

The Hierarchy of Partner Preferences

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Abstract

I digitized data from matrimonial ads published in major news outlets from Canada, India and France from 1950 to 1995 to document how partner preferences have evolved over time. In the two Western countries, I first show a gradual disappearance of economic criteria and an increase in the importance of personality traits. The decline of economic criteria is greater for women and particularly apparent after the 1970s. By contrast, in India, the importance of these criteria remained relatively stable. Second, I collected data from 1995 published in about 50 English-speaking outlets from multiple parts of Canada and the United-States. In all these outlets, I find that personality criteria are consistently the most sought for criteria in a potential partner. I argue that these evolution reflect a hierarchy of partner preferences, whereby the demand for non-material needs rests on the satisfaction of material needs such as economic ones.

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1 Introduction

Human needs arrange themselves in hierarchies of pre-potency. That is to say, the appearance of one need usually rests on the prior satisfaction of another, more pre-potent need. Man is a perpetually wanting animal.

A. H. Maslow

A Theory of Human Motivation, 1943

The goal of this paper is to document the evolution of preferences for a partner over the second half of the 20th century. Understanding their evolution matters for at least three reasons. First, characteristics of couples can exacerbate income inequality across households (Greenwood *et al.*, 2014, Eika *et al.*, 2019). Second, they have implications for child rearing and the intergenerational transmission of inequality (Barth *et al.*, 2020, Falk *et al.*, 2021, Mogstad and Torsvik, 2021). Finally, they influence the division of labor within the couple and the level of gender inequality.

Yet, we know little on the evolution of partner preferences. Because of data limitations, existing research has mainly described the evolution of characteristics of couples after pairing, once they are formed. It has been empirically challenging to distinguish whether these evolution are due to preferences - whom one wants to meet - or marriage market characteristics - whom one can meet.

In this paper, I attempt to shed new lights on the evolution of partner preferences. To overcome the lack of data, I assemble a new data set that consists of nearly 800,000 matrimonial ads.¹ These ads consist in describing oneself and the desired partner. They are known as the predecessors of dating websites and used to be published in the classified ads section of printed news outlets. To document the time-series variations, I collected data from major newspaper outlets published in Canada, India and France over the period 1950-1995. To understand the extent of cross-sectional variations, I complemented these data with ads published in 1995 in nearly 50 English-speaking newspaper outlets from multiple parts of Canada and 45 American States. Using dictionary-based methods, I classified the words in four distinct criteria: economic, personality, physical and taste.

The first part of the paper studies the evolution of stated preferences for a partner in matrimonial ads from three countries: Canada, India and France (Section 3.2). In the two Western countries, I show an unambiguous decline of the importance of economic criteria.

¹Also known as personal ads or lonely heart ads.

They used to be the most sought for criteria in the early 1950s, accounting for nearly 50% of words describing the demand for a partner. By the mid 1990s, their importance had declined to less than 20%. The fall of the importance of economic criteria was offset by an increase in the demand for personality criteria which occupy more than 60% of the demand side of matrimonial ads at the end of the 20th century.

By contrast, trends in India do not exhibit the same pattern. The distribution of the relative importance of economic and personality criteria remained relatively stable throughout the second half of the 20th century. If anything, the relative importance of economic criteria seems to have increased over the period.

Since the data do not originate from a repeated representative survey, one may question whether the trends are due to composition effects. Characteristics of ad writers could change in a way that would explain the diverging trends observed in the ads. To investigate this issue, I implement a Oaxaca-Blinder decomposition of the trends through time (Section 3.3). I use information from the supply side of matrimonial ads to construct variables related to characteristics of ad writers. I show that the unexplained evolution of the trends account for more than 90% of the observed evolution, suggesting that composition effects are unlikely to drive the effects.

Another limitation could be that the evolution of the words used in the ads reflects changes in the vocabulary used in everyday life. To study this limit, I use data from Google N-Grams to compute the evolution of the occurrence of the words of interest in a data set including 6% of all books ever published in English (Section 3.4). These data indicate that the distribution of economic and personality-related words remained stable through time, which suggests that the trends are not visible in daily language. Finally, I also demonstrate the robustness of the results to various methodological choices such as the choice of the outcome variable and the number of words classified.

As the trends stem from three newspaper outlets, one may also question to what extent the choice of these three specific outlets influence the findings. In particular, it could be possible that the content of ads displays significant cross-sectional variations across newspapers outlets within one country. To quantify the cross-sectional variations, I compare the results at the end of the century in 1995 to those obtained with matrimonial ads published in about 50 English-speaking outlets from multiple parts of Canada and the United States (Section 4). In all these outlets, I show that personality traits are consistently the most sought for criteria in a potential partner for both women and men, occupying more than

50% of the demand side of matrimonial ads. They are successively followed by physical, economic and taste criteria. Decomposing the total variance into variations driven between and within newspaper outlets, I show that the between variation constitutes less than 10% of the total variance, which suggests that the choice of newspapers outlets is unlikely to drive the results.

Finally, I discuss the mechanisms behind the results (Section 5). I argue that these trends are consistent with theories describing the profound changes affecting the family that occurred in Western countries in the second part of the 20th century. Over this period, marriage rates dropped while divorce rates surged and cohabitation became commonplace. Analyzing these changes, economists (Becker, 1981), demographers (Van De Kaa, 1986; Van De Kaa and Lesthaeghe, 1987) and sociologists (Cherlin, 2004) have argued that marriage has been increasingly based on the notion of companionship and love, and that individuals increasingly sought partners with whom they could share intimacy. To explain these evolution, several factors have been advanced such as the legalization of birth control methods, the rising participation of women to the labor market, and a shift in attitudes. While the setting of this analysis does not allow to precisely establish the causality between these determinants and the changes in the ads, it should be noted that the participation of women to the labor market significantly increased in the two Western countries whereas it remained stable in India.

Concerning the shift in values, outside the family sphere, social scientists have argued that the second part of the 20th century has witnessed the rise of postmaterialist values in Western countries (Inglehart, 1977). At the heart of these theories lies the idea that needs are arranged in a hierarchical form (Maslow, 1943) whereby the demand for non-material ones such as personality criteria rests on the satisfaction of material ones such as economic ones. The contrast between the Indian evolution and the two Western countries supports this interpretation of the results.

The paper first contributes to a vast literature studying the evolution of marital sorting in the long term and its determinants. A first subset of this literature has focused on documenting the degree of assortative mating (Mare, 1991; Fernández *et al.*, 2005; Schwartz and Mare, 2005; Greenwood *et al.*, 2014 Greenwood *et al.*, 2014, 2016; Eika *et al.*, 2019) and its consequences on inequality (Fernández and Rogerson, 2001; Ermisch *et al.*, 2006, Breen and Salazar, 2011; Frémeaux and Lefranc, 2020). As these studies observe couples once they are formed, this literature remains unclear on whether the trends are due to changes

in preferences or changes in the characteristics of marriage markets (Kalmijn, 1998). I contribute to this literature by providing direct evidence on preferences and document two new empirical facts. First, the results suggest that the importance of economic criteria has strongly declined over the twentieth century in Western countries, in line with the hypothesis of Becker (1981) and Coontz (2006). Second, the results indicate that personality traits have become key elements in the study of marital behavior. This resonates with limited literature on this question (Lundberg, 2010; Dupuy and Galichon, 2014), hindered by the scarcity of data on personality traits.

The results are also related to literature that has attempted to understand why individuals marry, divorce, or choose to cohabit and how these choices react to specific historical events. This literature has highlighted the role of changing economic conditions (Autor *et al.*, 2019), biased sex ratios (Abramitzky *et al.*, 2011), and the development of the welfare state (Persson, 2020). The profound transformations of the family in the late 1960s, such as the fall in marriage and fertility rates, the rise of cohabitation and divorce rates, have been well established in France (Frémeaux and Leturcq, 2018) as in other Western countries (Lundberg and Pollak, 2007; Stevenson and Wolfers, 2007; Lesthaeghe, 2014). The results of this paper suggest that these latter transformations were accompanied by a shift in partner preferences.

This paper also contributes to a related literature that attempts to identify preferences for a partner. Two approaches can be distinguished. A first one relies on final matches and estimates structural models using administrative or survey data from couples once they are formed (Chiappori *et al.*, 2017). Since different preferences could coincide with the same situation, another approach consist in documenting preferences before the formation of couples. This approach usually relies on *ad hoc* surveys or *in situ* data such as online dating websites, speed-dating events or matrimonial ads (for instance, Waynforth and Dunbar, 1995, Fisman *et al.*, 2006 Hitsch *et al.*, 2010, Belot and Francesconi, 2013, Banerjee *et al.*, 2013, Bapna *et al.*, 2016, Bergström, 2018, Egebark *et al.*, 2021). To my knowledge, nearly all these papers focus at one point in time and only one has documented the evolution of preferences in the U.S. by relying on similar surveys from American universities (Buss *et al.*, 2001). My paper is an extension and generalization of (Lippmann, 2021) who focuses only on the French context. I provide evidence suggesting that the trends observed in France could generalize to other Western countries and suggest that partner preferences are arranged under a hierarchical form.

2 Method

2.1 Disentangling Demand and Supply

Matrimonial ads are usually characterized by a demand side and a supply side (Coupand, 1996). The supply side consists of describing oneself. The demand side consists of specifying what the ideal partner looks like. To illustrate this structure, the following sentence is an example of a matrimonial ad written by a woman and published in May 1955 in France:

Single, 38, secretary, 1m62, thin, brown hair would answer to man 40-45, good situation.

This matrimonial ad has three parts. The first one is the supply side (from “single” to “hair”). The woman describes herself and specifies her matrimonial status, age, job, and some physical attributes (height, corpulence, hair). The second part is a delimiter, in this case, “answer,” between supply and demand. The last part is the demand (from “man” to “situation”). She is looking for a man aged 40 to 45 years old, with a good economic situation.

To disentangle the demand from the supply side, I computed a list of delimiters (see Table A1) for each country. These delimiters allow me to identify the demand side in 90 to 95% of all matrimonial ads. Unless otherwise specified, the focus of this study is on the demand side of matrimonial ads.²

2.2 Main Outcomes

An important challenge in the analysis of this dataset is to synthesize and extract the information it contains. Potentially every word could be used as an outcome variable, but the results of such an analysis would obviously be difficult to read. Therefore, to identify partner preferences, I use a dictionary-based approach classifying words into four criteria: economic, personality, taste/cultural, and physical. These four categories encompass the most widely studied criteria in the literature on partner preferences.

In practice, I computed a list of the 500 most recurrent words in the ads for each year in the sample. Because the number of matrimonial ads varies per year, computing the most recurrent words on the total sample would have put more weights on words used at times

²In the Appendix, I also present results using the entire ad. They are essentially similar.

when more ads are published. Yet, this method could classify a greater share of words for years where the number of ads published is low.³

Using this list of words, I manually classified each word into one of the four criteria and left out those that did not relate to any of them. As the publication price of a matrimonial ad directly depends on the number of words, a word-level classification seems to be more suited to the analysis than a classification of expressions or groups of words. The four criteria are described below.

Economic - The economic criteria best reflect material needs. To compute the list, I follow and update the classification of [de Singly \(1984\)](#), who worked on a sample of matrimonial ads published in the French outlet *Le Chasseur Français* in 1978–1979. The sub-criteria are general, labor, wealth, and education.

Personality - To categorize words into personality traits, I rely on existing works of psychologists who mapped lexicons into the Big Five personality traits. They are often labeled extraversion, agreeableness, conscientiousness, emotional stability, and intellect/imagination and are sometimes complemented with a sixth factor labeled honesty. I follow [Goldberg \(1990\)](#) and [Boies et al. \(2001\)](#), who respectively developed a classification of the English and French lexicon into the Big Five categories. I complement them with a general one for words that explicitly mention personality in a general sense (such as “personality” and “character”).

Tastes/Cultural - In addition to personality traits, individuals may seek partners with specific tastes, hobbies, and cultural preferences. This category encompasses the main activities an individual may do during his/her free time and religion. The sub-criteria are hobbies and religion.

Physical - Finally, the last set of characteristics relates to physical attributes. Along with economic criteria, they are the most discussed in the literature. The sub-criteria are age, height, attractiveness, and general. The inclusion of age as a physical criterion is discussed in the robustness analysis.

The list of words classified for Canada is provided in [Table 1](#). The lists for India and France are described in the Appendix ([Tables A2](#) and [A3](#)).

