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NUPTIALITY ESTIMATES AND CONSENSUAL UNIONS: THE BRAZILIAN CASE

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Résumé — L'analyse des tendances récentes en nuptialité au Brésil indique une tendance montante légère dans l'âge moyen au mariage et une tendance à la baisse en célibat. Dans cette étude, l'attention est portée sur l'impact des prétendues unions 'consensuelles' sur l'analyse des tendances en nuptialité. Les données brésiliennes suggèrent que tandis que l'âge moyen individuel au mariage semble être relativement robuste par rapport à l'incidence variable d'erreurs de mesure dans l'état matrimonial, à cause de la présence des unions consensuelles, les estimations du célibat sont subtantiellement affectées par ces erreurs.

Abstract — The analysis of recent nuptiality trends in Brazil indicates a slight upward movement in the mean age at marriage and a downward trend in celibacy. In this paper attention is called to the impact of the so-called *consensual* unions on the analysis of nuptiality patterns. The Brazilian data suggest that while the singulate mean age at marriage seems to be relatively robust in relation to the varying incidence of measurement errors in marital status due to the presence of consensual unions, the estimates of celibacy are substantially affected by these errors.

Key Words — **Singulate mean age, Brazil, nuptiality**

Although the study of nuptiality is increasingly recognized as a major area for demographic research, very little has been done on this topic for the Latin American countries. In general, it has been pointed out that the high incidence of so-called *consensual unions* in that region presents special difficulties for the analysis of marriage patterns. Possibly for this reason, a thorough and attentive analysis of nuptiality trends and differentials among Latin American countries remains to be done.

The purpose of the present paper is to attempt to clarify trends in nuptiality during the post-war period for one Latin American country, namely, Brazil. A secondary target is to call attention to the problem of varying incidence of consensual unions, and its impact on the analysis of nuptiality patterns. A final purpose of this paper is to attempt a preliminary analysis of some factors possibly associated with geographic differentials in nuptiality in Brazil, or more specifically, to try to explain variations in timing and quantity of nuptiality. The framework proposed by Hajnal (1953) and developed by Dixon (1971) is used for the analysis of cross-cultural variations in nuptiality patterns.

World Nuptiality Patterns

Hajnal (1965) observed that for about the last two hundred years European society had been characterized by late marriage and high proportions of the population never marrying, a pattern sharply in contrast with the "traditional" pattern of early and universal marriage in the rest of the world.

In recent years, however, this *European* pattern has tended to disappear, being replaced by a systematic trend toward earlier and more widespread marriage in Europe. On the other hand, some other areas have displayed a recent trend toward delayed marriage.

But the difference between *European* and *non-European* marriage patterns is still marked.

Dixon (1971) introduces an important qualification to Hajnal's typology: she observes that, while the European/non-European are quite good descriptives of the female marriage patterns, for male populations there is a shorter range of behavior, blurring the regional characterization. This is shown in Table 1 below, using data for 57 countries *circa* 1960.

TABLE 1 WORLD MARRIAGE PATTERNS AROUND 1960

REGION	MEAN AGE AT MARRIAGE		CELIBACY	
	Male	Female	Male	Female
Asia	23.2	18.5	3.6	1.4
Middle East	24.6	19.3	4.0	1.9
English Speaking Overseas	23.5	20.8	7.8	6.6
Eastern Europe	24.9	21.7	4.8	6.6
Western Europe	25.8	22.9	9.8	11.9

Source: Dixon, R. (1971), pp. 217-218.

As we can see in Table 1, the Caribbean, Central America and South America are excluded. The reason presented by Dixon is the high incidence of consensual unions in these areas. Indeed, the frequency of consensual unions has a marked impact on the analysis of marriage patterns. An attempt will be made to clarify this problem later when dealing with Brazil data.

