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Did the Decline in Social Capital Decrease American Happiness?
A Relational Explanation of the Happiness Paradox

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Abstract - Most popular explanations of the happiness paradox cannot fully account for the lack of growth in U.S. reported well-being during the last thirty years (Blanchflower and Oswald (2004)). In this paper we test an alternative hypothesis, namely that the decline in U.S. social capital is responsible for what is left unexplained by previous research. We provide three main findings. First, we show that the inclusion of social capital does improve the account of reported happiness. Second, we provide evidence of a decline in social capital indicators for the period 1975-2004, confirming Putnam's claim (Putnam (2000)). Finally, we show that failed growth of happiness is largely due to the decline of social capital and, in particular, to the decline of its relational and intrinsically motivated component.

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1. Introduction

In the last thirty years Americans experienced a decline in their average reported happiness and social capital. To what extent this two stylized facts are linked? In this paper we empirically try to answer this question.

The decline in US happiness is the American version of the so called paradox of happiness. The latter was formulated by Easterlin (1974), who showed two stylized facts: that people in industrialized countries are not becoming happier over time despite economic growth, and that people with a higher income than others, at any given point in time, do report higher levels of happiness. If more income makes an individual better off, why does an increase in the income of all not improve everybody's lot?

Further evidence of the paradox has been provided by subsequent research and it has attracted interest on the determinants of well-being. The literature introduced by Easterlin has become a booming industry by now. This literature is fed by the abundance of data on self-reported well-being, which proved to contain relevant information on the well-being of individuals. Econometric studies have detected, among others, the importance of income aspirations, unemployment, inflation and social capital for people's well-being (Oswald (1997); Blanchflower and Oswald (2004), Easterlin (1995), Frey and Stutzer (2000), Di Tella and McCulloch (2005)).

However, not all these variables, usually omitted from utility functions, can aid in explaining the happiness paradox. In order to do so, they need to have a trend that can offset the positive impact exerted by rising income on well-being. For instance, unemployment and inflation cannot be used to explain the paradox simply because they do not exhibit a rising trend.

Income aspirations have progressively attracted wide consensus due to their potential in explaining the paradox. In fact, the shift in income aspirations may, in principle, compensate for the positive impact of rising income on well-being. Two sources of aspirations dynamics have been pointed out. Aspirations can be linked to one's past income or to the income of one's reference group. The former case has been often referred to as a hedonic adaptation to a consumption standard, while the latter is linked to the tradition emphasizing the importance of social comparisons in determining consumption choices (Veblen (1899), Duesenberry (1949)). In both cases, economic growth tends to raise income aspirations with negative effects on happiness. Growth triggers a Hedonic Treadmill (people adapt their aspirations to past living standards) and a Positional Treadmill (people compare their income to that of others and set their aspirations accordingly), which may partly or completely offset the positive effect exerted on well-being by rising absolute income.

However, the shift in income aspirations cannot fully account for a decreasing trend in happiness. Reasonably, it can account for, at most, a stable trend. In fact, aspirations must concern

that which individuals consider relevant per se and not what is regarded as unimportant. In other words, one can aspire to a greater absolute income only if absolute income is considered relevant. If only relative income matters, then it is relative income that becomes the object of aspiration and, hence, adaptation occurs with respect to relative position. Therefore, the total negative effects of the hedonic and the positional treadmills cannot go beyond the elimination of any benefit accruing from income growth.[1] Summing up, a declining trend in happiness remains partly unexplained at the current state of the literature.[2]

As a remarkable example, Blanchflower and Oswald (2004) observe that a negative time-trend of well-being in the US between 1974 and 1998 persists, even if controlled, for relative income, alongside the other usual socio-economic controls. They thus conclude asking for more research on this point (see also Blanchflower and Oswald (2007)).

Our thesis is that the decline in U.S. social capital can account for what is left unexplained of the happiness trend. In particular, we test the hypothesis that the decline in the quality and quantity of intrinsically motivated relations may have played a major role in the evolution of happiness over the last thirty years. The possible role of social capital in explaining the happiness paradox is still an open question, currently explored by a few pioneering studies (Helliwell (2003, 2006), Helliwell and Putnam (2005). Bruni and Stanca (2006) focus on the relational dimension of social capital. These studies show a positive impact of social capital on happiness. However, since they do not analyze trends of social capital variables, they do not allow drawing any conclusions on their possible role in explaining happiness trends.[3]

Social capital trends in the US during the last 5 decades have been the object of a lively debate raised by Putnam (Putnam (2000), and for a concise survey see Stolle and Hooghe (2004)). His evidence has been criticized by Ladd (1996), and then carefully scrutinized for the variable used and the period considered by Paxton (1999), Robinson and Jackson (2001), and Costa and Kahn (2003). On balance, social capital has been confirmed as declining in the US, although not so dramatically as Putnam claimed.

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[1] The empirical evidence on these issues is controversial: Blanchflower and Oswald (2004) show that the effect of an increase in the income of others does not completely compensate for the increase in one's own income (also Stutzer (2004), Luttmer (2005)). On the other hand, some research shows that the impact of the income of others is as strong as that of one's own (see Ferrer-I-Carbonell 2005).

[2] Di Tella and McCulloch (2005) further attempt to give an answer to the happiness paradox by adding to the conventional arguments of the utility function other aggregate variables, like unemployment rate, inflation, average divorce rate, life expectancy, pollution, and crime, and by attempting an estimate of their contribution to reported well-being. However, "introducing omitted variables *worsens* the income-without-happiness paradox" (Di Tella and McCulloch (2005), emphasis added), at least for Europe.

[3] When the studies concentrate on social capital, the cross-country approach is adopted. This approach not only impedes the analysis over time, but the usual data set employed (the World Value Survey) does not allow the comparison of individuals' level of absolute income.

Summing up, in this paper we test a number of interrelated hypotheses: that the various proxies for social capital declined during the recent decades; that these proxies play an important role in an individual's self-reported well-being over the same period; that absolute and relative income maintain significant roles.

These aims require a generous data set. For this purpose we use the US General Social Survey (GSS) since it includes many questions directly linked to social capital, questions on absolute income and as it extends over 32 years drawing from very large samples of the US population. The main limitation of the GSS is that it is not a panel. Consequently, adaptation cannot be properly studied.

Blanchflower and Oswald (2004) have already estimated a happiness equation with a number of demographic and socio-economic controls using GSS data. In the first part of the paper we follow their strategy. The present work may also be seen as an extension and an advancement of Blanchflower and Oswald (2004). With respect to them, we analyze a longer period (up to 2004 instead of 1998); we include social capital variables; we refine the controls for relative income; and, most importantly, we calculate the impact of each of our regressors on the trend of happiness.

The paper proceeds as follows. In Section 2, we define concepts and variables. In Section 3, we estimate the impact of social capital on happiness. In Section 4, we estimate the trend of social capital. In Section 5, we estimate the happiness trend predicted by our figures and compare it to the observed trend. Section 6 draws conclusions and comments on both problems of interpretation and implications for policy.

2. Theoretical framework: social capital, relations, motivations

Social capital (SC) is a rather vague concept and, often, scholars ascribe different meanings to it. By SC we mean the stock of non-market relations and beliefs that affect the return of available resources, either in physical or utility terms. In other words, in what follows we will distinguish between *relational social capital* (RSC), i.e. the non-market relations, and *non-relational social capital* (non-RSC), i.e. the "beliefs" component. We further distinguish between intrinsically and extrinsically motivated RSC. Summing up, we identify three components of social capital: intrinsic RSC, extrinsic RSC and non-RSC.

The concept of extrinsic motivations refers to the incentives coming from outside an individual. By contrast, major psychological schools emphasize the intrinsic motives issuing from within an individual. According to Deci (1971, pg. 105), "one is said to be intrinsically motivated to perform an activity when one receives no apparent reward except the activity itself". Notice that Deci's definition concentrates on the non-instrumental nature of intrinsically motivated activities which directly enter the utility functions of individuals. The distinction between intrinsic and

extrinsic motivations is a well-established concept in social sciences. Various empirical studies in psychology have found that extrinsic motivations can crowd out intrinsic ones. This has arisen a lively debate in psychology (Sansone and Harackievicz, 2000), but it has also attracted interest among the economists (Frey (1997), Benabou and Tirole (2003), Kreps (1997)).

Notice that, according to such a distinction, instrumental relations are not exhausted by market relations. In fact, also non-market relations can be extrinsically motivated. Moreover, they may be both extrinsically and intrinsically motivated. Therefore, we adopt the following definitions. By *intrinsic relational social capital* (or intrinsic RSC) we mean the stock of RSC that enters into people's utility functions. By *purely extrinsic* or *non-intrinsic relational social capital* we mean the stock of RSC that does not directly enter into people's utility functions, but is instrumental to something else that may be considered valuable.

The economic importance of intrinsically motivated relationships has been emphasized using the term *relational goods*.[4] In the following we will adopt the terminology 'intrinsic relational social capital' interchangeably with 'relational goods'.

As measures of the non-relational component of SC – i.e. the "beliefs" component – we use several reports of trust in institutions such as organized labor, education, Congress, the military forces, banks and financial institutions, major corporations, the executive branch of government, etc. This is quite standard (Paxton (1999), Costa and Kahn (2003)). As measures of RSC we use marital status, social contacts, trust in individuals and membership in various groups and organizations. Since marital status is obviously a relational variable we include it among RSC indicators, although it is not always considered a social capital variable. Moreover, it is an important source of information on the family, which, according to Putnam (2000), is considered one of the main sources of social capital. Furthermore, we classify marital status and social contacts (with neighbors, friends and relatives, at bars and taverns) as indicators of intrinsic RSC. Besides possible extrinsic motivations, their intrinsic nature should be obvious enough. In the following, we illustrate why we also consider membership in certain groups and trust in individuals as indicators of intrinsic RSC.

Membership in groups and organizations is widely considered to be a good indicator of relational activities (also referred to as "weak ties" in the social capital literature (Olson (1982), Putnam (2000), Costa and Khan (2003), Sabatini (2006)). Given the different nature of the various groups and organizations, we propose a distinction between intrinsically and extrinsically motivated group memberships. For this purpose, we sort groups into two main categories which we call,

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[4] Uhlaner (1989), Gui and Sugden (2005), Bruni and Stanca (2007). Some studies show their positive impact on reported well-being, as Bruni and Stanca (2005). Helliwell (2006) and Helliwell and Putnam (2004) show similar results although not using the term relational goods.

following the intuition of Knack (2003), *Putnam's groups* and *Olson's groups*. The distinction between Olson's and Putnam's groups is based on the classic works of Olson (1982) and Putnam (1993). They provide conflicting views on the impact of private associations on economic performance and social conflict. Olson (1982) emphasized the tendency of associations to act as 'distributional coalitions' which lobby for policies that protect the interest of special groups at the expenses of the society as a whole. Since these 'distributional coalitions' impose large costs to the rest of the society they negatively impact on economic growth. Growth-inhibiting policies such as tariffs, tax breaks, competition-reducing regulations or subsidies are the undesirable result of the lobbying activity of associations. Instead, according to Putnam (1993) associations are a source of general trust and social ties leading to governmental and economic efficiency. These different views motivated empirical tests aimed at verifying if different horizontal associations, called Olsonian and Putnamian, have a different impact on economic growth (Knack (2003), Gleaser et al. (2000)).

In this paper, membership in Putnam's group is interpreted as intrinsic RSC, while membership in Olson's group is interpreted as purely extrinsic RSC. In other words, membership in Putnam's groups is supposed to be mostly experienced for the pleasure of being a member (e.g. the pleasure derived by the idea of acting together with other individuals towards a common aim, the pleasure of interacting with people having similar tastes, etc.). Conversely, membership in Olson's groups is supposed to be experienced only for instrumental reasons (e.g. rent-seeking). Among Putnam's groups we include service groups, church organizations, sports clubs, art and literature clubs, national organizations, hobby clubs, fraternal groups and youth associations. Among Olson's groups we include fraternity associations, unions, professional organizations and farm organizations. Three groups were left unclassified and we put them under the label of *Other groups*. The reason is that it is not clear whether these groups constitute intrinsic RSC or not. Among such *Other groups* we include veterans associations, political parties and "other groups" (the latter is the label used in the GSS for groups that do not fall in any of the types otherwise described).[5]

We also classify variables concerning trust in individuals – i.e. reports of general perceived trustworthiness, helpfulness and fairness – as indicators of intrinsic RSC. They can be interpreted as judgments about the behavior of others, which stem from the quality of individuals' actual relationships. In other words, we posit that people judge that others are trustworthy or helpful on the basis of their actual experiences and that these relationships are more likely to be based on trust and

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[5] Knack (2003) does not refer to intrinsic and extrinsic motivations. Moreover, the types of groups recognized in the GSS do not coincide with those recognized in the database used by Knack (2003) so our classifications are partly different. However, this is not the only reasons for the minor differences between ours and Knack's classification. We made some further changes because of a different interpretation: groups whose main objective is to foster collective actions do not necessarily fall in the Olson category. For instance, we put political parties among Other groups – and not among Olson's group – because we believe that membership in a political party is not necessarily a matter of rent-seeking.

mutual help when they are intrinsically motivated. This does not exclude extrinsic motivations but requires intrinsic ones to play an important role.

3. Empirical Strategy, Data and Estimation Results

We start with an empirical strategy which is similar to the one applied in Blanchflower and Oswald (2004) (BO from now on). Using GSS data, we estimate several ordered logit equations, each characterized by a different set of regressors.[6] We introduce a time variable in all these regressions in order to capture the residual trend in happiness that is left unexplained. By comparing the coefficient of the time variable across regressions, we deduce information about the impact of the different groups of regressors on the trend of reported happiness.

The equations that we estimate are variations of the following general specification:

$$h = h(Soc\text{-}Demo, Inc, RelInc, SC, Time)$$

where *Soc-Demo* is a set of controls for socio-demographic characteristics, *Inc* is a set of controls for absolute income, *RelInc* is a set of controls for relative income, *SC* is a set of controls for social capital and *Time* is the time variable. Function $h(\cdot)$ determines "perceived happiness" and is not observable. However, subject to standard measurement errors, we do observe reported perceived happiness h^* according to the following rule: $h = 1$ if $h^* < c_1$, $h = 2$ if $c_1 < h^* < c_2$, $h = 3$ if $c_2 < h^*$, for some threshold values c_1 and c_2.

Our first set of regressions contains, beside the time variable, only demographic and economic variables. The purpose is twofold. Firstly, we want to establish that which remains to be explained once we have checked for plausible determinants of happiness that cannot be related to SC (either relational or non-relational). Secondly, we are interested in checking what the best control for relative income is. In fact, the one used by Blachflower and Oswald (2004) – the ratio between household per capita income and regional income – performs rather badly. Since our aim is to measure to what extent SC can account for the happiness trend, we want to be reasonably sure that the unexplained residual in the happiness trend is not due to a poor control for relative income.

