, to show how it was possible to examine the relative linkage of two or more populations by surname analysis. He introduced the concept of "Coefficient of Relationship" by isonymy, as the proportion of individuals with common surnames within or between populations.

Fig. 1 : Map of Iran and the administrative subdivisions of Shahrestan Nowshahr.



STUDY AREA

Shahrestan Nowshahr (fig. 1) is an administrative subdivision (3695 sq km) of the Province of Mazandaran, situated in the North of Iran, between the southern shores of the Caspian Sea and the Alborz Ranges. Administratively, Iran is divided into ostans, shahrestans, bakhshes, dehestans (conglomerates of villages) and dehs (villages). The deh is the smallest unit of habitation, as well as the economic unit of agriculture and consumption; it also constitutes a social unit composed mainly of related individuals. The great majority of the rural population of the Caspian Littoral resides in these units. These villages are semi-continuous on the coast, and nucleated in the highlands. The climate is subtropical in the lowlands, and is one major cause of the summer and winter migration of the population. The mountainous topography and the abundance of rivers have constituted major obstacles to movement and contact between the villages. The construction of roads and bridges, specifically the Chalous bridge have facilitated communication between the settlements. The inhabitants are mainly Mazandarani and Gilaki, in addition to the Khajevand and Lak Kurds who were resettled here around 200 years ago from north-west Iran. Many of the local populations are culturally homogeneous and retain strong kinship ties.

The comparative demographic analysis of the three existing census returns of Shahrestan Nowshahr (Mehrai, 1984) has revealed changes in the composition of the population, and the trend conforms to the demographic generalization of the Transition Period. Differences in family structure, migration patterns and population growth between the urban and rural areas, have been attributed to socio-economic changes, and urbanization in the last 40 years.

MATERIAL AND METHODS

Data presented for this study were collected through questionnaire forms, from a total of 1,047 households. The forms were distributed to schools throughout the region, to obtain a geographically random sample of the population. Schools in the Shahrestan are limited to large villages and urban centres, and consequently every village could not be directly sampled. The data extracted for this study were based upon the names and birthplaces of the respondents' parents.

The purpose of the present analysis is to study the data on the frequency and distribution of surnames, and by applying Lasker's method, determine how genetically isolated or panmictic the inhabitants of each dehestan is, whether a pattern of surname localization exists, and to examine any clines in surname flow between every pair of dehestans. It was also considered useful to assess the possibility of applying this technique to an Iranian population.

The coefficient of relationship by isonymy is mathematically expressed as

$$Ri = \sum(S_{i1}S_{i2})/2N_1N_2$$

where S_{i1} and S_{i2} are the respective frequencies of the ith surname in the males and females of the population (or in two populations), and N_1 and N_2 are the corresponding sample sizes. The model is based on two assumptions : unilineal descent of surname (polyphyletism or multiple ancestral origin of surnames can violate the assumption), and that the exchange of surnames is proportional to the flow of migrants, i.e. equal virilocal and uxorilocal migration.

The population under study has a system of patrilineally descending surnames; furthermore, it has been assumed that surnames are monophyletic. The assumption of uniform migration of the sexes has been considered with caution. In general, patrilocality appears to be more frequent, and more of the genetic exchange and intermarriage between the settlements are based on female migration. However, some factors need to be considered. Primarily, movement is extremely limited because of the geographic setting, the communication network, the agricultural pattern of subsistence, and also the proclivity to marry members of the same village. It is erroneous to generalize on the pattern of movement within each dehestan, since it is determined by the structure of the distribution of the villages, the kinship structure, and its rural or urban nature. Another factor is the local custom of "khaneh-damad" meaning house-groom; this is a situation when a man moves to a wife's residence at marriage. Touba (1972) states that matrilocal residence also occurs depending on the village and the economic state of the bride's family. A final essential point is the traditional summer and winter migration of the people, particularly the males who descend to the lowlands in the winter in search of work, and usually migrate back to the mountains in the summer. A proportion of these local migrants remain in the lowlands because of better living standards.

These reasons provide the base data for the analysis of isonymy. Estimation of the Ri coefficients are based upon 1293 patronyms and matronyms (652 males and 641 females), who have been born and reside in the nineteen subdivisions of Sharestan Nowshahr.

Cluster analysis and non-metric multidimensional scaling (Kruskal, 1964) are employed to demonstrate the hierarchical pattern of relatedness between

the dehestans in relation to commonality of surnames and the geographical properties of the environment. The analysis was performed by coding the data, and transforming them to the computer (Numac, Computer Unit, University of Durham).

