E C O N O M I C S B U L L E T I N

What Does the Atlas Narodov Mira Measure?

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Abstract

The Atlas Narodov Mira has been used extensively to investigate the effects of ethnic divisions, but little is known about how it defines ethnicity. Most theories of ethnicity emphasize the tendency of group members to marry within the group (endogamy). This note surveys studies of ethnic intermarriage to evaluate whether the groups in the Atlas: (1) are endogamous and (2) have no endogamous subgroups. I find that the groups are generally endogamous but there are a number of cases of groups with endogamous subgroups. Therefore, the data tend to underestimate ethnic divisions.

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1. Introduction

A large number of studies have used the data in the *Atlas Narodov Mira* (1964) to examine the effects of ethnicity. (A notable example is Easterly and Levine (1997).) The *Atlas*'s data are useful since they are comprehensive and mitigate the endogeneity problems that using more recent data suffer from.

However, the *Atlas* only provides a list of population by ethnicity with no documentation of its methodology. Many have questioned the validity of the data (Fearon 2003, Alesina, et al. 2003, Posner 2004). For example, the data list Rwanda as being ethnically homogeneous.

This note investigates whether the data in the *Atlas* correspond to a commonly used indicator of ethnic difference: the likelihood of marrying within the group (endogamy). An ethnic group is a set of people (1) that are endogamous and (2) for which no endogamous subgroup exists. I survey the empirical literature on intermarriage to determine whether the ethnic groups in the *Atlas* satisfy these criteria. Violations of the first criteria are minor, while violations of the second are often significant. Therefore, the data tend to underestimate the degree of ethnic divisions.

2. Ethnicity and Intermarriage

I use the degree of intermarriage as an indicator of ethnic difference. Social scientists often use it as a measure of assimilation (e.g. Price and Zubrzycki (1962) and McCaa (1989)). It also matches popular understanding of ethnicity. In the United States in the early 20th Century, recent European immigrant groups were endogamous and considered ethnically distinct (Angrist 2002). Americans of European background are now largely indistinguishable in their marriage patterns and are no longer distinct (Lieberson and Waters 1988).

Most work using the data has examined interethnic conflict, where ethnicity is a vehicle for collective action that may harm or exclude outsiders. Children of ethnic group members are generally presumed to be members (Fearon 2006). If two groups have a high degree of intermarriage, it will difficult to maintain distinction between them since so many people will be able to claim membership to both groups. Groups with a hereditary basis are more effective coalitions since it is easier to prevent free riding (Caselli and Coleman 2006).

3. Evaluating the Data

If ethnic cleavages were not important in marriage choices, the amount of intermarriage in diverse countries should be higher than in more homogenous ones since there is more

Table I: Exogamy

Country (Year)	Obs. Exogamy	Exp. Exogamy	IR
Australia (1975)	10.9	34.9	68.8
Australia (1986)	12.1	36.2	66.6
Canada (1971)	45	86.0	47.7
Finland (1990)	6.7	10.0	33.0
France (1968)	4.8	13.1	63.4
Kenya (1989)	7.0	88.5	92.1
Mauritius (1995)	6.6	46.3	85.7
Netherlands (1999)	13.0	31.7	59.0
N. Ireland (1971)	1.2	47.0	97.4
Singapore (1962-8)	5.25	42.0	87.5
Singapore (1980-4)	5.9	41.6	85.8
Sweden (1993)	14.0	21.1	33.6
Togo (1988)	23.5	67.4	65.1
Turkey (1993-8)	2.4	23.9	90.0
United Kingdom (1983)	0.8	8.5	90.6
United States (2000)	5.5	40.0	86.3
W. Germany (1961)	4.5	2.4	-87.5
W. Germany (1980)	9.8	13.8	29.0
Yugoslavia (1962)	12.7	74.1	82.9
Yugoslavia (1989)	13.0	80.2	83.8

opportunity for such marriages. So the actual level of exogamy (intermarriage) must be compared with a reference level to determine if groups are endogamous. I use the expected amount of exogamy if matching were completely random, assuming that the number of (non-polygamous) marriageable men and women in a group is proportional to total population. I calculate the probability that a random woman and random man are members of the same ethnic group, taking the overall population shares as the distribution of ethnic groups. Formally, if n_i is the population share of group i, then expected exogamy (EE) is given by: $1 - \sum_i n_i^2$. (This indicator has also been called Ethnolinguistic Fractionalization (ELF)). To facilitate comparisons across countries, I also calculate an aggregate version of Benini's Index of Repulsion (IR): $IR = \frac{EE-OE}{EE} * 100$, where OE is Observed Exogamy. Higher values of IR indicates a higher degree of endogamy, with 100 meaning perfect endogamy, 0 random matching and -100 perfect exogamy.

