

The Latin American Cohabitation Boom, 1970 – 2007.

Albert Esteve, Ron Lesthaeghe, Antonio López-Gay

Centre d'Estudis Demogràfics
Universitat Autònoma de Barcelona.

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Abstract.

This article documents the often spectacular rise of the share of cohabitation in the process of union formation in over 350 regions of 13 Latin American countries during the last 30 years of the 20th Century. To this end harmonized census microdata were utilized (IPUMS International). In many provinces, and especially those with larger Indian and black populations, cohabitation and visiting unions have always existed as alternatives to the classic “European” marriage. However, as the data from 3 or 4 census rounds indicate, the rise in cohabitation occurred both in such areas with “old cohabitation” practices and in those where cohabitation had remained much more exceptional till the 1970s. In other words, there is now a sizeable chunk of “new cohabitation” besides or on top of “old cohabitation”.

The same census data also document the existence of a universal negative cohabitation-education gradient, with women with higher levels of education cohabiting less and moving to marriage in greater proportions. On the basis of such negative cross-sectional gradients, one would expect that with advancing education over time, cohabitation would yield to marriage. The advancement in male and female education in Latin America has been quite pronounced since the 1970s, and yet just the opposite trend in marriage and cohabitation is observed compared to the one predicted on the basis of this cross-sectional education gradient. This not only reveals once more the fallacy inherent in the extrapolation of cross-sectional differentials, but illustrates even more strongly that other factors favorable to cohabitation must have been “flying under the radar”. In this paper we shall therefore also explore to what extent ideational factors, especially in the domains of ethics, sexuality and gender relations, could have contributed to the emergence of the “cohabitation boom”. This brings us inevitably to the issue of a possible partial convergence of several Latin American populations to the pattern of the “Second Demographic Transition” (SDT).

1. “Old” and “new” cohabitation.

Indian and black populations in Latin America and the Caribbean have been known to have maintained patterns of union formation other than classic marriage. (e.g. R.T. Smith, 1956; G.W. Roberts and S.A. Sinclair, 1978). In the instance of American Indian indigenous populations, ethnographic evidence shows that they did not adhere to the group of populations with diverging devolution of property through women. As argued by J. Goody (1976), populations that pass on property via a dowry or an inheritance for daughters (i.e. populations with “diverging devolution” of family property via women)

tend to stress premarital chastity, control union formation via arranged marriages, have elaborate marriage ceremonies, and reduce the status of a married woman within the husband's patriarchal household. Moreover they tend toward endogamous marriage (cross-cousin preference) or to caste or social class homogamy. Through these mechanisms the property "alienated" by daughters can still stay within the same lineage or clan or circulate within the same caste or social class. Populations that are hunter-gatherers or who practice agriculture on common community land, have fewer private possessions, no diverging devolution of property via dowries, no strict marriage arrangements or strict rules regarding premarital or extramarital sex. Instead, they tend to be more commonly polygamous with either polygyny or polyandry, have bride service or bride price instead of dowries, and practice levirate or even wife-lending. The dominance of the latter system among American natives can be gleaned from the materials brought together in Table 1.

Table 1 about here. (Distribution of 51 ethnic populations according to selected characteristics of their marriages and sexual unions.)

This table was constructed on the basis of the 31 ethnic group references contained and coded in the G.P. Murdock and D.R. White "Ethnographic Atlas", and another 20 group specific descriptions gathered in the "Yale Human Areas Relation Files" (eHRAF). Via these materials, which refer mainly to the first half of the 20th Century, we could group the various populations in broader ethnic clusters and geographical locations, and check the presence or absence of several distinguishing features of social organization.

Of the 41 *native Indian groups* mentioned in these ethnographic samples, only one had an almost exclusively monogamous marriage pattern, whereas the others combined monogamy with polyandry often based on wife-lending, occasional polygyny associated with life cycle phases (e.g. associated with levirate), more common polygyny, or serial polygyny in the form of successive visiting unions. For 26 native Indian groups we have also information concerning the incidence of extramarital sex or of visiting unions. In only 6 of them these features were rare. Furthermore, none have a dowry, which implies that the feature of diverging devolution is absent, and that, compared to their European colonizers, these populations are located on the other side of the "Goody divide". As expected, they have the opposite pattern in which the prospective groom or the new husband has to render services to his in-laws or pay a certain sum of money to his wife's kin. In a number of instances, there was also a custom of women or sister exchange in marriage between two bands or clans, and there were also instances with just gift exchanges or no exchanges at all. And finally, mentions of elaborate marriage ceremonies were only found among the references to Mexican or Central American Indian groups, whereas the others had marriages with a simple ritual only, and often had a "marriage" as a gradual process rather than a single, marked event.

The story for the *New World black and mixed* populations is of course very different, since these populations were imported as slaves. As such they had to undergo the rules

set by their European masters, or, when freed or eloped, they had to “reinvent” their own rules. When still in slavery, marriages and even unions were not encouraged by the white masters, given the lower labor productivity of pregnant women and mothers. And for as long as new imports remained cheap, there was little interest on the part of the owners in the natural growth of the estates’ slave population. The “reinvented” family patterns among eloped or freed black populations were often believed to be “African”, but in reality there are no instances where the distinct West African kinship patterns and concomitant patterns of social organization are reproduced (strict exogamy, widespread gerontocratic polygyny). Instead, there is a dominance of visiting unions, in which the woman only accepts a male partner for as long as he contributes financially or in kind to the household expenditures and where the children of successive partners stay with their mother. Not surprisingly, diverging devolution is equally absent among the New World black and mixed populations reviewed by our two ethnographic samples. In this regard, they do follow the pattern of West-African non-Islamized populations.

The *white colonial settler population or the upper social class* by contrast adhered to the principles of the European marriage (“Spanish marriage”, “Portuguese *nobres* marriage”) being monogamous, based on diverging devolution and hence with social class as well as preferred families endogamy. However, this European pattern was complemented with rather widespread concubinage, either with lower social class women or slaves (see for instance D.E. Borges, 1994, and J. Beierle, 1999, for the Bahia colonial upper class in Brazil and A. Twinam, 1999, for several Spanish speaking populations). Children from such unions in Brazil could easily be legitimized by their fathers via a simple notary act (D.E. Borges, 1994).

The data of Table 1 should of course be taken as an illustration, and not as an exhaustive classification of Latin American ethnic populations. But, in our opinion, they clearly demonstrate that “marriage” as Eurasian societies know it, often must have been either a fairly irrelevant construct to both Indian natives and New World black populations, or later on, just an ideal or a formal marker of social success.

So far, we have only dealt with the historical roots of the diverse patterns of union formation. To this one has to add the influence of institutional factors and immigration.

The Catholic church and the states generally tended to favor the “European” marriage pattern, but with quite some ambiguity. First, the Catholic clergy, and especially those in more distant parishes, did not observe the celibacy requirement that strictly. Second, many Christian and pre-Colombian practices were merged into highly syncretic devotions. The promotion of the Christian marriage was mainly the work of the religious orders, with the Jesuits in the vanguard. At present, that promotion is vigorously carried out by the new Evangelical churches which have been springing up all over the continent since the 1950s, and most visibly in Brazil.

Also the role of the various states is often highly ambiguous. Generally, states copied the European legislations of the colonizing nations and hence “officially” promoted the classic European marriage, but more often than not this was accompanied by

amendments that involved the recognition of consensual unions as a form of common law marriage and also of equal inheritance rights for children born in such unions. In Brazil, for instance, Portuguese law had already spelled out two types of family regulations as early as the 16th Century (Philippine Code of 1603), namely laws pertaining to the property of notables (*nobres*) who married in church and transmitted significant property, and laws pertaining to the countryfolk (*peões*) who did not necessarily marry and continued to live in consensual unions (D.E. Borges, 1994). Furthermore, it should also be stressed that many central governments were often far too weak to implement any consistent policy in favor of the European marriage pattern. Add to that the remoteness of many settlement and the lack of interest of local administrations to enforce the centrally enacted legislation.

However, it would be a major mistake to assume that this “old cohabitation” was a uniform trait in Latin American countries (J. Quilodran, 1999). Quite the opposite is true. In many areas late 19th Century and 20th century mass European immigration (Spanish, Portuguese, Italian, German) to the emerging urban and industrial centers of the continent reintroduced the typical Western European marriage pattern with monogamy, highly institutionally regulated marriage, condemnation of illegitimacy and low divorce. As a consequence the European model was reinforced to a considerable extent and became part and parcel of the urban process of *embourgeoisement*. This not only caused the incidence of cohabitation to vary widely geographically and in function of the ethnic mix, but also produced the emergence of a marked gradient by educational level and social class: the higher the level of education, the lower the incidence of cohabitation and the higher that of marriage. This negative cohabitation-education gradient is obviously essentially the result of historical developments and long term forces, and, as we shall illustrate shortly, found in every single one of the 13 countries studied here. The gradient is not the outcome of a particular economic crisis or decade of stagnation (e.g. the 1980s and 1990s).

2. The Latin American cohabitation boom: the spatial view.

Latin American censuses have historically provided an explicit category for consensual unions (*uniones libres*, *uniones consensuales*). The examination of the questionnaires of all Latin American and Caribbean censuses conducted between the 1960s and 2000s reveals that in the vast majority of them cohabitants could be explicitly identified either through the variables ‘marital status’ (dominant approach) or ‘union status’ (quite common in Caribbean countries) or through a direct question (e.g. Brazil and recently in Argentina and Suriname). A methodological problem emerges, however, when individuals that cohabited in the past and were no longer in union at the time of the census report themselves as singles (Esteve, García and McCaa, 2011). This clearly exaggerates the proportion of singles and affects the ratio between married and cohabitating couples as we observe ages that are increasingly distant from those in which

union formation was more intense. To minimize bias, our analysis focuses on young ages, mainly 25-29¹.

Several researchers (e.g. Ruiz Salguero and Rodriguez Vignoli, 2011; Rosero-Bixby, Castro Martin and Martin Garcia, 2009; Lopez Ruiz, Esteve and Cabré, 2008; Rodriguez, 2005; Garcia and Rojas, 2002) have used census data to explore cohabitation patterns in Latin America. Some of them did so on the basis of the Integrated Public Use Microdata Series (IPUMS) that have been collected and harmonized at the University of Minnesota Population Studies Center (Minnesota Population Center, 2011). Also, estimates of the share of consensual unions among all unions were made by the US Census Bureau (2004) for the censuses of the 1950s and 60s in a more limited number of countries.

Previous research reveals a remarkable rise of the share of consensual unions among all unions, and this rise most probably already starts during the 1960s in a number of countries (Fussell and Palloni, 2004), involving both countries with an initially very low incidence of cohabitation and countries with higher levels. The early cohabitation shares reported by Fussell and Palloni pertain to the unions of women aged 20-29. These data indicate that Argentina (5.8 % cohabitation of all unions in 1950), Uruguay (5.7 % in 1960), Chile (3.0 % in 1970) and Brazil (5.1% in 1960) belong to the former category. Peru (20.9 % in 1960) and especially Colombia (13.5 % in 1960) are typical examples of the latter group with later rises. However, countries with pre-existing high levels of what we have called “old cohabitation” did not witness the onset of such a trend until much later. Examples thereof are Guatemala (56.1 % in 1950) or Venezuela (29.7 % in 1950), the Dominican Republic (44.4 % in 1960) or El Salvador (34.2 % in 1960).