In Table 1, celibacy is measured as the percentage never married (PNM) at ages 40-44; the mean age at marriage is measured by the well-known *singulate mean age at first marriage* (SMAM), a measure devised by Hajnal (1953) to approximate the average age at first marriage using population census type data — especially useful for countries with no civil registration data.

Hajnal's European/non-European dichotomy is based on the association between age at marriage and celibacy, and as Dixon empirically showed, this pattern for female populations still clearly holds. Table 2 is taken from Dixon and illustrates this point.

One should observe that age at first marriage in Table 2 is measured not by the more usual SMAM but by the percentage never married at age 20-24, another index of the average age at first marriage.

The purpose of the next section will essentially be to try to locate the Brazilian case in Dixon's framework, as represented by Tables 1 and 2 above.

The Brazilian Marriage Pattern (1940-1976)

Brazil in the post-war period coud be characterized, by any international standard, as showing a late marriage and a relatively high celibacy pattern. Estimates of the singulate mean age at marriage and proportion never marrying as proposed by Hajnal — based on the age distribution of the proportions single — for the whole 1940-1976 period are presented in Table 3. These figures are based on the decennial census returns and on the 1976 Brazilian National Household Survey (PNAD).

TABLE 2 FEMALE AGE AT FIRST MARRIAGE AND WOMEN NEVER MARRIED CIRCA 1960

CELIBACY (% never married) 40-44	AGE AT FIRST MARRIAGE (% never married age 20-24)		
	Low (2-29%)	Medium (30-49%)	High (50-78%)
Low (0-4%)	Asia: 5 countries Middle East: 9 countries E. Europe: Bulgaria, Albania	Asia: 4 countries Middle East: Israel	Asia: Japan, Ryukyu Island
Medium (5-9%)	United States	Asia: Philip., Hong Kong Middle East: Cyprus E.Europe: 5 countries W.Europe: 4 countries English Sp.Overseas: Canada, Australia, New Zealand	E.Europe: Greece W.Europe: Sweden
High (10-23%)		W.Europe: Norway	W.Europe: 14 countries

Source: Dixon, R. (1971). op.cit., p.220

If we compare the data in Table 3 with those in Table 1, the conclusion is clear: Brazil in the post-war period did, indeed, present a nuptiality pattern closely following the western European one. The figures for the SMAM are in fact higher than the average for western Europe, that is, higher than the highest observed values in the world and substantially higher than the figures for Asian, Middle Eastern and even the English-speaking overseas countries.

TABLE 3 BRAZILIAN NUPTIALITY PATTERNS, 1940-1976

YEAR	MEAN AGE AT MARRIAGE				CELIBACY	
	Male		Female		Male	Female
	SMAM	PNM (20-24)	SMAM	PNM (20-24)	PNM (40-44)	PNM (40-44)
1940	26.55	72.98	22.47	48.07	13.60	17.01
1950	26.23	74.25	22.45	47.24	12.37	15.16
1960	25.84	72.19	22.19	43.69	8.04	9.34
1970	26.21	74.98	22.96	50.80	8.78	9.70
1976	25.86	74.51	23.27	51.56	7.36	8.39

Source: IBGE, Brazilian Censuses of Population and 1976 PNAD (National Household Survey).

The results for celibacy are, however, less clear. They seem to lie between the Western European values and those for English-speaking overseas countries. At any rate, these are relatively high figures for both males and females.

The comparison with individual countries for the female populations, taking 1960 as a basis and using Table 2, indicates that Brazil could be located in the same group with most English-speaking overseas countries, most Eastern European countries and with some Western European nations such as France, England, Belgium and Denmark. However, it should be noticed that the 9.34 per cent figure for female celibacy and 43.69 per cent for age at first marriage are almost equal to the lower limits of the High-High category. In other words, for all practical purposes, the Brazilian nuptiality patterns in 1960 could be considered as equivalent to the situation in most Western European countries, that is, a pattern of late marriage and high proportions never marrying.