³To address this issue, I show that the results are robust to different cutoffs to classify words (100, 250, 500).

3 Time-Series Evidence

3.1 Data

France - The data consist of all the matrimonial ads published in the monthly French magazine *Le Chasseur Français* from 1950 to 1995. This magazine is the only one in France to have continuously published matrimonial ads across the twentieth century and the main supplier of such ads (de Singly, 1984).

India - The data consist of all the matrimonial ads published every 5 years in the daily newspaper, *the Times of India* from 1955 to 1995. In terms of circulation, this is the third largest newspaper in India and the main one in English.

Canada - The data consist of all the matrimonial ads published every 5 years in the daily newspaper *The Vancouver Sun* from 1950 to 1995. In terms of circulation, this newspaper is the main one in Vancouver and the British Columbia area.

Descriptive Statistics - The total data set consists in 365,713 matrimonial ads, out of which 25,627 come from Canada, 63,778 from India and 276,308 from France (data collected annually for this country). The evolution per year is described in Figure A2 and examples of ads from each outlet are provided in Figures A3, A4 and A5 for respectively Canada, India and France.

3.2 Main Results

Figure 1 describes the evolution of the demand for economic criteria for women (graph a) and men (graph b) from 1950 to 1995 for India, Canada and France.

Looking at graph (a) restricted to women, we observe that this demand decreased substantially for ads published in France and Canada. Words related to economic criteria used to represent respectively 50% and 40% of the demand side of matrimonial ads in France and Canada in the early 1950s. By the end of the 20th century, this share was roughly halved and reached about 20% in both places. Indian matrimonial ads displayed a different pattern as the importance of economic criteria appeared to have remained predominant from 1950 to 1995. They used to occupy about 50% of the demand side in 1950 and this share remained stable up until the 1970s where it seemed to start increasing and reached about 70% by 1995.

Looking at graph (b) restricted to men, we observe similar trajectories although the

level of the importance of economic criteria remains lower. From 1950 to 1995, the share of words related to economic criteria in the demand side of matrimonial ads decreased from about 30% to roughly 10%. At the same time, it increased slightly in India, from 40% in 1955 to 50% in 1995.

What replaced economic criteria? Figure 4 provides an answer to that question by plotting the evolution of the demand for personality criteria over time. Overall, we observe a significant increase of the importance of these criteria in both French and Canadian ads. In these two countries, the share of words related to these criteria in ads written by women (graph a) and men (graph b) increased from 30% in 1950 to almost 60% in 1995. As for India, the importance of these criteria stagnated over the entire period at about 20-25%.

3.3 Oaxaca-Decomposition

A limit of the previous trends is the possibility of composition effects driving the results. It could be that the characteristics of individuals posting ads changed over time in a way that explains the changing demand for each criterion.

Note that changes in the characteristics of ad writers are the product of two channels: a changing pool of individuals using matrimonial ads within society, and the changing structure of society. Therefore, changes in the characteristics of ad writers are likely to provide an upper bound of the "true" composition effects caused by the nature of the data and threatening external validity.

To study this limit, I use two alternative methods. The first one consists in constructing specific variables related to the characteristics of individuals using the information contained in the supply side of matrimonial ads. The variables are the age, job, presence of children, matrimonial status and explicit mention of marriage. The second method does not pool words according to their meaning and instead use each word as a different variable.

Using these variables, I perform a Oaxaca-Blinder decomposition through time using the year 1955 as a reference and the demand for economic criteria as the main outcome variable. This method allows to identify the unexplained component of the trends that is not driven by composition effects. If they play a minor role, we expect the unexplained trends to be essentially similar to the overall trends.

The results are displayed in Figure 3.3. Overall, the composition effects seem to explain a minor part of the findings as the unexplained trends are essentially similar to those

presented in Section 3.2. For women (graph a), we observe a decline of the importance of economic criteria by about 25 p.p. over time in the two Western countries. The decline is particularly apparent after the 1970s. Similarly, for men (graph b), we observe a decline of the demand for economic criteria by about 20 p.p. in France and Canada. On the opposite, in India, we observe a slight increase in the importance of economic criteria for both women and men.

3.4 Trends in Common Language

To what extent these trends mirror changes in the use of vocabulary in everyday life? It could be that over the second half of the 20th century, people simply started using more words related to personality criteria in their interactions and in all domains. As a consequence, we would observe a decrease in the usage of words related to economic criteria and an increase in those related to personality criteria simply because these words became used more often in everyday language.

To investigate this question, I exploited data from the English corpus of Google N-Grams.⁴ It is based on a dataset that contains about 6% of books ever published in English (Michel *et al.*, 2011). I use exactly the same set of words for each criterion (as described in Section 2.2) and plot the evolution of these criteria over time.

Figure 6 provides the evolution of the prevalence of each criterion in the data set. Two elements can be observed. First, economic criteria appear to be the most important ones in the corpus, followed by personality and physical criteria. Second, the ranking of these criteria appears to have remained relatively stable over the period. Economic criteria occupied nearly 50% of words in 1950 and this share had slightly decreased to about 45% in 1995. Personality criteria slightly increased from nearly 30% in 1950 to about 30% (30.08%) in 1995. Overall, this suggests that the trends observed in the matrimonial ads are not a simple product of changes in everyday vocabulary.

3.5 Additional Robustness Checks

Alternative outcome variables - The main outcomes considered in the previous section consist in the share of words attributed to each criterion. In Section B.2, I show how the result vary when using alternative outcomes that consist in the count of words and

⁴<https://books.google.com/ngrams>

a dummy indicating the presence of a criteria. Overall, we observe essentially similar trends whereby economic criteria decline in the two Western countries and are replaced by personality ones while the distribution of these criteria remain mostly stable in India throughout the second part of the 20th century.

The evolution of the Supply Side - The above findings all focus on the demand side as it is arguably where we are most likely to observe preferences. However, the supply side could also convey information on partner preferences as it includes information that was mentioned strategically in order to attract potential partner. For instance, if economic criteria were greatly valued, individuals could devote more space to describe their financial situation. Figure 7 displays the trends related to the supply of economic criteria. They are essentially similar to those presented in the previous section. Over the second part of the 20th century, there is an important decline in the supply of economic criteria in the two Western countries for both women and men while the supply of such criteria remained stable, if not increased, in India.

Replicating stylized facts of the literature - One might also ask to what extent the results provided by matrimonial ads have a general significance beyond the matrimonial market. To answer this question, it should first be noted that until the end of the 20th century, there were no competitors to matrimonial ads in the matchmaking market. The first dating websites appeared in the mid-1990s. Secondly, the most consistent stylized facts in this literature concern gender differences. They show that women demand more economic criteria than men and that men demand more physical criteria than women (Buss, 1989). Both sets of facts are found in the matrimonial ads of the three countries.

4 Cross-Sectional Evidence from 1995

4.1 Why Use Cross-sectional Data?

A limit of the previous results is that the data do not come from representative surveys of the population. Instead, they come from specific outlets publishing matrimonial ads over the long-run. I collected data from these outlets because of their unusual commitment to continuously publish matrimonial ads over the second part of the 20th century. To my knowledge, few outlets have done so and a large number either sporadically publish such

ads or continuously did but eventually went bankrupt, interrupting the time series.⁵⁶

The outlets used to compute the trends in the previous section all publish matrimonial ads as part of a second activity. Their main activity is either to publish regular news or news about hunting and nature. Since readers have a preference for news that fit their priors (Gentzkow and Shapiro, 2010), it could be possible that the publishers of ads (and the readers) come from a specific portion of society reflecting the slant of the outlets.

The first objection we could formulate to this argument is the fact that all three outlets are major providers of matrimonial ads, if not leaders in their respective country. To be clear, this does not rule out the fact that the ads may represent a specific portion of society but suggests that they should represent trends on the market of matrimonial ads.

To investigate this limit, one would ideally compare trends in multiple outlets publishing ads in a specific area over time. Since this is not possible, I instead rely on cross-sectional evidence from newspapers published towards the end of the period in 1995. The goal is to understand to what extent the content of ads may vary over different newspapers outlet at one point in time.

4.2 Data

United States - The data consist in matrimonial ads published in 45 American states. The full list of newspapers is provided in Table A5. The data were collected from the website newspaper.com. Whenever several newspapers were available for a given state, I chose to collect the data from the most widely circulated newspapers that published matrimonial ads.

Canada - The data consist in matrimonial ads published in 3 Canadian provinces (British Columbia, Ottawa and Alberta). The list is provided in Table A5.

Descriptive Statistics - The total data set consists in 420,265 matrimonial ads. The breakdown by location is provided in Figure A15. About 41% of these ads are written by women.

⁵For instance, the New York Times used to publish matrimonial ads in the late 19th century.

⁶For instance, in the UK, The Matrimonial Times published ads from the late 19th century to the mid 1950s and stopped being published afterwards.

4.3 Results

The results are depicted in Figure 8. The key result is the consistent ranking of personality criteria as the first criterion demanded for both men and women across all the outlets. Looking at graph (a), we observe that about 60% of the words used by women to describe their ideal partner are related to personality criteria. Physical criteria come in second position and occupy about 20% of the demand side, followed by economic and taste-based criteria which both occupy about 10% of the demand side. Similarly, in graph (b), we observe that personality criteria occupy about 50% of the demand side followed by physical criteria (about 30%), then taste-based and physical criteria (roughly 10% each).

The ads display variations across the territories but it remains striking to see that the order of the criteria is the same in all the 50 outlets. While this does not indicate that the trends would have been the same in all these outlets over the second part of the 20th century, this provides suggestive evidence indicating that the slant of the medias is not driving the order of the four criteria.

5 Discussion

The above findings suggest that the importance of economic criteria declined in Western countries while they remained stable in India. What could explain these diverging trends?

5.1 The role of parents

A first explanation could rely on the role of parents and family. Over time, ads written in Western countries could have been less and less sent by parents or family. On the opposite, the influence of family could have remained at higher levels in India. This argument has been formulated by Becker (1981): "*Dating, even by young teenagers, and search in marriage markets to find mates with desirable characteristics are more common in modern societies because personal, rather than family, compatibility is sought*" (p.182).

To investigate this mechanism, I computed the share of ads that mention the words "parents" or "family". The results are displayed in Figure 9. We observe that the mention of parents is consistently higher in Indian ads than in their Western counterparts where it is nearly non-existent. Over the second part of the 20th century, in India, about 10 to 15% of ads written by women mentioned parents (graph a) and this share has risen from

less than 5 to more than 10% in ads written by men (graph b).

Could this explain the diverging trends in the demand for economic criteria? The results suggest that it is unlikely. In Figure A16, I show that the trends are roughly the same, independently of whether they mention parents.

5.2 Links with the Transformations of Family

In the second half of the 20th century, the Western family underwent profound changes. Observing these changes, social scientists from various disciplines have argued that they reflect changes in the formation and function of family. Economists have described the radical alteration of the family in Western countries (Becker, 1981), demographers have advanced the concept of "*Second Demographic Transition*" (Van De Kaa, 1986; Van De Kaa and Lesthaeghe, 1987) while sociologists advanced the idea of the "*deinstitutionalization of marriage*" (Cherlin, 2004). At the heart of these theories and descriptions lie several observations such as the drop in marriage rates, the surge of divorce rates, the normalization of cohabitation and the postponement of fertility.

To study whether ad writers may have been influenced by the transformations of family in society as a whole, I computed the evolution of ads explicitly mentioning marriage. Figure 10 displays the results. We observe that almost 80% of the ads published in the two Western countries mentioned marriage until the 1970s. Then, in line with what happened in Western societies, the explicit mention of marriage dropped and had almost disappeared by the early 1990s. This decline is not observable in India. In the mid-1950s, about 70% of ads explicitly mentioned marriage. This share remained stable over time for both women and men and, by the end of the 20th century, respectively 70% and 60% of ads written by women and men still mentioned marriages.

Therefore, the mechanisms explaining the evolution of partner preferences could be found in the same determinants explaining the transformations of family. The existing literature has suggested that these determinants include the rising participation of women to the labor market, the legalization of birth control methods and a shift in cultural values.