The results that will be reported from here onward stem from the extensive analysis of the harmonized Latin American census microdata samples available at IPUMS international (Minnesota Population Center, 2011). This analysis uses as many census rounds between 1970 and 2000 as possible (see Appendix 1). Consequently, with the exception of few areas, the time series generally capture the initial rises of the share of cohabitation. The results are shown in Table 2 for 13 countries, and for men and women aged 25-29 and 30-34 respectively.

Table 2 about here. (Percent cohabiting among all unions of men and women, 25-29 and 30-34, in Latin American countries, 1970-2000 census rounds)

¹ Age at union formation has remained remarkably stable in Latin America during the last few decades. This implies a process in which young cohorts substitute more and more non-marital cohabitation for marriage without modifying substantially the timing of union formation. Since we observe over time similar proportions of individuals in union by age, the rise of cohabitation among individuals aged 25-29 cannot be explained by changes in the timing of union formation.

The data in Table 2 not only document the marked heterogeneity of Latin American countries at the onset, but also that especially the 1990s witnessed a marked acceleration of an already upward trend.

During the 1960s (1970 census round) the share of cohabitation among all women 25-29 in a union varied between about 5 and 15 percent in countries with low levels of “old cohabitation” (Chile, Brazil, Puerto Rico, Argentina), but a genuine cohabitation boom must have taken place during the 1990s (2000 census round) that drove up these percentages to levels between 25 and 45. The 1990s were equally significant for a number of countries who were in the middle range at the 1970 census round. This holds very strikingly for Colombia where the share of cohabitation for women 25-29 jumps from about 20 percent in 1973 to almost 50 in 1993 and over 65 in 2007. Less spectacular, but equally noteworthy are the rises in Mexico and Costa Rica, where the cohabitation shares initially remained fairly stable around 15 percent, but also increased during the 1990s by 7 and 16 percentage points respectively.

Among the countries with 30 percent or more cohabitators among women 25-29 in unions in the 1970s census round, i.e. among those with sizeable categories of “old cohabitation”, there are also remarkable rises that took place during the last decade of the previous century. Clear examples thereof are Venezuela, where the share of cohabiting young women rose from 37 in 1990 to 52 percent in 2000, and Peru with a jump from 43 to 70 over the same decade. Only for the “champion” of old cohabitation, namely Panama, is there a more modest rise during the 1990s, from 53 to 63 percent. And at the other end of the distribution, Puerto Rico remains the most conservative country in the entire set, but the share of cohabitation among women 25-29 of over 20 percent by 2000 should not come as a surprise.

Taken together, in the 2000 census round 6 countries of the 13 had shares of cohabitation in excess of 40 percent for women 25-29, and 9 out of the 13 had such large shares for men 25-29. In the 1990 census round there were only such 4 countries (counting in Cuba) for either men or women 25-29, and in 1970 presumably only 1 (Panama).

The census estimates of the shares of cohabitation for women 25-29 are equally available for the regions (or even municipalities of Colombia) of the various countries. For most countries these regions remain the same over the entire period of observation (see Table 3), except for Brazil, where the spatial resolution improves starting from 26 regions in 1970 to 135 smaller ones subsequently. There are no regional data for Puerto Rico, whereas Cuba, Bolivia and Costa Rica only contribute information for the 2000 census round.

Table 3 about here (Number of regions with shares of cohabitation among all unions of 20 and 50 percent respectively, women 25-29. Latin American countries, 1970-2000 census rounds)

Table 3 documents the rise in cohabitation by counting the number of regions that pass the thresholds of respectively 20 and 50 percent cohabiting women 25-29. As before,

these percentages are again the shares of all such women currently in a union (i.e. married + cohabiting). Here are a few striking examples of the spatial diffusion of cohabitation. None of the 13 regions in Chile reached the level of 20 percent until 1990. But at the time of the 2000 census round, no less than 9 regions of these 13 had crossed that threshold. In Brazil, only 22 out of 133 regions passed the lower threshold of 20 percent in 1980. By 2000, virtually all of them had crossed that level, and 29 of them had already passed the much higher threshold of 50 percent in cohabitation rather than marriage. The movement in Argentina is very similar: in the 1970 census round, 8 out of 23 regions had cohabitation shares of 20 percent or more, and by 2000, all of them had crossed that lower threshold. Furthermore, 4 of them had already crossed the line with more women 25-29 in cohabitation than in marriage. The rise in Mexico is less spectacular, but there were 20 out of the 32 regions with a share of cohabitation above 20 percent in 2000 where there were only 8 in 1970 and 1990.

Of all countries, the most striking cohabitation boom may have occurred in Colombia. In 1970 only 2 regions of 27 had more cohabiting than married young women and 12 regions did not even make it across the 20 percent threshold. But in 2000, all 33 of them had not only passed the lower, but also the upper threshold of 50 percent.

As noted earlier, not only the countries with low or moderate levels of “old cohabitation” in 1970 or 1980, but also the ones with high levels witnessed rises. These countries were already above the lower threshold of 20 percent as used in Table 3 to start with, and for them it is the upper threshold that is of relevance. In Venezuela 16 regions of the 24 cross the 50 percent mark in 2000, whereas there were only 3 ten years earlier. Over the same decade the figure jumps from 8 to 24 for the 25 Peruvian regions. Finally, two thirds of the 15 Cuban regions have joined that group by 2000, and the same holds for all 11 Panamese ones.

The full distribution of provincial levels by country is shown in Figure 1 using boxplots. For countries with two such measurements, only the “leader” Panama shows no marked further upward shift of the distribution of regions.

Figure 1 about here. (Boxplot of the share of cohabitation among all unions of women 25-29 in the regions of Latin American countries, various census rounds.)

Another telling way to describe the data consists of ranking the regions by level of cohabitation as measured at the earliest date, and to see how they move up over the next decades. This is done for 10 countries in Figure 2. In addition, a straight line was fitted through the provincial data points for each census so that one can see whether the distribution shifted more as a result of the tail being pulled in or the head moving out. In this way, the lines are essentially parallel in Costa Rica and Brazil, indicating that all regions had similar absolute increases in percentages cohabiting, irrespective of their earlier position in the distribution. Most of the other countries have the higher increments in regions that were at the lower end to start with, which indicates that the overall rise is due to a slightly greater extent to “new” rather than to “old” cohabitation. The main

exception is found in Chile, where the big jump between the 1990 and 2000 census rounds is largest for the areas that had the higher cohabitation shares to start with.

Figure 2 about here. (Patterns in the rise of the share of cohabitation among all unions of women 25-29 in regions of Latin American countries, various census rounds.)

Finally, we present the list of 25 regions which respectively had the lowest and the highest shares of cohabiting women aged 25-29 in 1970, together with the subsequent increments in these shares over the next three decades. As shown in Table 4, 24 of the 25 “lowest” regions had less than 5 percent cohabitation to start with, and the rise to levels of up to 40 percent can be considered as “new cohabitation”. The most spectacular of such rises are found in seven Brazilian regions (Parana, Ceara, Minas Gerais, Santa Catarina, Piaui, Sao Paulo and especially Rio Grande do Sul), in Argentina (Cordoba), Chile (RM Santiago) and Colombia (Valparaiso). At the other extreme, among the 25 regions with the highest proportions of “old” cohabitation most consolidate their position, but others still make a jump in excess of 10 percentage points. The latter are areas in Colombia (Cordoba, Cesar and especially Choco and La Guajira), Ecuador (Esmaraldas), Venezuela (Portuguesa, Amazonas, Yaracuy, Delta Amacuro) and even in Panama (Colon).

Table 4 about here. (Changes in the shares of cohabitation among women 25-29 in the 25 regions with respectively the lowest and the highest initial levels of cohabitation in 1970.)

Further geographical details can be gleaned from the two series of maps presented in the appendix. The maps in the first series are of the classic type, and have the advantage of familiarity. However, they misrepresent the demographic weight of each region, and sometimes enormously so. For instance, the Amazone basin covers a very large area, but is only very sparsely populated. Conversely, large urban areas are barely dots on a classic map, but may contain sizeable portions of a nation’s population. To correct for this, also a series of Gastner-Newman cartograms has been made, which may look less familiar but do respect the true demographic weight of each region. Obviously the color (shading) codes have been kept constant for the 4 census rounds, so that the “reddening” (“darkening”) of the map fully catches the well nigh ubiquitous Latin American cohabitation boom.

3. The education gradient.

We have already pointed out that the negative cross-sectional gradient of cohabitation with rising female education is a historical reflection of ethnic and social class differentials. That negative slope is found in all the countries considered here, and as the top part of Figure 3 shows, this was already clearly so prior to the post-1970 cohabitation boom.

Figure 3 about here (Share of cohabitation among all unions of women 25-29 by level of education, country and census round.)

The existence of a positive or negative education gradient has very often been used to explain trends. For instance, the finding that contraceptive use and effectiveness both increase with education level is an almost universal cross-sectional feature. If there is furthermore a rise in educational levels over time, then the latter combined with the former is taken as the reason for an overall increase in contraceptive use or effectiveness. Examples of such conclusions based on combinations of a cross-sectional differential and a trend in the independent variable (here: education) are so frequent and “normal” in demography that they lead to leaps of faith.

Recently B. Perelli-Harris and her colleagues (2010, 2011) use the cross-sectional negative gradient of fertility among cohabiting women in Russia to infer that the rise in out-of-wedlock fertility has nothing to do with changing values as predicted by the “second demographic transition” but with increasing disadvantage of the less educated segments of the population². From the education gradient they infer that:

“these findings suggest that non-marital childbearing in Russia has more in common with the pattern of disadvantage in the United States than with the second demographic transition” (2011:343)

And furthermore:

“...Thus, the educational gradient can provide information on how and why a particular behavior increases over time” (2010: 775).

If we were to use the typical Latin-American educational gradient of cohabitation as the authors quoted above use the Russian extra-marital fertility one, and applied that classic projection of it to come up with a trend, we would have been dramatically wrong. As it turns out, female education levels rose dramatically over the three decades in all countries presented here. The boxplots of Figures 4 and 5 show for each country the distribution of regions with respect to their percentages of women 25-29 with at least full primary and full secondary education respectively³. In the 1970 census round, there were 8 countries

² The World Values Survey of the data for Russia for 1990, 1995 and 2006 are available on line, but no effort is being made to at least check out empirically whether the “second demographic transition” propositions hold or not. It turns out, that there were quite dramatic shifts in Russia that parallel those found here in Latin American countries (e.g. the growing tolerance for homosexuality and euthanasia, the changing role of women, and duties of parents toward their children). In fact, neither do the authors show how much the living conditions for their educational categories deteriorated and/or improved over the last decades. Finally, it should be stressed that the explanations that have been juxtaposed (economic disadvantage versus SDT) are not mutually exclusive. All of this amounts to the invalidation of their conclusion

³ We distinguish four categories of educational attainment: “Some primary school”, “primary school completed”, “secondary school completed”, “more than secondary”. This classification corresponds to the major divisions of EDATTAN as harmonized by IPUMS-International (Esteve and Sobek 2003). EDATTAN takes as a reference the principles and recommendations of United Nations to measure educational attainment in population censuses (UNESCO, 2006). The UNESCO scheme is based on 4 thresholds: 6 years of primary school, 3 years of lower secondary education, 3 years of higher secondary education and later tertiary education. With some

out of 12 with median regional levels below 50 percent of young women completing at least primary education. In the 2000 round, there is no such country left. All of them have reached regional medians of 70 percent completed primary education or better. In fact, with the exception of a few Brazilian areas, there is hardly any other region left with less than 50 percent of women 25-29 having completed full primary schooling. Very much the same picture holds with respect to the completion of full secondary education by women 25-29. In 1970 or 1980, regional medians for 10 countries were typically below 10 percent of women 25-29 with full secondary education or better. By 2000 these medians have all moved to the 30 to 60 percent band. In fact there is hardly any single region left with less than 10 percent of women 25-29 having completed secondary education.