Some variables are used as they are provided in the GSS. Other variables are constructed using variables found in the GSS. For example, our dependent variable is reported happiness, measured in the GSS by the survey question: "Taken all together, how would you say things are these days? Would you say you are very happy, pretty happy or not too happy?", associating the

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[6] The GSS covers quite a long period of time – more than 30 years – and counts more than 45 thousand observations that are representative of the US census regions. However, the waves have not been carried out on a yearly basis. In particular, after 1974 we have observations only for the years 1975, 1976, 1977, 1978, 1979, 1980, 1982, 1983, 1984, 1985, 1986, 1987, 1988, 1989, 1990, 1991, 1993, 1994, 1996, 1998, 2000, 2002 and 2004.

numbers from 1 to 3 to the three answers. We intend a higher number to mean greater happiness so we associate 3 to "very happy", 2 to "pretty happy" and 1 to "not too happy". Several categorical and ordered variables require more than two values. We either collapse all categories into just two or construct a dummy for each category. Two variables come from two other data sets. Details about definition and source of variables can be found in the appendix. Table 1 reports their summary statistics.

In Regression 1, we control for demographic characteristics such as age, gender and race, and for socio-economic factors such as work status, years of education and absolute income. We also add a dummy for living with both parents at the age of 16 and another dummy for the divorce of one's parents again at age of 16. These are supposed to be controls for important individual past events which may have affected individuals' preferences and/or future choices. Both variables have significant coefficients that show the expected signs. This suggests that life events such as the divorce or death of one's parents do have permanent negative effects on the reported well-being of individuals.

We use household income instead of personal income, because the former is available for most observations while the latter is not. Moreover household income seems to be a better measure of an individual's overall economic condition. Unfortunately the GSS provides no reliable income data for 2004, which forces us to restrict our analysis to 2002. The period covered is 1972-2002. The magnitude and sign of coefficients is in line with other studies in this area and, in particular, with BO (see also Di Tella and MacCulloch (2005), Di Tella et al (2003), Bruni and Stanca (2006), Alesina et at. (2004)).[7] Net of the income loss, unemployment has a huge negative impact on happiness. Income buys happiness, but at a very high price. Finally, the coefficient of the time variable is -.019 and highly significant. This confirms that reported happiness has a residual negative trend in the period 1972-2004 which is not explained by the controls.

In Regression 2, we follow BO adding a control for relative income and a control for differentials in life costs across U.S. census regions. The first control is obtained by calculating the ratio between "per capita" household income (household income divided by household size) and regional per capita income (source: US Dept. of Commerce, Bureau of Economic Analysis). The second control is an index (base is the U.S. average), which measures the difference in house values for single-family detached homes on which at least two mortgages were originated or subsequently purchased or securitized (source: The Office of Federal Housing Enterprise Oversight's, Repeat Sales House Price Index). Our results differ from those provided by BO in two respects. First, the relative income variable has a negative and insignificant coefficient. Second, the control for life cost

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[7] The coefficient of household size is positive and significant, while in BO it is negative and significant. Most probably, this difference is due to the fact that here household size is a proxy for marriage. In fact, when marital status is added, the coefficient of household size becomes negative and significant (see Table 3).

differentials has a negative and highly significant coefficient. This may be due to the fact that we constructed the latter variable in a way which is different from that followed by BO or to the fact that the time period that we study is different (1975-2002 instead of 1972-1998). However, the coefficient of the time variable is about -0.162 and highly significant, which is a result very similar to that obtained by BO. Overall this suggests that the control for relative income may be a rather poor one.

In Regressions 3 we use a different control for relative income reintroducing household income and household size in place of per capita household income. Using GSS data we calculate the average regional household income based on both race and 5-years age group. Results are consistent with the idea that this variable is a better proxy of people's reference group income than that used by BO. The coefficient is highly significant and has a reasonable size (roughly three-fifths of the coefficient of absolute income). Most importantly, the coefficient of the time variable increases up to about -.010 and remains highly significant. This result suggests that demographics, absolute income and relative income leave unexplained a substantial part of the trend in reported happiness.

The next set of regressions explores the impact of SC variables, namely marital status and children, social contacts, trust in individuals, group membership and trust in institutions. One serious problem with these variables is that they are not observed for the entire sample of individuals. However we have observations for every variable for both 1975 and 2004. This gives us the possibility to look at their variation over a 30-year time span. However, when we consider all these variables together, we end up with less than six thousands observations out of more than thirty-two thousands. What is worst, the questions about group membership had not been asked during the period 1996-2002 (included). This, coupled with the fact that we do not have reliable observations for household income in 2004, forces us to restrict the time frame to 1975-1994 whenever we place absolute income and variables related to group membership in the same regression.

In total, we run six additional regressions. In each regression from 4 to 9, we add a different group of social capital variables to the regressors used in Regression 3. In Regression 9, we add all groups of social capital variables. We adopt this strategy for two reasons. First, it allows us to extend the time period up to 2002 for most regression, which, in turn, gives us the possibility of investigating whether the results that we obtain for Regression 9 – therefore relative to the period 1975-1994 – can be reasonably extended to the period 1975-2002. Second, by running separate regressions for each group of social capital variables, we obtain information about the impact of each group on the trend of happiness. In fact, we are not only interested in the impact of social

capital as a whole. We also want to understand wherein lays the contribution of relational variables, with respect to non-relational variables, to the explanation of the happiness trend.

Table 3 shows the results for Regressions 4-9. Although their estimates are not reported, all controls present in Regression 3 are maintained here. Regression 4 investigates the impact of marital status and the number of children. As expected, marital status is very important. In particular, being married increases the level of reported happiness as much as being unemployed decreases it. This confirms that marital status has a large impact on an individual's happiness. Interestingly, people in their second marriage are not as happy as people in their first marriage, even without considering the happiness reduction due to a divorce. Separated and divorced people are less happy than unmarried people. Being divorced is as bad as being widowed. Children do not seem to have an impact on happiness. This is the case even if we substitute for the number of children with a dummy for 1 or 2 children. One reason may be that household size already captures the effect of children. However, when we control for marital status, the coefficient of household size becomes negative and significant (as in BO), suggesting that household size is mostly a control for household expenditures. Another reason may be that the number of children is a too rough variable: what makes parents happy is not the number of children but the relationship they have with them. In any case, evidence has been provided that, when controlling for individual fixed effects, having a child has almost no effect (Clark and Oswald (2002)). Finally, Regression 4 shows that this group of variables has a considerable impact on the happiness trend. Although the coefficient of the time variable remains negative, it becomes significant at the 10% level only and drops to about -0.004. This suggests that a consistent part of the decline in happiness in the period 1975-2002 can be explained with a deterioration of marital relationships.

Regression 5 explores the role of social contacts. We introduce four dummies which are set equal to one if the respondent declared to spend at least one evening per month with, respectively, his/her relatives, his/her neighbors, his/her friends (outside the neighborhood), and at a bar, tavern or the like. Results are twofold. On the one hand, the coefficients of the four dummies are all large and significant, suggesting that social contacts matter a great deal for reported happiness. In particular, spending evenings with relatives, neighbors or friends goes with a greater reported happiness, while spending evenings at a bar goes with a lower one. More precisely, spending at least one evening with relatives increases happiness twice as much as spending one evening with friends or neighbors. Spending at least one evening at a bar has a negative effect that is as large as the positive effect of spending evenings with relatives. This result suggest that spending evenings at a bar is a proxy for poor social relations. In our opinion, this interpretation especially fits the case of U.S., where going to a bar in search of company – and not already in company – is a standard practice. On the other hand, however, there is only a very small increase in the coefficient of the

time variable with respect to Regression 3. This suggests that although social contacts are important for reported well-being, they do not contribute much to the explanation of the happiness trend.

Regression 6 explores the impact of trust in individuals. With respect to Regression 3, we add three dummies for the respondent considering, respectively, most people to be trustworthy, most people to be considered helpful and most people to be seen as unfair – i.e. taking advantage of others whenever possible. The coefficients of these three variables are all highly significant and their signs are as one would expect. Considering people trustworthy or helpful goes with a higher reported happiness, while considering people unfair goes with a lower reported happiness. The impact of trust in individuals' variables on reported happiness is comparable to that of social contact variables, ranging from about one-third to one-sixth of the impact of unemployment. In this case, however, the coefficient of the time variable increases a more than in the case of social contacts while remaining significant at the 1% level. This definitely makes the decline in trust in individuals a better candidate for explaining the happiness trend.

Regression 7 shows the impact of group membership. As anticipated, this regression only covers the period between 1975 and 1994. We add two dummies for being a member, respectively, of one or two, and three or more of Putnam's groups. Moreover, we add two dummies for being member, respectively, of one, and two or more of Olson's groups. We also add one dummy variable for membership in at least one group which does not fall in any of the two previous group categories. As anticipated in the previous section, among Putnam's groups we include service groups, church organizations, sports clubs, art and literature clubs, national organizations, hobby clubs, fraternal groups and youth associations. Among Olson's groups we include fraternity associations, unions, professional organizations and farm organizations. The unclassified groups are veterans associations, political parties and "other groups".

Results for Putnam's and Olson's groups differ sharply, while being member of other types of groups seems to have no effect on reported happiness. Membership in Putnamian groups goes with higher reported happiness. The two coefficients are highly significant and also quite large: being a member of three or more Putnamian groups is about half (in absolute value) of that of being unemployed while being member of one or two is about half of the former. On the contrary, being a member of an Olsonian group goes, if anything, with lower reported happiness. In particular, being member of two or more Olson's groups seems to be bad for happiness.

Overall, these numbers suggest that group membership is good for reported happiness only if it involves relational activities that are intrinsically motivated. In contrast, membership in groups that are fundamentally based on extrinsically motivated relations may even be detrimental to reported happiness, especially if one is a member of several groups. On this basis, one may be tempted to conclude that the evolution of group membership has a big role in explaining the US

happiness trend. Unfortunately, since the time period covered by regression 7 is only 1975-1994, this conclusion cannot be drawn. Actually, since the coefficient of the time variable which is obtained excluding membership variables from the set of regressors (but maintaining the period 1975-1994) is still about -.003 and is significant at 5% level, we could more reasonably conclude that group membership had a limited role. However, this claim too may be flawed because the impact of Olsonian and Putnamiam memberships may be offsetting each other. In fact, if membership in Olsonian groups declined substantially in the period 1975-2004, then the impact of group membership may be larger than what appears just looking at the change in the coefficient of the time variable. We explore this issue in next section.

Regression 8 explores the role of non-relational social capital in the form of confidence in institutions. We add a dummy for the respondent's expression of strong confidence in each of the following "institutions": banks/financial institutions, major corporations, organized religion, education, the executive branch of government, organized labor, the press, medicine, TV, the Supreme Court, the scientific community, Congress, the military forces. As shown in Table 3, the coefficients for confidence in TV, the Supreme Court and the scientific community are small and not significant. The remaining coefficients are all significant and, with the only exception of the press, are also strictly positive.[8] Moreover, apart from the coefficient of confidence in major corporations, which is about .23, the positive coefficients are all comprised between .05 and .15. Therefore, being strongly confident in institutions is accompanied, on average, by a substantially higher level of reported happiness. The coefficient of the time variable drops to about .007, suggesting that confidence in institutions can account for a non-negligible part of the happiness trend.

Finally, in Regression 9 we include all social capital variables plus the regressors used in Regression 3. Despite the notable reduction in the number of observations and the shortening of the time period for which there are available observations, results are in line with those obtained in the previous six regressions. Marital status variables maintain similar coefficients, although only married and widowed remain significant. The only exception is being divorced, which seems to lose much of its importance. The impact of social contact variables is almost unchanged. Among the coefficients of trust in individuals variables, only the variable concerning general trust changes. It maintains the same sign but becomes much smaller and not significant. Also the coefficients of the variables concerning group membership are not affected very much by the inclusion of all social capital variables. Finally, the variables regarding confidence in institutions decrease their relative impact, but only slightly. In particular, the coefficients of the variables relating to confidence in

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[8] We do not have an intuitive explanation for the result about confidence in the press. It may be that more confidence in the press goes with some personal trait that is against reporting high happiness, but we do not try to guess what such a trait may be.

organized religion, the press, medicine, Congress and military forces become smaller and not significant, while the remaining maintain their size and significance – and in some cases they slightly increase them.

In conclusion, Regression 9 confirms the findings of Regressions 5-8, suggesting that our estimates are robust to the inclusion of all social capital variables. In other words, the impact on reported happiness of each group of social capital variables is not washed away by the inclusion of all variables, even if this means that the time span drops to from 31 to 20 years. Thus, we can be reasonably confident that the happiness equation estimated for the period 1975-1994 is not far off from the one that we would obtain for the period 1975-2004, if we had enough observations. Furthermore, the coefficient of the time variable jumps to about .010 becoming insignificant. This makes sens even when compared with the benchmark -.003 which we get from the shorter time span 1975-1994 (see comments to regression 7). These numbers definitely suggest that the decline in social capital is a candidate explanation of the happiness paradox.

Given the importance and novelty of these findings, we believe that a further check of their robustness is necessary. Moreover, we are interested in establishing the relative importance of each group of SC variables in order to understand which type of social capital -- intrinsic RSC, non-intrinsic RSC or non-relational SC – has played a major role in the failed growth of happiness. We try to perform both tasks using the following two-step strategy. First, we calculate the trend of our social capital variables for the period 1975-2004, checking if and to what extent they actually declined. Second, we calculate the predicted change in happiness due to the change in these variables which occurred throughout this 30 years period. Finally, we compare these predicted changes among themselves and with the predicted changes due to demographic and socio-economic variables.

4. The trends of social capital

We investigate the trends of SC variables by regressing them on the time variable. Since the GSS has been carried out with different sampling techniques, we also provide a regression with demographic controls. Furthermore, in a third regression we include dummies for 10-year cohorts in order to test Putnam's hypothesis that the decline in social capital is mainly generational. We use logit or OLS depending on the nature of the dependent variable. On the whole, our analysis suggests that both relational and non-relational SC declined between mid 70s and 2004. Moreover, the control for 10-year cohorts suggests that generations may have played an important role in this decline but that they are unlikely to be the only explanation. Results are reported in Table 4. The first column of coefficients shows the estimates for the time variable in regressions without demographic controls, the second column shows the coefficient of the time variable in regression

with demographic controls and the third shows the coefficient of the time variable in regressions with both demographic and 10-year-cohorts controls.