5.3 The Hierarchy of Partner Preferences

Why are personality criteria increasing? Why don't we observe an increase in physical criteria instead? By observing the changes in the family, social scientists have hypothesised

that they reflect a greater individualisation of society and an aspiration towards a need for fulfilment and self-actualization. Individuals would be increasingly looking for partners with whom they can share their lives. The theoretical basis for this interpretation is Maslow's theory of needs (Maslow, 1943). This theory postulates that, as individuals satisfy first order needs such as physiological and security needs, they develop other less material needs related to individual fulfilment and self-actualization. Needs are arranged in a hierarchical form where the demand of one rests on the satisfaction of the previous one.

The previous results suggest that this theory could be applied to the evolution of partner preferences. Individuals would first seek to satisfy first-order economic needs directly related to physiological and security needs, and then, as societies develop, individuals' needs would shift away from materialistic needs and focus on partner's personality, related to individual's needs of fulfilment and self-actualization. This evolution could thus be characterised as a hierarchy of partner preferences.

6 Conclusion

This paper has studied the evolution of couple preferences over the second part of the 20th century. I constituted a new data set that consists of matrimonial ads published in Canada, France and India. Using these data, I documented that the demand for economic criteria significantly decreased in the two Western countries while it remained stable in India. The decrease in economic criteria was offset by a large increase in the demand for personality ones. As for other criteria, such as physical and taste-based ones, their importance seemed to have remained stable over time.

To demonstrate the robustness of the results, I first implemented a Oaxaca-Blinder decomposition of the trends over time. The results suggested that the changing characteristics of ad writers over time are unlikely to drive the findings. Second, I showed that the evolution of the content of these ads is also unlikely to be driven by changes in the use of vocabulary in everyday life. Third, I tested the robustness of various methodological choices and showed that the matrimonial ads can replicate stylized facts of the literature regarding gender differences in partner preferences.

Finally, to provide evidence on the external validity of the results, I compared the results at point in time in 1995 with those obtained from matrimonial ads published in about 50

English-speaking outlets published in Canada, United States. In all these newspapers outlets, I found that personality criteria are consistently the most sought for criterion in a potential partner followed by physical ones.

Discussing the mechanisms, I argued that the evolution of partner preferences in Western countries is related to the profound transformations of the family in these countries during the second half of the 20th century. Observing the drop in marriage rates and the surge of divorce rates, economists, demographers and sociologists have all hypothesized that these changes, which can be objectively measured with existing data, must probably be linked to changes in partner preferences. My results confirm these theories. They are consistent with the existence of a hierarchy of partner preferences, whereby the demand for non-material needs such as personality ones rests on the satisfaction of material needs such as economic ones.

In terms of future research, the results of this paper suggest multiple directions. A natural extension would be to expand the data set to more contexts and countries in order to better understand the extent of the changes described in this paper. Another direction would be to causally identify the key mechanisms explaining these changes.

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Tables

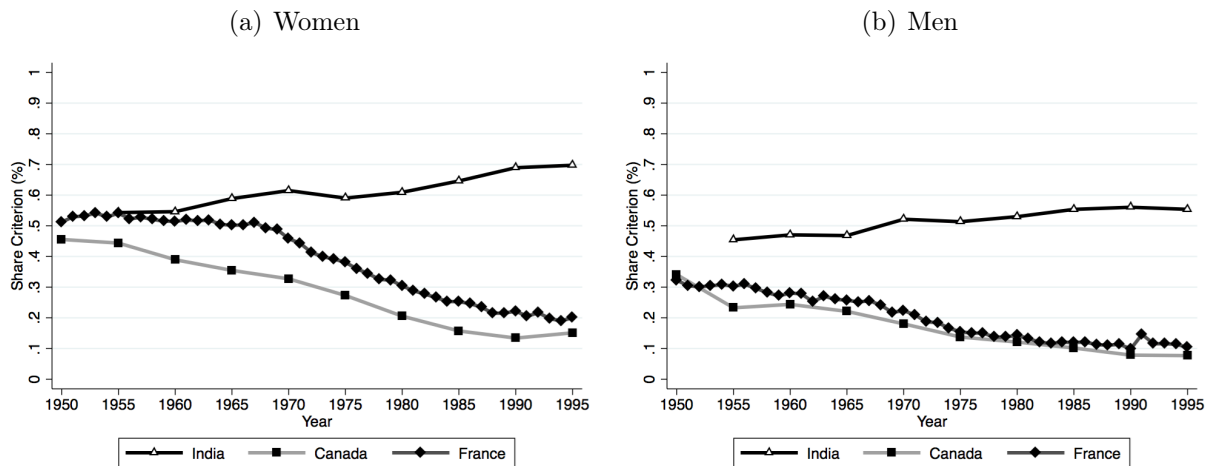
Table 1: Details on Topic Classification - Canada

Topic	Keywords
<i>Panel A: Economic Criteria</i>	
General	means, position, income, money, background, financially (6)
Labor	business, work, job, employment, pensioner, logger, career, retired, housekeeper, profession, businessman, fisherman, carpenter, professional, worker, engineer, farmer, nurse, teacher (19)
Education	education, student, degree (3)
Wealth	home, car, house, bequest, owner, property, residence (7)
<i>Panel B: Personality Criteria</i>	
General	personality (1)
Agreeableness	easygoing, smiling, respectful, sincere, honest, nice, moral, honesty, kind, natural, warm, affect, sensitive, simple, pleasant, friendly, helpful, gentle, affectionate, informal, caring, understanding, reasonable, humour, considerate (25)
Extraversion	loving, romantic, spiritual, funny, spontaneous, outgoing, adventurous, spirited, happy, witty, quiet, confident, communicative, vivacious, sociable, active, ambitious, shy, fun, cheerful, energetic, playful, frank, secretive (24)
Emotional Stability	emotional, stable, secure, independent (4)
Conscientiousness	steady, responsible, loyal, dependable, forgetful, reliable (6)
Intellect	refined, creative, artistic, bright, sophisticated, smart, cultured, intelligent, worldly (9)
<i>Panel C: Physical Criteria</i>	
General	fit, lbs, kg, look, slender, physical, hair, handicap, weight, health, eyes, athletic, blond, slim (14)
Age	young, old (2)
Height	tall, height (2)
Attractiveness	cute, pretty, attractive, beautiful, sensual (5)
<i>Panel D: Taste-Based Criteria</i>	
Religion	christian, protestant, jewish, catholic (4)
Hobbies	nonsmoker, nondrinker, ski, sport, dog, theater, show, drinker, paint, fish, drawing, animal, smoke, cook, garden, holiday, book, reading (18)

Notes: these words are used to classify ads published in the *Vancouver Sun* in Canada.

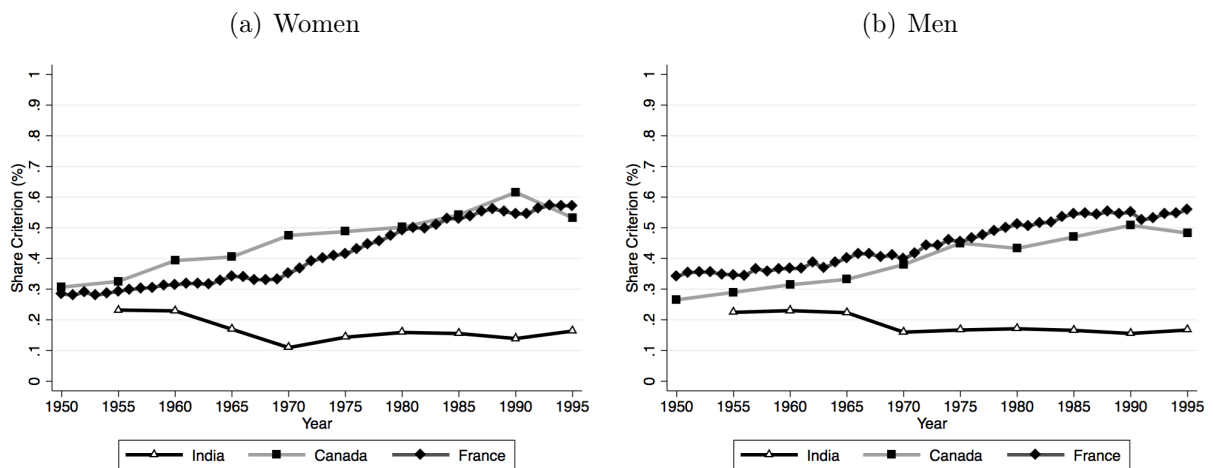
Figures

Figure 1: Evolution of the Demand for Economic Criteria



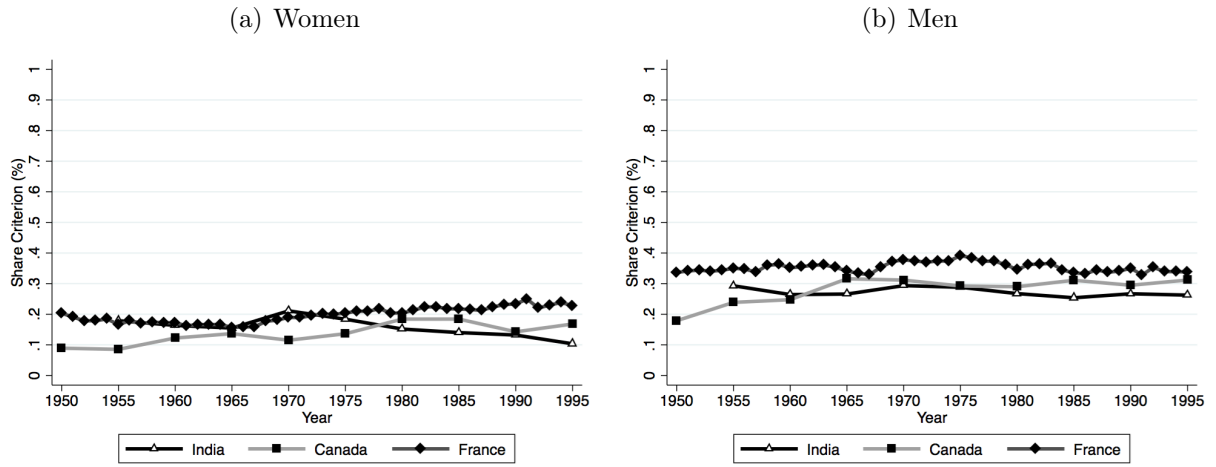
Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure 2: Evolution of the Demand for Personality Criteria



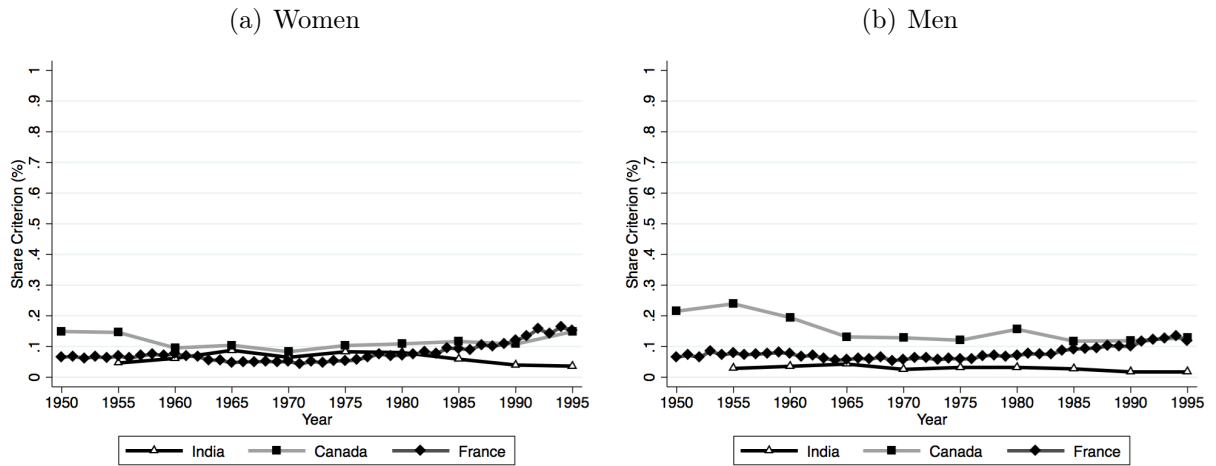
Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure 3: Evolution of the Demand for Physical Criteria