Figures 4 and 5 about here

(Boxplots of the regional distributions of the percentage of women 25-29 with complete primary education or better in Latin American countries, various census rounds)

(Boxplots of the regional distributions of the percentage of women aged 25-29 with complete secondary education or better in Latin American countries, various census rounds)

Considering these major improvements in educational levels during the last 2 or 3 decades of the 20th Century (a trend) in combination with the negative education gradient of cohabitation (a cross-section) would lead us to expect a *drop* in the incidence of cohabitation over time. Of course, just the opposite has happened, and quite dramatically so. *Evidently, the educational gradient does not at all provide any information as to how and why a particular behavior increases over time.*

The outcome is that there must have been major other factors fostering a rise in cohabitation that have been flying under the radar and that have even annihilated the effect of rising education. The proof of the existence of such factors lies in the observation that cohabitation has been rising over time in *all* education groups, and sometimes more among the better educated than among the lesser educated. In other words, all social classes have been affected by the cohabitation boom. The latter feature is eloquently shown in the bottom panel of Figure 3. In 1970, there was not a single country with more than 10 % cohabitation among all women 25-29 living in a union and with more than complete secondary education. In the last census round there are 9 such countries, and the group of best educated women now have cohabitation shares in excess of 30 percent in Argentina, Colombia, Cuba and Peru. Even more striking is that the starkest contrast in 1970 was between those women with less than primary education and the others. In the 2000 census round, this contrast has given way to a more gradual slope as a result of increases in cohabitation among the middle educational groups, who, it should be stressed, now form the bulk of the population.

exceptions (see a detailed discussion in www.ipums.org/international) most Latin American countries conform to this scheme.

This obviously begs the question of what has caused this rise in cohabitation in all these countries, regions and educational groups.

4. What flew under the radar ?

A useful framework for starting the analysis of any new form of behavior is the “ready, willing and able” (RWA) one used by A.J. Coale (1973) to interpret the historical European fertility transition, and elaborated by R. Lesthaeghe and C. Vanderhoeft (2001) to accommodate heterogeneity and the time dimension. The “Readiness” condition states that the new form of behavior must have an economic or psychological advantage, and hence refers to the cost-benefit calculus of a particular action compared to its alternatives. The “Willingness” condition, by contrast, refers to the religious and/or ethical legitimacy of the new form of behavior. And the “Ability” condition states that there must be technical and legal means available which permit the realization of that “innovation”. Note, however, that the RWA-conditions must be met *jointly* before a transition to a new form will take place. It suffices for one condition not being met or lagging for the whole process of change coming to a halt.

In the instance of cohabitation, a number of economic advantages are easily identified. First, compared to legal marriage, cohabitation is an “easy in, easy out” solution. This implies, more specifically, (i) that considerable costs are saved by avoiding more elaborate marriage ceremonies, (ii) that parents and relatives or friends are presented with the outcome of individual partner choice as a *fait accompli* and without fuzz, and (iii) that the exit costs from cohabitation, both financial and psychological, are considerably lower than in the case of a legal divorce. In other words, cohabitation is the quicker and cheaper road to both sexual partnership and economies of scale. And in many instances, such shorter term advantages may indeed weigh up against the main advantage of marriage, being a firmer longer term commitment. As such, a switch from marriage to cohabitation must by no means be the exclusive outcome of economic disadvantage or of growing economic hardship.

In the instance of Latin American countries, many experienced periods of political instability and even renewed dictatorships and/or periods of economic stagnation and recession. In such instances the fruits of economic development realized prior to 1980 were often annihilated. Consequently, there are enough reasons to propose the economic and political conditions as the main culprits for the rise in the share of cohabitation in overall union formation. However, as argued and illustrated by E. Fussell and A. Palloni (2004), ages at first union remained remarkably stable throughout the second half of the 20th century, and show a surprisingly low elasticity to such external disturbances. The authors start out with the following question:

“The joint occurrence of an unusual rapid fertility decline and a traditional marriage regime quite resistant to changes poses a problem. How can one explain their coexistence? ”(p.1201)

Their answer consist of pointing out that the economic conditions spurred on the fertility decline, but that:

“As it has been for many centuries, the marriage and kinship system in Latin America continues to provide a system of nonmonetary exchange that parallels rather than competes with market systems.”(p.1211)

As such, in their opinion, the nuptiality system would provide a buffer against economic hardship, for both elites and the bulk of the population. But the paper focuses on the stable ages at first union, and not on the shift from marriage to cohabitation. Viewed from the latter perspective, there was much more change in the nuptiality system, and it remains possible, and even likely, that the more turbulent 1980s and 90s are indeed partially responsible for that shift.

But as the RWA-framework posits, the switch to more cohabitation in all strata of the population would not have occurred in the absence of more favorable “Willingness” and “Ability” conditions. Hence, also these conditions must be researched before coming up with a final conclusion.

With respect to “Willingness”, we possess information from the World Values Surveys (WVS) that indeed suggests the occurrence of a major change in crucial features of the ideational domain. We shall now turn to that evidence.

As is well known, the European (EVS) and World Values Studies (WVS) have a long tradition often going back to the 1980s to measure major ethical, religious, social and political dimensions of the cultural system. Most Latin American countries have only one wave of the WVS, and a single cross-section is of course inadequate for our purposes. Moreover, unlike the EVS, the WVS-surveys measure current cohabitation only (“living as married”) but fail to catch the “ever cohabited” state, thereby hopelessly confounding married persons with and without cohabitation experience⁴. This shortcoming obstructs the analysis of a single cross-section even more, since the selection over the various household formation strategies in function of differences in values cannot be pursued adequately⁵.

⁴ That problem is particularly important for countries where much cohabitation is of the “new” type. These countries are more similar to the European ones, for which the insertion of the “ever cohabited” question in the EVS revealed very stark contrasts in values orientations between those who ever and never cohabited (R. Lesthaeghe and J. Surkyn, 2002, 2004).

⁵ The analysis of V. Salinas and J. Potter (2011) of the Chilean data gathered among new mothers in maternities suffers precisely from such a muddling-up effect. The authors found no significant differences in a series of ethical items by currently married versus cohabiting status, and concluded that this was evidence for refuting the SDT hypothesis. However, the bulk of married women in their atypical sample could not be split up between those who had and did not have prior cohabitation experience. Furthermore, no time series data are presented on the ethics items, despite these being available online for the Chilean WVS rounds of 1990 and 2006. Our results presented in Table 5 for a random sample (rather than a highly selective one) show precisely for these items that vast ideational shifts occurred in Chile between 1990 and 2006.

For three Latin American countries with large shares of post 1960s “new” cohabitation we can at least follow the trend over time with an interval of 15 years. Argentina and Brazil had WVS waves in 1991 and 2006, and Chile in 1990 and 1996, with a subset of questions being repeated. Several of these are of particular use for our purposes since they shed light on the changes occurring in the various age groups in values pertaining to ethics, gender relations, secularization, individual autonomy and Inglehart “post-materialism”.

In table 5 we have brought together the WVS results for the 1990-91 and 2006 waves with respect to 5 ethical issues. For three broad age groups and both sexes we have measured the percentages that consider as inadmissible (“never justified”) the following actions: euthanasia, homosexuality, abortion, divorce and suicide. With the exception of abortion in Argentina and Brazil, there are major changes in the direction of greater tolerance, and in many, there is just about a landslide with reductions in the percentages “never justified” of 10 to over 50 percentage points. Furthermore, these changes are often just as large among the older men and women (50+) as among the younger ones.

Table 5 about here (Attitudinal changes in ethical issues in three Latin American countries, by age and sex, 1990-2006).

By far the largest change noted in all three countries is the increase in tolerance toward homosexuality. The percentages who consider this as “never justified” are halved or, as in Chile, have been reduced to a third or even a quarter of their 1990 levels. In addition, a similar landslide can also be noted with respect to euthanasia. It equally occurs in the three countries, among both sexes and in all age groups. The change is again most pronounced in Chile. The reductions in percentages rejecting suicide and divorce are more modest compared to the massive change in the previous two items, but still very substantial and found in all age groups. And, as noted above, only the attitudes toward abortion show a mixed picture, with greater tolerance emerging in Chile, but not in Brazil and Argentina.

The latter exception notwithstanding, the data in Table 5 clearly indicate that a massive attitude change has taken place during the last two decades in favor of greater tolerance to forms of behavior or interventions that were largely tabooed before. This is obviously a cultural change which is entirely in line with what the theory of the “Second demographic transition” predicted.

The next set of items deals with secularization. The results for three sub-dimensions are given in Table 6: church attendance, roles of the church, and individual prayer. In all instances we measured the percentages who are at the secular end of the spectrum (no attendance, no prayer, church gives no answers). The results for the four items in Table 6 are very clear in the Chilean case: secularization has advanced to a remarkable degree and the trend is entirely in line with those described for the ethical issues in Table 5. The evidence for Argentina is more attenuated. There is a major increase in non-attendance, but a much more modest increase in doubts about the church being capable of addressing family issues and in men reporting no moments of private prayer or mediation. By

contrast the church's capacity to address social problems seems not to have suffered in Argentina.

Table 6 about here. (Attitudinal changes regarding religion and secularization in three Latin American countries, by age and sex, 1990-2006).

The Brazilian outcome differs substantially from the previous two countries: the landslide toward greater ethical tolerance is not matched by advancing secularization. Compared to the 1990 WVS-round, the 2006 one indicates falling percentages of persons never or very rarely attending church and falling percentages of persons doubting the role of the church. In fact, there is a clear rise in the proportions thinking that the church has a role to play in family matters. Only the percentages without moments of prayer and meditation have not changed in any significant direction. Overall, the Brazilian lack of secularization is not in line with international trends.

Table 7 about here. (Attitudinal changes in issues regarding family and gender in three Latin American countries, by age and sex, 1990-2006).

The results for four classic attitudinal items regarding family and gender are reported in Table 7. The Chilean results are again the most striking and totally in line with the expected trend: a sharp increase for men and women of all ages who consider marriage an outdated institution, a parallel decrease of respondents considering that a child needs both a father and mother, a marked increase of persons disagreeing with the statement that being a housewife is just as fulfilling (even among men), and a clear drop in the percentages stating that men should have priority when jobs are scarce. It should also be noted that the "feminist" shift is as pronounced among men as among women.