Marriage shows, both in simple and controlled estimates, a decreasing trend, while separation an increasing one. Widowhood and divorce do not show a significant trend. Unfortunately, the GSS does not report data on cohabitation, which is certainly on the rise, and which would presumably have effects on well-being similar to those exerted by marriage. However, the impact of cohabitation seems to be somewhat more ambiguous and difficult to capture than that of marriage. The status "living as married" in the happiness equation emerges as not significant in the case of the UK (Blanchflower and Oswald 2004), although it appears as significant and positively correlated in the case of a heterogeneous cross-section of countries (Helliwell (2003)). Moreover, while in some cases it is possible to track actual cohabitation, it is rather difficult to obtain data on past ones, and, therefore, it is hard to control for partnership breakdowns that may have an important negative effect – especially because cohabitation is found to be more unstable than marriage (Kamp Dush et al. (2003), Brown (2006)).

The fraction of people who report spending more than one evening per month with neighbors shows a significant declining trend, while the same activity with friends shows a significant increasing trend. The fraction of people reporting to spend more than one evening with relatives is stable, while that of people spending at least one evening per month at a bar or a similar place is slightly declining, although the trend disappears when we control for cohorts. These mixed results suggest that contacts have mostly changed in type but did not decrease much in number. Other empirical studies using from different data sets find that the decline of this kind of relational goods is remarkable. For instance, Costa and Kahn (2003) find a significant declining trend for three variables drawn from different data sets: the probability of spending time visiting or at parties (Time Use Studies 1965-1985), the probability of spending time visiting family or friends (NPD Group Time Study 1992-1999), and the probability of entertaining frequently at home among married people and family eating dinner together (DDB Life Style Study 1975-1998). Finally, McPherson et al. (2006) attempting to quantify qualitative content of social networks, find that the number of people saying there is no one with whom they discuss important matters nearly tripled between 1985 and 2004 and the average dimension of the network declined of about one unit. However, McPherson et al. (2006) also find that the frequency of contacts in the such smaller networks increased, which is in line with our findings.

Trusts in individuals have a negative trend. More precisely, general trust and a perception of helpfulness have a negative trend, while the perception of unfairness has a positive one. The decline in helpfulness seems a generational phenomenon, while the decline of general trust and the increase in perceived unfairness seem not to be one. These results confirm the evidence from other studies

using the same data set but different estimation techniques (Brehm and Rahn (1997), Putnam (2000), Smith (1997), Paxton (1999), Robinson and Jackson (2001)).

The participation in Putnamian groups is significantly declining both in simple and controlled estimates of the trend, at least when participation is in 1 or 2 groups. The participation in Olsonian and Other groups is also declining, both in the case of membership in one group only. The total number of memberships in groups of any of the three types shows a negative trend. However, with the exception of the negative trend of membership in 1 or 2 Putnamiam groups, once we control for 10-year cohort these trends disappear. This suggests that the general decline in memberships may be a generational phenomenon, in line with Putnam's thesis. However, it also suggests that non-intensive participation to Putnam's groups (not more than 1 or 2) may be declining for other reasons. Other studies have investigated this issue, but this is the first one using GSS data up to 2004. Costa and Kahn (2003) show a significant declining trend also for variables drawn from other data sets, i.e. the probability of spending time in organizational activity (Time Use Studies 1965-1985), the proportion of 25 to 54-year olds volunteering in the past year (Current Population Survey 1974-1989), the volunteer rate (DDB 1975-1998). However, for what concerns the GSS, they used data only up to 1994 and found that a negative trend is mostly due to the decline in church-related membership.

Our results about confidences in organizations suggest that these indicators have a significant negative trend in the period considered, with the interesting exception of confidence in the military forces, which is significantly positive. The inclusion of cohort controls makes estimates insignificant in three cases: confidence in major corporations, confidence in the executive branch of government and confidence in science. Confidence in the Supreme Court does not show a significant trend. These findings are in line with Paxton (1999), though we consider a longer period.

In conclusion, results seem to confirm Putnam's thesis that SC has declined in the US over the last 30 years. However, this decline is not equally distributed among SC indicators: marriage, group membership, trust in individuals and trust in institutions seem to be the most negatively affected. Furthermore, our findings suggest that part of this decline is linked to the disappearance of older generations but that there is also another part that has to be explained in a different way. For instance, trust in individuals and in institutions seems to be declining also (and mostly) for reasons different than a generational turn-over, while a decline in group membership seems to be entirely due to latter. Very interestingly, the decline of marriage and the growing number of separations do not seem to be a generational matter.[9]

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[9] Some sociological literature has argued that social capital has not declined in the US, if membership in voluntary organizations and political participation are observed. However, this contrary evidence produced by, e.g., Baumgartner and Walker (1988) and Ladd (1996), has been either contested on methodological grounds (Smith 1990) or it emerges as fragmentary pieces of evidence, as in Ladd (1996).

5. Impact of the decline in social capital on the happiness trend. How much?

In Section 3, we have shown that SC affects reported happiness. More precisely, our results suggest that non-relational SC and intrinsic RSC have a positive effect, while extrinsic RSC has a negative effect. In Section 4, we have shown that SC has declined, on average, during the period 1975-2004. In particular, marriage, group membership, trust in individuals and trust in institutions all had a negative trend. In this section, we try to quantify how much the decline in SC has affected reported happiness. In other words, we try to find out to what extent the decline in SC can help to explain the happiness paradox.

Our empirical strategy is a rather simple one. First, we run a regression with the variables included in Regression 9 but with a linear specification (applying OLS) and with a dummy for each year instead of a time variable. The linear specification allows a better and simpler calculation of the effects of changes in independent variables.[10] Second, we calculate the variations of each independent variable in the period 1975-2004. Third, we use these numbers to predict the variation of happiness implied by the variations of independent variables and then we compare it to the actual variation of reported happiness. In other words, we calculate for each regressor the predicted variation in happiness, i.e. $\Delta h = \alpha(X_{2004} - X_{1975})$ where α is the coefficient of the considered regressor obtained with the OLS version of regression 9 and X_{2004} and X_{1975} are the average values of such regressor in, respectively, the year 2004 and the year 1975. Finally, we compare the total effect of the different set of variables to check which had the most prominent role.

Detailed results about the impact of each independent variable are reported in Table 5, while in Table 6 we report the effects of different groups of variables and the total effect. The actual variation in average reported happiness between 1975 and 2004 has been about -.0192. This is a rather small change but nevertheless a relevant one.[11] The main question that we ask of the data is: "what would this figure have been if social capital had remained at its 1975 level?" Our answer is that is could have been approximately .035, a positive and relatively large increase. This confirms that SC can help to explain the US happiness paradox.

However, we are also interested in understanding what part of SC has played a major role and what differences there are between intrinsic and extrinsic RSC. If intrinsic RSC remained at its 1975 level, then the predicted variation would have been lower, namely about .028 (obtained by subtracting the total impact of intrinsic RSC from the predicted variation in happiness). A bit less

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[10] This does not pose any particular problem since very strong evidence emerges that happiness equations using OLS are equivalent, for all practical purposes, to ordered logit and ordered probit (Ferrer-i-Carbonell and Frijters (2004)). However, we laso use our logit estimates to predict marginal effects. We get similar results that we report in the appendix (Tables 7-12).

[11] The variation of .0192 between 1975 and 2004 is not statistically significant. However, if we average over the years 1975-1978 and 1996-2004 we get a similar variation which is statistically significant.

than three-fourths of the impact of intrinsic RSC on the happiness trend derives from marital status (-.0309). Among the the other forms of intrinsic RSC trust in individuals played a major role (.0091), while social contacts seem to have had a negligible impact (.0003). Membership in Putnam's groups had a small but non-negligible impact (.0025). The decline of extrinsic RSC, in the form of membership in one Olson's group had no effect while its slight rise in the form of membership in two or more Olson's groups had an almost negligible negative impact (.0006). Non-relational SC, in the form of trust in institutions, played an important role, depressing reported happiness by about .0061.

Our figures also confirm that income matters a great deal. Absolute income is the main positive contributor to the happiness trend, with a total impact of about .0910. Relative concerns account for a negative impact of about .0620. Therefore, approximately two-thirds of the benefits of income growth seem to have been offset by negative positional externalities. However, one-third of the benefits of income growth remains suggesting that concerns for relative standing do not make income growth non-beneficial. Notice that these numbers certainly are a bit underestimated because we lack observations on income for the year 2004 (we have to stop at 2002 for the lack of a reliable measure of income in 2004). Other socio-economic factors had a substantial positive effect which is the result of a large positive effect of the reduction of household size and small positive effect due to a slight reduction in unemployed. Finally, demographics had a non-negligible negative impact, which is mostly due to the dynamics of average age with some role for the increase in Afro-American population.

Finally, notice that our estimates have a high predictive power of the happiness trend (-.0145 predicted, -.0192 observed), implying a predicted variation of happiness that departs from the actual value of only .0047. Unfortunately, though we explain much of the variance over time, we are able to explain only a very small fraction of the cross-sectional variance. This may suggest that unobserved individual characteristics are unlikely to exert any large influence on the happiness trend, while they have a large influence on the cross-sectional variance.

Summing up, the trend of SC seems to have mattered a great deal for the happiness trend. In particular, it seems that this is the case because of the decline of intrinsic RSC. Therefore, our analysis suggests that there are good reasons to believe that intrinsic RSC is a major responsible, for the US decline in happiness in the last 30 years. Although other relevant variables are likely to be missing (e.g. adaptation), the difference between the predicted variation and the observed variation in happiness is small enough to leave a limited role to other explanations. This residual may be underestimated because of biases due to the lack of controls for cohabitation or because of the underestimation of the impact of income (because we lack data for 2004).

6. Summary of Results, Problems of Interpretations and Implications for Policy

Summing up, our findings are the following:

1. including social capital indicators in the empirical model developed by Blanchflower and Oswald (2004) sensibly improves the account of the trend in US reported happiness;

2. the intrinsically motivated part of relational social capital goes with a greater reported happiness;

3. the extrinsically motivated part of relational social capital goes with a smaller reported happiness;

4. non-relational social capital, in the form of trust in institutions, goes with a greater reported happiness;

5. with the only exception of confidence in the military forces and evenings spent with friends, the trend of social capital indicators that we have studied suggests that social capital declined between 1975 and 2004;

6. the decline of social capital seems to be linked to the aging of older generations (Putnam (2000)), but this does not exhaust the issue; in particular, while group membership seems to have declined exactly for the former reason, the decline of marriage and trust in individuals seems to have other causes;

7. if social capital had remained at its 1975 level, our estimates predict that happiness would have increased and not decreased, as it actually did; this suggests that the so called "happiness paradox" may find an explanation if social capital is also taken into account;

8. absolute income is the main positive contributor to happiness;

9. social comparison seems to have a major role in the happiness trend: the growth of others' income (where others are a race-region-age reference group) is the main negative contributor to the happiness trend;

10. growth is positive for happiness: the negative effect of the growth of others' income amounts to about two-thirds of the benefits of own income growth;

11. intrinsic relational social capital seems to be have been an important negative contributor to the happiness trend (amounting to roughly two-thirds of the negative impact of the growth of others' income); in particular, the decline of marriage accounts for about half of the negative impact while one-sixth comes from the decline in trust in individuals (which the second largest negative contributor among intrinsic RSC indicators);

12. the decline of non-relational social capital in the form of trust in institutions seems to have had a non-negligible negative effect (amounting to one-eighth of the total negative impact of SC);

13. the decline of social capital as a whole seems to have had a negative impact which is five-sixths of that of growth in others' income and more than half of the positive impact of growth in own income. Together, the decline of social capital and the growth in others' income more than offset the positive benefits of the growth in own income;

14. the residual unexplained (i.e. the difference between the variation predicted by our figures and the actual variation in happiness) is small enough to leave a limited role to explanations that are not tested here (e.g. adaptation)

The main problem in the interpretation of the evidence that we provided is about causal relationships. The underlying assumption of our empirical strategy is that reported happiness is the result, and not the cause, of the variables that we included in our set of regressors. Since the endogeneity problem may affect any of our regressors, in order to carry out a meaningful IV estimation we would require a large number of instruments that, in turn, would require a long list of additional assumptions about their relationships with both regressors and happiness. Hence we are skeptical about the feasibility of an IV estimation in this case. More defensively, we adopt Blanchflower and Oswald's pragmatic approach: "at this point in the history of economic research it is necessary to document patterns and to be circumspect about causality" (Blanchflower and Oswald (2004), pag. 1380). Being circumspect means not taking for granted what is suggested by our estimation, but considering it, nevertheless, as a piece of evidence.

Finally, we want to briefly comment on the policy implications of our findings. A straightforward implication of our results is that the impact on SC of *any* public policy should be considered when taking decisions. This applies to a vast array of issues such as labor market regulations, education, policies for infancy and adolescence, care of the elderly, health care, urban policies, environmental policies, etc. However, there is an issue which deserves particular attention by economists. We can summarize it by answering the question posed in the famous title of

Easterlin's paper "Does economic growth improve the human lot?" (Easterlin (1974)). In the light of our results, the answer is a *conditional yes*. In fact, our figures suggest that absolute income buys happiness and that it does this beyond positional concerns. Therefore, in principle, income growth is good for well-being. Income growth, however, is desirable as far as it is not associated with a deterioration of SC. In particular, the positive effects of income growth may be lost (or even more than offset, as in the US case) if growth is accompanied by the impoverishment of intrinsic RSC or other non-relational SC (such as confidence in institutions). In order to judge the desirability of growth, we have to take into account its effects on SC.

Let us make a short numerical exercise to illustrate the size, and therefore the relevance, of this argument. According to GSS data the average rate of growth of US household income between 1975 and 2002 has been 4.55% (household income grew at a much quicker pace than per-capita income, due to the reduction in the average household size). Under the assumption that the income of reference groups grows uniformly with household income, our estimates suggests that, to compensate for the happiness loss due to the decline in SC, household income should have grown at an average rate of about 10.1%. On the contrary, if social capital remained constant at its 1975 level then the happiness observed in 2004 would have been obtained with household income reducing at an average rate of -0.75% per year. These numbers suggest that policies aimed at the sustainability of social capital should not be considered less serious candidates for increasing well-being than policies aimed at increasing income. According to our results the prospect of a future increase in happiness is more likely to be linked to the design of credible policies for the sustainability of social capital than to reaching rather un-plausible growth rates in the midst of social and relational decay.

Table 1.