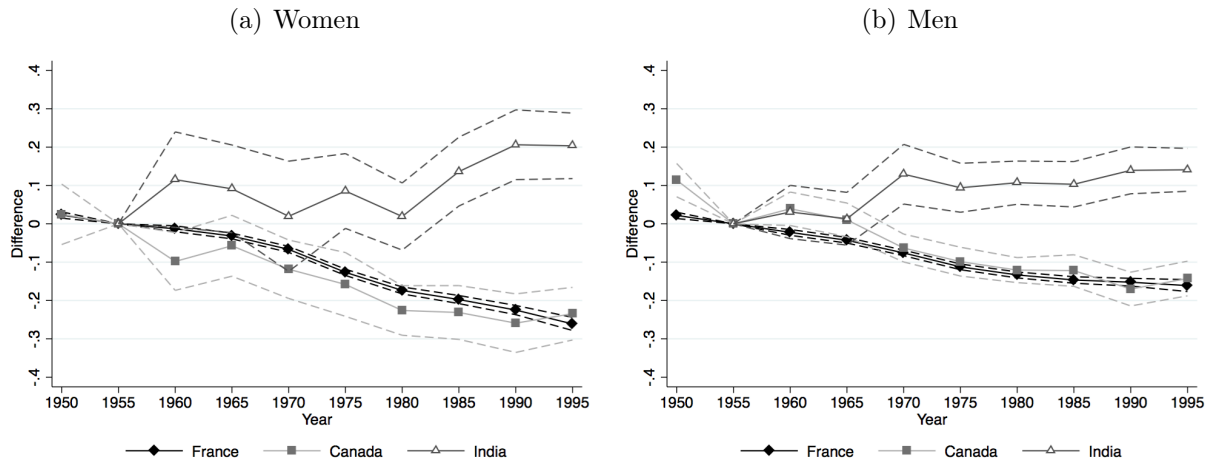
Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure 4: Evolution of the Demand for Taste Criteria



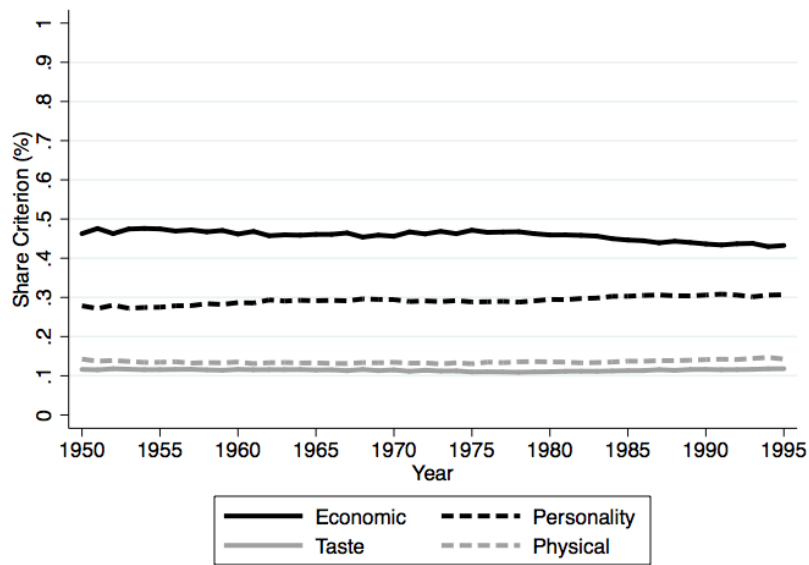
Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure 5: Oaxaca-Blinder Decomposition - Unexplained Evolution of the Demand for Economic Criteria



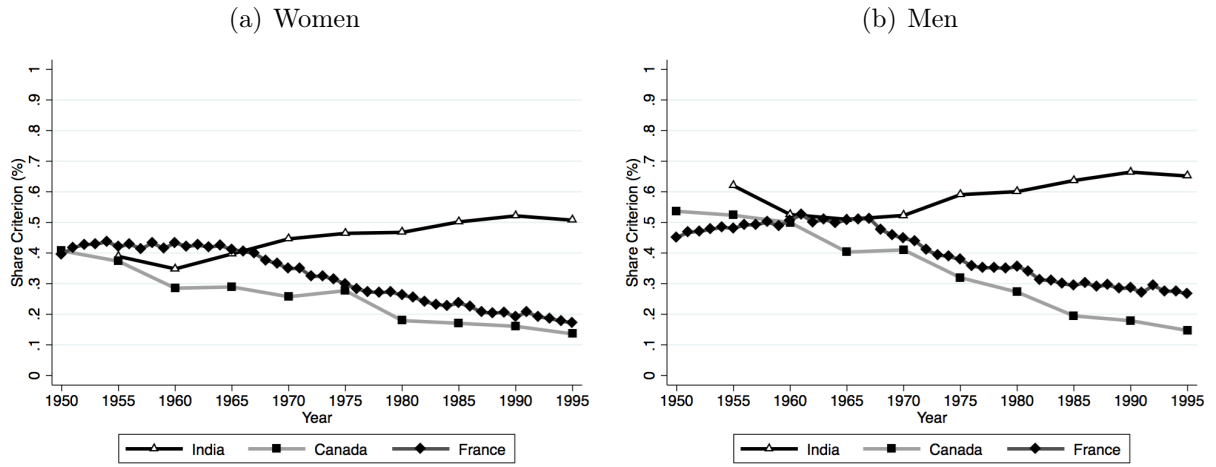
Notes: the data come from matrimonial ads published in France, Canada and India. Confidence intervals at the 95% level are represented.

Figure 6: Measuring the Prevalence of each Criterion in English using Google N-Grams



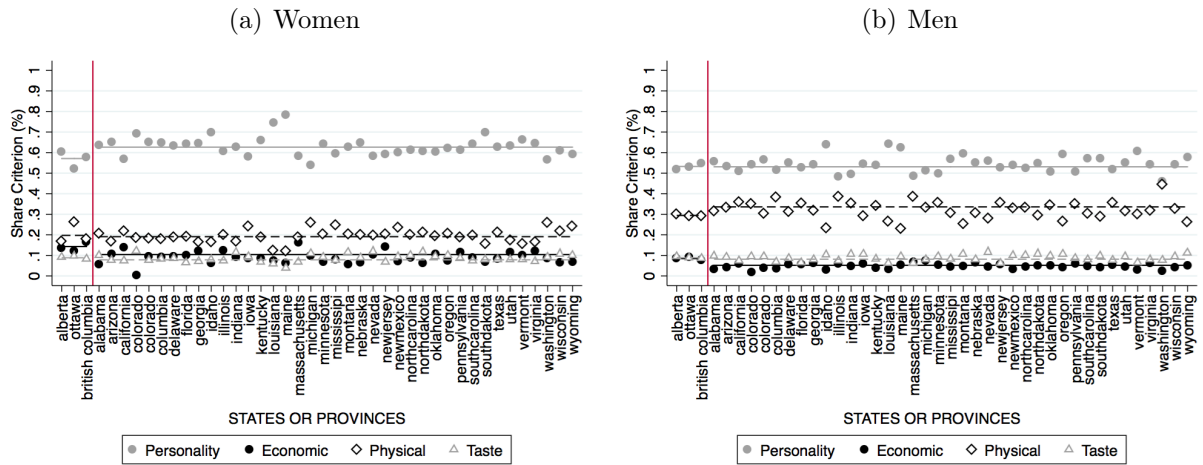
Notes: the data come from the English corpus of the Google N-Grams Viewer.

Figure 7: Evolution of the Supply for Economic Criteria



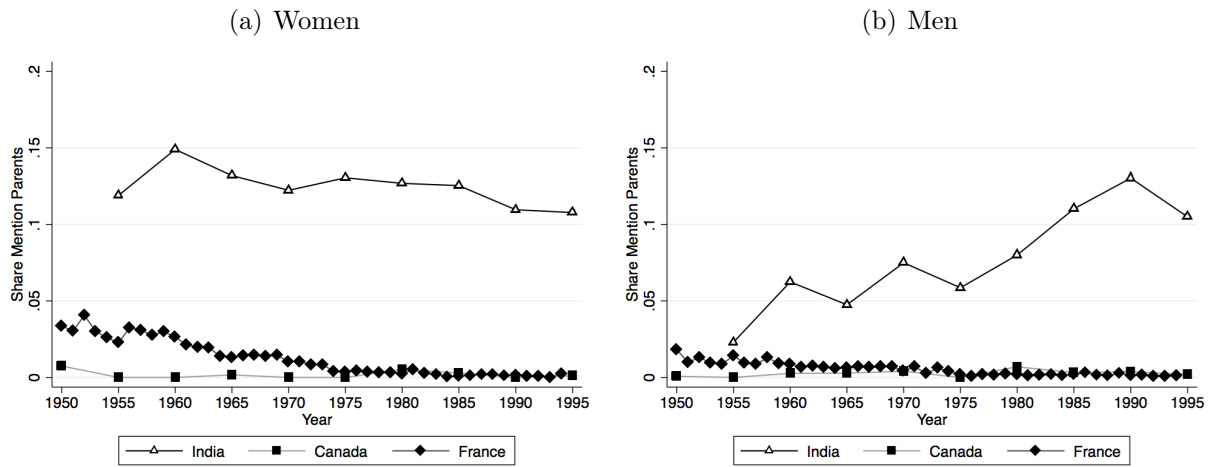
Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure 8: Demand - Prevalence of Each Criterion in 1995 in the American and Canadian Newspapers Ads



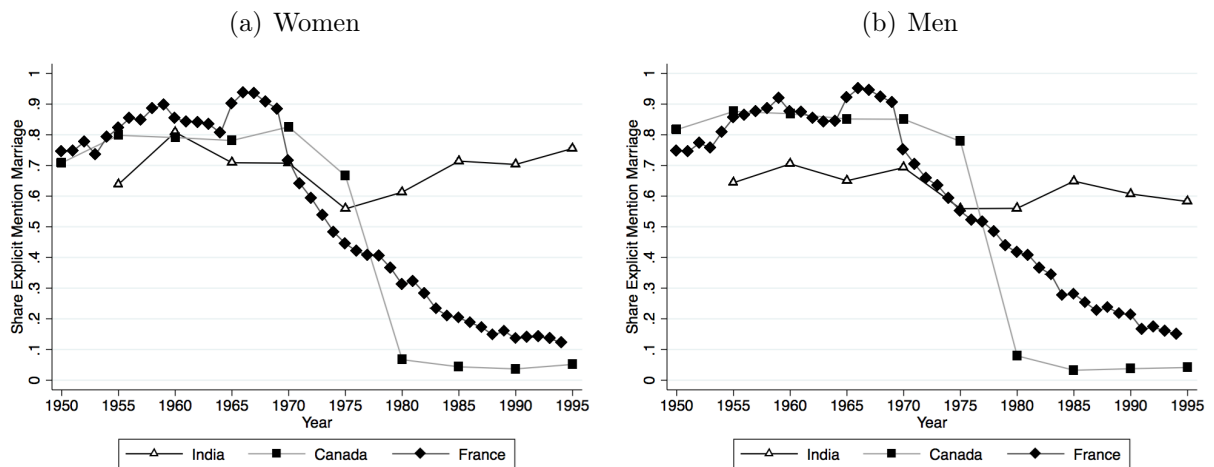
Notes: the data come from American and Canadian Newspapers in 1995.

Figure 9: Share of Ads Mentioning Parents



Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure 10: Share of Ads Mentioning Marriage



Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Appendix

A Method

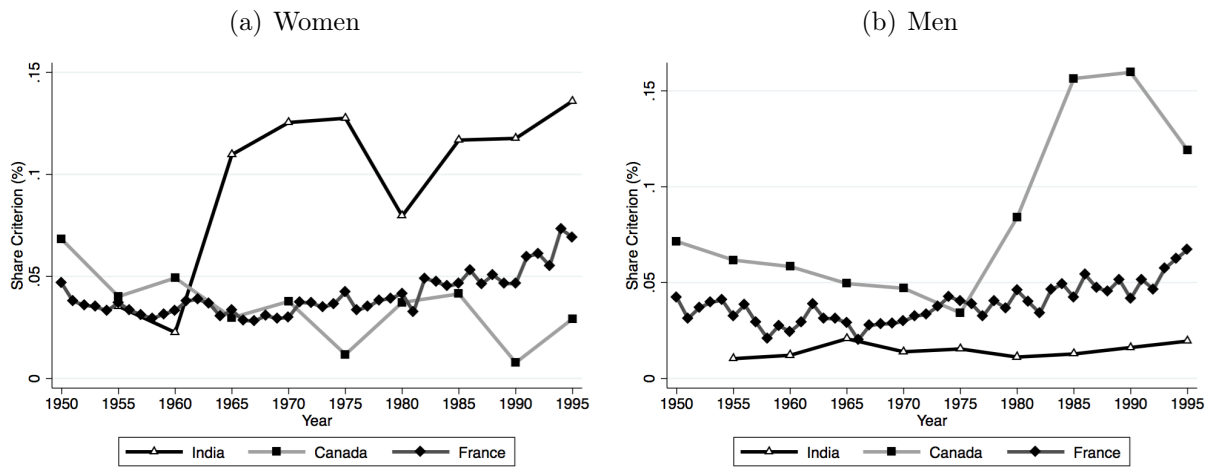
A.1 Disentangling Demand and Supply

Table A1: List of Delimiters Used to Disentangle Demand and Supply

Country	Delimiter	Delimiter (French)
Canada	wish, seek, iso (in search of), would like, meet, desir, share, correspond, look for, want,	
India	desire, seek, wish, request, need, invit, look for, for,	
France	marry, meet, desire, wish, correspond (x2), looks for (x2), assist, share, found, wants, asks, know, offer, enter, hope, wed, accept, answer, like, wait	epous, rencontr, desir, souhait, correspond, correspondr, recherch, cherch, second, partag, fond, voudr, demand, connaitr, offre, entre, es- per, mari, accept, repond, aime, attend (22)

Notes: List of delimiters

Figure A1: N Ads Without Delimiters



Notes: the data come from matrimonial ads published in Canada, France and India. The trends are normalized with respect to the year 1955.