Now, when we look for trends in the post-war period, the data suggest that the mean age at marriage remained somewhat stable with a slight downward trend during the 1940-1960 period, and an upward trend afterwards. On the other hand, the incidence of celibacy declined substantially, being reduced by more than half during the whole 1940-1976 period. The bulk of the reduction in celibacy seems to have occurred during the 1960's. These results, however should be considered as provisional because, as is made clear in the next section, they are contaminated by variations in the treatment given to consensual unions. They especially affect the analysis of celibacy, the latter being measured directly by the proportion single at 40-44 years of age in the case of females.

Unwed Mothers: Illegitimacy or Consensually Married?

Probably the most striking feature of Brazilian nuptiality data is the substantial proportion of single women having children. In 1970, of the 8,827,334 single women 15-54 years old, 395,457 (4.48 per cent) had at least one child. The important point is, however, that the proportion single having children grows rapidly with age. From a figure of 0.76 per cent of single women having children in the age bracket 15-19 this proportion grows to 18.93 per cent in the ages 45-49 and to a high of 24.45 per cent in the age group 50-54 years. Undoubtedly, this is an impressive figure and possibly an indication that at least part of these women are, or had been, involved in the so-called *consensual* unions, and erroneously classified as single.

TABLE 4 FERTILITY OF SINGLE MOTHERS GROUP, 1970

Age	% Single Having Children	Average Number of Children for Single Mothers	Average Number of Children for Married Mothers
15-19	0.76	1.40	1.51
20-24	3.92	1.86	2.35
25-29	8.83	2.47	3.49
30-34	13.68	3.08	4.68
36-39	16.63	3.59	5.68
40-44	18.22	3.89	6.31
45-49	18.93	4.02	6.57
50-54	24.45	4.09	6.64

Source: 1970 Brazilian Census

As for the fertility patterns of those single mothers, Table 4 presents the proportion single having children and the average number of children for these women. To allow a comparison with the *married* group, the same data — average number of children ever born — for married women having children are presented for each five-year groups.

Several things appear important in Table 4. First the fertility of the single mothers group is relatively high. Even with increasing differentiation between the two groups along the age axis, the fertility of the single mothers group is 62 per cent of the fertility of the married mothers at the end of the reproductive period, with around four children ever born on average. Clearly, this can be considered an indication that at least most of those single mothers are, or had been, engaged in some kind of regular or semi-stable cohabitation with male partners. In other words, mingled in this *single mothers group* we have three distinctly possible cases:

I. Those women that are in fact involved in a regular union and that, for one reason or another, have declared themselves or have been classified as single. It seems that the high fertility of the single mothers group clearly points in this direction.

II. Those women that had been at least once involved in a regular or stable union and that have declared themselves, or have been classified, as single because they are no longer *married*. This return to the single status is a well known phenomenon among widowed or separated women, especially those previously involved in consensual unions. The rising proportion of single mothers as age increases points to this possibility if we assume no significant decrease of illegitimacy through time. Of particular significance perhaps is the fact that this proportion continues to increase after the childbearing years. For instance, the proportion single having children jumps from a more or less stable 18.5 per cent at the end of childbearing years (40-45 and 45-49) to a high 24 per cent in the 50-54 age group, a full 6 per cent increase. Even if we admit no differential mortality between mothers/non-mothers — contrary to common demographic knowledge, which indicates higher mortality among mothers and minimum mortality among those married — this is a significant increase. Clearly, some *widows* or *separated* women are returning to the single status.

III. Finally, those women who are correctly classified as single and whose children should be thus considered as illegitimate. The high fertility of the single mothers group seems to indicate, however, that this group is probably relatively small.

Now, if one allows for the fact that there is a group of childless women classified as single but that are in fact involved in a regular union, which tends to compensate for those single mothers that are correctly classified as single, the exclusion of the single mothers group from the computations of nuptiality figures should provide estimates that should not be far off the *true* figures. At any rate, this exclusion should give better estimates, particularly in the case of estimation of the incidence of celibacy in the population. Estimates of the mean age at first marriage should not change substantially since the higher incidence of single motherhood occurs well after the crucial years, 15-30 years of age.