RESULTS AND DISCUSSION

1. Surname occurrences

An analysis was carried out by compiling a list of the incidence and frequencies of surname in each of the subdivisions (some have very few samples) of Sharestan Nowshahr. It was possible to examine the preponderance of specific surnames particular to the dehestan. Table 1 presents a rank order of occurrences of surnames in each unit for both sexes. Generally, unique names (names that occur only once) are the most frequent in all the units. The Dehestans of Kalej, Kelardasht, Baladeh-Kojour, Zanouss-Rostagh and Birounbashm, show occurrences of particular surnames at high frequencies.

a) Bakhsh Markazi

In Dehestan Kalej, the most frequently occurring surnames are Divasalar (22.6 %), Salarian (20.4 %) and Salar (10.7 %). It is hypothesized that there is an inter-relationship between these names with possible similar ancestral origin. These surnames comprise 53.7 % of the inhabitants, demonstrating the extent of intermarriage and inbreeding in the Taifeh of Salar. The Taifeh of Kia, in addition to the related families of Kiakojouri, Kia-Lashaki, Kia-Mohammadi, Kia-Heyrati, Kia-Mansouri and Lashaki are the major inhabitants of Humeh, particularly in the village of Kordkroudsar; they are also distributed in Nowshahr City. In Kalrudpey and Kheyrud-kenar, the Darvish family reside, while in Kouhparat, the Mataji family are settled.

The Khazaii family constitutes the main inhabitants of Zanouss-Rostagh, comprising 23.3 % of the population. The name also appears in the contiguous dehestans of Baladeh-Kojour (23.8 %), Kheyroud-Kenar (13.8 %), and Nowshahr City and Kuhparat. The Khazaii family are one of the numerous families belonging to the Khajevand and Lak tribes who originate from the Zagros regions of Azarbaijan, Kurdistan and Luristan, but were resettled in Mazandaran. Within Sharestan Nowshahr, their domains have been in the mountainous valleys of Kojour and Kelardasht (Rabino, 1913). One of their main strongholds has been in the Yelagh (summer quarters) of Poul, presently the capital of Zanouss-Rostagh.

b) Bakhsh Kelardasht and Chalous

The Dehestan of Kelardasht, is another stronghold of the Khajevand and Lak tribes. It is partly inhabited by the Faghieh-Abdollahy family, comprising 6.9 % of the total surnames. Other related surnames are Faghieh-Maleky, Faghieh-Marzban and Faghieh-Nasseri, signifying the joining of the Faghieh family with other families. This dehestan is a large territory, and is inhabited mainly by Kurdish tribes.

The Delfan family, originally a subdivision of the Lak tribe, also reside in Kelardasht, in addition to related families of Delfan-Azari, Delfan-Hosseini, Delfani and Delfanian. The name Delfan also appears in Kuhestan-Gharb and Kelarostagh. Surnames derived directly from the Lak tribes are Lakelayeh, Lakpour, and Lakourej-Manssouri, which are distributed in Kelardasht, Kelarostagh, and Birounbashm. The surname Manssouri also appears quite frequently in Kelardasht, and Birounbashm. Other frequently occurring surnames are Radaii and Vissy which comprise 11.9 % and 6.6 % of the total surnames respectively. The family names of Sam, Sam-Daliri and Dalir are distributed in Kelarostagh, Birounbashm, Kouhestan-gharb and Chalous City.

From this analysis it becomes evident that certain names reflecting family and tribal lines are localized in particular dehestans and distributed around contiguous areas, thereby showing some degree of surname flow.

2. Surnames as genetic markers

The average coefficient of relationship (Ri) within each of the dehestans based on the surnames of the males and the females, and between the dehestans based on the pooled results, is presented in table 2. Some of the coefficients are inflated because of small sample sizes, the inclusion of members of close relatives living in the same household, and by duplication of surnames, if female married names are given instead of the maiden names. These factors do not show the actual isonymic relationships. In general, large sample sizes are needed to yield values of Ri which are not dominated by stochastic factors which invariably affect small populations.

The average Ri within each unit ranges from .00735 in Kelardasht to .06330 in Kalej. The mean local Ri is around .03290, but excluding Alavikola, Chalandar and Kuhestan-Shargh (which have inflated the coefficients), a lower mean of .02695 is obtained. The coefficient appears to be very much a function of the size of the dehestans which vary greatly, and also the number, size and density of villages in each dehestan, and the structure of their distribution. Another influential factor (which cannot at this level of analysis be examined) is the number of taifehs residing there.