A.2 Dictionaries

Table A2: Details on Topic Classification - India

Topic	Keywords
<i>Panel A: Economic Criteria</i>	
General	economically, income, financially, finance, affluent, rich, position, means, background (9)
Labor	merchant, retired, business, commerce, officer, industrialist, employment, engineer, accountant, doctor, nurse, work, technician, professional, businessman, career, teacher, employee, job, profession (20)
Education	educ, graduate, postgraduate, study, student, degree (6)
Wealth	apartment, owner, property, flat, home, dowry, residence, car, wealthy, housing (10)
<i>Panel B: Personality Criteria</i>	
General	personality (1)
Agreeableness	caring, respectful, accommodating, pleasant, simple, natural, nice, kind, considerate, gentle, amiable (11)
Extraversion	quiet, direct, loving, confident, energetic, (5)
Emotional Stability	independent, secure, stable (3)
Conscientiousness	firm, industrious, responsible, dependable, conventional, traditional (6)
Intellect	cosmopolitan, cultured, sophisticated, smart, refined, intelligent, artistic, ignorant, bright (9)
<i>Panel C: Physical Criteria</i>	
General	look, slim (2)
Age	young, old (2)
Size	tall, height (2)
Attractiveness	beautiful, handsome, pretty, attractive (4)
<i>Panel D: Taste-Based Criteria</i>	
Religion	catholic, christian, protestant (3)
Hobbies	drawing, travel (2)

Notes: these words are used to classify ads published in the *Times of India* in India.

Table A3: Details on Topic Classification - France

Topic	Keywords (Translated)	Original Keywords (Stemmed French)
<i>Panel A: Economic Criteria</i>		
General	situation, franc, distinguished, sophisticated, better-off, income, money	situat, franc, distingu, raffin, aisé, revenu, argent (7)
Labor	civil servant, executiv, retired, merchant, job, engineer, teacher, secretary, industrialist, physician, schoolmaster, farmer, worker, seller, musician, pharmacist, technician, employee, accountant, non-commissioned officer, craftsman, dentist, veterinary, notary	fonctionnair, cadre, retrait, commerc, profess, ingénieur, enseign, secretair, industriel, médecin, institutric, agriculteur, ouvri, commercial, musicien, pharmacien, technicien, employe, comptable, sous-officier, artisan, dentiste, veterinaire, notair (24)
Education	education, study, educated, academic	educ, etud, instruit, universitair (4)
Wealth	asset, owner, car, house, expected inheritance, dowry, property, wealth, savings, bourgeois, pension, annuity, annuitant, immovable, nobility, capital	avoir, propriétair, voitur, maison, espérance, dot, propriét, fortun, économ, bourgeois, pension, rente, rentier, immeubl, nobless, capital (16)
<i>Panel B: Personality Criteria</i>		
General	likes, affinity, personality, character, taste	aim, affinit, personnalit, caracter, gout (5)
Agreeableness	affectu, agreabl, simpl, sweet, cheerful, happy, tender, kind, comprehens, courteous, romant, cuddly, tactful	affectueux, agreabl, simpl, dou, gai, heureu, tendr, gentil, comprehens, courtois, romant, calin, delicat (13)
Extraversion	serious, sober, dynamiqu, energ, charm, humour, calm, enthusiast, reserve, shy, spontaneous	serieu, sobr, dynamiqu, energ, charm, humour, calm, enthousiast, reserve, timid, spontané (11)
Emotional Stability	sentimental, feminin, sensitiv, natural, secur, adventur, courag	sentimental, feminin, sensibl, natural, securis, aventuri, courag (8)
Conscientiousness	hardworking, neat	travailleur, soigné (2)
Intellect	cultivated, intelligent, spirit, spiritu, passion	cultiv, intelligent, esprit, intellect, spirituel, passionne, intellectu (7)
Honesty	moralit, sincer, loyal, honest, frank, honorabil	moralit, sincer, loyal, honnet, franch, honorabilit (6)
<i>Panel C: Physical Criteria</i>		
General	physical thin, athletic, slim, kilo, health, handicap, blond, brown, dark blond, hair, eyes	physiqu, taille, metre, minc, sportif, svel, sant, handicap, blond, brun, chatain, cheveux, yeux (13)
Age	year, young, age, sixty, fifty, forty, thirty	an, jeun, age, soixantain, cinquaintain, quarantain, trentain (7)
Size	size, metre	taille, metr (2)
Attractiveness	pretty, sensual, beautiful, manly, cute, attractive, beautiful	jol, sensuel, beau, viril, mignon, seduis (6)
<i>Panel D: Taste-Based Criteria</i>		
Religion	cathol, christian, protestant, religi	cathol, chretien, protestant, religi (4)
Hobbies	travel, natur, smoke, hunter, art, music, sport, animal, cultur, artist, garden, reading, book, hunt, mountain, leisure, ski, smoking, cinema, handyman, fish, dog, paint, cook, drawing, theater, holiday, cultural, show	voyag, natur, fumeur, chasseur, art, musiqu, sport, animal, cultur, artist, jardin, lectur, livre, chass, montagn, loisir, fumant, ski, cinema, bricoleur, pech, chien, peintur, cuisin, dessin, theatr, vacanc, culturel, spectacl (29)

Notes: these words are used to classify ads published in the *Chasseur Francais* in France.

B Time-Series Evidence

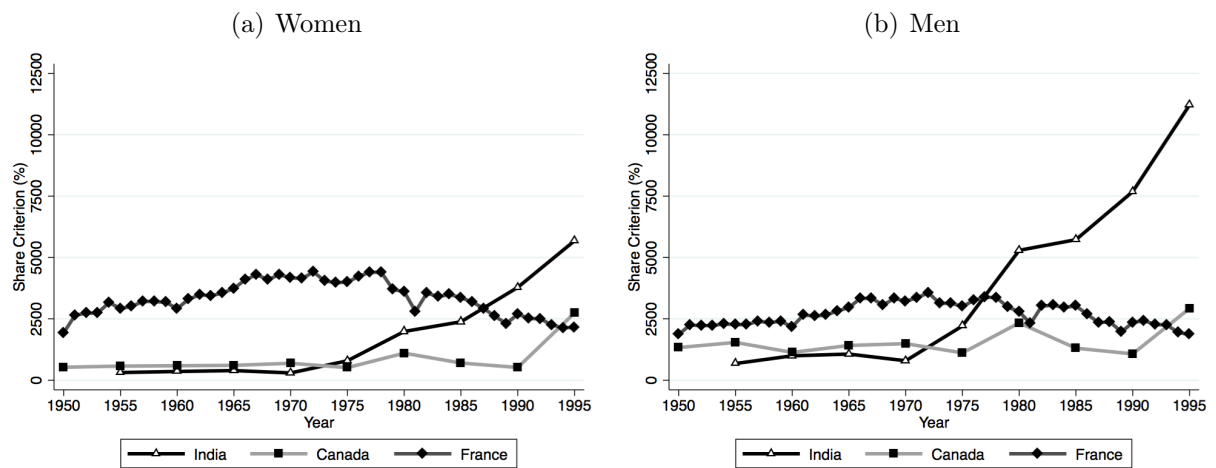
B.1 Data

Table A4: List of Outlets

Country	Newspaper
Canada	Vancouver Sun
India	Times of India
France	Chasseur Français

Notes: List of outlets

Figure A2: Descriptive Statistics on the Number of Matrimonial Ads



Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure A4: One page of matrimonial ads in May 1995 in the Times of India - India



Figure A5: One page of matrimonial ads in May 1994 in the Chasseur Français - France

LES PETITES ANNONCES DU CHASSEUR FRANÇAIS

13-LIMITROPHES- Divorcée 41 ans, bonne situation, aimant la vie, l'humour, dynamique, affectueuse, cherche compagnon 50 ans (max) grand, même profil pour compléter et peut être Grand Amour. CF1164

PARIS- Très jolie femme, 1m71, 51 kg, brune, excellente éducation, études Anglisme Allemagne, artiste, musique, danse, sportive, plusieurs disciplines, maîtresse maison accomplie, avoir immobilier important. aimant vie intime, recherche union soignée, Monsieur cinquantaine, éducation, moralité, communicatif, amoureux, sensuel, situation équivalente, pour mener une existence aisée, harmonieuse, région indifférente. CF1160

Toutes régions- Femme 50 ans, 1m64, sériuse, affectueuse, rencontrerait homme 50-60 ans, veuf ou divorcé, attentionné, séduisant, pour bonheur à deux. CF1388

Féminine, sensible, élégante, sensuelle, sachant recevoir, attachée aux valeurs morales, rencontrerait Monsieur, mariage 50-60 ans, profession libérale, sécurisant, élégant, bilibéaire. CF1402

33- Célibataire, 35 ans, 1m60, physique agréable, situation, qualités de cœur, cherche homme 35-40 ans, situation stable, sérieux, désirant créer foyer heureux avec enfants. CF1140

PARIS- Secrétaire, 45 ans, divorcée, petite, féminine, romantique, sensible, cultivée, appréciant soleil, foyer chaleureux, confert raffiné, passionnée d'art lyrique, épouserait tendre Monsieur 50 ans (max), distingué, courtis, franc, spirituel, situation aisée, qualités cœur, attentionné, même profil, non fumeur, attaché valeurs traditionnelles. CF1139

19-LIMITROPHES- Enseignante célibataire, 40, physique jeune, sérieuse, souhaite 45 maximum, réfléchi, attentionné, sérieux, pour fonder un foyer. CF1137

70-85-PARIS- 35 ans, célibataire, féminine, gentille, sérieuse, 1m60, 50 kg, fonctionnaire, rencontrerait Monsieur cultivé, sérieux, charmant, 35-45, aimant nature, situation stable. CF1134

Divorcée, 46 ans, secrétaire, gaie, sensuelle, souhaite union heureuse avec homme loyal 47-60 ans. Antillais bienvenus. Annonce sérieuse. CF1131

PARIS- JF célibataire, ingénieur 33 ans, 1m75, brune, gaie, équilibrée, tendre, aimant nature, sport, voyages, souhaite rencontrer via mariage Monsieur même profil 30/36, grand, svelte, viril, sincère, humour, non fumeur. CF1075

R.P.- Femme célibataire, 42, sens moral, 1m68, chétain, calme, bonne situation, musique classique, cinéma, montagne, nature, recherche compagnon libre, deux 1m75+, cadre, max 47 ans, non fumeur. CF1104

Profession libérale, études supérieures, célibataire, quarantaine, qualités morales, excellent milieu, physique agréable, aimant sorties, voyages, facile à vivre, recherche Monsieur 45-50 ans, même profil. CF1113

Francilienne, 38 ans, 1m75, sympathique, dynamique, études supérieures, rencontrerait homme max 45 ans, humour, dialogue, plus s'affinités. CF1114

Jeune femme malgache, quarante ans, résidant à Madagascar, expérience restauration et hôtellerie, excellente présentation, coquette, affectueuse, efficace, maniant parfaitement le français, sachant tenir une maison, cherche correspondance avec Monsieur sérieux pour union sincère et durable. CF1115