In the next sections these *better* estimates of the nuptiality statistics will be compared with those from the previous section, and their impact in the analysis of both temporal trends and spatial differences in Brazilian nuptiality will be considered.

Differences in Estimates

As indicated before, if one considers only the information on proportions single for the estimation of nuptiality patterns, the Brazilian figures indicate no substantial change

in the mean age at marriage for the whole period 1940-1976, although a recent upward trend can be discerned. On the other hand, the data suggested a marked decline in celibacy (as indicated by the proportion single at age 45-49), especially during the 1950-60 period. There is one important reason why this is so: the changing definition of consensual unions. Until the 1950 Brazilian population census the people engaged in consensual unions were defined as *single,* while from the 1960 census on, those people were allocated to the *married* group. This change in definition can easily account for most of the sharp decline in the celibacy statistics observed for the 1950-60 period, and because the proportions of males and females engaged in consensual unions before 1960 is unknown, the *better* estimates of the nuptiality statistics are used to evaluate the temporal trends in marriage patterns. The proposed procedure should eliminate most of the bias introduced by the changing treatment given to consensual unions, with the additional advantage of accounting for the unknown proportion of people engaged in consensual unions who, even after the 1960 change in definition, still declared themselves as *single.*

Before we evaluate the differences in trend estimates for the country as a whole, it will be interesting to see the extent to which our proposed procedure can improve the nuptiality estimates at a lower level of aggregation: the state level.

Table 5 shows the proportions single by age group (20-24, 45-49) for selected states in 1950, 1960 and 1970. The striking feature of this table is the fact that some states — in this case, Piaui, Espirito Santo and Santa Catarina — show almost no change in the proportion single profiles. In others, such as Pará, Maranhão and Amazonas, the difference between 1950 and 1960 is hardly credible. For instance, the proportions remaining single in Maranhão declined from 26.8 per cent in 1950 to only 9.0 per cent in 1960 — an astonishing drop. Obviously, something must be wrong.

And in fact, something does seem to be wrong. The last two columns of Table 5 present for the same states the profiles of the proportions single and childless by age for the same period. Now the picture is quite different from the previous one and perfectly in harmony with the results obtained before. All states without exception fail to show any important change for the whole 1950-1970 period, even those states that showed differences when only the proportions single were used. The differences observed before can thus best be described as changes in the rules for classifying the consensual unions among states.

The results seem to reinforce the idea that the 1950-1970 period in Brazil can be characterized by little significant change in nuptiality patterns, at least for the female population, both in amount and timing of marriages. The differences previously recorded using the information on the proportions single by age seem to come mainly from the fact that among those listed as single, there is a substantial proportion of women who are, or have been, engaged in some kind of stable or consensual union, thus biasing the results.

Let us now turn to the differences in estimates at country level. Table 6 presents data for the proportion single and childless in the female Brazilian population for the period 1940-1970. As it is immediately obvious, the difference of celibacy estimates using the proportion single data is drastically reduced from a difference of 15.2 per cent in 1950 to 9.34 per cent in 1960, to a difference of 9.29 per cent in 1950 to 8.34 per cent in 1960 when the proportions single and childless distribution is used. In other words, our *better* estimates indicate only a very slight decrease in the proportion remaining single over the whole thirty years period.