Summary statistics of variables

Variable	Obs	Mean	Standard Dev.	Min Value	Max Value
Happiness	43317	2.199483	.6337112	1	3
Female	46510	.5606106	.4963181	0	1
Age	46344	45.26474	17.48464	18	89
Black	46510	.1375833	.3444658	0	1
Other non-white	46510	.0350677	.183953	0	1
Years of education	46369	12.60765	3.166813	0	20
Retired	46506	.1271879	.3331869	0	1
Unemployed	46506	.0301466	.1709926	0	1
Keeping house	46506	.1767299	.381444	0	1
Student	46506	.0299101	.1703412	0	1
Other	46506	.0171591	.1298653	0	1
Parents divorced or separated	46485	.1177799	.3223508	0	1
Living with own parents at 16	46485	.7249866	.4465259	0	1
Ln household income/1000	39540	3.636754	1.069562	0	6.083747
Ln household per capita inc./1000	39538	9.684456	1.121593	4.60517	12.9915
Household size	46504	2.730346	1.539986	1	16
Number of Children	46351	1.964316	1.812595	0	8
% Diff. Regional price index	40372	.0116351	.1855122	-.4092308	.8303686
Personal/regional	39538	1.646384	1.625489	.004891	21.69769
Income very below average	43183	.0521502	.2223323	0	1
Income below average	43183	.2355325	.4243361	0	1
Income above average	43183	.184656	.3880227	0	1
Income very above average	43183	.0195679	.1385115	0	1
Married	46502	.555417	.4969248	0	1
2nd+ Marriage	46502	.1054148	.3070905	0	1
Separated	46502	.1161025	.3203513	0	1
Divorced	46502	.0349447	.1836418	0	1
Widowed	46502	.1003398	.3004557	0	1
Monthly with relatives	26923	.5389815	.4984874	0	1
Monthly with neighbors	26892	.364086	.4811819	0	1
Monthly with friends	26905	.4239361	.4941896	0	1
Monthly at bar	26869	.1673304	.3732775	0	1
Others can be trusted	29496	.393172	.4884627	0	1
Others are helpful	29782	.4960043	.4999924	0	1
Others are unfair	29684	.3667969	.4819386	0	1
Member of 1 or 2 Putnam's Group	20444	.4275582	.4947365	0	1
Member of 3+ Putnam's Groups	20444	.1576991	.3644675	0	1
Member of 1 Olson's Group	20536	.2539443	.4352767	0	1
Member of 2+ Olson's Groups	20536	.0519088	.2218484	0	1
Member of 1+ other Groups	19985	.1909432	.3930542	0	1
Very confident in banks	29053	.2704712	.4442109	0	1
Very confident in companies	31264	.2564611	.4366863	0	1
Very confident in organized religion	31492	.2966785	.4568008	0	1
Very confident in education	32201	.3117916	.4632324	0	1
Very confident in executive	31711	.1728422	.3781168	0	1
Very confident in organized labor	30766	.1227004	.3280983	0	1
Very confident in press	31961	.1734614	.3786516	0	1
Very confident in medicine	32290	.4822236	.4996916	0	1
Very confident in television	32162	.1416268	.3486723	0	1
Very confident in supreme court	31231	.3290321	.4698692	0	1
Very confident in scientific	30010	.4317894	.4953337	0	1
Very confident in congress	31696	.1373044	.3441738	0	1
Very confident in military forces	31671	.3752329	.4841906	0	1

Table 2.

Ordered Logit Regression, happiness and relative income

	1. 1972-2002	2. 1975-2002	3. 1975-2002
Female	.0747241*** (3.36)	.0113064 (0.48)	.0535752** (2.24)
Age	-.0189944*** (5.06)	-.0066548* (1.67)	-.0092911** (2.02)
Age square	.0002628*** (6.57)	.0000915* (2.19)	.0001552*** (3.16)
Black	-.4801454*** (14.53)	-.496009*** (13.92)	-.5627611*** (14.45)
Other non-white	-.1253531** (2.01)	-.097917 (1.50)	-.1862247*** (2.80)
% Diff. Regional price index		-.271039*** (4.38)	-.2664742*** (4.26)
Ln household income/1000	.3478708*** (25.28)		.376794*** (23.81)
Ln household per capita inc./1000		.2198727*** (10.15)	
Personal/ regional		-.0139962 (1.19)	
Ln Regional-Race-Age Income/1000			-.2092654*** (6.22)
Household Size	.0476364*** (6.20)		.0598867*** (7.11)
Years of education	.0226497*** (5.63)	.0354578*** (8.08)	.0287937*** (6.56)
Retired	.1274525*** (2.77)	.0893249* (1.79)	.1174924** (2.35)
Unemployed	-.7764868*** (11.33)	-.883336*** (11.98)	-.8043842*** (10.82)
Keeping house	.1202834*** (3.72)	.1390803*** (3.88)	.104872*** (2.92)
Student	.1341999** (2.03)	.0815238 (1.15)	.1450721** (2.00)
Other	-.4658172*** (4.74)	-.6227398*** (5.96)	-.4658533*** (4.54)
Parents divorced or separated	-.1090997*** (2.68)	-.1230674*** (2.83)	-.1129242*** (2.58)
Living with own parents at 16	.0943295*** (3.13)	.1167276*** (3.55)	.0905848*** (2.75)
Time	-.0190505*** (13.81)	-.0162215*** (8.93)	-.0095907*** (4.54)
Cut 1	-.8990779	.1278454	-1.236847
Cut 2	1.996996	3.024628	1.703125
Obs	37910	32349	32349
loglikelihood	-34598.372	-29613.504	-29311.995
Wald Chi2	1905.57	1204.49	1703.19
Prob > Chi2	0.0000	0.0000	0.0000
Pseudo R2	0.0308	0.0227	0.0327

Orderd logit regressions with robust standard errors (absolute values of z statistics in in parenthesis).
*significant at 10%, **significant at 5%, ***signifiant at 1%

Table 3.
Ordered Logit Regression, Happiness and Social Capital

	4. 1975-2002	**5.** 1975-2002	**6.** 1976-2002	**7.** 1975-1994	**8.** 1975-2002	**9.** 1975-1994
Married	.665731*** (18.07)					.6959921*** (7.30)
2nd+ Marriage	-.0834818** (2.18)					.0818254 (0.89)
Separated	-.2022541*** (4.58)					-.2024829 (1.64)
Divorced	-.4219694*** (5.88)					-.0606763 (0.32)
Widowed	-.3390962*** (5.87)					-.3965252*** (2.37)
Number of Children	.007129 (0.83)					.02016 (0.89)
Monthly with relatives		.2340759*** (8.30)				.1447402** (2.56)
Monthly with neighbors		.1270654*** (4.31)				.14161** (2.40)
Monthly with friends		.1141669*** (4.34)				.1522999*** (2.61)
Monthly at bar		-.222983*** (5.89)				-.200949*** (2.65)
Others can be trusted			.1650153*** (5.35)			.0414533 (0.67)
Others are helpful			.2888945*** (9.44)			.2140502*** (3.29)
Others are unfair			-.2880191*** (8.67)			-.1837664*** (2.58)
Member of 1 or 2 P-Group				.2206106*** (5.90)		.1268787** (1.96)
Member of 3+ P-Groups				.3899596*** (7.54)		.3374236*** (4.11)
Member of 1 O-Group				-.0027998 (0.07)		.0356015 (0.53)
Member of 2+ O-Groups				-.1274969* (1.70)		-.2309979** (2.02)
Member of other Groups				.0041955 (0.10)		-.0622346 (0.90)
Very confident in banks					.1287216*** (3.69)	.2592246*** (3.56)
Very confident in companies					.2304645*** (6.72)	.3040021*** (4.31)
Very confident in organized relig.					.1259197*** (3.74)	.066541 (0.98)
Very confident in education					.1416779*** (4.20)	.2407746*** (3.63)
Very confident in executive					.1529919*** (3.63)	.1953302** (2.31)
Very confident in organized labor					.0860868* (1.75)	.1822264* (1.75)
Very confident in press					-.1410039*** (3.46)	-.0482809 (0.63)
Very confident in medicine					.1107395***	.0082096

					(3.62)	(0.13)
Very confident in television					.0416006 (0.90)	.0744808 (0.85)
Very confident in supreme court					.0532817 (1.61)	-.0032072 (0.05)
Very confident in scientific					-.0298774 (0.96)	-.0149271 (0.24)
Very confident in congress					.1127779** (2.32)	.0271064 (0.29)
Very confident in military forces					.0552211* (1.70)	.0443092 (0.68)
Time	-.0036188* (1.69)	-.007635*** (2.91)	-.0066221** (2.48)	-.003298 (0.81)	-.0075808*** (-2.82)	.0105422 (1.59)
Cut 1	-1.747544	-1.064561	-1.717063	-1.763829	-1.009101	-2.413583
Cut 2	1.263737	1.964394	1.236569	1.197965	1.97144	.8305286
Obs	32276	20957	21265	14479	20855	5532
Loglikelihood	-28773.429	-18702.452	-19153.883	-12988.802	-18673.854	-4690.2051
Wald Chi2	2638.56	1174.75	1453.84	1125.24	1417.26	653.81
Prob > Chi2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.0485	0.0351	0.0417	0.0458	0.0418	0.0743

Orderd logit regressions with robust standard errors (absolute values of z statistics in in parenthesis); other controls are Female, Age, Age square, Black, Other non-white, % Diff. Regional price index, Ln household income/1000, Ln Regional-Race-Age Income/1000, Household Size, Years of education, Retired, Unemployed, Keeping house, Student, Other, Parents divorced or separated, Living with own parents at 16.
*significant at 10%
**significant at 5%
***significant at 1%

Table 4.

Social Capital Trends

Probit(OLS)	I. Trends		II. Controls		III. Controls + cohorts			
Variable	Time Coefficient	|z|	Time Coefficient	|z|	Time Coefficient	|z|	Time Period	Obs
Married	-.0299363***	30.74	-.0352385***	33.50	-.0360682***	9.92	'72-'04	46502
Separated	.0377813***	25.59	.3300767***	10.83	.015344***	3.44	'72-'04	46502
Divorced	.0029935	1.17	-.0005805	0.22	-.0117655	1.27	'72-'04	46502
At least monthly with relatives	-.0014439	1.05	-.0012393	0.88	.0004335	0.10	'74-'04	26923
At least monthly with neighbors	-.0147846***	10.21	-.0137078***	9.27	-.0150468***	3.19	'74-'04	26892
At least monthly with friends	.0060217***	4.31	.0092548***	6.31	.0099264**	2.11	'74-'04	26905
At least monthly at bar	-.0088071***	4.73	-.0052513***	2.67	-.0046908	0.74	'74-'04	26869
General trust	-.0148809***	11.76	-.0141656***	10.84	-.0092464**	2.06	'74-'04	29496
People unfair	.009879***	7.64	.0098812***	7.29	.0093629**	2.05	'74-'04	29684
People helpful	-.005639***	4.54	-.0052227***	4.07	-.002344	0.54	'74-'04	29782
Member of 1 or 2 Puntnam's Group	-.0094746***	5.24	-.0102239***	5.58	-.012563**	2.38	'74-'04	20444
Member of 3+ Puntnam's Groups	.0019248	0.78	.0030421	1.23	.0021419	0.29	'74-'04	20444
#Putnam's Groups(OSL)	-.0026733**	2.09	-.0022001*	1.71	-.0030044	0.81	'74-'04	20444
Member of 1 Olson's Group	-.0074154***	3.62	-.0068865***	3.28	.0019586	0.32	'74-'04	20444
Member of 2+ Olson's Groups	.0043654	1.13	.0061606	1.59	.0011249	0.10	'74-'04	20444
#Olson's Groups(OSL)	-.0010361**	1.97	-.0006273	1.20	.0005817	0.38	'74-'04	20444
Member of other Groups	-.004136**	1.85	-.0035254	1.55	.0047848	0.71	'74-'04	20444
#other Groups (OSL)	-.0009175**	2.32	-.0008759**	2.20	.0005297	0.45	'74-'04	20444
Very confident in banks	-.0243909***	14.67	-.0250674***	14.75	-.0256894***	5.14	'75-'04	29053
Very confident in companies	-.0060181***	4.22	-.0058606***	4.05	-.006238	1.30	'75-'04	31264
Very confident in organized religion	-.0227844***	16.27	-.0238471***	16.64	-.024187***	5.24	'75-'04	31492
Very confident in education	-.0237482***	17.42	-.0257481***	18.42	-.0276271***	6.14	'75-'04	32201
Very confident in executive	-.0068542***	4.10	-.0077339***	4.56	.0034781	0.63	'75-'04	31711
Very confident in organized labor	-.009248***	4.58	-.0097953***	4.72	-.0080532	1.25	'75-'04	30766

Very confident in press	-.0447282***	25.88	-.0457263***	25.99	-.047839***	8.68	'75-'04	31961
Very confident in medicine	-.019897***	16.11	-.0192119***	15.33	-.0138134***	3.35	'75-'04	32290
Very confident in television	-.0300173***	16.26	-.0317508***	16.68	-.0316482***	5.34	'75-'04	32162
Very confident in supreme court	.0002232	0.17	.0006384	0.47	-.001413	0.32	'75-'04	31231
Very confident in in science	-.003356***	2.61	-.0022105*	1.68	-.0016486	0.38	'75-'04	30010
Very confident in congress	-.0195107***	10.42	-.0208569***	10.92	-.0192758***	3.18	'75-'04	31696
Very confident in military forces	.0159521***	12.31	.0155258***	11.78	.0206457***	4.79	'75-'04	31671

Ordered logit regressions with robust standard errors; in first column of coefficients regressions have no controls apart from the time variable; in the second column of coefficients regressions have also gender, age, age squared, black race, other non-white race as controls; in the second column of coefficients 10-years age cohort dummies are added to the other controls.
*significant at 10%
**significant at 5%
***significant at 1%

Table 5.
Predicted Impacts on Reported Happiness (OLS estimates of Regression 9)
OLS