Existe-t-il cet homme qui désirerait refaire une existence enfin heureuse auprès d'une JF divorcée, quarantaine, 1m66, mince, jolie, distinguée ? CF1121

49 ans, jeune grand-mère, libre, indépendante, active, souhaite homme même situation, bonne moralité, humour, sensible, culture pour parfaire éducation enfants, voyager, former un couple uni durable si affinités. CF1125

Dames de plus de 50 ans

PARIS- Jolie femme, jolies sourires, 59 ans, paraissant 45/47, 1m70, élégante, allurée, désirable, féminine, chaleureuse, passionnée, fraîcheur d'âme, position sociale élevée, aisé, épouserait homme haut niveau de vie. CF1289

BASSE NORMANDIE- Femme 62, 1m70, divorcée, fumeuse, très motivée, pour vie couple, rencontrerait Monsieur, bon niveau socio-culturel, gai, sincère et bien dans ses baskets. CF1504

R.P.- Femme brune, yeux bleus, 50 ans, séparée, souhaite trouver une épauole solide pour y poser sa tête. CF1491

Dame 51 ans, paraissant moins, B.C.B.G., recherche Monsieur très aisé, aimant arts, voyages, opéra, mariage blanc accepté. CF1499

Veuve éducation bourgeoise, catholique, 1m65, mince, sentimentale, douce, aimant la vie, le soleil, la joie, souhaite rencontrer Monsieur 70 à 80 ans, bon, cultivé, même profil pour partager une fin de vie heureuse, à Paris et au soleil. CF1483

31, limitrophes- Dame 55 ans, 1m74, moralité humaine, calme, es-commerçante, revenus modestes, recherche point d'appui chaleureux 53-60 ans, grand, pour partager douce joie de vivre. CF1476

55 ans, paraissant moins, brune, caractère jeune, aimant musique sorties, voyages souhaite rencontrer Monsieur sérieux pour sorties, amitié ou s'affinités, 60 ans maximum. CF1489

La cinquantaine, moderne, féminine, 1m65, 56 kg, pas moche, pas sottie, souhaite compagnon 50-60 ans, positif, sportif, attentionné, pour réussite dernier parcours. CF1468

Antillaise, 53 ans, divorcée, fonctionnaire, vira, sérieuse, rencontrerait homme sérieux, situation, pour bonheur tranquille aux Antilles. CF1453

PARIS-TOUTES REGIONS- Jolie femme, 51 a, 1m72, enrobée, douce, sensuelle, féminine, enjouée, enthousiaste, chaleureuse, propriétaire, études supérieures, active, partagerait infinie tendresse, projets, avec compagnon libre, solide, éducation, profil similaire. CF1445

63- Célibataire la cinquantaine, 1m72, sportive, aimant voyages, sorties, musique, art, recherche compagnon, goûts en rapport pour union sincère. Tél. souhaite. Régions indifférentes. CF1444

Annonce sérieuse : Votre décision est prise, vous ne voulez plus vivre seule, vous êtes décidée à construire une famille. Dans ce cas téléphonez vite : A «HARMONIE A DIEU» au 36-68-39-45. Vous découvrirez des hommes qui ont le même but que vous. Construisez pour durer. Attention ce service est interdit à toute personne n'ayant pas la ferme conviction de se marier. 2,19 €/min.

31-500- 53 ans, élégante, dynamique, indépendante, charme, cher. Mr 62 ans max, cultivé, humour, gai, chaleureux, sécurisant, aimant arts, musique, voyages. CF1436

95- Veuve pré-retraitee Market, 56 ans, 1,60, brune, enfants indépendants, féminine, traditionnelle, activités manuelles, artist, jardin, voyages, recherche complicité, chaleur, sincérité, joie de vivre dans vie couple. Proximité possible. CF1433

78, limitrophe- Veuve 60 ans, féminine, affectueuse, souhaite rencontrer Monsieur sérieux, non fumeur, pour vie couple si affinités. Ecrire journal. CF1431

LANGUEDOC-ROUSSILLON- Professeur 60 ans, sans charge, agréable, élégante, maison vacances, sports, voyages culturels, animaux, souhaite rencontrer Monsieur 65 max, 1m80 max., bien physiquement, cultivé, soigné, sportif, courtis. MARIAGE EXCLUSIVEMENT. CF1418

48- Veuve 70 ans, retr. com. désire renc. Mr même âge, retr. com. ou fonc., sobre, gai, santé, ans. vie fam., sorties, aimant. pas sér. r'atst. Ecrire journal. CF1409

PARIS- Cinquantaine, blonde, yeux verts -mince- très féminine -épouée- profession? scientifique (physicienne, cadre supérieur), aime? nager, courir, skier, danser (jou, très invitée), respirer la nature en vélo. - Egalement : harmonie, calme, musique classique, beauté dans environnement (meubles anciens...)- Valeurs? courage, enthousiasme, utilité aux autres, auteurs préférés? Arnaud Desjardins, Dale Carnegie, ouvrages pensée positive, nouvel âge -souhaite?... Pas rôle aide ménagère, tellement mieux: tendresse cœur et corps, échanges profonds, nouvel élan de vie. CF1304

Veuve, directrice d'école, retraitée, très bien physiquement, distinguée, aime voyages, attachée valeurs morales, rencontrerait Monsieur, mêmes aspirations, situation équivalente. CF1395

R.P. Ouest, Jeune cinquante, autonome, rousse yeux dorés, souriante taillonnée désire partager automne dynamique avec ami tête bien construite et cœur intelligent. CF1381

Correspondants première semaine février suis annonce 11-370 (Blonde, Saint-Eupéry...) recontactez-moi, très navrée, sa-coche courriers volée dans métro! Desprez, 32 rue du Mont Thabor, 75001 Paris.

30-34, Veuve, sans enfant, 63 ans 1m68, cadre retraitée, physique caractère jeunes agréables, recherche compagnon 65 ans max, buveur fumeur exclus. Résidences alternées possible. CF1375

58-505 Perdue, seule, a lancé message que celui à qui il est destiné ne lira peut-être pas - ou trop tard ! Divorcée 65 désire mariage célibataire seul, sensible, doux, 61-68 ans. Locataire ville, jamais chazé. «Suis abandonnée du genre humain». CF1373

PARIS- Femme 54 ans d'origine Malgache, courageuse, sincère, fidèle, cherche homme 50 à 65 ans, pour rompre solitude. CF1374

Paris - Dame 68 ans, physique et caractère jeunes, agréable, souhaiterait rencontrer Monsieur 67 / 75 ans affectueux, sincère, bonne moralité. CF1372

Vie physique allure jeunes, belle femme, moderne, 1,64m 67 kg, aisée, sportive, tendre, naturelle, élégante, éducation, propriété Touraine. Rencontrerait Monsieur 69 - 75 max, grand, soigné, santé, tendre, courtis, optimiste, aisé. Partager ensemble loisirs, tendresse, complicité. Alternance domicile envisageable. CF1371

Française, cinquantaine, classe, paraissant très jeune, blonde, yeux bleus, mince, en activité, artiste, désire vie couple harmonieuse avec homme asiatique, libre, très motivé, médecin ou cadre supérieur, parlant français. Annonce très sérieuse. CF1369

38, Dame sérieuse, gentille, femme d'intérieur, 70 ans, 1,65m, 65 kg, désire rencontrer Mr 70 et 4, sobre, sécurisant. CF1368

Bretagne, veuve alerte, gaie, santé, aime voyages, nature, promenades, rencontrerait Mr 72-75, non fumeur, mêmes goûts. CF1367

69, Limitrophes, Veuve 57 ans 1m56, 55 kg, employée, goûts simples, physique agréable, rencontrerait Monsieur sobre, sérieux, pour rompre solitude, goûts similaires. CF1356

96-autres- Cinquantaine, divorcée, féminine, blonde, 1m60, bon niveau, revenus confortables, aimant sorties, voyage, musique, peinture, animaux, rencontrerait Monsieur 50/56, même profil, bien physiquement, min, 1m73, libre, sobre, sincère, valeurs morales pour relation de qualité. CF1349

37 et limitrophes- 54 ans, veuve, blonde, yeux bleus, corpulente, ressources modestes, qualités et défauts, donnerait affection, sincérité, compréhension contre amitié, sécurité, pour mariage si affinités. CF1348

Région Parisienne- Dame la cinquantaine, loyale, authentique, sensible, souhaite construire relation solide, non fumeur, profil identique, 60 ans maxi. CF1345

Toutes régions, Veuve, jeune septuagénnaire, chétain, yeux verts, 1m52 / 53kg, retraitée, excellent milieu, rencontrerait Monsieur sérieux 70/60, vie commune. CF1339

69, toutes régions- Dame divorcée, 53 ans, libre, sans charge, santé, sérieuse, éducation, aimant nature, voyages, vie saine, souhaite compagnon profil identique. CF1331

71, 68, 61- Jolie, cinquantaine, seule, sans enfant, rieuse, naturelle, sensible, sociable, goûts simples, aimant peinture, voyages, lectures, sports, cherche homme libre (soixantaine), pour partager les plaisirs de la vie. CF1329

PARIS- Petite femme 60 ans, fine corps esprit, moderne, épanouie, passion vie arts, souhaite homme tendre, gai, niveau intellectuel, sensuel, sensibilité, pour relation de qualité. CF1328

28- Veuve fin soixantaine, retraite, excellent milieu, éducation, simplicité, allure, mince, santé, maison près mer, aimant nature, peinture, rencontrerait Monsieur 70 ans, sérieux, affectueux, valeurs morales, pour rompre solitude. CF1320

TOULOUSE- Suis de celle pour qui quand on aime, il faut toujours beau-sagittaire, fin quarantaine, 1m68, mince, yeux verts, jolie, élégante, très féminine, situation, rencontrerait Monsieur 50-60, réajustement hors du commun, moralité, raffiné, niveau et milieu social élevés, pour partager durablement amour-humour, fumeurs, caractérisés s'établir. CF1311

PAYS-DE-LOIRE- Retraitée partagerait avec Monsieur courtis 60-70 ans, vie saine, sereine, dialogue, valeurs morales. CF1309

Veuve, 58 ans, 1m78, élégance, charme, féminine, sensible, qualités cœur/morales, maison, rencontrerait Monsieur, beauté intérieure, souhaite mariage. 05-58-73-31.

Message PERSONNEL- CF1302 «DOULOUREUSEMENT SEULE». Lorsque reçu second courrier, suite accident, ne marchais plus. Pas osé le lui dire. Suis guérie, remarche normalement, ai gardé poèmes, fleur de fuchsia. Si Jean-Pierre n'a pas trouvé âme-sœur, suis toujours «TELLEMENT ABANDONNÉE!» CF1302

TOUTES REGIONS- Dame 57 ans, très seule, cherche compagnon 58-65 ans, grand, sérieux, pour rompre solitude. CF1294

45 et autres- Veuve, 55 ans, grande, mince et dynamique, sincère; désire rencontrer Monsieur 55-60 ans, bon niveau socio-culturel, courtis et tendre pour partager un grand bonheur. CF1285

Soixantaine, gaie, sentimentale, propriétaire Var, rencontrerait Monsieur sérieux, aimant voyages, danse, non fumeur, grand, 1m76, pour liaison durable, accepte résidences alternées. CF1281

06-83-04- Dame retraitée agréable, caractère jeune, 1m56, 53 kg, recherche compagnon physique agréable, bon milieu, bonne retraite. CF1286

