

# Patterns in the Standard Cross-Cultural Sample: supplementary notes to Pacifying Monogamy

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## **1 Introduction**

These notes discuss some empirical patterns referred to in Lagerlöf (2010). These are summarized by Figure 1 of these notes, and based on data from the Standard Cross-Cultural Sample (SCCS). This data set consists of 186 human societies at different stages of preindustrial development, and is being increasingly applied by economists interested in preindustrial development (see e.g. Baker and Miceli 2005, Fenske 2010). Section 2 below describes the patterns that we want to point out, and Section 3 discusses the details of the data.

## **2 The pattern**

In Panel A of Figure 1 we note that “prescribed” monogamy is more common in societies at later stages of development, as proxied by the society’s total population. (The numbers I-VIII denote categories for population levels, in increasing order; see the caption text.)

The pattern in Panel A holds if we instead of total population use “political organization” (a variable categorizing a society into band, tribe, chiefdom, or state), or population density. For that reason, it seems reasonable to interpret population size as a broad measure of preindustrial development. In the SCCS data total population, population density, and political organization are all positively correlated with one another, and also with the reliance on agriculture (variable 3 in the SCCS data), suggesting that these different characteristics have all evolved with agricultural development.

Panel B of Figure 1 shows the mean value of a harem-size index, that we have constructed from data compiled by Betzig (1986), across the same population categories. As seen, this shows an inversely U-shaped pattern, rather than a monotonic decline. Societies at early stages of development, although not imposing monogamy by rule, were by this measure not very polygynous either.

### 3 Data

The Standard Cross-Cultural Sample (SCCS) contains information about various characteristics of 186 societies, as documented in the ethnographic literature. This data set is described, and downloadable in SPSS or R format, by following this link:<sup>1</sup>

<http://eclectic.ss.uci.edu/~drwhite/worldcul/sccs.html>

As described on that Web site, these societies are selected to represent 186 different “cultural provinces” of the world and are “chosen at a time when cultural independence is maximal: hence it is primarily a sample of PREINDUSTRIAL (sic.) societies.”

The variables used here are the following:

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<sup>1</sup>I am very grateful to Matthew Baker for supplying me with this data set in Stata format.

**Population size.** This is given by an eight-grade scale, as defined by variable 1122 in SCCS, and explained in the caption text to Figure 1. Only two societies belong to category I, with less than 100 people (the Eyak in Alaska and the Trumai in Brazil); both these have data over harem size and monogamy. Only two societies fall into category VIII, with more than 100 million people, namely China and Uttar Pradesh, of which the former had prescribed monogamy (as of 1936), and Uttar Pradesh did not; of these two societies data over harem size is available only for China. All other categories (II-VII) contain at least five societies with data for both harem size and monogamy.