The Argentinean results again follow the Chilean pattern, but with more moderation. The increase in the percentages considering marriage an outdated institution is just as large, but the Argentinean public is still more convinced that a child needs both a father and mother. There are also mixed signals regarding gender equality: there is the expected increase in persons who disagree with the role of housewife being just as fulfilling, but there is no convincing decline in the opinion that men should have priority when jobs are scarce.

The Brazilian results with respect to the two family items are equally mixed, but different: there is no increase in the percentages considering marriage as an outdated institution, and even a drop among female respondents, but there is a systematic reduction in percentages considering that a child needs a complete parental family. The trend with respect to the gender items is more consistent: there is a rise in percentages disagreeing with the fulfilling nature of being a housewife and a clear drop in those giving men priority if jobs are scarce.

Finally, we have also inspected the trends with respect to two scales that have been used repeatedly in the WVS. The oldest is the "Materialist – Post-materialist" scale in which R. Inglehart tried to catch the contrast between the preoccupations with the "lower order"

or “material” needs in the Maslowian hierarchy of needs and the “higher order”, expressive and non-material needs. This is operationalized by requesting respondents to pick two items out of a total set of four. That set contains two “materialist” items, namely “fighting rising prices” and “maintaining order in the nation”, and two “post-materialist” ones, namely “protecting freedom of speech” and “giving people a greater say in government decisions” (Inglehart, 1990). In Table 8, we use the difference between the percentage of respondents who pick the two “materialist” items and the percentage who prefer the two “post-materialist” ones (M minus PM), and omit, as done by Inglehart, those with a mixed choice. Negative values indicate a preference for the post-materialist priorities. The other WVS-scale used in Table 8 attempts to measure the accentuation of autonomy, by contrasting the socialization values of determination or perseverance and independence (DPI) versus those stressing religious faith and obedience (RO). The WVS-autonomy scale is a 5 point scale (running from -2 to +2), and in our measure we have grouped the autonomy scores and the conformity ones. Our index is again the difference between both (RO minus DPI), omitting the middle category (score 0). Negative values indicate a preference for the “autonomy” end of the scale.

Table 8 about here (Attitudinal changes in the “materialism versus post-materialism” and the “conformity versus autonomy” scales in three Latin American countries, 1990-2006)

The international trend is a shift toward the post-materialist and the autonomy ends of these scales. And the theory of the “second demographic transition” links the growth of non-conformist forms of household formation to these trends. However, as was found repeatedly in the European settings, the Inglehart M-PM scale is quite sensitive to fluctuations in retail prices (cf. item “fighting rising prices”(Inglehart, 1990:94). Given the turbulent economic and political histories of Chile and Argentina during the last two or three decades, one can indeed expect a two-point measurement to be far from adequate. The results in Table 8 for the Inglehart-scale should therefore be interpreted with great caution. It turns out, at least in our results, that both Chile and Argentina have not progressed on the post-materialist dimension, and that only Brazil shows a decline in the preponderance of the “materialist” preoccupations. As a consequence, another synthetic measure is needed, and preferably one who is much more immune to economic and political disturbances. The “autonomy-conformity” scale offers such an alternative. The results for this scale reveal exactly the opposite. Here, the percentages at the conformity end give way to those at the autonomy end in Chile, but not consistently so in Argentina and not at all in Brazil. The sizeable Chilean shift toward the “autonomy” end is definitely consistent with the trends found earlier with respect to all the other items used in this section. But, the presence of “religious faith” among the constituting items of the autonomy scale and the lack of secularization found in Brazil translate into a concomitant lack of progress on the autonomy scale.

Table 9 about here. (Overview of findings concerning attitudinal changes over the period 1990-2006 in three Latin American countries.)

An overview of the attitudinal trends is given in Table 9. We have coded the presence of a strong trend which is furthermore consistently observed among both sexes and in virtually all age groups as “T”, and the presence of a weak or no trend as “t”. Similarly, upper case “F” denotes that the trend fits the direction that one would expect on the basis of the “second demographic transition” theory, whereas lower case “f” signals the lack of such a fit. The outcome is as follows for the 15 items or scales used here:

1. The patterning for Chile is strikingly consistent with what could be expected on the basis of the SDT-theory: The TF combination is present in 14 of the 15 tests. The only exception is a tf combination for the Inglehart post-materialist scale.
2. In Argentina and Brazil, there are more exceptions. For these two countries respectively there are 5 and 6 outcomes that fail to fit expected directions (tf +Tf). In the Brazilian case, the exceptions are typically clustered around the topics of religion and abortion, and therefore basically reflect the lack of further secularization. For Argentina, however, the non-fitting results are more widely scattered over various other domains, with the 2 Tf combinations for abortion and the Inglehart-scale.
3. The overall result is that a total of 30 strong and consistent TF combinations are found against 7 Tf cases with strong but inconsistent trends, and 8 more inconclusive tF or tf combinations.

The answer to the question of what flew under the radar can now be answered partially. The ethical dimension, far more than any other, has undergone very large shifts during the period under consideration. This lends strong support to the thesis that tolerance for various sorts of non-conformist behavior, including the rise of “new” cohabitation in Chile, Argentina and Brazil, has increased quite dramatically, and that as a consequence, the W or “willingness”-condition in the RWA-framework has ceased to be a limiting or bottleneck condition. Obviously other changes that remain undocumented here could have equally contributed in creating more favorable R and A conditions for the Latin American cohabitation boom, but at least it is becoming clear that a cultural shift component is again a necessary (but probably not a sufficient) ingredient of a more complete explanation.

5. Discussion

The reconstruction of the share of cohabitation in the process of union formation of both men and women in some 350 Latin American regions indicates that there has been a real “cohabitation boom” taking place since the 1960s in some instances and accelerating during the 1990s in most. This holds particularly, but not exclusively, in areas which had relatively low levels of “old” or traditional cohabitation with a historical ethnic background. Hence, a sizeable part of the boom is due to “new” cohabitation. Moreover, the negative gradient of cohabitation with female education is somewhat alleviated over time since the rise in cohabitation affected all educational categories, with the middle educational groups and the more educated catching up to a significant extent.

This raises the question whether or not this feature signals a partial convergence of Latin American countries to the European pattern of the so called “second demographic transition”. The discussion of this question has already emerged in the Latin American literature (Garcia and Rojas, 2001; Cabella et al., 2004; Rodriguez Vignoli, 2005; Quilodran, 2008; Castro Martin et al., 2011; Salinas and Potter, 2011; Covre-Sussai and Matthijs, 2010). Two arguments are offered here in favor of such a convergence. Firstly, on the basis of both the negative cross-sectional gradient with education and the steep rises in female education, one would expect the share of marriage to gain importance, and not the share of cohabitation. Secondly, for three major countries with a sizeable increase in “new” cohabitation (Chile, Brazil, Argentina) data from two rounds of the World Values Studies show major changes, if not a landslide, in the direction of greater tolerance for previously tabooed behavior or actions, such as euthanasia, homosexuality, and suicide. Moreover, several other attitudes in favor of greater secularism, of non-conformist family arrangements, or more egalitarian gender relations emerged during the 15 year period documented by the WVS. These ideational changes, and particularly those in ethics, are indicative of the fact that the cohabitation boom has indeed developed in a context of growing individual autonomy and greater overall tolerance. The expansion of cohabitation and of parenthood among cohabitants, or the “non-conformist transition”, is not the only hallmark of the SDT. The other major ingredient is the so called “postponement transition” with the shift to older ages of both nuptiality and fertility. In Western and Northern Europe, both the non-conformist and the postponement parts occurred more or less simultaneously. In advanced Asian industrial societies, the marriage and fertility postponement preceded the hitherto modest increase in cohabitation by three decades. A similar timing gap was witnessed in Southern Europe. The Latin American experience may just be the illustration of the reverse, with the non-conformist transition preceding the postponement one. If that proposition holds, we should now be looking out for rises in ages at first birth and further drops in fertility to below replacement levels.

Appendices

Appendix 1. Sample characteristics

Map series 1: Evolution of the share of cohabitation among all unions of women 25-29, various census rounds.

Map series 2: Cartogram representation of the evolution of the share of cohabitation among all unions of women 25-29, various census rounds. Areas of regions are proportional to their 2000 population size.

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Tables and figures

Table 1. Distribution of 51 ethnic populations according to selected characteristics of their marriages and sexual unions

	Dominant type of union					Consensual unions and/or Extamarital sex			Marriage mode				Marriage ceremony	
	Monogam. only	Monog+ polyandry	Monog+ occas. polygamy	Monog+ common polygamy	Monog+ visiting unions	Universal	Moderate	Occas. / uncom	Bride price/ Bride serv.	Woman/ Sister exchange	None	Dowry	Elaborate	Simple/ none
Mexican / Centr. Am. Indian (9)	1	3	2	1	2	2	2	2	5	0	0	0	3	1
Amazone / Orinoco Indian (9)	0	1	7	1	0	3	3	0	6	3	0	0	0	1
Mato Grosso, Braz. Highlands, Gran Chaco Indian (12)	0	5	6	1	0	5	1	2	7	0	2	0	0	1
Andes Indian (11)	0	1	6	4	0	3	1	2	7	3	2	0	0	2
New world black & mixed (8)	0	0	2	0	6	7	0	0	2	0	1	0	-	-
European or upper class (2)	2	0	0	0	0	0	2	0	0	0	0	1	2	0
TOTAL (N=51)	3	10	23	7	8	20	9	6	27	6	5	1	5	5

Sources: Compiled by authors on the basis of 31 coded references in the G.P. Murdock and D.R. White "Ethnographic Atlas" Standard Cross Cultural Sample, and 20 ethnic groups described in the Yale "Human Areas Relations Files" eHRAF electronic version.