Administrative Sub-divisions	Occurrences																								No*	S*	M*	F*
	1	2	3	4	5	6	7	8	9	10	11	12	13	15	16	18	19	20	21	24	25	27	28	41				
Dehestans																												
Kachrostagh	35	9	5	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	88	53	41	47
Kalej	21	3	...	1	...	...	...	...	...	1	...	1	...	...	...	...	2	...	1	...	...	...	...	...	93	29	47	46
Alavikola	6	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	8	7	6	2
Kalrudpey	16	2	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	29	20	18	11
Baladeh–Kojour	21	2	...	1	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42	26	20	22
Tavabe–Kojour	17	9	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	42	28	24	18
Kuhparat	19	3	3	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	58	29	32	26
Chalandar	9	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	10	5	6
Kheyroud–Kenar	22	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	26	23	12	14
Zanouss–Rostagh	32	4	4	1	2	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	86	44	46	40
Panjakrostagh	10	2	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	21	14	11	10
Nowshahr City	50	4	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	61	55	22	39
Humeh	40	2	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	21	17	12	9
Bakhsh Markazi	210	32	17	11	5	3	2	2	...	1	1	...	...	...	...	1	1	1	...	...	1	...	...	1	586	289	296	290
Dehestans																												
Kelarostagh	53	7	7	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	92	68	44	48
Chalous City	40	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	46	43	19	27
Bakhsh Chalous	87	12	5	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	138	107	63	75
Dehestans																												
Kelardasht	130	25	14	5	3	2	...	1	1	1	...	1	...	1	...	...	...	...	...	1	...	...	...	...	347	185	179	168
Kuhestan East	9	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	10	8	4
Kuhestan West	35	8	1	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	59	45	33	26
Birunbashm	53	15	2	2	13	...	...	...	...	1	1	...	...	...	...	1	...	...	...	...	...	...	...	...	151	78	73	78
Bakhsh Kelardasht	231	49	16	7	10	4	...	...	2	2	1	1	...	1	...	1	...	...	...	1	...	...	...	...	569	325	243	276
SHAHRESTAN NOWSHAHR	422	104	33	20	16	10	4	4	4	3	2	...	1	...	1	2	...	1	1	1	1	...	...	1	1293	631	652	641
TOTAL SAMPLES	796	175	43	18	17	15	13	3	5	5	4	1	4	...	2	1	...	2	...	1	...	1	1	1	2050	1108	1037	1013

* No = Number of Samples
S = Number of Surnames
M = Number of Males
F = Number of Females

Table 1 : Surnames ranked in frequency of occurrences.

	KAC	KAL	ALA	KPY	BAL	TAV	KUH	CHA	KHE	ZAN	PAN	N-C	HUM	KEL	C-C	KLD	K-S	K-G	BIR
KAC	.01420																		
KAL	.01175	.06330																	
ALA	.00140	.00000	.07815																
KPY	.00100	.00000	.00000	.03865															
BAL	.00110	.00050	.00000	.00125	.04365														
TAV	.00230	.00155	.00000	.00165	.00200	.02040													
KUH	.00125	.00010	.00000	.00000	.01640	.00000	.03120												
CHA	.00050	.00000	.00000	.00155	.01300	.00540	.00625	.05370											
KHE	.00195	.00085	.00000	.00065	.00550	.00230	.01095	.00175	.02810										
ZAN	.00080	.00055	.00000	.00100	.03045	.00110	.01605	.01110	.00535	.03665									
PAN	.00435	.00305	.00000	.00000	.00455	.01190	.00000	.00000	.00275	.00250	.04875								
N-C	.00065	.00045	.00000	.00200	.00235	.00100	.00170	.00075	.00095	.00360	.00165	.01010							
HUM	.00160	.00000	.00000	.00165	.00115	.00000	.00125	.00000	.00275	.00000	.00000	.00040	.03515						
KEL	.00006	.00000	.00000	.00020	.00000	.00015	.00045	.00000	.00000	.00025	.00000	.00020	.00000	.00945					
C-C	.00110	.00045	.00000	.00000	.00025	.00080	.00035	.00100	.00040	.00040	.00165	.00020	.00050	.00085	.01275				
KLD	.00040	.00010	.00070	.00015	.00025	.00035	.00020	.00000	.00110	.00025	.00070	.00005	.00000	.00075	.00025	.00735			
K-S	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.00000	.06250		
K-G	.00040	.00010	.00000	.00000	.00020	.00000	.00030	.00000	.00000	.00060	.00040	.00055	.00080	.00035	.00055	.00010	.00070	.01450	
BIR	.00025	.00005	.00085	.00010	.00025	.00030	.00005	.00030	.00040	.00045	.00015	.00015	.00030	.00045	.00080	.00035	.00110	.00040	.01700

Table 2. Coefficient of relationship based on common surnames in the subdivisions.