	Coefficient	t-stat	Mean 1975	Stnd err	Mean 2004 (Income 2002)	Stnd err	Var 1975-2004	Var. Happiness
Female	0.0107	0.57	0.550	0.013	0.545	0.009	-0.0055	-0.0001
Age	-0.0121	-3.13	44.308	0.459	45.965	0.317	1.6569	-0.0200
Age square	0.0001	3.13	2275.156	44.477	2395.012	31.971	119.8560	0.0152
Black	-0.1103	-3.71	0.109	0.008	0.134	0.006	0.0247	-0.0027
Other non-white	-0.0044	-0.06	0.003	0.001	0.071	0.005	0.0688	-0.0003
% Diff, Regional price index	-0.0546	-1.24	0.017	0.003	-0.002	0.005	-0.0195	0.0011
Ln household income/1000	0.0709	6.01	2.955	0.024	4.238	0.022	1.2831	0.0910
Ln Reg-Age-Race Income/1000	-0.0436	-1.77	3.178	0.012	4.600	0.010	1.4215	-0.0620
Household size	-0.0173	-2.50	3.169	0.044	2.453	0.026	-0.7161	0.0124
Years of education	0.0011	0.31	11.683	0.081	13.698	0.055	2.0156	0.0022
Retired	0.0229	0.63	0.111	0.008	0.143	0.007	0.0326	0.0007
Unemployed	-0.1908	-3.90	0.041	0.005	0.035	0.003	-0.0057	0.0011
Keeping house	0.0294	1.18	0.270	0.012	0.095	0.006	-0.1752	-0.0052
Student	0.0655	1.28	0.033	0.005	0.041	0.004	0.0080	0.0005
Other	-0.1071	-1.42	0.013	0.003	0.022	0.003	0.0086	-0.0009
Parents divorced or separated	-0.0163	-0.51	0.092	0.007	0.168	0.007	0.0763	-0.0012
Living with own parents at 16	-0.0011	-0.05	0.765	0.011	0.700	0.009	-0.0653	0.0001
Married	0.1870	6.93	0.672	0.012	0.526	0.009	-0.1465	-0.0274
2nd+ Marriage	0.0274	1.05	0.105	0.008	0.126	0.006	0.0205	0.0006
Separated	-0.0675	-1.93	0.056	0.006	0.148	0.007	0.0912	-0.0062
Divorced	-0.0298	-0.55	0.033	0.005	0.034	0.003	0.0009	0.0000
Widowed	-0.1106	-2.67	0.097	0.008	0.073	0.005	-0.0241	0.0027
Number of Children	0.0053	0.86	2.112	0.051	1.823	0.031	-0.2898	-0.0015
Monthly with relatives	0.0440	2.73	0.558	0.013	0.581	0.016	0.0234	0.0010
Monthly with neighbors	0.0392	2.34	0.417	0.013	0.338	0.016	-0.0783	-0.0031
Monthly with friends	0.0421	2.53	0.388	0.013	0.412	0.016	0.0236	0.0010
Monthly at bar	-0.0551	-2.54	0.159	0.010	0.146	0.012	-0.0127	0.0007
Others can be trusted	0.0137	0.77	0.395	0.013	0.359	0.016	-0.0363	-0.0005
Others are helpful	0.0671	3.62	0.565	0.013	0.502	0.017	-0.0631	-0.0042
Others are unfair	-0.0536	-2.65	0.308	0.012	0.398	0.017	0.0908	-0.0049
Member of 1 or 2 P-Groups	0.0393	2.12	0.449	0.013	0.369	0.013	-0.0802	-0.0031
Member of 3+ P-Groups	0.1011	4.29	0.154	0.009	0.161	0.010	0.0069	0.0007
Member of 1 O-Group	0.0133	0.70	0.267	0.012	0.211	0.011	-0.0561	-0.0007
Member of 2+ O-Groups	-0.0485	-1.69	0.040	0.005	0.052	0.006	0.0118	-0.0006
Member of other Groups	-0.0114	-0.58	0.184	0.010	0.152	0.009	-0.0319	0.0004
Very confident in banks	0.0777	3.74	0.329	0.012	0.282	0.015	-0.0472	-0.0037
Very confident in companies	0.0937	4.68	0.204	0.011	0.170	0.013	-0.0340	-0.0032
Very confident in organized relig,	0.0158	0.82	0.260	0.012	0.241	0.015	-0.0198	-0.0003
Very confident in education	0.0758	4.01	0.315	0.012	0.275	0.015	-0.0400	-0.0030
Very confident in executive	0.0529	2.19	0.137	0.009	0.208	0.014	0.0711	0.0038
Very confident in org. labor	0.0439	1.49	0.108	0.008	0.124	0.011	0.0164	0.0007
Very confident in press	-0.0120	-0.55	0.245	0.011	0.092	0.010	-0.1539	0.0018
Very confident in medicine	0.0039	0.22	0.513	0.013	0.365	0.016	-0.1472	-0.0006
Very confident in television	0.0058	0.23	0.183	0.010	0.103	0.010	-0.0795	-0.0005
Very confident in supreme court	0.0048	0.26	0.322	0.012	0.310	0.016	-0.0116	-0.0001
Very confident in scientific	-0.0055	-0.31	0.422	0.014	0.425	0.017	0.0032	0.0000
Very confident in congress	0.0088	0.33	0.137	0.009	0.133	0.012	-0.0039	0.0000
Very confident in military forces	0.0116	0.62	0.370	0.013	0.568	0.017	0.1988	0.0023

Table 6.
Predicted Impacts on Reported Happiness by Group of Variables

GSS happiness		Stnd Err		
1975	2.1980	0.017		
2004	2.1788	0.018		
Variation	-0.0192			
Demographics		-0.0075	-0.0075	
Absolute Income		0.0910		
Relative Income		-0.0620	0.0290	**Income**
Other Socio-economics		0.0135	0.0350	**All non-SC**
Marital Status & Children		-0.0309		
Social Contacts		-0.0003		
Trust in Individuals		-0.0091		
Putnam's Group		-0.0025	-0.0428	**Intrinsic RSC**
Olson's Group		-0.0006	-0.0434	**RSC**
Confidence in institutions		-0.0061	-0.0495	**All SC**
Total predicted variation		-0.0145		

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Appendix

Table 7.
Marginal Effects on Reported Happiness (Logit Estimates, "Very Happy" category)

	dy/dx	Std. Err.	z	P>z	[95%	C.I.]
Female	0.010	0.014	0.710	0.476	-0.017	0.037
Age	-0.009	0.003	-3.100	0.002	-0.015	-0.003
Age square	0.000	0.000	3.130	0.002	0.000	0.000
Black	-0.080	0.019	-4.120	0.000	-0.117	-0.042
Other non-white	0.002	0.055	0.040	0.965	-0.105	0.110
% Diff, Regional price index	-0.043	0.033	-1.330	0.184	-0.107	0.021
Ln household income/1000	0.053	0.009	6.000	0.000	0.036	0.071
Ln Regional-Age-Race Income/1000	-0.035	0.019	-1.860	0.063	-0.071	0.002
Household size	-0.013	0.005	-2.530	0.011	-0.023	-0.003
Years of education	0.001	0.003	0.340	0.732	-0.004	0.006
Retired	0.019	0.028	0.680	0.497	-0.036	0.074
Unemployed	-0.127	0.027	-4.660	0.000	-0.180	-0.073
Keeping house	0.022	0.019	1.170	0.241	-0.015	0.060
Student	0.057	0.041	1.380	0.167	-0.024	0.138
Other	-0.070	0.050	-1.400	0.160	-0.168	0.028
Parents divorced or separated	-0.011	0.023	-0.480	0.633	-0.057	0.035
Living with own parents at 16	0.001	0.017	0.030	0.973	-0.034	0.035
Married	0.138	0.019	7.370	0.000	0.101	0.175
2nd+ Marriage	0.019	0.020	0.930	0.354	-0.021	0.058
Separated	-0.048	0.024	-1.970	0.049	-0.096	0.000
Divorced	-0.023	0.039	-0.580	0.565	-0.100	0.055
Widowed	-0.079	0.027	-2.930	0.003	-0.132	-0.026
Number of Children	0.004	0.005	0.790	0.431	-0.006	0.013
Monthly with relatives	0.031	0.012	2.610	0.009	0.008	0.055
Monthly with neighbors	0.029	0.013	2.270	0.023	0.004	0.054
Monthly with friends	0.034	0.013	2.680	0.007	0.009	0.058
Monthly at bar	-0.040	0.015	-2.590	0.009	-0.070	-0.010
Others can be trusted	0.010	0.013	0.750	0.451	-0.016	0.036
Others are helpful	0.048	0.014	3.540	0.000	0.021	0.075
Others are unfair	-0.039	0.015	-2.660	0.008	-0.068	-0.010
Member of 1 or 2 P-Groups	0.027	0.014	1.970	0.048	0.000	0.055
Member of 3+ P-Groups	0.075	0.019	4.000	0.000	0.038	0.112
Member of 1 O-Group	0.010	0.014	0.720	0.471	-0.018	0.038
Member of 2+ O-Groups	-0.041	0.022	-1.820	0.069	-0.085	0.003
Member of other Groups	-0.011	0.014	-0.740	0.458	-0.039	0.018
Very confident in banks	0.061	0.016	3.730	0.000	0.029	0.093
Very confident in companies	0.069	0.016	4.370	0.000	0.038	0.100
Very confident in organized relig,	0.013	0.015	0.920	0.358	-0.015	0.042
Very confident in education	0.054	0.015	3.710	0.000	0.026	0.083
Very confident in executive	0.044	0.019	2.320	0.021	0.007	0.081
Very confident in org. labor	0.037	0.023	1.590	0.113	-0.009	0.083
Very confident in press	-0.009	0.016	-0.580	0.565	-0.041	0.022
Very confident in medicine	0.003	0.013	0.240	0.812	-0.023	0.029
Very confident in television	0.008	0.019	0.440	0.660	-0.028	0.045
Very confident in supreme court	0.001	0.014	0.040	0.971	-0.027	0.028
Very confident in scientific	-0.002	0.013	-0.180	0.857	-0.028	0.024
Very confident in congress	0.006	0.020	0.290	0.771	-0.034	0.046

Table 8.
Predicted Impacts on Reported Happiness (Logit Estimates, "Very Happy" category)

Very Happy (hap=3)

	dy/dx	Mean 1975	Stnd err	(Income 2002) Mean 2004	Stnd err	Var 1975-2004	Var. Happiness
Female	0.010	0.5503	0.0129	0.545	0.009	-0.0055	-0.0001
Age	-0.009	44.3077	0.4585	45.965	0.317	1.6569	-0.0149
Age square	0.000	2275.1560	44.4773	2395.012	31.971	119.8560	0.0115
Black	-0.080	0.1094	0.0081	0.134	0.006	0.0247	-0.0020
Other non-white	0.002	0.0027	0.0013	0.071	0.005	0.0688	0.0002
% Diff, Regional price index	-0.043	0.0170	0.0031	-0.002	0.005	-0.0195	0.0008
Ln household income/1000	0.053	2.9548	0.0239	4.238	0.022	1.2831	0.0685
Ln Regional-Age-Race Income/1000	-0.035	3.1783	0.0125	4.600	0.010	1.4215	-0.0492
Household size	-0.013	3.1691	0.0442	2.453	0.026	-0.7161	0.0094
Years of education	0.001	11.6826	0.0809	13.698	0.055	2.0156	0.0018
Retired	0.019	0.1107	0.0081	0.143	0.007	0.0326	0.0006
Unemployed	-0.127	0.0409	0.0051	0.035	0.003	-0.0057	0.0007
Keeping house	0.022	0.2698	0.0115	0.095	0.006	-0.1752	-0.0039
Student	0.057	0.0329	0.0046	0.041	0.004	0.0080	0.0005
Other	-0.070	0.0134	0.0030	0.022	0.003	0.0086	-0.0006
Parents divorced or separated	-0.011	0.0919	0.0075	0.168	0.007	0.0763	-0.0009
Living with own parents at 16	0.001	0.7651	0.0110	0.700	0.009	-0.0653	0.0000
Married	0.138	0.6725	0.0122	0.526	0.009	-0.1465	-0.0203
2nd+ Marriage	0.019	0.1054	0.0080	0.126	0.006	0.0205	0.0004
Separated	-0.048	0.0564	0.0060	0.148	0.007	0.0912	-0.0044
Divorced	-0.023	0.0329	0.0046	0.034	0.003	0.0009	0.0000
Widowed	-0.079	0.0966	0.0077	0.073	0.005	-0.0241	0.0019
Number of Children	0.004	2.1125	0.0507	1.823	0.031	-0.2898	-0.0011
Monthly with relatives	0.031	0.5578	0.0129	0.581	0.016	0.0234	0.0007
Monthly with neighbors	0.029	0.4168	0.0128	0.338	0.016	-0.0783	-0.0023
Monthly with friends	0.034	0.3879	0.0126	0.412	0.016	0.0236	0.0008
Monthly at bar	-0.040	0.1585	0.0095	0.146	0.012	-0.0127	0.0005
Others can be trusted	0.010	0.3951	0.0127	0.359	0.016	-0.0363	-0.0004
Others are helpful	0.048	0.5649	0.0129	0.502	0.017	-0.0631	-0.0030
Others are unfair	-0.039	0.3076	0.0120	0.398	0.017	0.0908	-0.0035
Member of 1 or 2 P-Groups	0.027	0.4494	0.0131	0.369	0.013	-0.0802	-0.0022
Member of 3+ P-Groups	0.075	0.1537	0.0095	0.161	0.010	0.0069	0.0005
Member of 1 O-Group	0.010	0.2667	0.0116	0.211	0.011	-0.0561	-0.0006
Member of 2+ O-Groups	-0.041	0.0400	0.0051	0.052	0.006	0.0118	-0.0005
Member of other Groups	-0.011	0.1840	0.0102	0.152	0.009	-0.0319	0.0003
Very confident in banks	0.061	0.3289	0.0124	0.282	0.015	-0.0472	-0.0029
Very confident in companies	0.069	0.2041	0.0108	0.170	0.013	-0.0340	-0.0024
Very confident in organized relig,	0.013	0.2604	0.0118	0.241	0.015	-0.0198	-0.0003
Very confident in education	0.054	0.3146	0.0121	0.275	0.015	-0.0400	-0.0022
Very confident in executive	0.044	0.1366	0.0090	0.208	0.014	0.0711	0.0031
Very confident in org. labor	0.037	0.1077	0.0083	0.124	0.011	0.0164	0.0006
Very confident in press	-0.009	0.2455	0.0113	0.092	0.010	-0.1539	0.0014
Very confident in medicine	0.003	0.5126	0.0131	0.365	0.016	-0.1472	-0.0005
Very confident in television	0.008	0.1826	0.0101	0.103	0.010	-0.0795	-0.0007
Very confident in supreme court	0.001	0.3216	0.0124	0.310	0.016	-0.0116	0.0000
Very confident in scientific	-0.002	0.4217	0.0136	0.425	0.017	0.0032	0.0000
Very confident in congress	0.006	0.1371	0.0091	0.133	0.012	-0.0039	0.0000
Very confident in military forces	0.008	0.3695	0.0128	0.568	0.017	0.1988	0.0016

Table 9.
Predicted Impacts on Reported Happiness (category "very happy") by Group of Variables