Table 2. Percent cohabiting among all unions of men and women, 25-29 and 30-34, in Latin American countries, 1970-2000 census rounds

	25-29					30-34				
	1970	1980	1990	2000	Dif. 2000 -1970	1970	1980	1990	2000	Dif. 2000 -1970
Men										
Argentina	13.05	14.90	25.85	48.72	35.67	10.93	12.16	20.9	33.19	22.26
Bolivia	.	.	.	41.13		.	.	.	28.59	
Brazil	7.15	13.29	25.24	45.52	38.37	6.52	11.25	19.54	35.41	28.89
Chile	4.36	6.19	12.06	29.29	24.93	4.22	5.75	9.59	20.38	16.16
Colombia	20.32	36.42	54.81	72.95	52.63	18.59	30.47	46.11	62.07	43.48
Costa Rica	16.99	20.10	.	38.05	21.06	15.28	17.99	.	29.84	14.56
Cuba	.	.	.	62.10		.	.	.	54.59	
Ecuador	27.17	29.93	31.30	41.52	14.35	24.75	27.61	28.64	36.35	11.6
Mexico	16.61	.	16.19	25.04	8.43	14.59	.	12.6	19.62	5.03
Panama	58.42	54.93	58.82	70.17	11.75	57.49	52.42	50.52	58.3	0.81
Peru	.	.	50.74	76.60		.	.	37.49	62.73	
Puerto Rico	8.09	6.24	13.49	.		8	5.12	11.01	.	
Venezuela	30.61	34.14	38.68	56.39	25.78	30.57	32.81	35.34	47.7	17.13
Women										
Argentina	11.05	13.02	22.47	41.28	30.23	10.08	11.53	19.46	28.72	18.64
Bolivia	.	.	.	34.68		.	.	.	23.39	
Brazil	7.59	13	22.22	39.27	31.68	7.13	11.73	19.03	31.6	24.47
Chile	4.63	6.72	11.35	24.6	19.97	4.61	6.52	10.95	18.3	13.69
Colombia	19.66	33.18	49.17	65.6	45.94	18.2	28.44	42.44	56.64	38.44
Costa Rica	16.82	19.44	.	32.58	15.76	16.05	17.27	.	26.32	10.27
Cuba	.	.	.	55.82		.	.	.	50	
Ecuador	26.96	29.37	30.12	37.44	10.48	25.34	26.84	27.47	32.54	7.2
Mexico	15.34	.	15.16	22.69	7.35	14.16	.	12.49	18.63	4.47
Panama	58.86	52.33	53.24	62.54	3.68	53.78	51.01	49.32	54.06	0.28
Peru	.	.	43.09	69.81		.	.	31.85	56.05	
Puerto Rico	8.51	5.25	12.01	.		6.57	4.67	10.09	.	
Venezuela	30.81	32.59	36.85	51.61	20.8	31.18	32.64	34.89	45.15	13.97

Source: Own calculations based on Latin American census microdata from IPUMS international

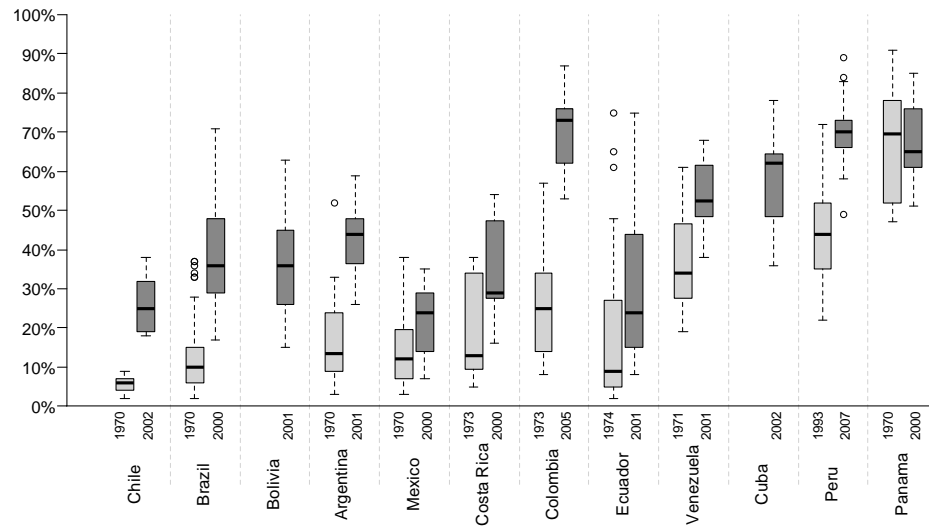
Table 3. Number of regions with shares of cohabitation among all unions of 20 and 50 percent respectively, women 25-29. Latin American countries, 1970-2000 census rounds

	>20%				>50%			
	1970	1980	1990	2000	1970	1980	1990	2000
Chile	0 (13)	0 (13)	0 (13)	9 (13)	0 (13)	0 (13)	0 (13)	0 (13)
Brazil	2 (26)	22 (133)	67 (135)	131 (135)	0 (26)	0 (133)	3 (135)	29 (135)
Puerto Rico	0 (1)	0 (1)	0 (1)		0 (1)	0 (1)	0 (1)	
Bolivia				8 (9)				2 (9)
Argentina	8 (23)	8 (24)	18 (24)	24 (24)	1 (23)	0 (24)	0 (24)	4 (24)
Mexico	8 (30)		8 (32)	20 (32)	0 (30)		0 (32)	0 (32)
Costa Rica	3 (7)	3 (7)		6 (7)	0 (7)	0 (7)		2 (7)
Colombia	15 (27)	28 (30)	30 (30)	33 (33)	2 (27)	4 (30)	19 (30)	33 (33)
Ecuador	7 (21)	8 (20)	9 (22)	13 (23)	3 (21)	3 (20)	3 (22)	5 (23)
Cuba				15 (15)				10 (15)
Venezuela	23 (24)	24 (24)	24 (24)	24 (24)	5 (24)	4 (24)	3 (24)	16 (24)
Peru			25 (25)	25 (25)			8 (25)	24 (25)
Panama	10 (10)	10 (10)	10 (10)	11 (11)	8 (10)	9 (10)	8 (10)	11 (11)

Note: Regions with less than 50 women among all unions in the dataset are not included.

Source: Own calculations based on Latin American census microdata from IPUMS international

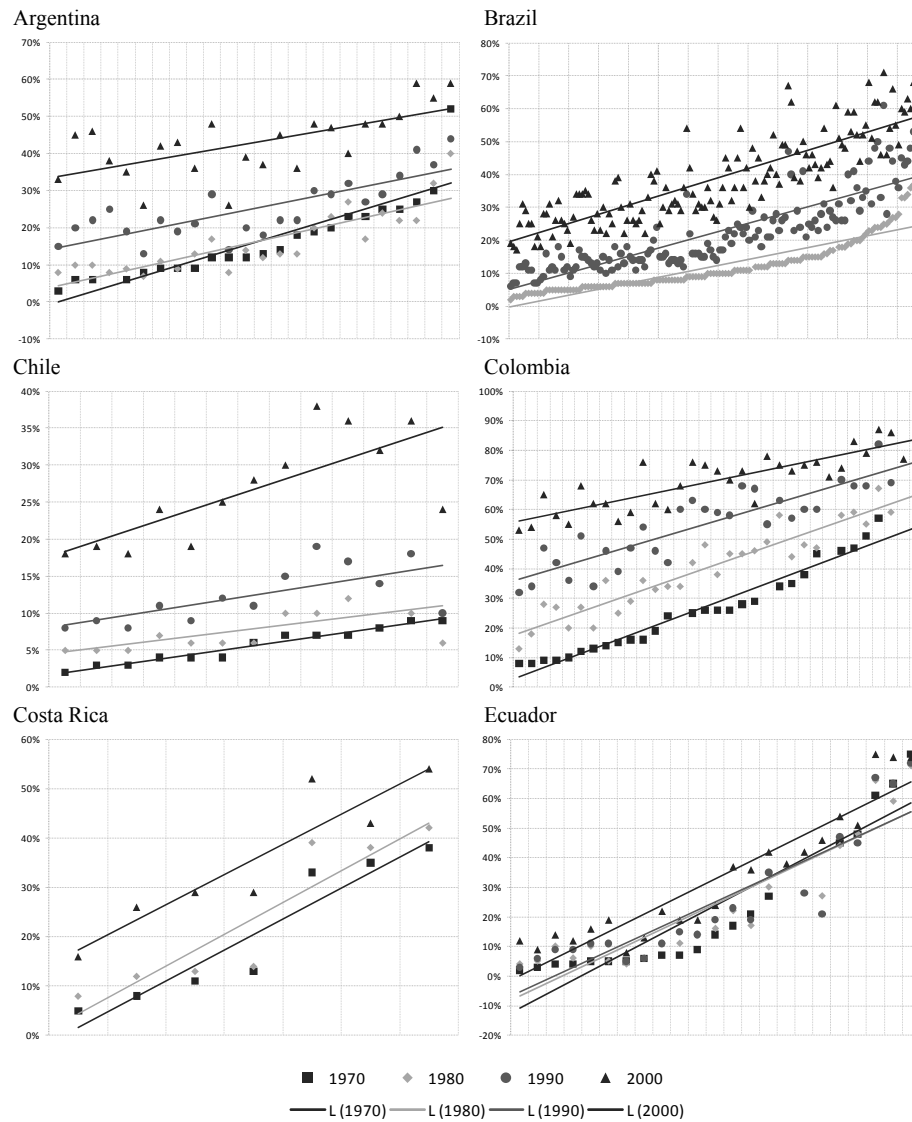
Figure 1. Boxplot of the share of cohabitation among all unions of women 25-29 in the regions of Latin American countries, various census rounds



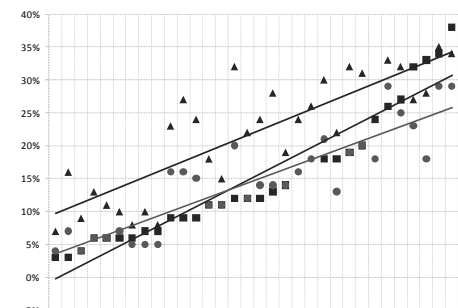
Note: Regions with less than 50 women among all unions in the dataset are not included.

Source: Own calculations based on Latin American census microdata from IPUMS international

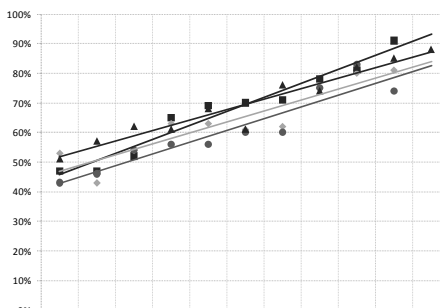
Figure 2. Patterns in the rise of the share of cohabitation among all unions of women 25-29 in regions of Latin American countries, various census rounds



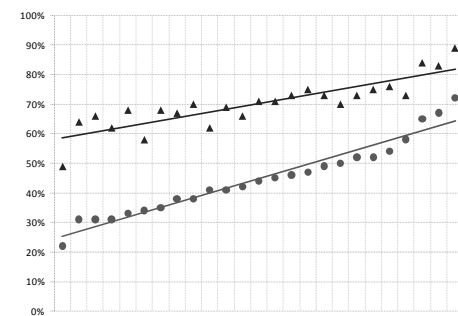
Mexico



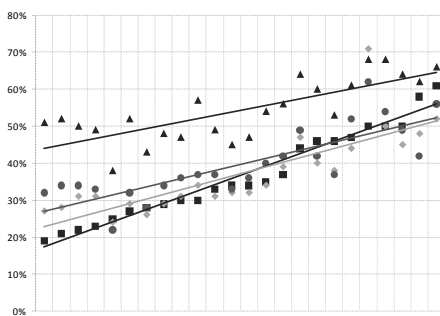
Panama



Peru



Venezuela



■ 1970 ♦ 1980 ● 1990 ▲ 2000
— L(1970) — L(1980) — L(1990) — L(2000)

Note: Regions with less than 50 women among all unions in the dataset are not shown.

Source: Own calculations based on Latin American census microdata from IPUMS international.