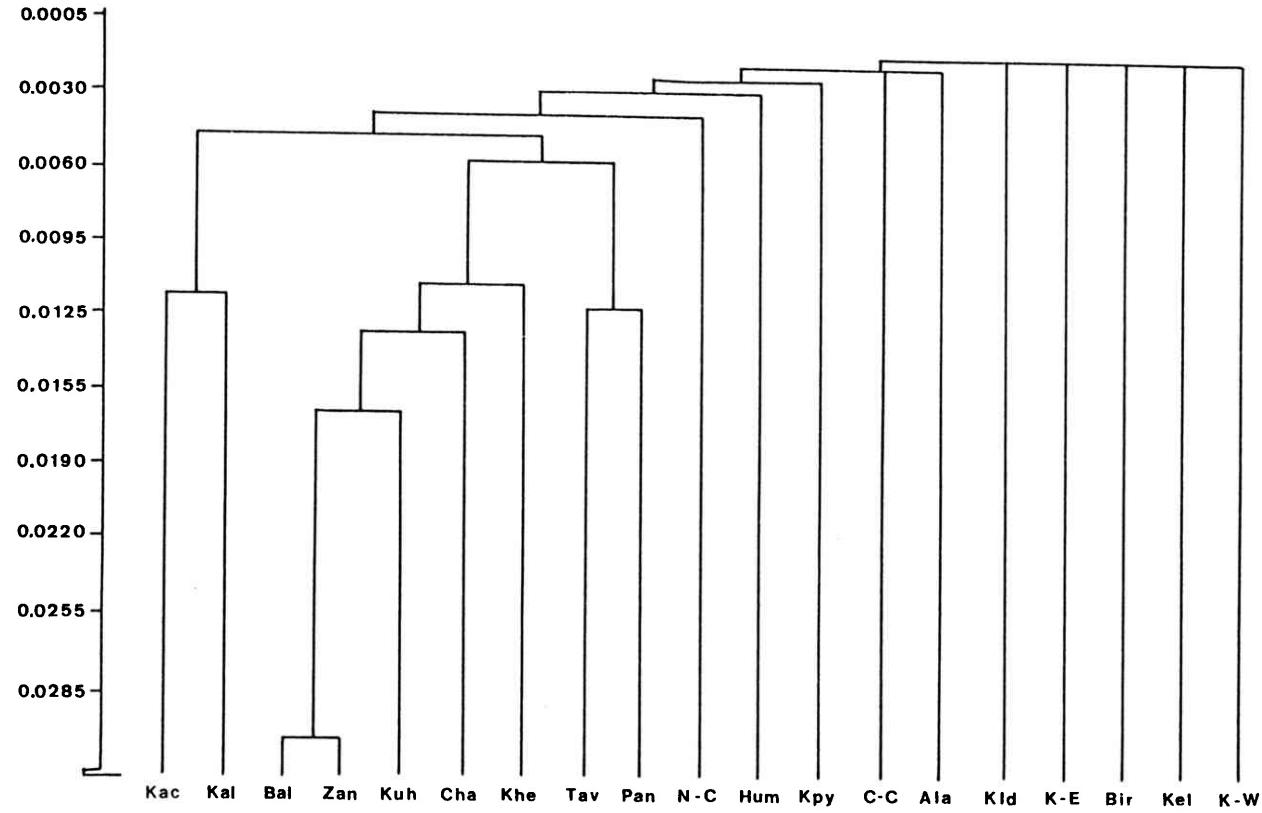


Fig. 2 : Clustering of subdivisions based on isonymy.