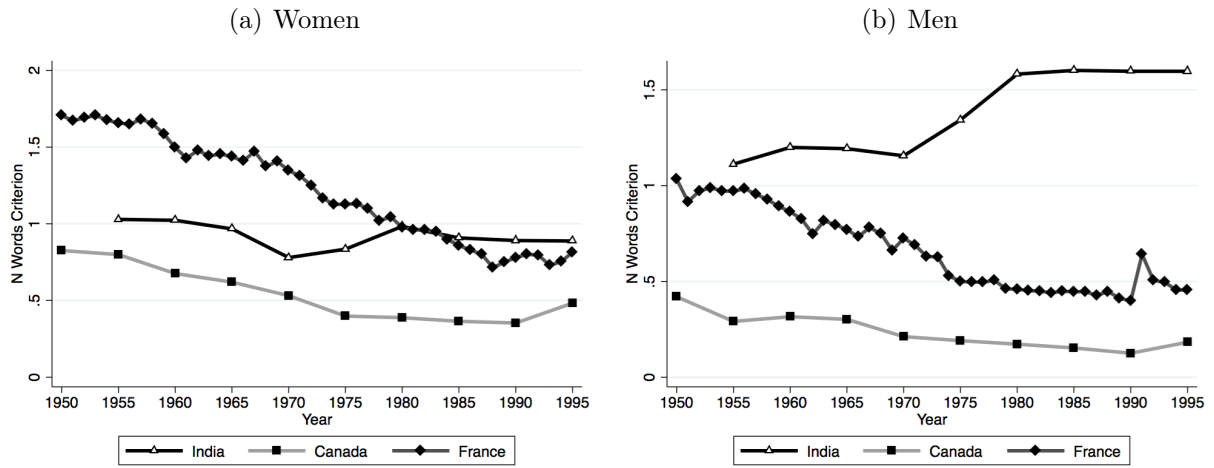
R.P.- Belle femme, 53 ans, cadre, gaie, dynamique, rencontrerait Monsieur grand, distingué, privant, HUMOUR, aimant voyages, nature, BON NIVEAU SOCIAL. ANNONCE SERIEUSE. CF1277

91-77- F. 53 ans, brune, 52 kg, physique, allure agréable, sérieuse, affectueuse, indép. financ. désire continuer sa vie avec amour, confiance, sérénité et sécurité avec M. 50-58 ans, min, 1m76, même profil, mêmes desirs. CF1274

66 ans, veuve, cadre fonction publique, retraitée, dynamique, aimerait rencontrer homme âge correspondant, sérieux, libre, Nord Picardie, Ile-de-France. CF1269

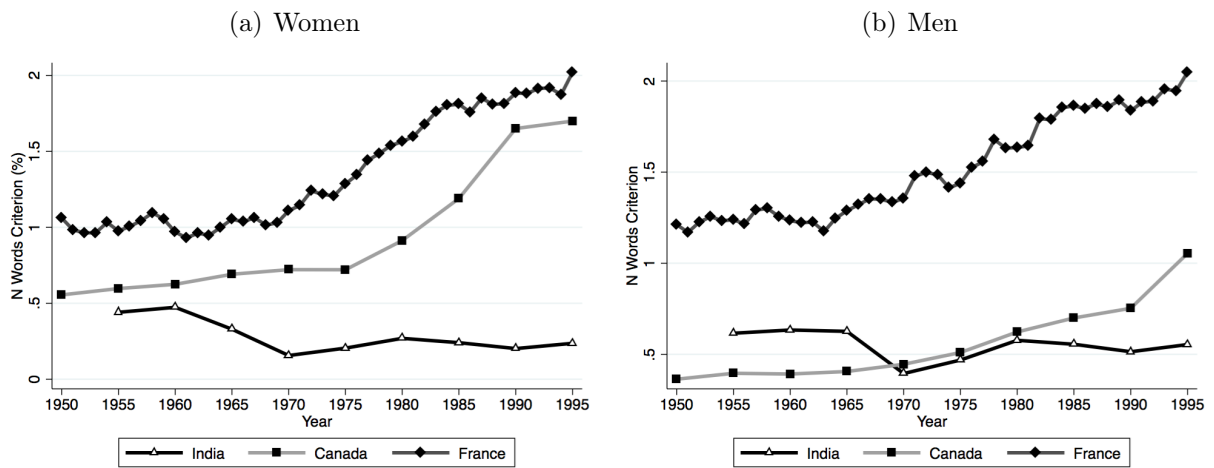
B.2 Additional Robustness

Figure A6: Evolution of the Demand for Economic Criteria - Count



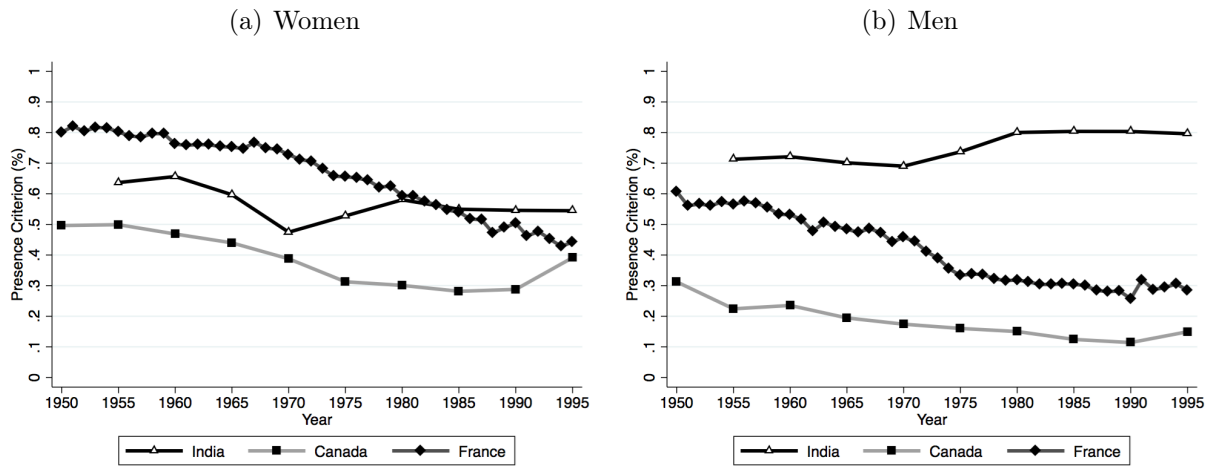
Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure A7: Evolution of the Demand for Personality Criteria - Count



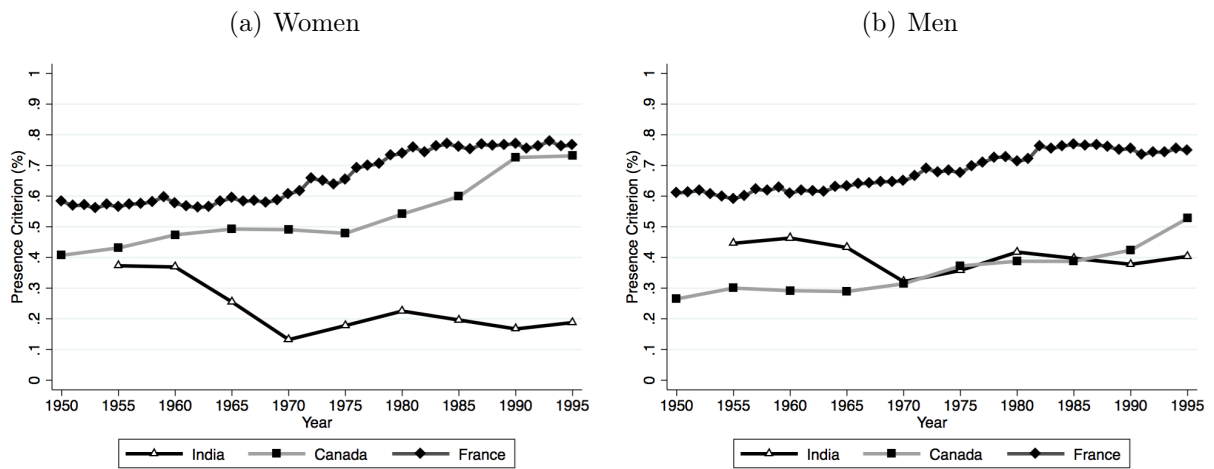
Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure A8: Evolution of the Demand for Economic Criteria - Dummy



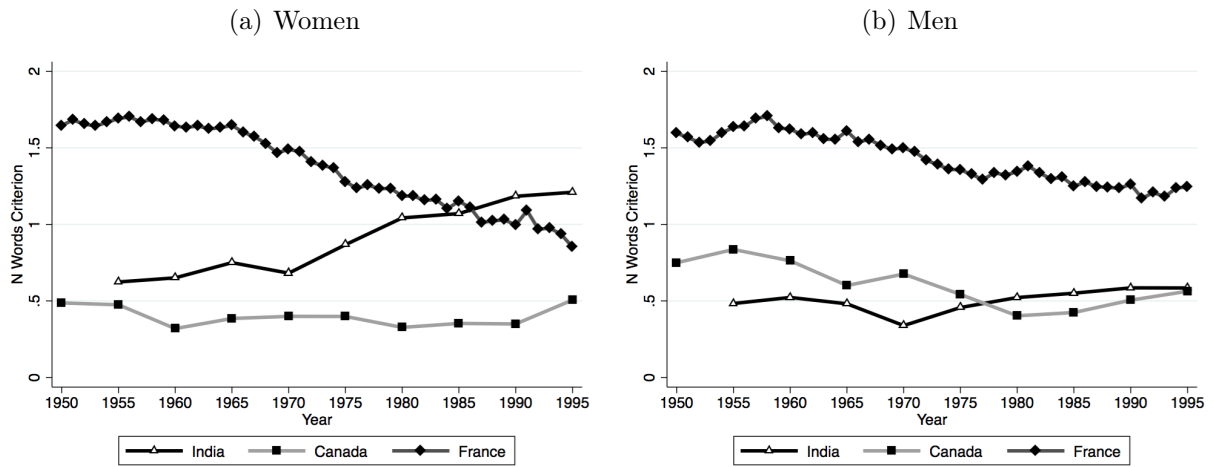
Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure A9: Evolution of the Demand for Personality Criteria - Dummy



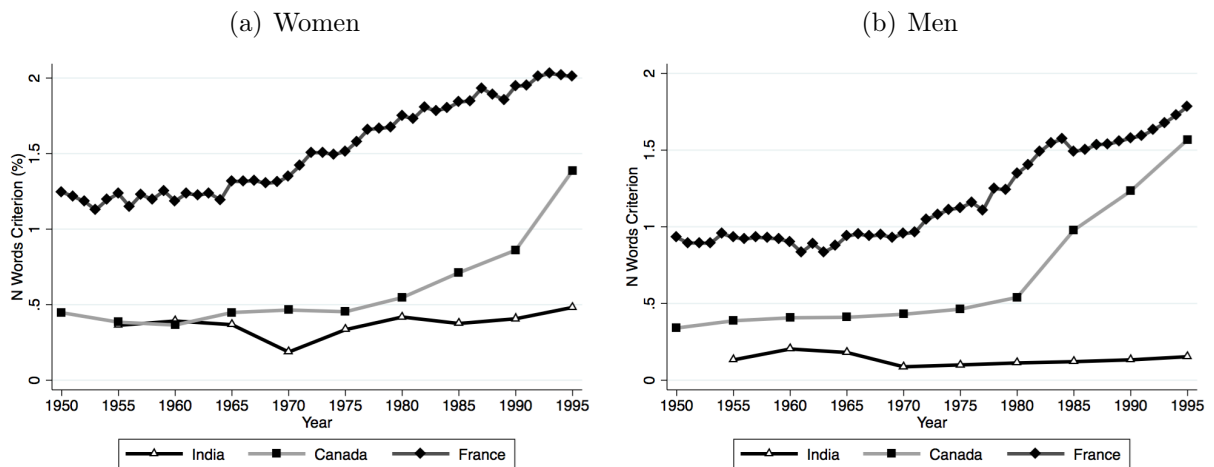
Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure A10: Evolution of the Supply for Economic Criteria - Count



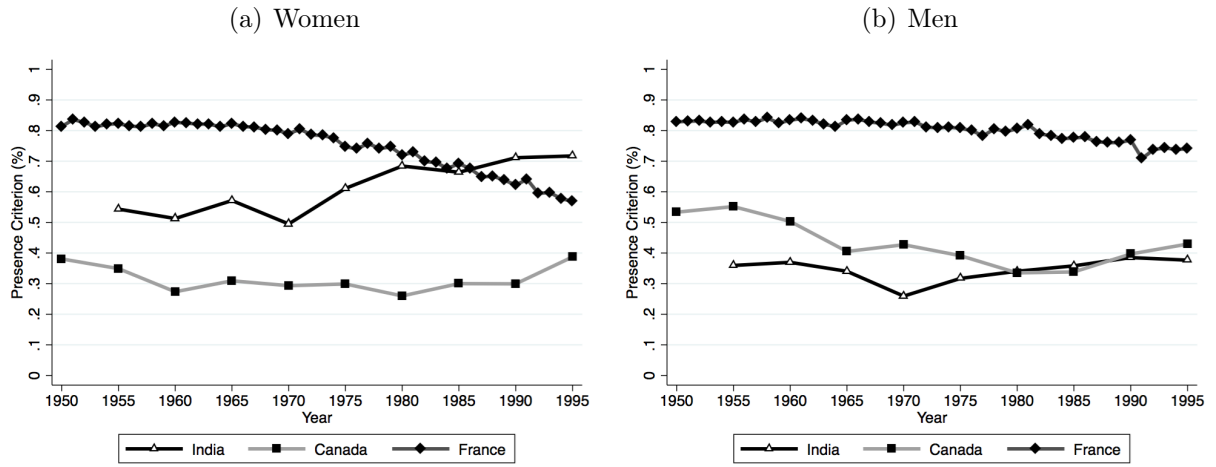
Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure A11: Evolution of the Supply for Personality Criteria - Count