Table 4. Changes in the shares of cohabitation among women 25-29 in the 25 regions with respectively the lowest and the highest initial levels of cohabitation in 1970

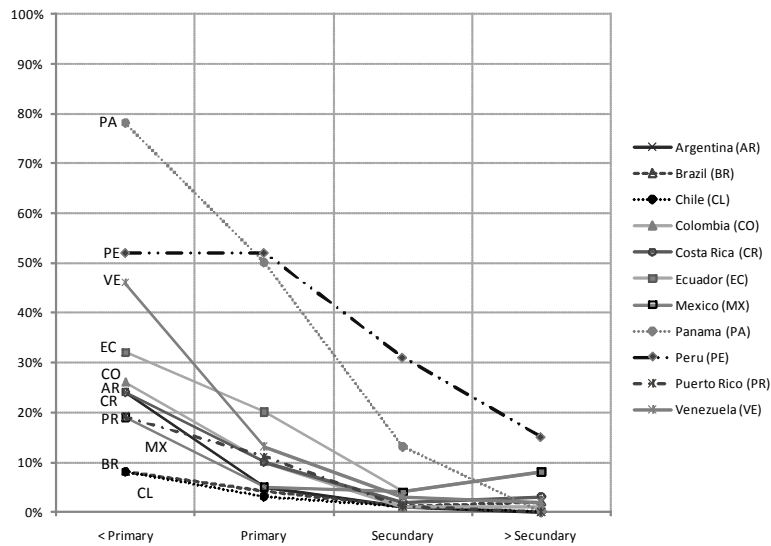
#25 Regions with the lowest % of cohabiting unions in 1970					#25 Regions with the highest % of cohabiting unions in 1970				
	Region	Country	% 1970	% 2000		Region	Country	% 1970	% 2000
1	Azuay	Ecuador	1.6	12.1		Kuna Yala (San Blas)	Panama	90.6	85.1
2	Del Maule	Ecuador	2.4	18.2		Darien	Panama	81.0	82.1
3	Magallanes y Antartica Chilena	Chile	2.5	18.1		Bocas del Toro*	Panama	78.4	73.9
4	Tungurahua Del Libertador	Ecuador	2.7	8.7		Los Rios	Ecuador	75.3	74.4
5	General Bernardo O'Higgins	Chile	3.0	19.5		Cocle	Panama	70.7	75.7
6	Parana	Brazil	3.1	28.9		Chiriqui*	Panama	69.9	61.4
7	Guanajuato	Mexico	3.3	7.1		Veraguas*	Panama	68.6	68.2
8	Cordoba	Argentina	3.3	32.6		Los Santos	Panama	65.3	61.1
9	Ceara	Brazil	3.4	35.7		Apure	Venezuela	60.8	65.6
10	Queretaro	Mexico	3.4	16.2		Esmeraldas	Ecuador	60.7	75.4
11	Santa Catarina	Brazil	3.5	30.4		Cojedes	Venezuela	58.2	62.0
12	Valparaiso	Colombia	3.5	23.9		Choco	Colombia	57.1	87.4
13	Minas Gerais	Brazil	3.7	26.0		Formosa	Argentina	52.1	59.1
14	Loja	Ecuador	3.8	11.6		Colon	Panama	51.7	62.0
15	Region Metropolitana de Santiago	Chile	3.9	24.8		Cordoba	Colombia	50.8	79.5
16	Cotopaxi	Ecuador	3.9	13.6		Amazonas	Venezuela	50.4	67.6
17	Piaui	Brazil	4.0	27.6		Yaracuy	Venezuela	50.2	63.9
18	Aguascalientes	Mexico	4.1	9.3		Delta Amacuro	Venezuela	49.5	67.8
19	Bio-Bio	Chile	4.1	19.0		Guayas	Ecuador	48.3	50.7
20	Sao Paulo	Brazil	4.3	34.8		Panama	Panama	47.4	57.2
21	Chimborazo	Ecuador	4.6	8.5		La Guajira	Colombia	47.4	82.8
22	Cartago	Costa Rica	4.6	15.5		Herrera	Panama	47.1	50.7
23	Rio Grande do Sul	Brazil	4.9	40.6		Portuguesa	Venezuela	46.7	60.6
24	Canar	Ecuador	4.9	16.2		Cesar	Colombia	46.4	74.3
25	Carchi	Ecuador	5.5	19.1		Monagas	Venezuela	46.3	52.9

Note: * The decrease in the % of cohabitation unions in these regions can be explained by the creation of a new region in Panama in the 2000 round, which was created from them (Ngöble-Bugle; 2000 = 88,44%).

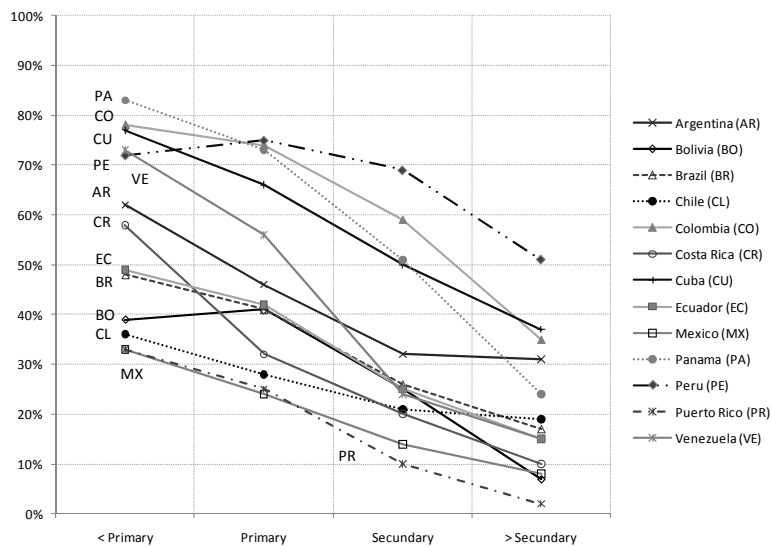
Source: Own calculations based on Latin American census microdata from IPUMS international.

Figure 3. Share of cohabitation among all unions of women 25-29 by level of education, country and census round

Round: 1970*



Round: 2000**

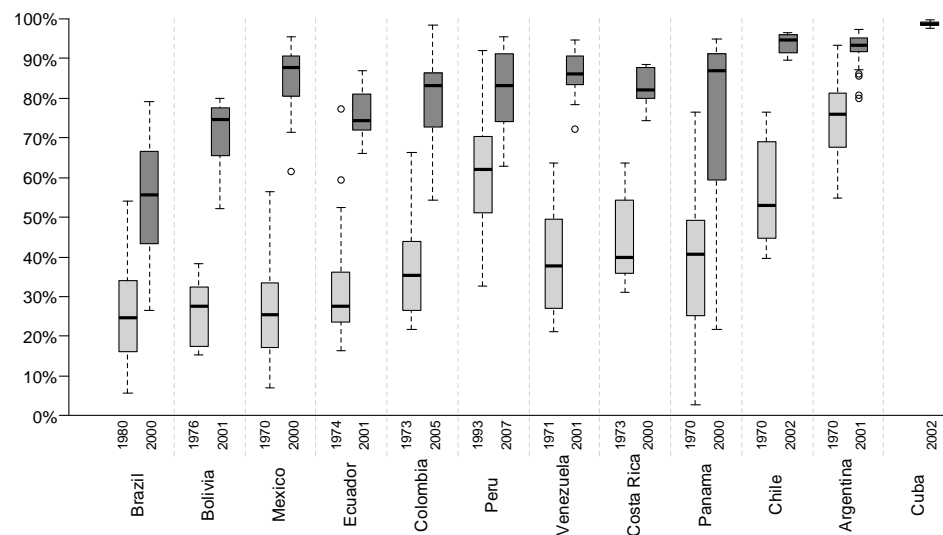


Notes: * Perú is 1993. ** Puerto Rico is 1990

Source: Own calculations based on Latin American census microdata from IPUMS international.

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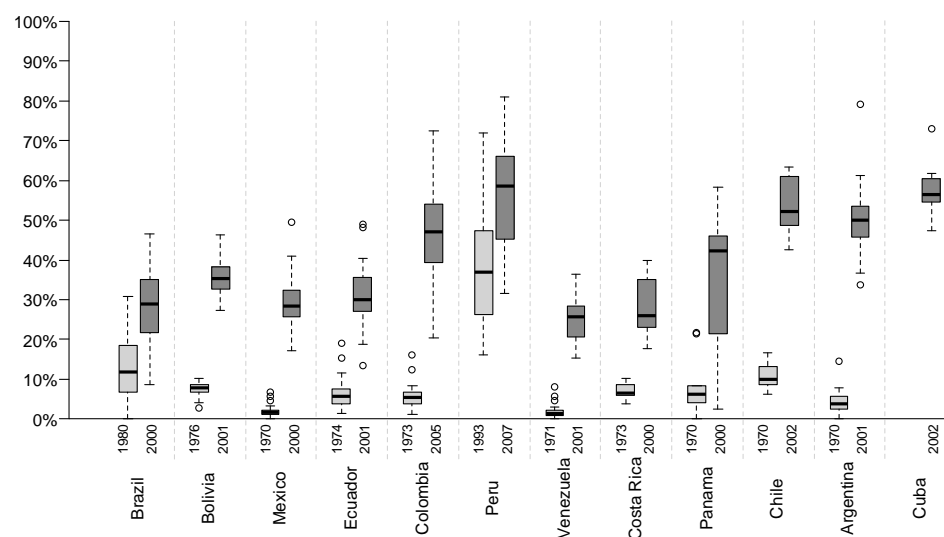
Figure 4. Boxplots of the regional distributions of the percentage of women 25-29 with complete primary education or better in Latin American countries, various census rounds



Note: Regions with less than 50 women among all unions in the dataset are not included.

Source: Own calculations based on Latin American census microdata from IPUMS international.

Figure 5. Boxplots of the regional distributions of the percentage of women aged 25-29 with complete secondary education or better in Latin American countries, various census rounds



Note: Regions with less than 50 women among all unions in the dataset are not included.

Source: Own calculations based on Latin American census microdata from IPUMS international.

Table 5. Attitudinal changes in ethical issues in three Latin American countries, by age and sex, 1990-2006

		Men					Women				
		≤ 29	30-49	50+	Total	N	≤ 29	30-49	50+	Total	N
Never justified: Euthanasia											
Argentina	1991	43.3	53.4	62.0	53.6	453	46.8	57.1	72.2	59.9	491
	2006	36.3	38.2	52.0	42.1	382	36.2	39.1	58.9	45.2	434
Chile	1990	51.9	62.6	72.8	61.0	700	58.7	65.2	75.9	65.7	760
	2006	25.7	34.1	48.9	36.7	411	35.1	33.0	50.0	39.4	510
Brazil	1991	58.2	59.2	73.2	62.0	811	60.8	70.4	79.2	68.6	869
	2006	41.4	48.8	47.1	46.0	611	50.4	50.3	56.3	51.9	855
Never justified: Homosexuality											
Argentina	1991	52.7	58.8	70.4	61.2	448	42.3	56.4	73.9	59.0	505
	2006	24.8	27.5	50.4	33.5	400	16.7	23.9	40.5	27.6	449
Chile	1990	71.8	75.6	83.6	76.1	703	71.4	77.5	86.2	77.6	774
	2006	17.5	24.6	36.0	26.4	425	13.9	21.6	32.7	23.2	512
Brazil	1991	74.7	70.1	84.9	75.2	888	57.6	62.3	76.6	63.6	867
	2006	35.8	32.5	38.7	35.3	606	22.6	27.6	37.4	28.6	838
Never justified: Abortion											
Argentina	1991	45.0	39.1	50.0	44.6	446	38.3	39.9	58.2	45.9	518
	2006	49.6	50.0	64.7	54.7	430	44.0	53.8	68.2	56.1	490
Chile	1990	69.3	76.7	78.8	74.5	709	73.8	74.6	82.0	76.2	783
	2006	43.0	53.7	63.8	54.2	432	49.6	53.6	72.1	58.9	533
Brazil	1991	59.6	59.0	67.5	61.1	890	61.7	68.5	74.9	67.3	887
	2006	55.8	65.0	62.7	61.5	613	59.5	65.6	68.5	64.5	866
Never justified: Divorce											
Argentina	1991	20.0	20.8	31.9	24.5	461	14.1	23.2	30.6	23.4	518
	2006	13.5	16.8	24.8	18.3	427	9.9	13.4	21.2	15.2	499
Chile	1990	36.4	49.5	50.3	44.8	707	42.0	44.3	58.8	47.3	780
	2006	15.3	13.0	27.5	18.3	437	8.0	13.7	26.2	16.5	533
Brazil	1991	28.8	26.5	42.2	30.9	883	25.1	32.6	45.5	32.6	881
	2006	14.6	21.1	22.0	19.3	612	12.6	20.5	26.0	19.6	859
Never justified: Suicide											
Argentina	1991	76.7	80.1	84.7	80.8	458	78.9	81.4	89.4	83.7	496
	2006	58.5	46.1	79.4	71.6	408	69.5	74.4	85.0	76.8	462
Chile	1990	73.3	78.9	85.4	78.3	706	77.9	85.0	86.9	83.0	782
	2006	48.2	60.0	65.7	58.7	426	52.6	61.5	75.0	63.8	517
Brazil	1991	83.1	89.3	92.0	87.5	890	85.5	92.7	92.5	89.9	888
	2006	64.9	77.8	79.7	74.3	619	71.2	78.1	78.7	76.2	864