As to the mean age at first marriage estimates, the previous situation of change from 22.45 years in 1950 to 22.19 in 1960, following the proportions single data, is now modi-

TABLE 5 NUPTIALITY STATISTICS: SELECTED BRAZILIAN STATES, 1970

State and Census year	Proportions Single 20-24	Proportions Single 45-49	Proportions Single & Childless 20-24	Proportions Single & Childless 45-49
Amazonas				
1950	.499	.197	.366	.065
1960	.387	.070	.366	.054
1970	.473	.065	.435	.046
Pará				
1950	.585	.276	.424	.088
1960	.443	.102	.404	.071
1970	.520	.093	.469	.054
Maranhão				
1950	.454	.262	.327	.075
1960	.327	.081	.309	.056
1970	.366	.071	.338	.036
Piauí				
1950	.421	.118	.378	.061
1960	.436	.093	.415	.064
1970	.466	.091	.440	.064
Santa Catarina				
1950	.376	.061	.352	.045
1960	.355	.044	.352	.041
1970	.451	.051	.438	.044
Espírito Santo				
1950	.434	.078	.402	.051
1960	.401	.048	.395	.046
1970	.489	.054	.474	.046

Source: 1950, 1960, 1970 Brazilian Censuses.

fied to a change from 22.06 in 1950 to 22.11 in 1960, reversing the trend. It should be noticed, however, that neither the revised estimates for celibacy nor those for the mean age at marriage change the interpretation of the recent trends in nuptiality in Brazil.

In summary, a re-analysis of nuptiality patterns in Brazil using the proportions single and childless, suggest that there has been only a very slight change in both the mean age at first marriage and the incidence of celibacy in the female population, the mean age at marriage tending to go up and the proportion remaining single tending to go down. However, given that the estimation problems are so substantial, a general characterization of the Brazilian female nuptiality as relatively stable over the whole post-war period is quite probably accurate.

TABLE 6 BRAZILIAN NUPTIALITY PATTERNS, 1940-1970, BASED ON PROPORTIONS SINGLE AND CHILDLESS — FEMALE POPULATION

YEAR	MEAN AGE AT MARRIAGE		CELIBACY PNM(40-44)
	SMAM	PNM (20-24)	
1940	22.08	42.86	9.68
1950	22.06	42.51	9.29
1960	22.11	42.64	8.34
1970	22.87	48.80	7.93

Source: IBGE, Brazilian Censuses of Population.

An Analysis of Spatial Differentials (1970)

If the nuptiality patterns in Brazil can be characterized as being quite stable through time, the spatial patterns show some marked differences in the quantity and timing among the Brazilian states.

Although the range of variation of the singulate mean age at first marriage based on the single and childless female population distribution is not especially large, varying from a low of 21.13 years for Parana to 24.46 for Guanabara, the city of Rio de Janeiro, these values are not only high by any international standard but also are skewed to the right, the modal range being the age bracket 23-24 years which contains almost half of the cases.

On the other hand, the incidence of celibacy, as measured by the PNM at 50-54 years of age, is also relatively high in comparison to European figures, ranging from a minimum of 2.5 per cent in the state of Goias to a high of 9.6 per cent in Paraiba. Table 7 shows the values of the SMAM and PNM for the female population of each Brazilian state.

Clearly from Table 7, it makes no significant difference in the calculation of the singulate mean age at first marriage whether the proportions single distribution or the proportion single and childless is used. The values by both procedures are quite similar and, although the SMAM value is typically lower when calculated from the proportions single and childless distribution, there is a very strong linear relationship between the two measures, indicating a similarity in timing between *legal* and *consensual* types of marriage. The correlation coefficient based on the 22 cases in Table 6 between the two SMAM measures is almost unitary, with $r=0.990$. Thus, analytically, it makes no difference whether we use one measure or the other. The statistics are quite robust.

The situation with the PNM is somewhat similar. There is also a strong linear relationship between the two PNM measures, although the correlation is substantially less than in the SMAM case, $r=0.8937$. This means that, as expected, there is a wider difference between the two PNM estimates, and this possibly makes some analytical difference.