GSS happiness	"Very Happy"		
1975	32.86%		
2004	31.34%		
Variation	–1.52%		
Demographics	-0.54%	-0.54%	
Absolute Income	6.85%		
Relative Income	-4.92%	1.93%	**Income**
Other Socio-economics	1.02%	2.41%	**All non-SC**
Marital Status & Children	-2.27%		
Social Contacts	-0.02%		
Trust in Individuals	-0.66%		
Putnam's Group	-0.17%	-3.12%	**Intrinsic RSC**
Olson's Group	-0.05%	-3.17%	**RSC**
Confidence in institutions	-0.43%	-3.60%	**All SC**
Total predicted variation	-1.19%		

Table 10.
Marginal Effects on Reported Happiness (Logit Estimates, "Not So Happy" category)

	Dy/dx	Std. Err.	z	P>z	[95%	C.I.]
Female	-0.004	0.005	-0.710	0.477	-0.013	0.006
Age	0.003	0.001	3.080	0.002	0.001	0.005
Age square	0.000	0.000	-3.110	0.002	0.000	0.000
Black	0.034	0.010	3.380	0.001	0.014	0.054
Other non-white	-0.001	0.019	-0.040	0.965	-0.039	0.037
% Diff, Regional price index	0.015	0.012	1.330	0.185	-0.007	0.038
Ln household income/1000	-0.019	0.003	-5.910	0.000	-0.025	-0.013
Ln Regional-Age-Race Income/1000	0.012	0.007	1.860	0.062	-0.001	0.025
Household size	0.005	0.002	2.540	0.011	0.001	0.008
Years of education	0.000	0.001	-0.340	0.732	-0.002	0.002
Retired	-0.006	0.009	-0.710	0.479	-0.024	0.011
Unemployed	0.068	0.022	3.070	0.002	0.025	0.111
Keeping house	-0.008	0.006	-1.220	0.224	-0.020	0.005
Student	-0.018	0.011	-1.590	0.111	-0.039	0.004
Other	0.031	0.027	1.130	0.259	-0.023	0.085
Parents divorced or separated	0.004	0.009	0.470	0.641	-0.013	0.021
Living with own parents at 16	0.000	0.006	-0.030	0.973	-0.012	0.012
Married	-0.055	0.008	-6.480	0.000	-0.072	-0.038
2nd+ Marriage	-0.006	0.007	-0.960	0.335	-0.019	0.007
Separated	0.019	0.011	1.750	0.080	-0.002	0.041
Divorced	0.009	0.016	0.540	0.589	-0.023	0.040
Widowed	0.035	0.015	2.380	0.017	0.006	0.063
Number of Children	-0.001	0.002	-0.790	0.430	-0.005	0.002
Monthly with relatives	-0.011	0.004	-2.560	0.010	-0.020	-0.003
Monthly with neighbors	-0.010	0.004	-2.310	0.021	-0.019	-0.002
Monthly with friends	-0.012	0.004	-2.720	0.007	-0.020	-0.003
Monthly at bar	0.015	0.006	2.400	0.016	0.003	0.028
Others can be trusted	-0.004	0.005	-0.760	0.449	-0.013	0.006
Others are helpful	-0.017	0.005	-3.410	0.001	-0.028	-0.007
Others are unfair	0.014	0.006	2.530	0.012	0.003	0.026
Member of 1 or 2 P-Groups	-0.010	0.005	-1.980	0.048	-0.019	0.000
Member of 3+ P-Groups	-0.024	0.005	-4.440	0.000	-0.034	-0.013
Member of 1 O-Group	-0.004	0.005	-0.730	0.465	-0.013	0.006
Member of 2+ O-Groups	0.016	0.010	1.640	0.102	-0.003	0.036
Member of other Groups	0.004	0.005	0.730	0.466	-0.007	0.014
Very confident in banks	-0.020	0.005	-4.030	0.000	-0.029	-0.010
Very confident in companies	-0.022	0.005	-4.750	0.000	-0.032	-0.013
Very confident in organized relig,	-0.005	0.005	-0.940	0.349	-0.014	0.005
Very confident in education	-0.018	0.005	-3.900	0.000	-0.027	-0.009
Very confident in executive	-0.014	0.006	-2.510	0.012	-0.026	-0.003
Very confident in org. labor	-0.012	0.007	-1.720	0.085	-0.026	0.002
Very confident in press	0.003	0.006	0.570	0.571	-0.008	0.015
Very confident in medicine	-0.001	0.005	-0.240	0.811	-0.010	0.008
Very confident in television	-0.003	0.006	-0.450	0.654	-0.016	0.010
Very confident in supreme court	0.000	0.005	-0.040	0.971	-0.010	0.010
Very confident in scientific	0.001	0.005	0.180	0.857	-0.008	0.010
Very confident in congress	-0.002	0.007	-0.290	0.768	-0.016	0.012
Very confident in military forces	-0.003	0.005	-0.590	0.554	-0.013	0.007

Table 11.
Predicted Impacts on Reported Happiness (Logit Estimates, "Not So Happy" category)

Very Happy (hap=1)

	dy/dx	Mean 1975	Stnd err	(Income 2002) Mean 2004	Stnd err	Var 1975-2004	Var. Happiness
Female	-0.004	0.5503	0.0129	0.545	0.009	-0.0055	0.0000
Age	0.003	44.3077	0.4585	45.965	0.317	1.6569	0.0053
Age square	0.000	2275.1560	44.4773	2395.012	31.971	119.8560	-0.0041
Black	0.034	0.1094	0.0081	0.134	0.006	0.0247	0.0009
Other non-white	-0.001	0.0027	0.0013	0.071	0.005	0.0688	-0.0001
% Diff, Regional price index	0.015	0.0170	0.0031	-0.002	0.005	-0.0195	-0.0003
Ln household income/1000	-0.019	2.9548	0.0239	4.238	0.022	1.2831	-0.0243
Ln Regional-Age-Race Income/1000	0.012	3.1783	0.0125	4.600	0.010	1.4215	0.0175
Household size	0.005	3.1691	0.0442	2.453	0.026	-0.7161	-0.0034
Years of education	0.000	11.6826	0.0809	13.698	0.055	2.0156	-0.0007
Retired	-0.006	0.1107	0.0081	0.143	0.007	0.0326	-0.0002
Unemployed	0.068	0.0409	0.0051	0.035	0.003	-0.0057	-0.0004
Keeping house	-0.008	0.2698	0.0115	0.095	0.006	-0.1752	0.0013
Student	-0.018	0.0329	0.0046	0.041	0.004	0.0080	-0.0001
Other	0.031	0.0134	0.0030	0.022	0.003	0.0086	0.0003
Parents divorced or separated	0.004	0.0919	0.0075	0.168	0.007	0.0763	0.0003
Living with own parents at 16	0.000	0.7651	0.0110	0.700	0.009	-0.0653	0.0000
Married	-0.055	0.6725	0.0122	0.526	0.009	-0.1465	0.0080
2nd+ Marriage	-0.006	0.1054	0.0080	0.126	0.006	0.0205	-0.0001
Separated	0.019	0.0564	0.0060	0.148	0.007	0.0912	0.0017
Divorced	0.009	0.0329	0.0046	0.034	0.003	0.0009	0.0000
Widowed	0.035	0.0966	0.0077	0.073	0.005	-0.0241	-0.0008
Number of Children	-0.001	2.1125	0.0507	1.823	0.031	-0.2898	0.0004
Monthly with relatives	-0.011	0.5578	0.0129	0.581	0.016	0.0234	-0.0003
Monthly with neighbors	-0.010	0.4168	0.0128	0.338	0.016	-0.0783	0.0008
Monthly with friends	-0.012	0.3879	0.0126	0.412	0.016	0.0236	-0.0003
Monthly at bar	0.015	0.1585	0.0095	0.146	0.012	-0.0127	-0.0002
Others can be trusted	-0.004	0.3951	0.0127	0.359	0.016	-0.0363	0.0001
Others are helpful	-0.017	0.5649	0.0129	0.502	0.017	-0.0631	0.0011
Others are unfair	0.014	0.3076	0.0120	0.398	0.017	0.0908	0.0013
Member of 1 or 2 P-Groups	-0.010	0.4494	0.0131	0.369	0.013	-0.0802	0.0008
Member of 3+ P-Groups	-0.024	0.1537	0.0095	0.161	0.010	0.0069	-0.0002
Member of 1 O-Group	-0.004	0.2667	0.0116	0.211	0.011	-0.0561	0.0002
Member of 2+ O-Groups	0.016	0.0400	0.0051	0.052	0.006	0.0118	0.0002
Member of other Groups	0.004	0.1840	0.0102	0.152	0.009	-0.0319	-0.0001
Very confident in banks	-0.020	0.3289	0.0124	0.282	0.015	-0.0472	0.0009
Very confident in companies	-0.022	0.2041	0.0108	0.170	0.013	-0.0340	0.0008
Very confident in organized relig,	-0.005	0.2604	0.0118	0.241	0.015	-0.0198	0.0001
Very confident in education	-0.018	0.3146	0.0121	0.275	0.015	-0.0400	0.0007
Very confident in executive	-0.014	0.1366	0.0090	0.208	0.014	0.0711	-0.0010
Very confident in org. labor	-0.012	0.1077	0.0083	0.124	0.011	0.0164	-0.0002
Very confident in press	0.003	0.2455	0.0113	0.092	0.010	-0.1539	-0.0005
Very confident in medicine	-0.001	0.5126	0.0131	0.365	0.016	-0.1472	0.0002
Very confident in television	-0.003	0.1826	0.0101	0.103	0.010	-0.0795	0.0002
Very confident in supreme court	0.000	0.3216	0.0124	0.310	0.016	-0.0116	0.0000
Very confident in scientific	0.001	0.4217	0.0136	0.425	0.017	0.0032	0.0000
Very confident in congress	-0.002	0.1371	0.0091	0.133	0.012	-0.0039	0.0000
Very confident in military forces	-0.003	0.3695	0.0128	0.568	0.017	0.1988	-0.0006

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Table 12.

Predicted Impacts on Reported Happiness (category "Not So Happy") by Group of Variables

GSS happiness	"Not So Happy"		
1975	13.06%		
2004	13.46%		
Variation	0.40%		
Demographics	0.21%	0.21%	
Absolute Income	-2.43%		
Relative Income	1.75%	-0.69%	**Income**
Other Socio-economics	-0.37%	-0.85%	**All non-SC**
Marital Status & Children	0.90%		
Social Contacts	0.01%		
Trust in Individuals	0.24%		
Putnam's Group	0.06%	1.20%	**Intrinsic RSC**
Olson's Group	0.00%	1.20%	**RSC**
Confidence in institutions	0.14%	1.34%	**All SC**
Total predicted variation	0.49%		

Definition and Source of Variables

The U.S. General Social Survey (dataset 1972-2004)

Happiness: 3 if respondent declares to be "very happy", 2 if "pretty happy" and 1 if "not too happy"

Female: 1 if subject is female

Age: number of years since born

Age square: age to the power of 2

Black: 1 if respondent defines himself afro-American

Other non-white: 1 if respondent neither defines himself as white nor afro-American

Years of education: number of years the respondent declared to have attended school

Retired: 1 if respondent declares to have retired

Unemployed: 1 if respondent declares to be unemployed

Keeping house: 1 if respondent declares to be keep house as work status

Student: 1 if respondent declares to be a student as work status

Other: 1 if respondent declares to be neither working (full or part-time), nor retired, unemployed, keeping house or student

Parents divorced or separated: 1 if respondent declares to be not be with own parents at 16 years old because they where divorced or separated

Living with own parents at 16: 1 if respondent declares to be living with own parents at 16 years old

Ln household income/1000: natural logarithm of reported household income as provided in the GSS (variable name: coninc) divided by 1000 (dollars 2000)

Ln household regional-age-race income/1000: natural logarithm of average reported household income for a reference group as provided in the GSS divided by 1000 (dollars 2000); reference groups are obtained by sorting people by census region of residence, 5-years age interval (starting from 15) and race (white, black and other non-white)

Ln household per capita inc./1000: reported household income divided by the number of household component (household size)

Household size: number of reported household members

Number of Children: reported number of children

Married: 1 if respondent reports to be currently married

2nd+ Marriage: 1 if respondent reports to be married but not for the first time

Separated: 1 if respondent reports to be currently separated

Divorced: 1 if respondent reports to be currently divorced

Widowed: 1 if respondent reports to be currently widowed

Monthly with relatives: 1 if respondent reports to spend at least one evening per month with relatives

Monthly with neighbors: 1 if respondent reports to spend at least one evening per month with neighbors

Monthly with friends: 1 if respondent reports to spend at least one evening per month with friends living outside her neighborhood

Monthly at bar: 1 if respondent reports to spend at least one evening per month at bar or tavern

Others can be trusted: 1 if respondent considers people to be trustworthy (0 is associated with answers "not trustworthy" and "depends")

Others are helpful: 1 if respondent considers people to be helpful (0 is associated with answers "not helpful" and "depends")

Others are unfair: 1 if respondent considers people to be unfair and to take advantage whenever possible (0 is associated with answers "fair" and "depends")

Member of 1 or 2 Putnam's Group: 1 if respondent declares to be member of one, or two among service groups, church organizations, sport clubs, art and literature clubs, national organizations, hobby clubs, fraternal groups and youth associations

Member of 3+ Putnam's Groups: 1 if respondent declares to be member of at least three Putnam's groups

Member of 1 Olson's Group: 1 if respondent declares to be member of one, and only one, among fraternity associations, unions, professional organizations and farm organizations

Member of 2+ Olson's Groups: 1 if respondent declares to be member of at least two Olson's groups

Member of 1+ Other Groups: 1 if respondent declares to be member of at least one among veteran associations, political party and "other groups"

Very confident in banks: 1 if respondent declares to be very confident in banks and financial institutions (0 is associated with answers "confident" and "not very confident")

Very confident in major companies: 1 if respondent declares to be very confident in major companies (0 is associated with answers "confident" and "not very confident")

Very confident in organized religion: 1 if respondent declares to be very confident in organized religion (0 is associated with answers "confident" and "not very confident")

Very confident in education: 1 if respondent declares to be very confident in education (0 is associated with answers "confident" and "not very confident")

Very confident in executive: 1 if respondent declares to be very confident in U.S. executive branch of government (0 is associated with answers "confident" and "not very confident")

Very confident in organized labor: 1 if respondent declares to be very confident in organized labor (0 is associated with answers "confident" and "not very confident")

Very confident in press: 1 if respondent declares to be very confident in press (0 is associated with answers "confident" and "not very confident")

Very confident in medicine: 1 if respondent declares to be very confident in medicine (0 is associated with answers "confident" and "not very confident")

Very confident in television: 1 if respondent declares to be very confident in television (0 is associated with answers "confident" and "not very confident")