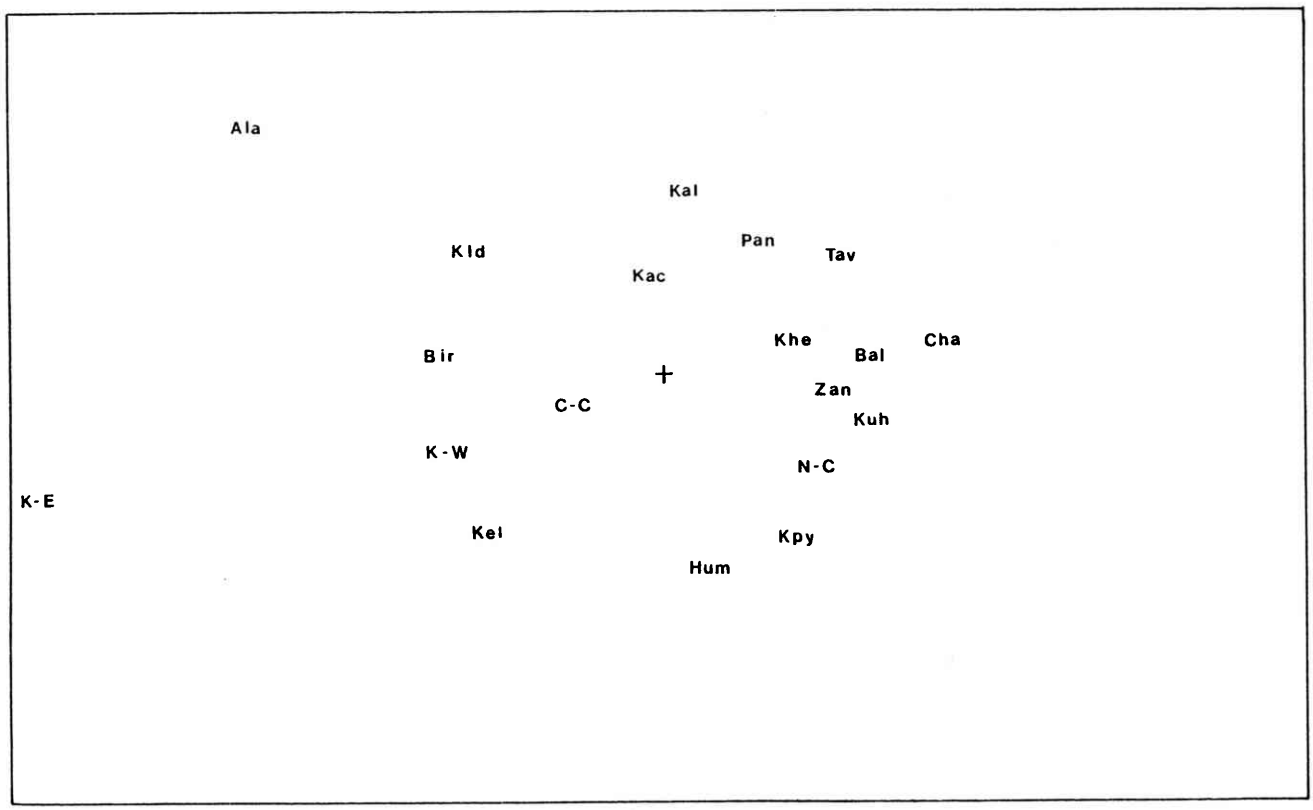


Fig. 3 : Spatial positioning of the subdivisions based on isonymy.

The dehestans of Kalej, Baladeh-Kojour, Zanouss-Rostagh and Birounbashm show relatively large coefficients. The high values represent the homogeneous composition in terms of common surnames, and the accumulation of relationship through relatively high levels of kin-endogamy. The two cities of Nowshahr and Chalous exhibit lower values, reflecting the heterogeneous composition of the inhabitants and surnames. The dehestan of Kelardasht shows the lowest coefficient, and this is attributed to its large size and the existence of different tribal groups there.

The *Ri* coefficients within each subdivision are larger than those between them, indicating some degree of localization of surnames and genes. The mean coefficient of relationship between the dehestans yields a value of .00150, ranging from 0 to .03045. The standard deviation is .007, indicating the high variability of the coefficients.

The largest between *Ri* coefficients occur in the contiguous dehestans of Bakhsh Markazi, in which they form small and large clusters in terms of common surnames. The dehestans of Baladeh-Kojour, Zanouss-Rostagh, Kuhparat, Kheyroud-Kenar and Chalandar form one cluster. The *Ri* values between them range from .01095 to .03045. Two small separate clusters also appear : the dehestans of Tavabe-Kojour and Panjakrostagh and, secondly, those of Kachrostagh and Kalej; both link to the main cluster. Other dehestans show far smaller *Ri* values, but the remaining dehestans in Bakhsh Markazi are the first to unite with the main cluster, followed by those in the Bakhsh of Chalous and Kelardasht (fig. 2). Figure 3 distinctly shows the positioning of the dehestans by commonality of surnames; it very closely resembles the geographic positioning. More importantly, it demonstrates the manner in which the two main clusters emerge separated by the Chalous River, which has historically been a dividing line within the Sharestan.