Another important point that is singled out by Table 7 is that the SMAM and PNM measures are strongly positively related, as expected. The correlation coefficient between these two measures based on the single and childless female population is $r=0.6702$,

TABLE 7 FEMALE POPULATION, BRAZIL, 1970

STATES	Data based on proportions single and childless		Data based on proportions single	
	SMAM	PNM(50-54)	SMAM	PNM(50-54)
Paraná	21.13	0.32	21.37	.042
Maranhão	21.19	.032	21.09	.077
Mato Grosso	21.73	.033	21.77	.053
Alagoas	21.78	.082	21.90	.099
Goiás	21.85	.025	21.92	.039
Sergipe	22.14	.090	22.38	.122
Piauí	22.28	.065	22.50	.091
Amazonas	22.29	.044	22.58	.074
Santa Catarina	22.33	.041	22.38	.052
Pará	22.74	.052	23.03	.100
Espírito Santo	22.87	.041	22.93	.054
Bahia	23.00	.097	22.96	.127
Rio Gde.do Sul	23.01	.072	23.14	.085
Distrito Federal	23.02	.057	23.28	.076
Rio de Janeiro	23.04	.045	23.10	.067
Pernambuco	23.08	.084	23.45	.103
São Paulo	23.24	.059	23.30	.073
Ceará	23.31	.089	23.69	.109
Minas	23.37	.087	23.51	.104
Rio Gde.do Norte	23.38	.085	23.64	.097
Paraíba	23.68	.096	23.93	.108
Guanabara	24.46	.094	24.60	.131

Source: 1970 Brazilian Census - Fundação IBGE

indicating that higher mean ages at marriage are significantly associated with higher proportions remaining single.

Dixon's framework for the explanation of cross-cultural variations in age at marriage and proportions never marrying is used in the analysis of spatial differences presented in Table 7. She proposes that "we should look at three variables intervening between the social structure and marriage patterns. These variables refer to the availability of mates, the feasibility of marriage and the desirability of marriage" (Dixon, 1971:221).

Having in mind as close a comparability as possible with Dixon's results, the most similar indicators available were selected for inclusion in the analysis that follows. Some of them, however, represent slightly different definitions when compared with Dixon's variables, but should be close enough to allow direct comparison.

One measure of the availability of mates is the sex ratio of persons of marriageable age. More specifically, two such sex ratios, the ratio of males aged 25-29 to females aged

20-24 and the ratio of males aged 20-49 to females aged 15-39. The predicted relationship is, obviously, that these ratios should be negatively correlated with both the mean age at marriage and the proportions never marrying.

The feasibility of marriage is determined by "expectations regarding the financial and residential independence of the newly married couple . . . and the availability of resources (land, savings, income) for meeting these obligations" (Dixon, 1971:222). In this analysis the feasibility of marriage is indicated by the state per capita income, the percentage of population with urban residence, the percentage of the male labor force employed in agriculture, and the unemployment rate. The predicted relationship is that our PNM and SMAM measures should be inversely related to per capita income, agricultural employment, while positively related to the unemployment rate and the percentage of urban dwellers.

Finally, the desirability of marriage is "determined by the availability of social and institutional alternatives to marriage and childbearing and by the extent to which these alternatives are considered rewarding" (Dixon, 1971:222). The indicators used to represent the desirability of marriage are, closely following Dixon, the child/woman ratio, the percentage of adult females gainfully employed and the literacy rate in the female population. The predictions are that the child/woman ratio should be negatively correlated with both SMAM and PNM, while employment and literacy should be positively related to these two measures.

Table 8 presents the correlations between the singulate mean age at marriage variable (based on the proportions single and childless in the female population) and these predictors.

As Table 8 makes clear, the mean age at marriage among the Brazilian states is significantly correlated only with the feasibility-of-marriage indicators. There is no significant relationship at any conventional level with either the availability of mates or desirability of marriage.