Very confident in Supreme Court: 1 if respondent declares to be very confident the U.S. Supreme Court (0 is associated with answers "confident" and "not very confident")

Very confident in scientific community: 1 if respondent declares to be very confident in the scientific community (0 is associated with answers "confident" and "not very confident")

Very confident in Congress: 1 if respondent declares to be very confident in the U.S. Congress (0 is associated with answers "confident" and "not very confident")

Very confident in military forces: 1 if respondent declares to be very confident in U.S: military forces (0 is associated with answers "confident" and "not very confident")

Description of the typology of groups and organizations:

service groups: non-profit associations aimed at providing a service which is considered insufficiently supplied;

church organizations: associations created by a church for social activities;

sport clubs: non-profit associations supporting sport activities;

art and literature clubs: small associations for studying and spreading art and literature;

national organizations: association based on national/ethnic homogeneity for social activities;

hobby clubs: non-profit associations centered aroud a single off-work activity;

fraternal groups: non -profit association based on mutual help and a common social purpose;

youth associations: age-based associations for social activities of young people;

fraternity associations: brotherood pursuing the interest of the members;

unions: labor unions;

professional organizations: association of professionals (not farmers);

farm organizations: association of farmers;

veteran associations: association of ex-member of military forces who have been in a war;

political party: any political group which has an organizational structure (not just political movements);

"other groups": residual category (not fitting in any of the previous ones);

US Dept. of Commerce, Bureau of Economic Analysis

Personal/regional: reported household income per capita (GSS dataset) is divided by average regional per capita income provided by the US Dept of Commerce (dollars 2000)

The Office of Federal Housing Enterprise Oversight's

% Diff. Regional price index: percentage of variation between average national house values for single-family detached homes on which at least two mortgages were originated or subsequently purchased or securitized and average regional values (calculated using the Repeat Sales House Price Index).
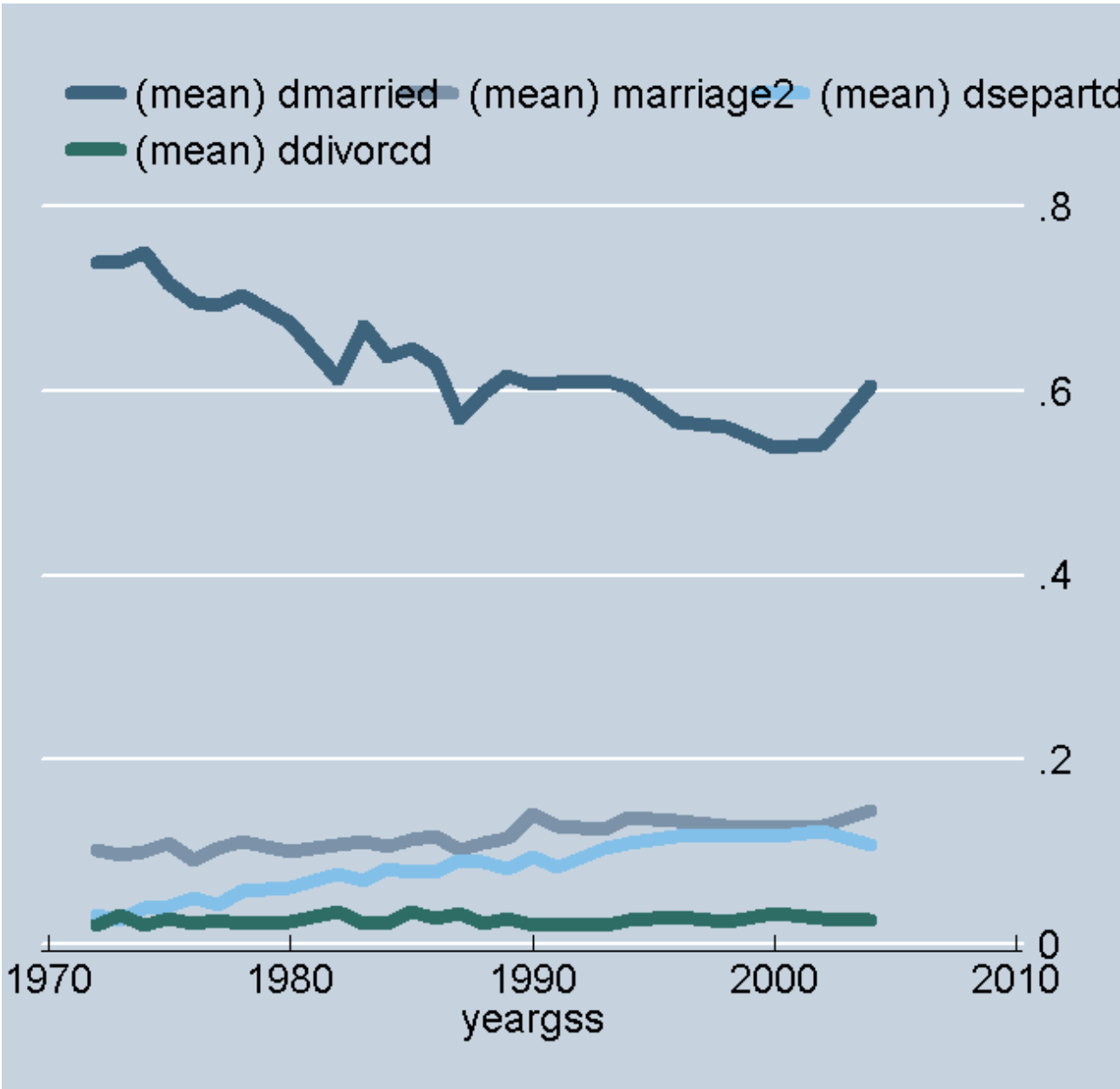
List of Figures

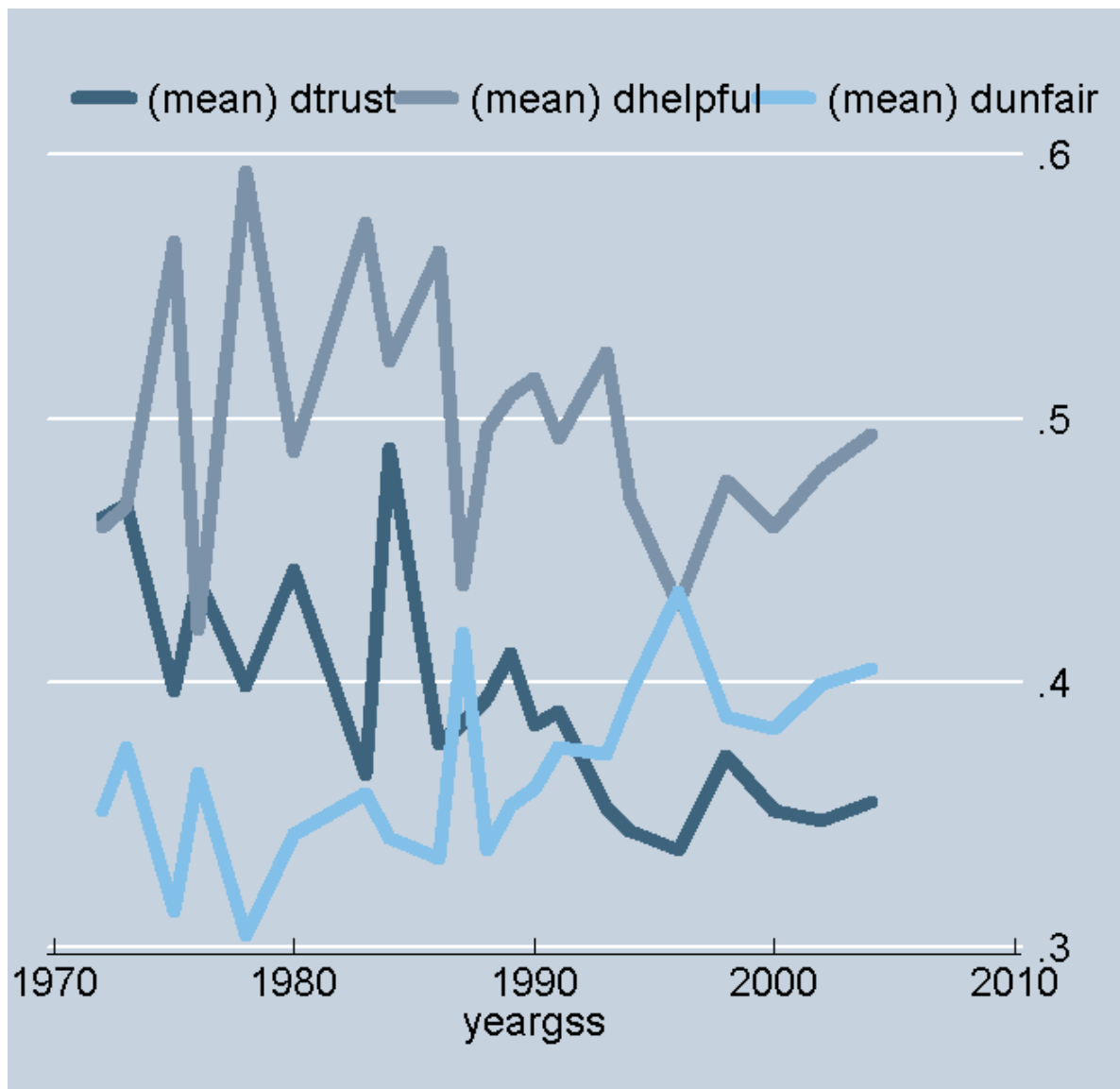**Figure1.** Average married, separated, divorced and at second (or further) marriage.

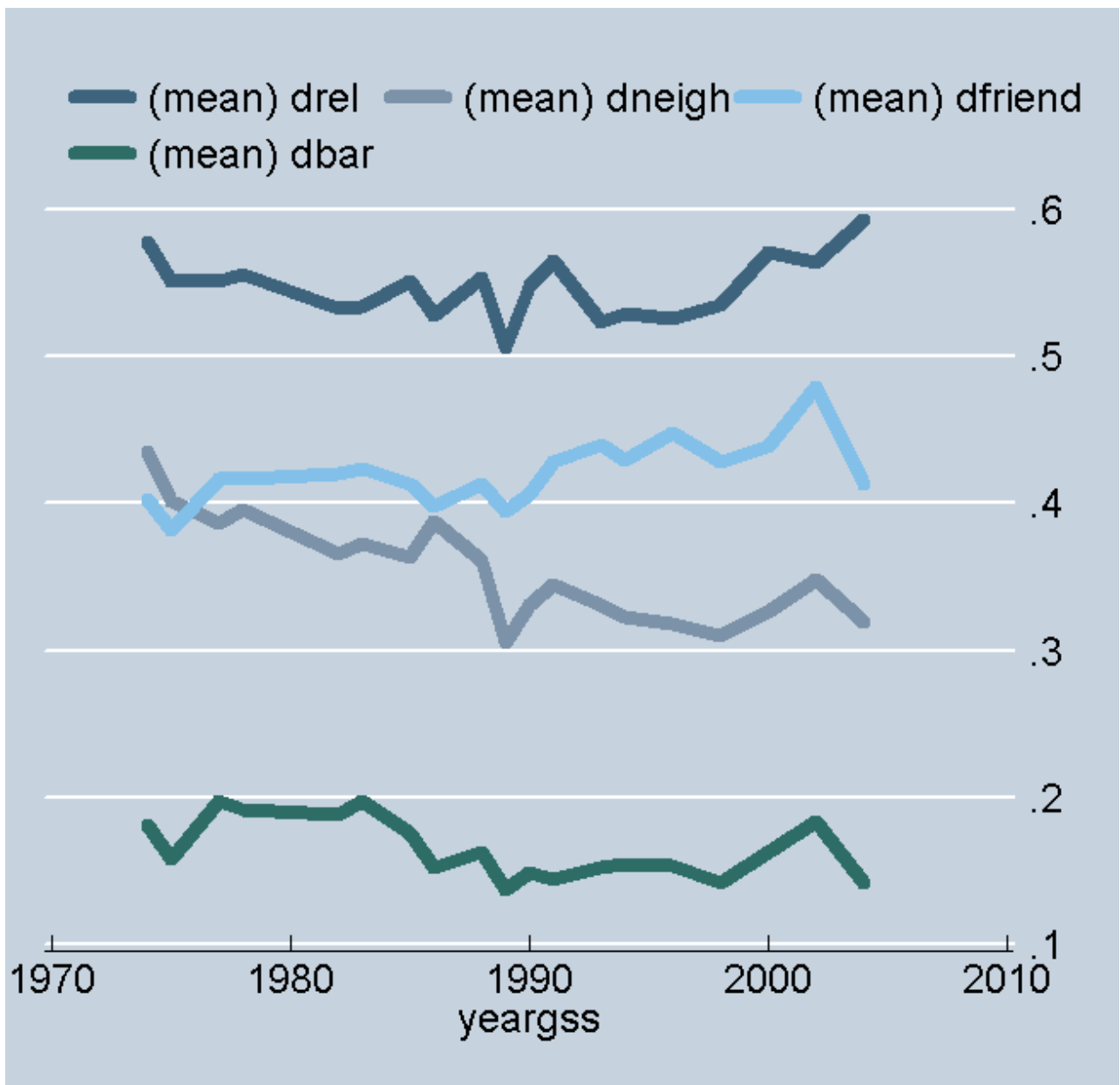**Figure 2.** Average trust in individuals (respondent considers people trustworthy, helpful and unfair).