Source: Own tabulations of the 1990 and 2005 rounds of the World Values Surveys data files.

Table 6. Attitudinal changes regarding religion and secularization in three Latin American countries, by age and sex, 1990-2006

		Men					Women				
		≤ 29	30-49	50+	Total	N	≤ 29	30-49	50+	Total	N
Church attendance = never or less than once a year (%)											
Argentina	1991	45.6	33.0	30.8	35.2	275	31.5	18.1	26.0	24.0	383
	2006	73.3	58.3	65.6	65.5	467	46.5	36.8	25.0	34.9	535
Chile	1990	61.2	50.2	38.7	51.5	714	36.2	27.7	23.3	29.5	786
	2006	76.1	55.9	55.7	61.1	425	47.9	39.2	23.8	36.2	542
Brazil	1991	46.0	45.8	35.4	43.5	892	34.3	31.5	16.0	29.1	890
	2006	38.5	38.7	34.3	37.3	624	25.7	21.9	19.9	20.9	870
Church gives answers to social problems (% No)											
Argentina	1991	72.6	72.3	56.8	66.8	407	68.3	62.6	48.7	55.4	448
	2006	72.8	63.6	63.5	66.5	391	67.4	57.7	438	55.4	466
Chile	1990	29.3	25.1	15.6	22.8	663	32.0	22.9	21.1	25.7	723
	2006	70.3	57.9	55.3	60.4	407	57.0	51.5	44.1	50.3	509
Brazil	1991	66.7	64.9	46.4	61.4	858	67.0	59.2	40.8	55.9	829
	2006	64.4	50.2	48.8	54.3	606	56.2	54.4	44.6	52.4	842
Church gives answers to problems of the family (% No)											
Argentina	1991	60.0	62.3	44.1	55.5	407	54.4	47.7	39.4	46.6	465
	2006	63.1	58.2	58.1	59.7	397	60.8	58.6	44.3	53.9	475
Chile	1990	22.1	16.0	13.0	17.5	668	18.6	18.5	14.0	17.4	743
	2006	59.6	47.9	43.9	49.9	413	51.9	42.9	38.7	43.7	517
Brazil	1991	55.0	55.3	45.9	53.0	860	54.1	41.4	32.1	44.3	844
	2006	34.2	29.0	26.5	29.9	608	27.2	27.0	25.2	26.6	854
Moments of prayer or meditation (%No)											
Argentina	1991	38.5	34.5	26.1	32.6	466	28.5	16.6	10.9	17.7	526
	2006	44.6	34.2	32.7	37.0	462	23.6	14.4	6.6	14.1	532
Chile	1990	27.0	18.2	14.4	20.5	706	16.3	8.9	2.0	9.7	784
	2006	45.8	29.9	22.6	31.8	443	24.6	17.5	5.9	15.3	543
Brazil	1991	15.5	15.1	10.0	14.1	887	13.9	6.4	3.0	8.6	886
	2006	21.2	13.2	10.4	14.9	609	11.2	5.4	4.4	6.9	859

Source: Own tabulations of the 1990 and 2005 rounds of the World Values Surveys data files.

Table 7. Attitudinal changes in issues regarding family and gender in three Latin American countries, by age and sex, 1990-2006

		Men					Women				
		≤ 29	30-49	50+	Total	N	≤ 29	30-49	50+	Total	N
Marriage is an outdated institution (% agree)											
Argentina	1991	13.5	11.4	4.8	9.6	460	13.7	10.5	4.4	9.2	502
	2006	38.1	29.0	22.8	29.7	434	38.2	32.3	22.0	30.1	521
Chile	1990	18.5	15.4	10.4	15.4	702	17.0	16.1	10.2	14.9	774
	2006	42.4	26.6	23.3	29.8	433	39.3	29.6	22.3	29.6	530
Brazil	1991	29.0	28.4	20.5	26.9	875	32.1	26.1	18.2	26.7	868
	2006	30.4	21.8	19.2	23.4	619	17.7	19.6	19.7	19.1	871
Child needs home with father and mother (% agree)											
Argentina	1991	91.5	93.4	97.6	94.4	462	94.2	96.1	96.1	95.6	519
	2006	83.7	93.6	98.0	92.0	449	79.6	80.3	89.9	83.6	518
Chile	1990	93.5	93.6	98.2	94.6	708	89.5	90.1	94.1	90.9	781
	2006	66.7	84.0	89.0	80.9	440	59.3	66.5	78.5	68.6	539
Brazil	1991	89.8	92.2	96.5	92.2	890	82.0	80.9	94.0	84.3	885
	2006	82.6	89.6	91.5	87.9	622	73.2	76.3	81.0	76.6	867
Being a housewife is just as fulfilling (% disagree + strongly disagree)											
Argentina	1991	42.9	39.0	44.8	42.1	401	54.6	46.6	28.9	42.6	496
	2006	50.4	45.0	53.4	49.5	364	45.3	46.1	30.9	40.1	506
Chile	1990	35.1	23.0	11.9	24.9	687	35.4	29.6	15.3	28.0	765
	2006	48.3	43.3	24.3	38.4	419	55.4	44.7	31.9	43.0	542
Brazil	1991	43.5	36.3	27.2	37.0	862	51.5	39.0	29.4	41.8	872
	2006	51.9	40.7	39.3	43.8	601	58.7	53.6	45.3	53.0	869
Priority for men if jobs are scarce (% agree)											
Argentina	1991	25.2	23.1	31.1	26.5	471	13.1	21.8	29.8	22.2	517
	2006	26.9	29.4	32.2	29.5	454	17.6	14.2	32.8	22.0	523
Chile	1990	34.0	35.0	50.0	38.1	713	30.3	33.7	49.0	36.5	781
	2006	24.0	28.9	41.4	31.6	446	21.1	19.8	32.8	24.6	548
Brazil	1991	39.8	37.2	45.8	40.1	892	33.8	33.7	49.0	37.2	885
	2006	26.2	19.9	33.1	25.6	624	10.6	20.1	27.5	19.2	870

Source: Own tabulations of the 1990 and 2005 rounds of the World Values Surveys data files.

Table 8. Attitudinal changes in the “materialism versus post-materialism” and the “conformity versus autonomy” scales in three Latin American countries, 1990-2006

		Men					Women				
		≤ 29	30-49	50+	Total	N	≤ 29	30-49	50+	Total	N
% “Materialist” minus % “Postmaterialist” (M-PM)											
Argentina	1991	-17.4	-0.3	9.2	-4.0	459	2.2	14.7	21.4	13.6	506
	2006	4.9	14.4	20.8	13.5	438	9.8	3.2	25.3	12.9	510
Chile	1990	-8.1	-6.9	13.5	-2.6	697	8.6	8.2	33.1	14.5	738
	2006	-3.5	16.3	26.7	14.5	441	6.6	7.6	23.4	12.7	537
Brazil	1991	23.0	26.0	48.0	29.8	881	31.0	36.4	55.3	38.2	861
	2006	20.5	20.8	26.0	22.8	587	17.3	15.8	28.0	20.0	843
% “Religion and obedience” minus % “Determination, perseverance and independence” (RO-DPI)											
Argentina	1991	-5.1	-26.6	11.3	-9.9	474	-27.5	-14.2	14.7	-6.4	506
	2006	-19.4	-3.5	1.4	-7.1	467	0.7	-12.1	17.3	2.3	510
Chile	1990	12.1	27.8	31.5	22.9	714	28.7	34.2	42.3	34.4	738
	2006	-21.3	-17.2	0.8	-12.6	449	-3.5	10.9	30.0	13.8	537
Brazil	1991	15.1	12.1	32.8	18.0	892	25.9	38.2	40.0	33.9	861
	2006	23.5	39.8	37.1	34.1	449	28.6	33.9	43.1	34.6	843

Source: Own tabulations of the 1990 and 2005 rounds of the World Values Surveys data files. Note that we have reversed the original Inglehart scale (PM-M) but equally disregard the middle or “mixed” category. The same holds for the autonomy scale used here where we contrasted the percentages with -2 and -1 scores (obedience end of the scale) with those with +1 and +2 (autonomy end), omitting those in the middle with a score of zero.

Table 9. Overview of findings concerning attitudinal changes over the period 1990-2006 in three Latin American countries.

	Argentina	Chile	Brazil	Total
Rise in "marriage outdated institution"	T, F	T, F	T, f	
Decline in "child needs home with both father and mother"	T, F	T, F	T, F	
Decline in "being housewife just as fulfilling"	t, F	T, F	T, F	
Decline in "priority to men if jobs are scarce"	t, f	T, F	T, F	
Decline in "never justified"				
Euthanasia	T, F	T, F	T, F	
Homosexuality	T, F	T, F	T, F	
Abortion	T, f	T, F	t, f	
Divorce	T, F	T, F	T, F	
Suicide	T, F	T, F	T, F	
Rise in lack of church attendance	T, F	T, F	T, f	
Decline in church answers social problems	t, f	T, F	T, f	
Decline in church answers family problems	T, F	T, F	T, f	
Decline in personal moments	t, F	T, F	t, f	
Rise in "post-materialism"	T, f	t, f	T, F	
Rise on the "autonomy scale"	t, f	T, F	T, f	
Number of T, F combinations	8	14	8	30
Number of t, F combinations	2	0	1	3
Number of t, f combinations	3	1	1	5
Number of T, f combinations	2	0	5	7
Total	15	15	15	45

Note: "T" = strong trend; "t"= weak or not trend; "F"= trend fits the expected direction on the basis of the "second demographic transition"; "f"= trend does not fit the expected direction on the basis of the "second demographic transition".