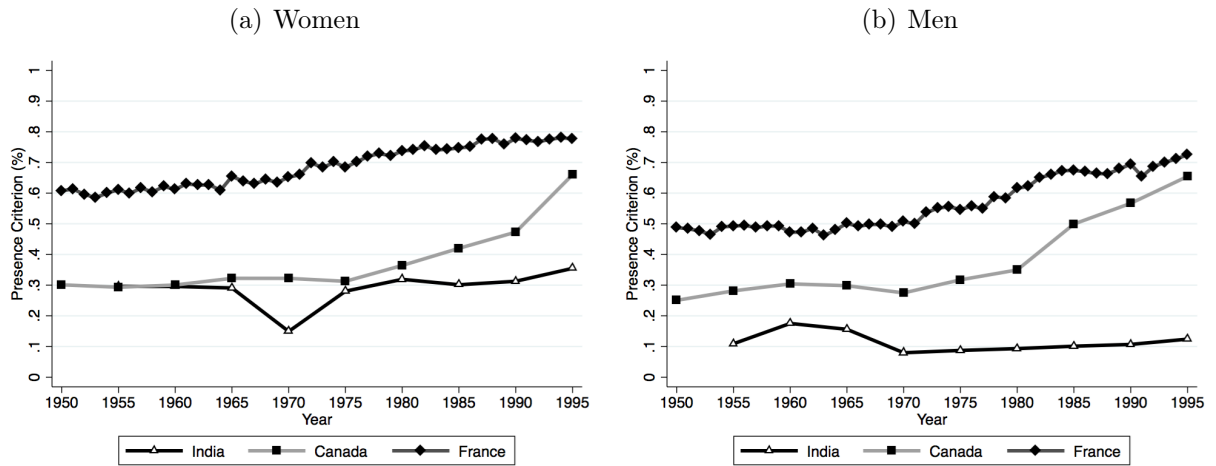
Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure A12: Evolution of the Supply for Economic Criteria - Dummy



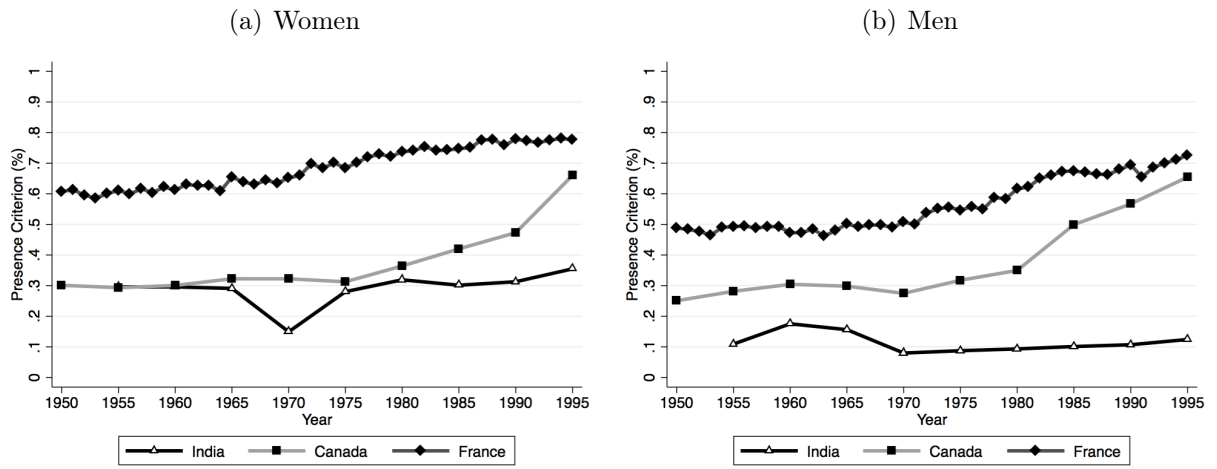
Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure A13: Evolution of the Supply for Personality Criteria - Dummy



Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

Figure A14: Evolution of the Supply for Personality Criteria - Dummy



Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

C Cross-Sectional Evidence

C.1 Data

Table A5: List of US States and Newspapers

US State	Newspaper
Alabama	The Anniston Star
Arizona	Arizona Daily Star
California	Los Angeles Times
Colorado	Daily Sentinel
Columbia	Washington Post
Connecticut	Hartford Courant
Delaware	The News Journal
Florida	Orlando Sentinel
Georgia	The Atlanta Constitution
Idaho	Times News
Illinois	Chicago Tribune
Indiana	The Indianapolis Star
Iowa	The Des Moines Register
Kansas	Wichita Eagle
Kentucky	The Courier Journal
Louisiana	The Times
Maine	Bangor Daily News
Maryland	The Baltimore Sun
Massachusetts	Boston Globe
Michigan	Lansig State Journal
Minnesota	Star Tribune
Mississippi	Clarion Ledger
Missouri	The Kansas City Star
Montana	Billing Gazette
Nebraska	Lincoln Journal Star
Nevada	Reno Gazette Journal
New Jersey	The Record
New Mexico	Albuquerque Journal
North Carolina	The Charlotte Observer
North Dakota	Bismarck Tribune
Ohio	Cincinnati Enquirer
Oklahoma	The Daily Oklahoman
Oregon	Statesman Journal
Pennsylvania	Pittsburgh Post Gazette
South Carolina	The Greenville News
South Dakota	Argus Leader
Tennessee	Johnson City Press
Texas	Austin American Statesman
Utah	The Salt Lake Tribune
Vermont	The Brattleboro Reformer
Virginia	Daily Press
Washington	Longview Daily News
Wisconsin	Wisconsin State Journal
Wyoming	Casper Star Tribune

Notes: List of American Newspapers

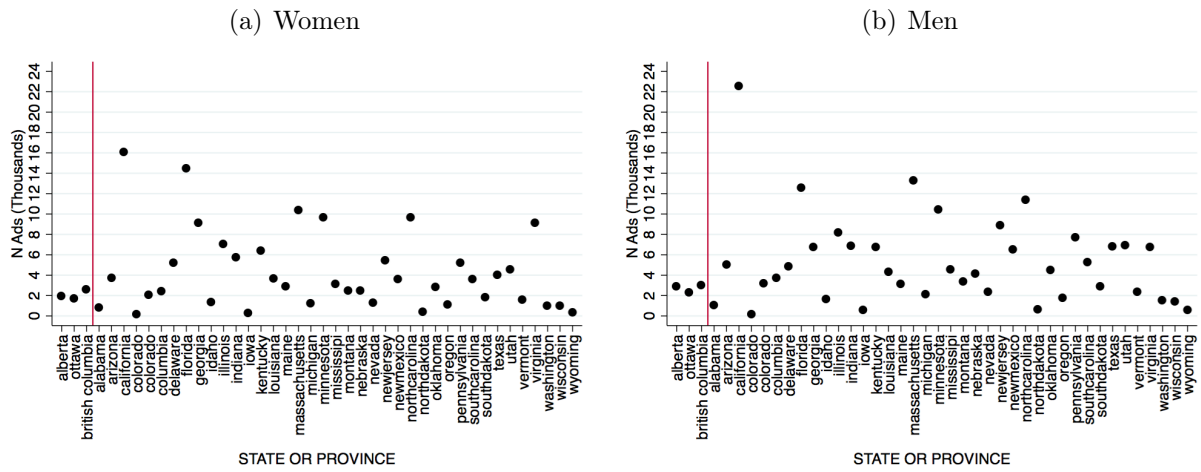
Table A6: List of Canadian Provinces and Newspapers

Canadian Province	Newspaper
Alberta	Calgary Herald
British Columbia	Vancouver Sun
Ontario	The Ottawa Citizen

Notes: List of Canadian Newspapers

C.2 Descriptive Statistics

Figure A15: Descriptive Statistics on the Number of Matrimonial Ads

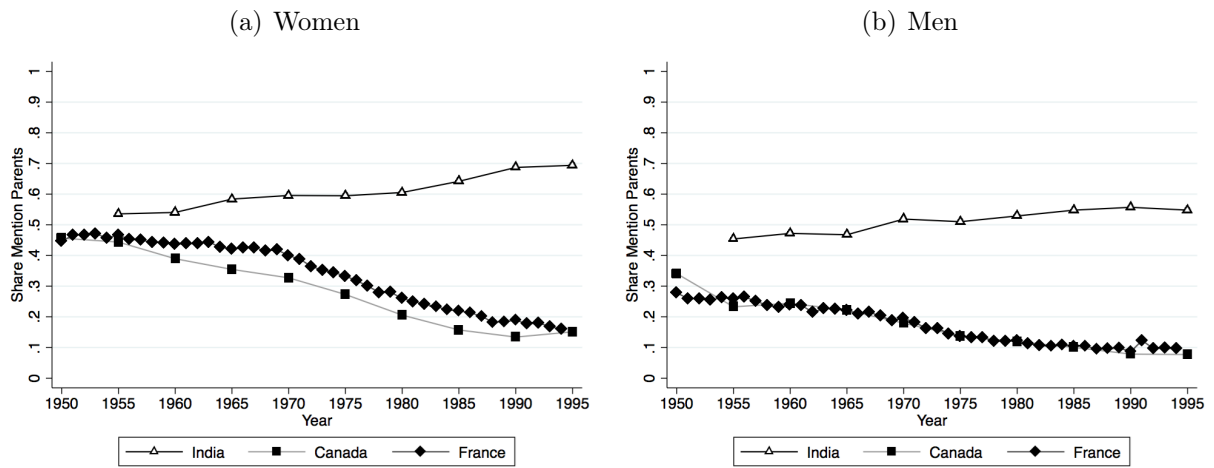


Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

D Mechanisms

D.1 Parent

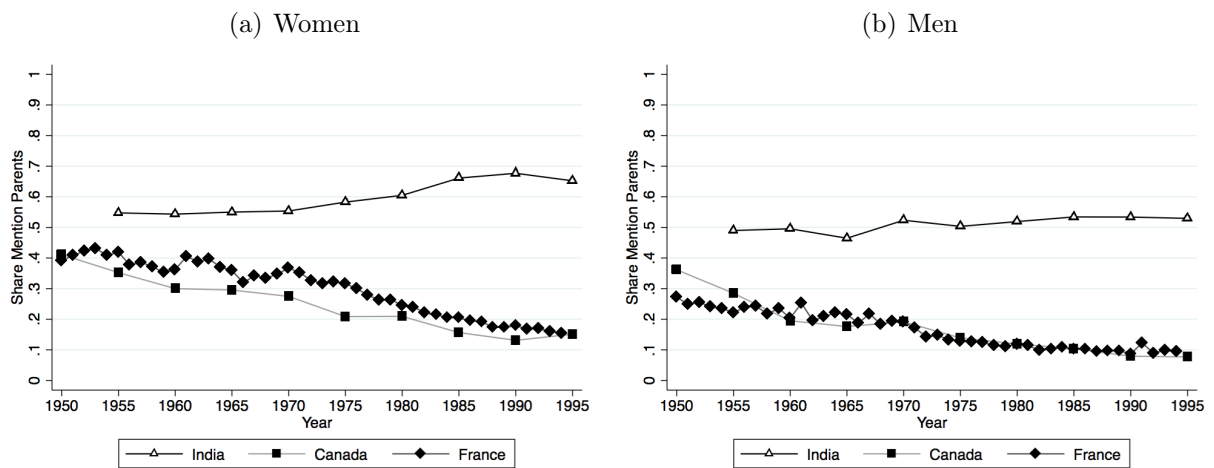
Figure A16: Demand for Economic Criteria - Ads without mention of parents



Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.

D.2 Marriage

Figure A17: Demand for Economic Criteria - Ads without mention of marriage



Notes: the data come from matrimonial ads published in Canada, France and India. Graphs (a) and (b) respectively include ads written by women and men.