Figure 3. Average frequency of social contacts (at least one evenings per month spent with relatives, neighbors, friends and at bar).
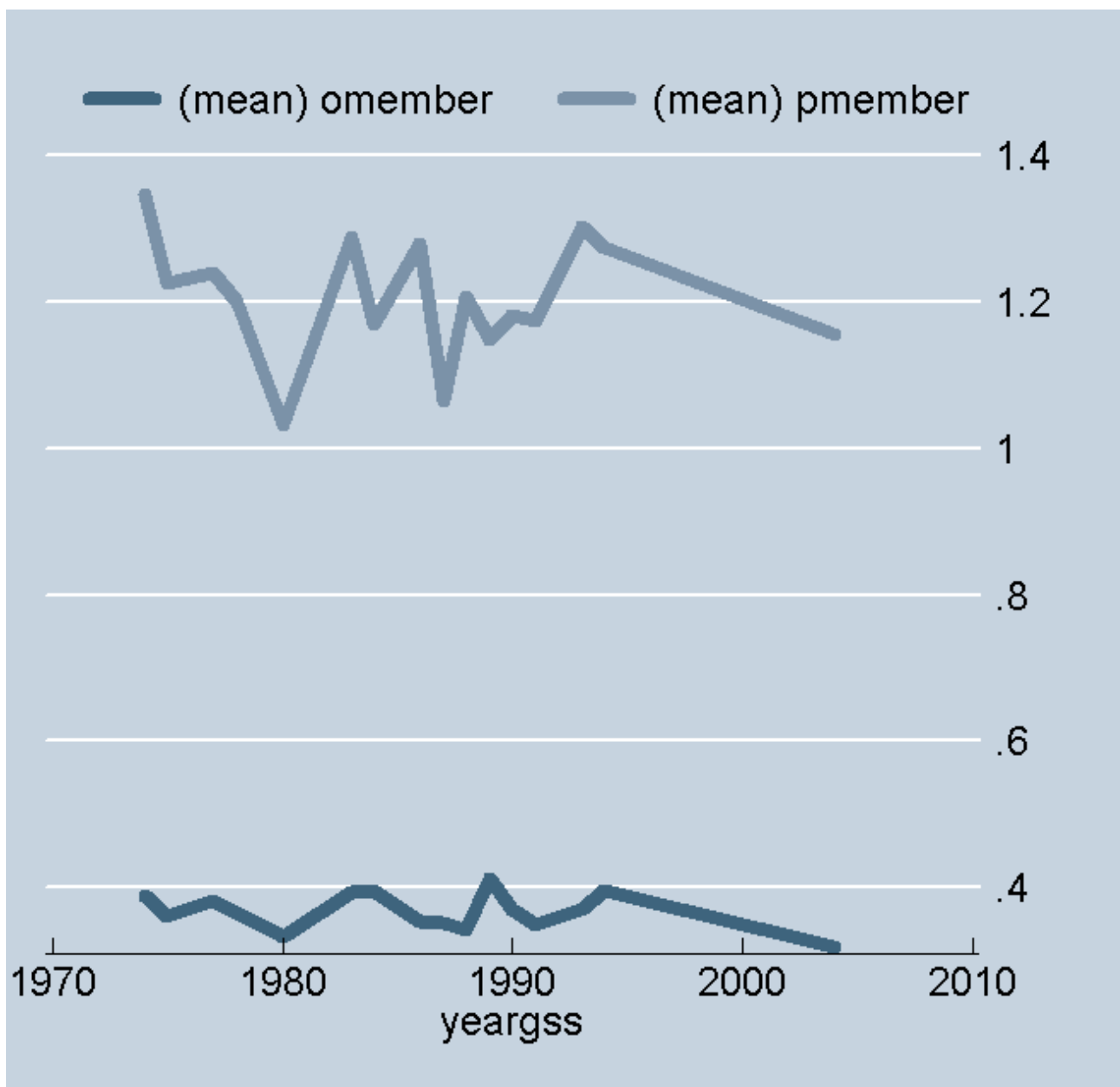
Figure 4. Average number of memberships in Olsonian and Putnamian Groups.
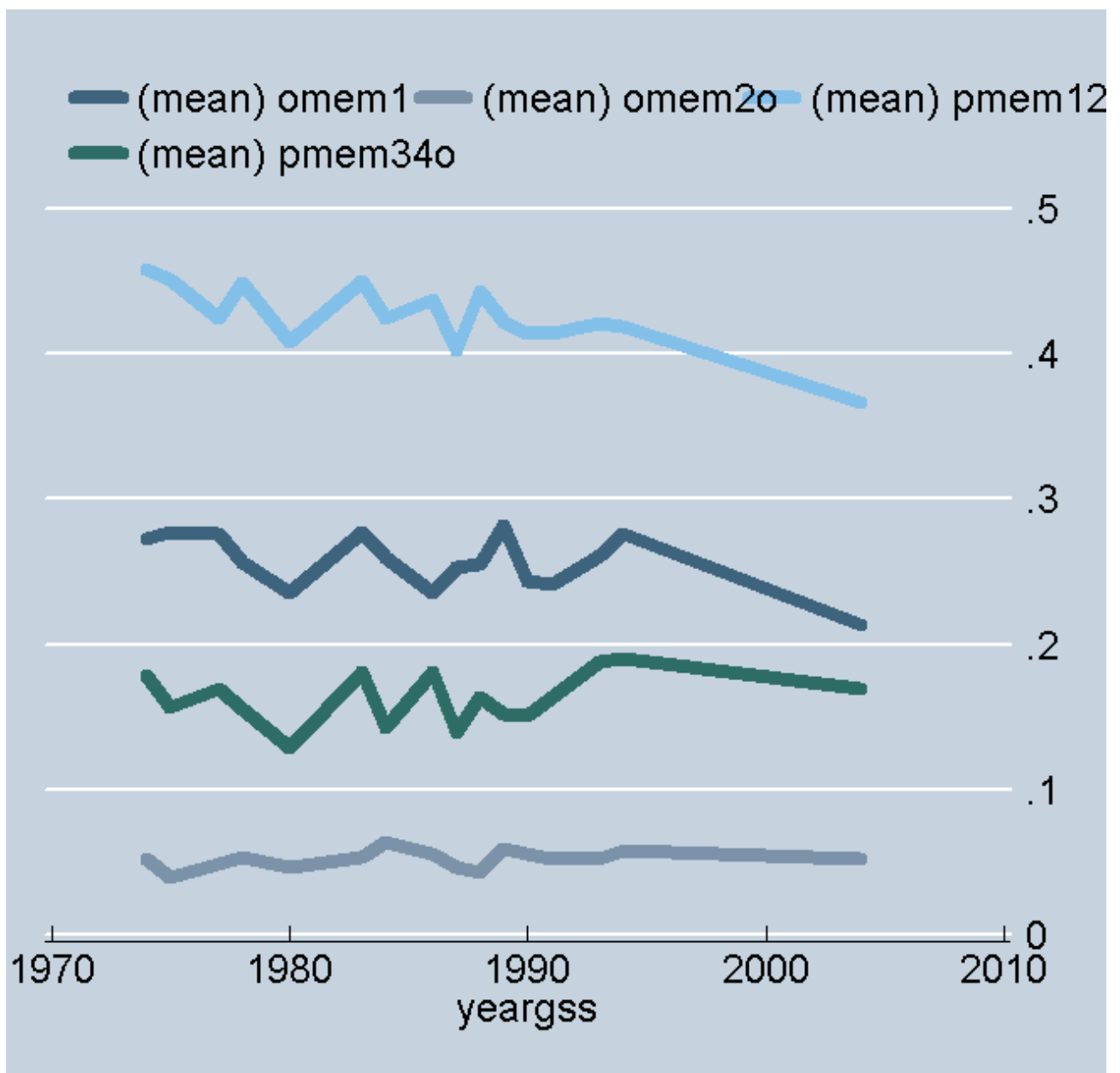
Figure 5. Olsonian groups: average membership in 1, and 2 or more; Putnamian groups: average membership in 1 or 2, and 3 or more.
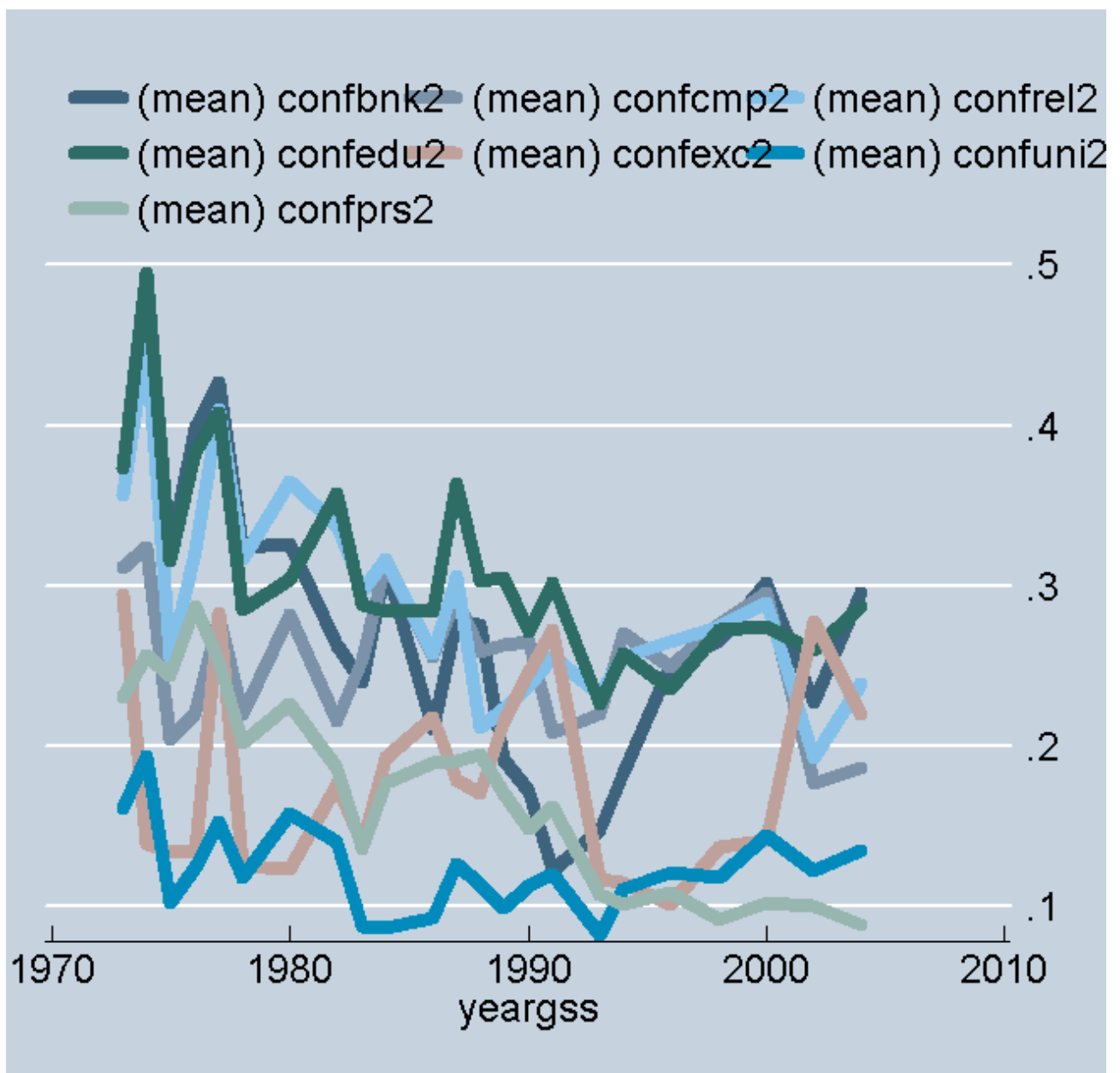
Figure 6. Average confidence towards banks, major companies, organized religion, education system, executive branch of government, organized labor and press (legend in same order).
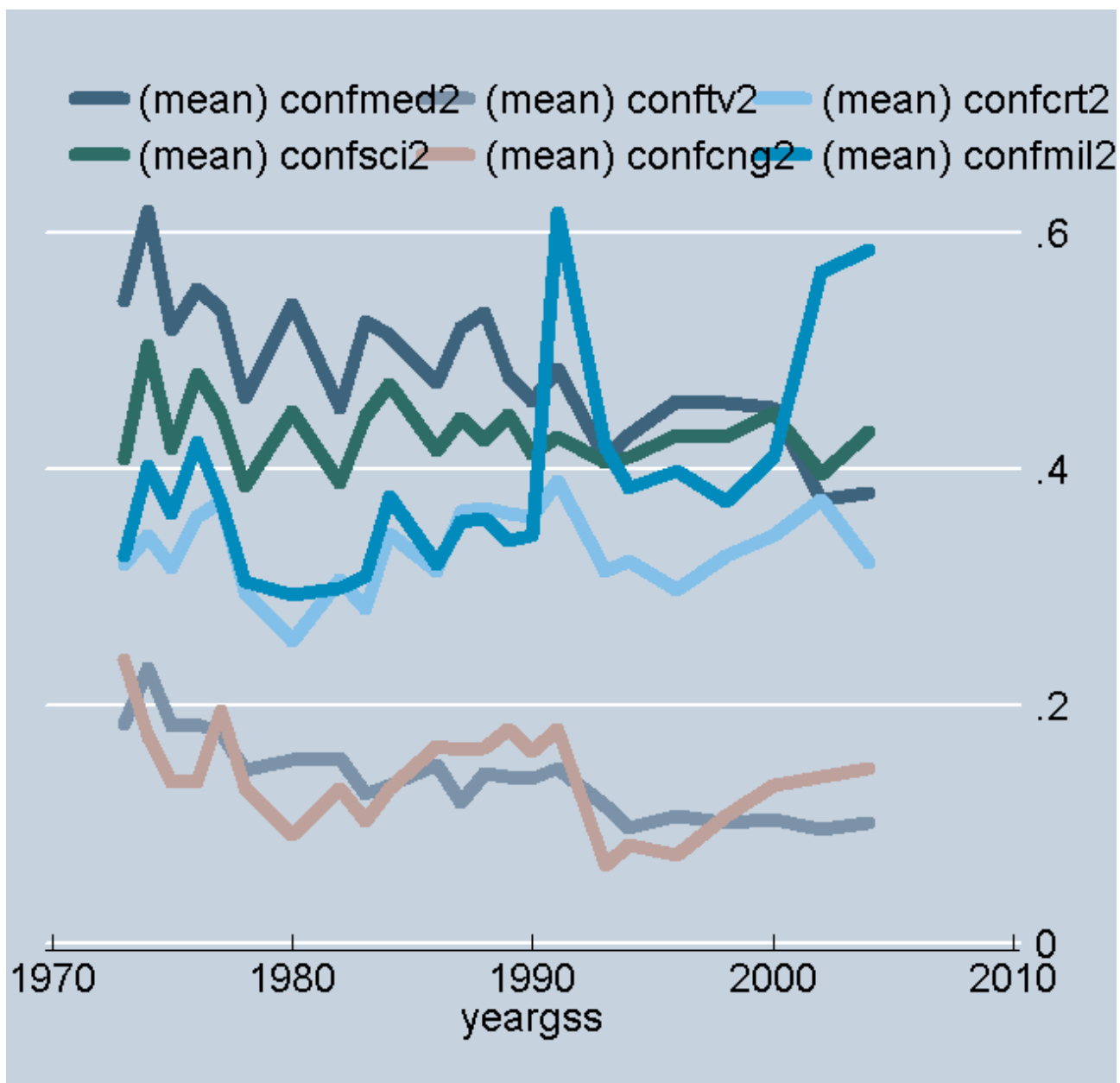
Figure 7. Confidence towrds medicine, television, Supreme Court, scientific community, Congress and military forces (legend in same order).