Source: own calculations with the World Value Surveys data.

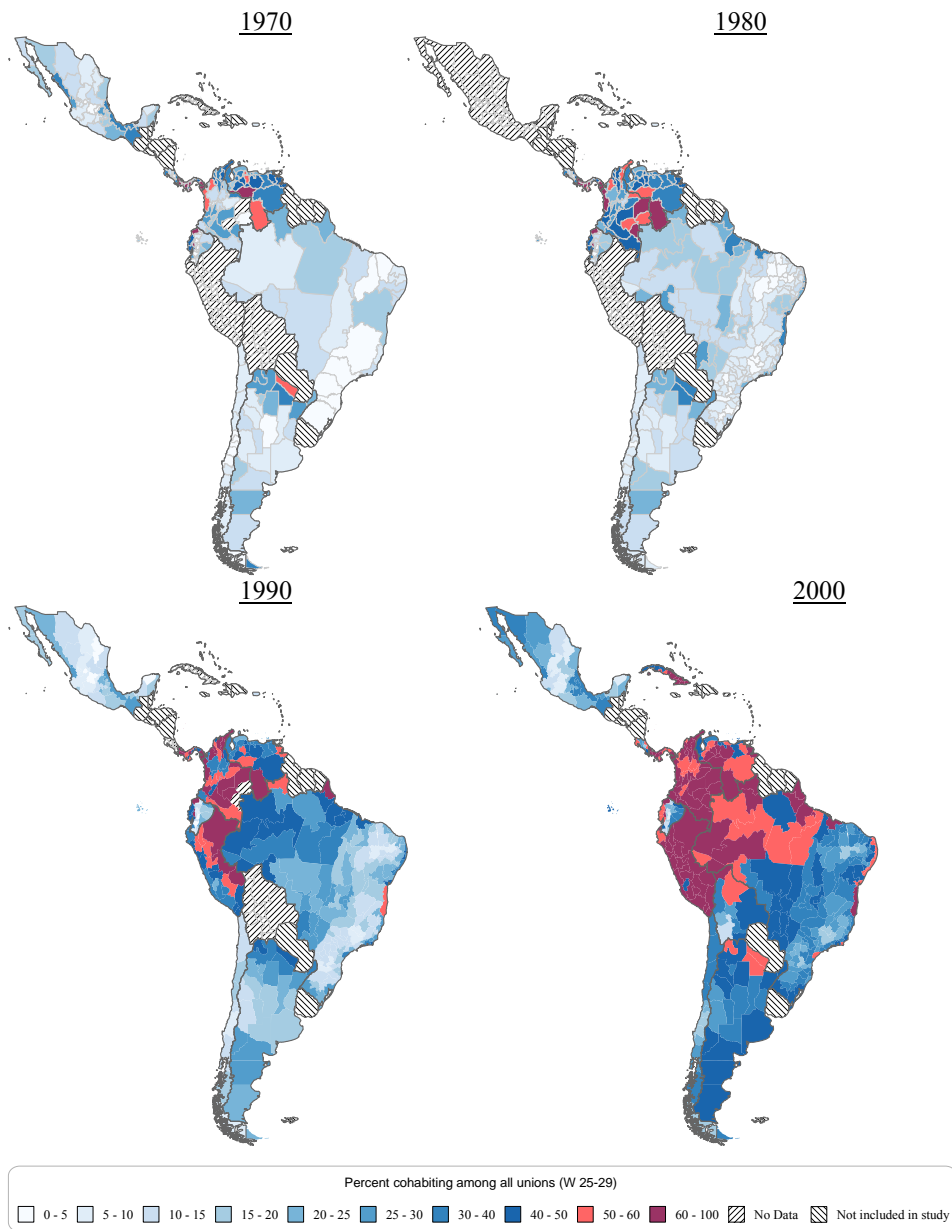
Appendices

Table 1. Sample characteristics

Country	Year	Sample density	Women in union		Men in union		Type of unit	# Units
			Age 25-29	Age 30-34	Age 25-29	Age 30-34		
Argentina	1970	2,0%	11,951	12,594	9,410	11,565	Province	24
	1980	10,0%	73,547	73,733	62,566	72,154	Province	24
	1991	10,0%	108,866	119,285	90,369	113,934	Province	24
	2001	10,0%	82,852	89,599	68,084	83,112	Province	24
Bolivia	2001	10,0%	21,002	20,533	18,001	19,275	Department	9
Brazil	1970	5,0%	128,358	119,990	108,100	120,653	State	26
	1980	5,0%	175,376	152,298	157,046	157,778	Meso-region	137
	1991	5,8%	248,620	245,327	210,307	238,203	Meso-region	137
	2000	6,0%	269,940	288,332	229,222	275,801	Meso-region	137
Chile	1970	10,0%	21,923	20,134	18,653	19,269	Region	13
	1982	10,0%	31,884	30,151	27,873	29,992	Region	13
	1992	10,0%	41,721	43,286	34,968	41,737	Region	13
	2002	10,0%	34,803	42,994	27,592	39,349	Region	13
Colombia	1973	10,0%	47,046	42,346	34,580	38717	Department	30
	1985	10,0%	80,109	67,829	60,629	66113	Department	33
	1993	10,0%	97,898	96,791	76,585	90675	Department	31
	2005	10,0%	95,127	97,155	77,645	88833	Department	33
Costa Rica	1973	10,0%	4,430	3,970	3,790	4,032	Province	7
	1984	10,0%	7,380	6,591	6,616	6,749	Province	7
	2000	10,0%	10,242	11,364	8,391	10,750	Province	7
Cuba	2002	10,0%	31,355	40,142	26,048	37,580	Province	15
Ecuador	1974	10,0%	16,243	13,543	15,839	15,654	Province	21
	1982	10,0%	22,534	19,787	19,492	20,050	Province	22
	1990	10,0%	28,991	26,605	23,770	25,744	Province	23
	2001	10,0%	33,923	33,228	28,616	32,206	Province	23
Mexico	1970	1,0%	13,275	10,914	11,370	10,785	State	32
	1990	10,0%	251,282	231,777	209,584	216,167	State	32
	2000	10,6%	311,063	300,694	260,268	276,893	State	32
Panama	1970	10,0%	3,921	3,384	3,307	3,169	Province	10
	1980	10,0%	5,412	4,991	4,347	4,916	Province	10
	1990	10,0%	6,653	6,172	5,459	5,966	Province	10
	2000	10,0%	7,953	8,047	6,580	7,600	Province	11
Peru	1993	10,0%	61,926	60,788	49,143	56,845	Department	25
	2007	10,0%	73,421	76,790	61,394	71,985	Department	25
Puerto Rico	1970	1,0%	740	654	606	600	Country	1
	1980	5,0%	4,326	4,560	3,799	4,336	Country	1
	1990	5,0%	4,240	4,542	3,691	4,128	Country	1
Venezuela	1971	10,0%	27,616	24,586	22,828	24,653	State	24
	1981	10,0%	41,685	36,022	37,357	37,231	State	24
	1990	10,0%	46,707	44,909	41,354	44,621	State	24
	2001	10,0%	59,709	62,640	49,570	58,867	State	24

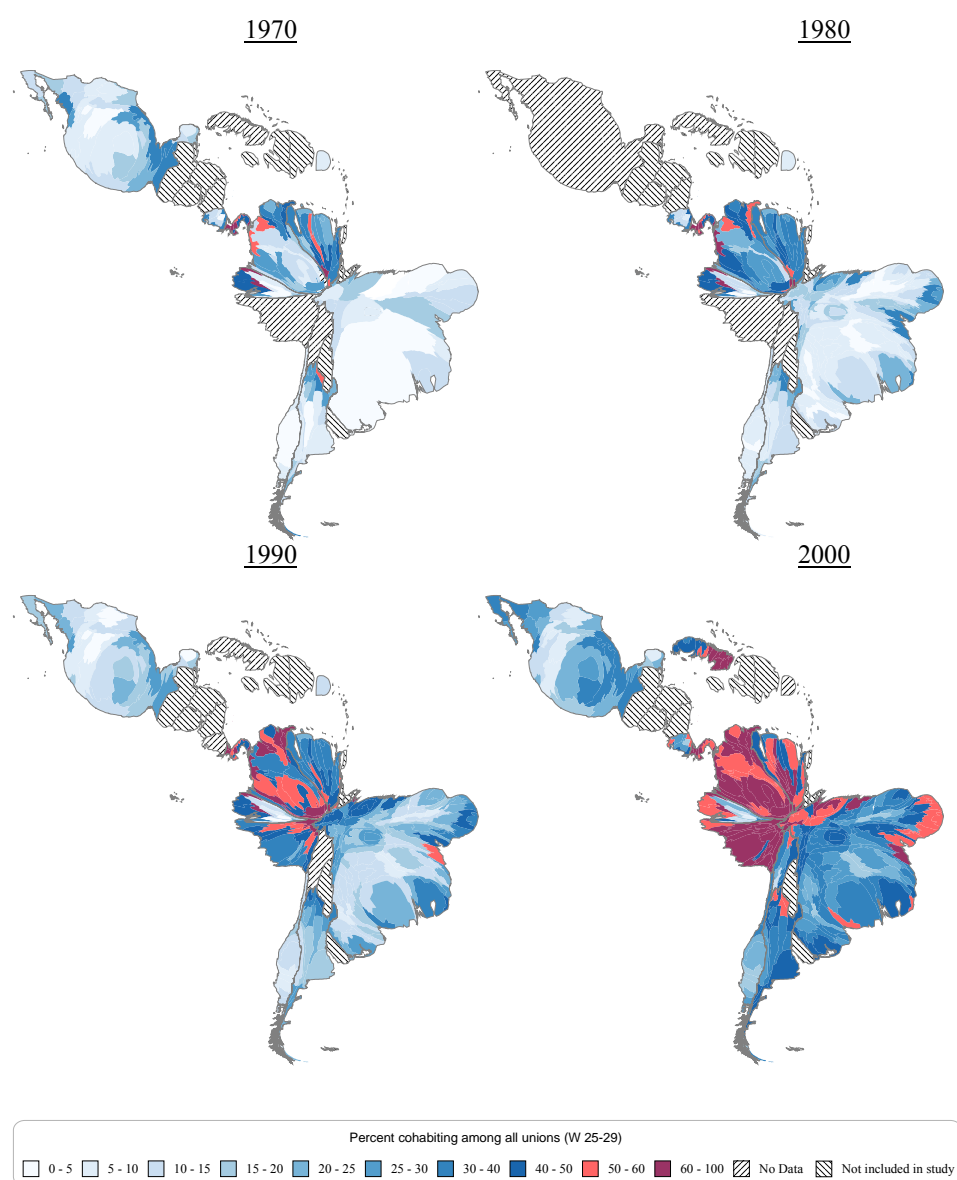
Source: IPUMS International.

Map series 1: Evolution of the share of cohabitation among all unions of women 25-29, various census rounds. (Depending on the journal, we'll probably have to move to b/w shadings)



Source: Own maps based on Latin American census microdata from IPUMS international.

Map series 2: Cartogram representation of the evolution of the share of cohabitation among all unions of women 25-29, various census rounds. Areas of regions are proportional to their 2000 census round population size.



Source: Own maps based on Latin American census microdata from IPUMS international.