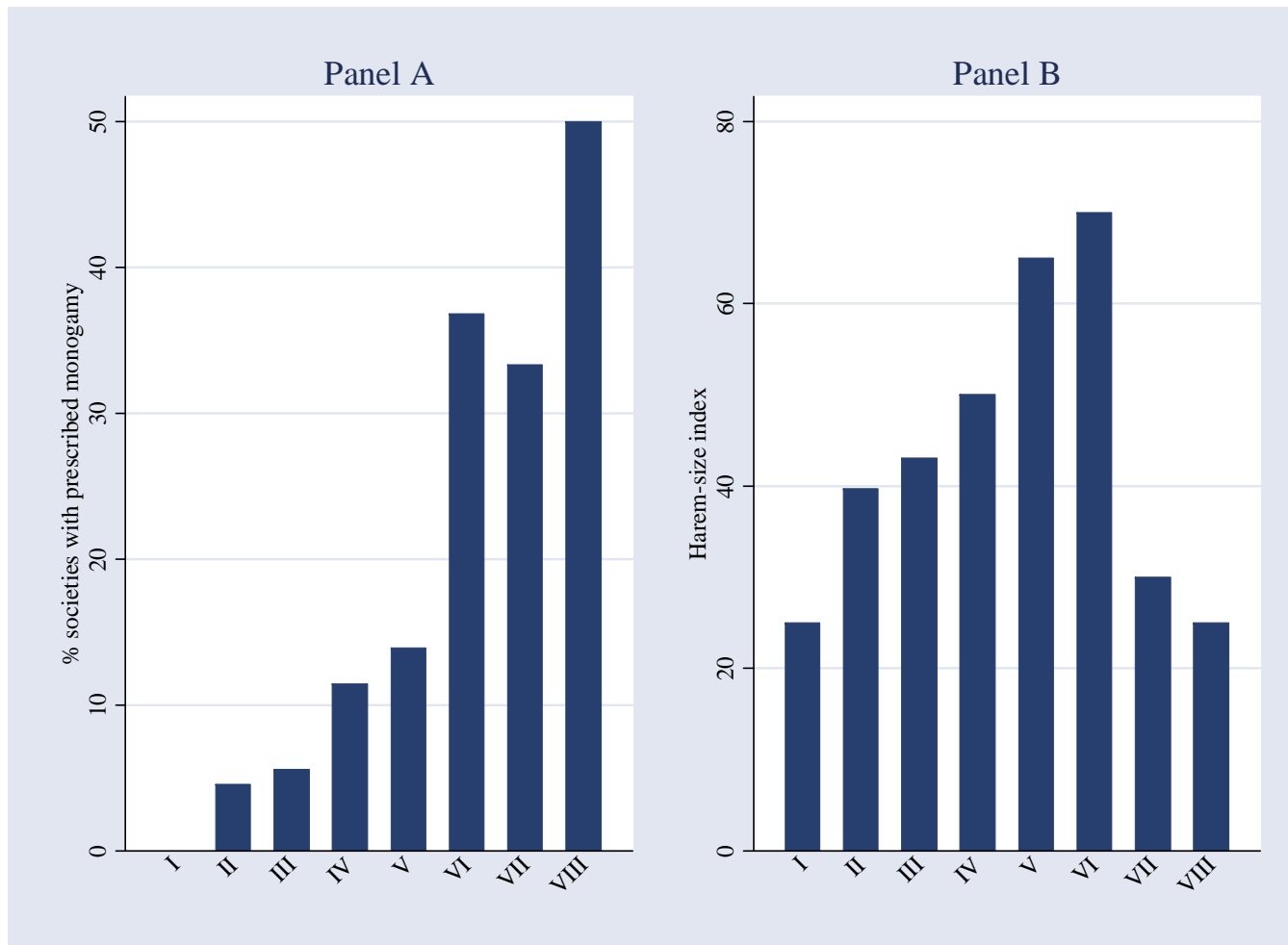
We here interpret population size as a broad measure of preindustrial development. Notably, population is strongly positively correlated with dependence on agriculture (variable 3 in SCCS), with a correlation coefficient of 0.49; it is also strongly negatively correlated with both dependence on hunting (variable 9), with a correlation coefficient of  $-0.54$ , and dependence on gathering (variable 11), with a correlation coefficient of  $-0.46$ .

**The percent societies with prescribed monogamy.** This is computed from variable 860 in SCCS (“Cultural Basis of Polygyny”). Here we count only societies with “prescribed” monogamy as being monogamous, but the patterns are very similar if using a broader measure that include also societies with “preferred” monogamy, meaning that polygyny is exceptional.

**The harem-size index.** This is based on variable 1133, used by Betzig (1986) and described by her (p. 136) as “a measure of maximum harem size in a society, the number of simultaneous conjugal relationships with concubines and wives which the individual at the head of the social hierarchy (or, where there is no hierarchy, the most polygynous man) enjoys.” Variable 1133 takes the numbers 1 to 4, with the following interpretations (Betzig 1986, p. 136). 1: “3 conjugal bonds or less”; 2: “4-10 conjugal relationships”; 3: “11-100 conjugal relationships”; 4 “More than 100 conjugal relationships.” We transformed Betzig’s variable into an index taking the value 100 when the original variable equals 4.

## References

- [1] Baker, M., and T. Miceli, 2005, Land inheritance rules: theory and cross-cultural analysis, *Journal of Economic Behavior & Organization* 56, 77-102
- [2] Betzig, L.L., 1986, *Despotism and Differential Reproduction: A Darwinian View of History*, Aldine Publishing Company, New York
- [3] Fenske, J., 2010, Does land abundance explain African institutions?, mimeo, Yale University
- [4] Lagerlöf, N.-P., 2010, Pacifying monogamy, mimeo, York University



**Figure 1.** Population and different measures of polygyny in the Standard Cross-Cultural Sample. Population levels are categorized as follows (number of societies in parentheses). **I**: less than 100 people (2); **II**: 100-1,000 people (17); **III**: 1,000-10,000 people (36); **IV**: 10,000-100,000 people (17); **V**: 100,000-1,000,000 people (15); **VI**: 1,000,000-10,000,000 people (5); **VII**: 10,000,000-100,000,000 people (5); **VIII**: more than 100,000,000 people (1). See Section C in the appendix for more details about the data.