This measure has the advantage of giving an aggregate statistic to summarize

the degree of endogamy without requiring detailed data on the matrix of exogamous marriages. It does not provide information about whether individual groups are endogamous or not. A number of methods, many requiring significant microdata, have been developed to analyze individual ethnic cleavages. (See Kalmijn (1998) for a survey). However, a high reading provides evidence that ethnic cleavages are present while a low reading is evidence that some of the identified categories are not significant boundaries.

Table I reports the actual and expected levels of exogamy. (Sources are given in the appendix). Generally, the level of exogamy is much lower than would be expected if marriages were random, suggesting that ethnicity is an important factor in the choice of marriage partners.

The area where the *Atlas* tends to identify groups that are not endogamous as separate is among immigrants. Finland, Sweden, West Germany and Canada show a high degree of immigrant assimilation (each have an IR below 50). In Canada, migrants from the British Isles and Scandinavia have very similar marriage patterns to native born Anglophone Canadians (Richard 1991). In Finland and Sweden, most immigrants are from culturally similar Scandinavian countries. West Germany even shows strong exogamy in 1961, a result of very unbalanced sex ratios in the small guestworker minority (Kane 1989).

The evidence suggests that the *Atlas*'s groups, aside from some small immigrant groups, are endogamous. However, there are a number of endogamous subgroups within the groups. There is strong religious endogamy within the *Atlas*'s categories in Lebanon (Klat and Khudr 1986) and Ireland (O'Leary 2001) and racial endogamy in Brazil (Schwarcz 2003). Among the different religious groups in the Lebanese "Arab" category (Sunni and Shiite Muslim, Druze, and Christian), the IR is a very high 81.6. Similar results obtain for Irish Catholics and Protestants (an IR of 72.8) and Brazilians of different races (an IR of 61.0).

Ideally, we would like to "fix" all the observations to examine the quantitative impact of incorrectly identified groups, but data limitations prevent that exercise. I adjust as many observations as possible.

The most commonly used measure of ethnic divisions is ELF. Table II reports different ELF measures. The first column reports ELF using the original data. The second adjusts the *Atlas* data using information from the auxiliary data. Specifically, for countries where data is incorrectly grouped together ("groupers"), categories are split in the same proportions as in the auxiliary data. For countries that incorrectly split groups apart ("separators"), groups in the Atlas's data are combined. The third column reports ELF only using the auxiliary data since they often omit some small categories.

Table II: ELF Using Adjusted Data

Country	Atlas	Adjusted Atlas	Auxiliary
Groupers			
Brazil	7	57	54
Ireland	4	11	7
Lebanon	13	65	66
Separators			
Canada	75	70	65
Finland	16	1	0
Sweden	8	0	0
W. Germany	3	0	0

The tendency of the *Atlas* data is to underestimate the level of ethnic divisions. The separators tend to separate out assimilating immigrant groups that are small so the effect ELF is also small. On the other hand, large groups are grouped together, which has a significant effect. Empirical research that utilizes the *Atlas's* data will likely underestimate the effect of ethnic divisions.

Appendix: Intermarriage Data

This appendix reports the the sources of the intermarriage data used in Table I.

Australia McCaa (1989).

Canada Richard (1991).

Finland O'Leary and Finnas (2002).

France Barbara (1989), Tribalat (1992).

Kenya Ezeh (1997).

Mauritius Nave (2000).

Netherlands Harmsen (1999).

Northern Ireland Lee (1994).

Singapore Hassan and Benjamin (1973).

Sweden Cretser (1999).

Togo Gage-Brandon and Meekers (1995).

Turkey Gunduz-Hosgor and Smits (2002).

United Kingdom Cretser (1990).

United States U.S. Bureau of the Census.

West Germany Kane (1989).

Yugoslavia Botev (1994).

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