The coefficients between the subdivisions vary according to the nature of the regions. There is some geographic element inherent in the distribution and flow of the surnames. In accordance with Malecot's (1967) theory that kinship between populations declines as distance increases, a larger *Ri* is expected between contiguous areas. A small but negative correlation appeared between *Ri* and geographic distance ($r = -.211$) indicating that the heterogenous distribution of the settlements, local topography, and the kinship network are also influential in restricting movement. It is evident that the non-random flow of surnames caused by the topography and the cultural restraints would result in partially homogenous demes. Lasker (1977) claims that a low correlation is an indication of the Island Model of gene distribution, where each population division demonstrates a high degree of isolation, and a low coefficient of relationship with other communities. It appears that it would be more instructive to ignore administrative boundaries, and to consider actual distances for *Ri* estimates.

CONCLUSION

The analysis of the frequency of common surnames and the extent of biological kinship within and between the dehestans of Shahrestan Nowshahr, has provided information on the pattern of migration and the direction of gene flow, and has indicated that some degree of surname localization exists. Although informative patterns emerge from the analysis, i.e. a geographic pattern is seen as in the correlation (although low) of *Ri* with distance, and in the hierarchical structure, there are limitations to the inferences to be drawn from the results. The observed coefficients should be considered as relative and not absolute indices of isonymic relationships. Because of the short time since the origin of surnames in this region, the random element of inbreeding relating to the accumulated historic aspect cannot be directly inferred, and therefore conclusions have been very limited.

There is a positive correlation between the pattern of migration based on parental mobility (which is a better index of population structure), and that based on surname analysis. Both models have substantiated the observed structure and pattern of migration, demonstrating the primary subdivision of the Shahrestan (historically maintained by the Chalous River), and the continuing closer genetic relationship maintained within each division.

Shahrestan Nowshahr is characterized by generally low mobility of the population because of its land-based economy, and a tendency to virilocality, and a propensity to patrilateral marriages. These factors will tend to augment the isonymy indices. In employing the method of Lasker, we intended to examine its applicability to Iranian data, but the main emphasis has been on extrapolating on the mating structure and the biological kinship within the subdivisions of the area. The results from the surname data and the migration data correspond very well, and a consistent pattern emerges. We hope that further research which is in process will clarify some of the deficiencies inherent in the results.

References

BEHNAM, J., 1968. Notes towards a typology of transitional family forms in Iran. *In* : Amani M. (ed.) : *Some demographic aspects of the population of Iran.* Institute for social Studies and Research, University of Tehran, Tehran.

BEHNAM, J., 1970. Nuclear families and kinship groups in Iran. *Diogenes*, **76** : 115–131.

CROW, J.F. and MANGE, A.P., 1965. Measurements of inbreeding from the frequency of marriages between persons of the same surname. *Eugenics Quarterly*, **12** : 199–203.

DOBSON, T. and ROBERTS, D.F., 1971. Historical population movement and gene flow in Northumberland parishes. *Journal of biosocial Science*, **3** : 193–208.

KRUSKAL, J.B., 1964. Multidimensional scaling by optimizing goodness of fit to a non-metric hypothesis. *Psychometrika*, **29** : 1–27.

LASKER, G.W., 1977. A coefficient of relationship by isonymy : a method for estimating the genetic relationship between populations. *Human Biology*, **49** : 489–493.

MALECOT, G., 1967. Identical loci and relationship. *In* : Lecam L. and J. Neyman, eds. : *Proceedings of the fifth Berkeley Symposium on mathematical statistics and probability*, **4** : 317–332.

MEHRAI, H., 1984. *A demographic study of some populations in Shahrestan Newshahr, Mazandaran, North Iran, with reference to the genetic structure*. Unpublished Doctoral Thesis, Dept. of Anthropology, University of Durham.

RABINO, H.L., 1913. A journey in Mazandaran (from Rasht to Sari). *Journal of the Royal geographic Society*, **42** : 435–454.

TOUBA, J.R., 1972. *Marriage and the family in Iran*. Institute for social Studies and Research, University of Tehran, Tehran.

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