Another important point to notice is that all the correlations have the *right* or ex-

TABLE 8 BRAZILIAN STATES, 1970: CORRELATIONS BETWEEN SMAM, PNM AND SEVERAL PREDICTORS

Indep.Variable		SMAM	PNM(S&C)	PNM(S)
	Per capita income	.448*	.000	.011
I.Fertility	Percent Urban	.629**	.204	.159
of Marriage	Percent Male Labor Force	-.592**	-.098	-.060
	Unemployment Rate	.613**	.327	.259
II.Availability	M(25-29)/F(20-24)	-.378	-.693**	-.593**
of Mates	M(20-29)/F(15-39)	-.270	-.693**	-.622**
	Percent Working Women	.233	.174	.246
III.Desirability	Percent Literate women	.368	-.196	-.266
of Marriage	Children/women	-.225	.224	.091

N=22

* sig. at 0.05

** sig. at 0.01

pected sign, with the exception of that with the per capita income. One plausible explanation for this sign is that this correlation is probably spurious, since we know the per capita income measure to be strongly correlated with the proportion of urban dwellers, r=.915. At any rate, all four feasibility-of-marriage variables are very strongly inter-correlated, and should be better treated as a single *factor*.

The results for the proportions never marrying, measured using both the proportions single and the proportions single and childless of the female population, are also presented in Table 8.

Clearly, the important point about Table 6 is that the incidence of celibacy seems to depend only on the availability-of-marriage variables. The correlations of PNM measures with availability-of-mates indicators is significant and, moreover the expected sign is found. No other variable has any significant relationship at any conventional level, some being virtually null, as is the case of per capita income — r=.000 with PNM, single and childless.

In summary, the previous analysis suggests the following conclusions about variations in nuptiality among Brazilian states: the timing of marriage seems to be most closely associated with the economic conditions facilitating marriage; the amount of marriage is most closely associated with the availability of mates; and the desirability of marriage as measured by our indicator appears not to be related to either timing or amount. Thus unfeasibility of marriage only postpones marriage, which takes place at the earliest feasible date, constrained only by the availability of mates.

This is in sharp contrast with Dixon's findings. Her basic conclusions are that "overall, delayed married and celibacy are most highly correlated with indicators of the desirability of marriage, less so with feasibility, and least with availability" (Dixon, 1971:225).

Conclusions

At the beginning of this report its central purpose was stated: to analyze nuptiality in post-war Brazil. In this respect, the main conclusions are that little change in either timing or quantity of marriage took place in Brazil during that period, although a slight upward trend in the mean age at marriage and a downward trend in celibacy is apparent. This seems to be true for Brazil as a whole as well as for its component states.

On the other hand, I found substantial geographic differentials among the states around 1970. The coupling of these two observations indicates that these geographic differentials have been quite stable, at least since the 1940's. If substantial changes in Brazilian nuptiality ever occurred, they must have occurred before the second world war.

Brazilian nuptiality can be characterized as *European* in terms of both quantity and timing, its parameters being comparable to those of most western European countries. A practical implication of this pattern is that public policies designed to bring about a decline in fertility by stimulating postponement of marriages are very unlikely to succeed in Brazil, where the ages at marriage and celibacy are already quite high.

A secondary purpose of this report was to call attention to the impact of the so-called *consensual* unions on the analysis of nuptiality patterns. The Brazilian data suggest that the singulate mean age at marriage seems to be relatively robust, basically due to the similarity in timing between *legal* and *consensual* unions, in relation to varying degrees of incidence of measurement errors in marital status, due to the presence of consensual unions. Estimates of the proportions never marrying are substantially affected by these errors. The failure to examine more closely the presence of consensual unions among

women classified as single can eventually lead to substantial bias in the estimation of the incidence of celibacy, as the analysis at the state level clearly exemplifies.

Finally, the analysis of nuptiality data at state level indicated that, contrary to expectations based on Dixon's findings, the timing of marriages seems to depend only on the feasibility of marriages, while the number of marriages is determined only by the availability of mates. The desirability-of-marriage indicators were found to be unrelated to both number and timing of marriages.

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