

Kotschy, Rainer; Sunde, Uwe

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## Have Preferences Become More Similar Worldwide?

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## Have Preferences Become More Similar Worldwide?

*Rainer Kotschy, Uwe Sunde*

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Telephone +49 (0)89 2180-2740, Telefax +49 (0)89 2180-17845, email [office@cesifo.de](mailto:office@cesifo.de)

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# Have Preferences Become More Similar Worldwide?

## Abstract

Recent evidence shows substantial heterogeneity in time, risk, and social preferences across and within populations; yet little is known about the dynamics of preference heterogeneity across generations. We apply a novel identification strategy based on dyadic differences in preferences using representative data for 80,000 individuals from 76 countries. Our results document that, among more recent birth cohorts, preferences are more similar across countries and gender gaps in preferences are smaller within countries. This decline in preference heterogeneity across cohorts relates to country-specific differences in preference endowments, population composition, and socioeconomic conditions during formative years, and points at global cultural convergence.

JEL-Codes: D010, J100, J110.

Keywords: patience, willingness to take risks, trust, prosociality, cohort effects.

*Rainer Kotschy*  
*Harvard T.H. Chan School of Public Health*  
*Boston / MA / USA*  
*rkotschy@hsph.harvard.edu*

*Uwe Sunde*  
*Ludwig-Maximilians-University*  
*Munich / Germany*  
*uwe.sunde@lmu.de*

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# 1 Introduction

Preferences concerning time, risk, and social interactions shape human behavior. They determine the degree to which people are willing to shift consumption between the present and the future, whether people invest time and resources in activities with uncertain outcomes, and how people behave in social interactions. Preferences thereby determine the functioning of markets, institutions, and ultimately economic development.

Recent work has documented substantial heterogeneity in time, risk, and social preferences around the world (Rieger et al. 2015; Falk et al. 2018; Ruggeri et al. 2022). This heterogeneity has been linked to the geographic, climatic, and cultural environments that have shaped preferences through evolutionary and genetic processes (Galor and Moav 2002; Cesarini et al. 2009; Galor and Özak 2016; Becker et al. 2020), intergenerational transmission (Dohmen et al. 2012), and institutions (Alesina and Giuliano 2015). However, little is known about the dynamics of preference heterogeneity across generations.

In this paper, we investigate the population dynamics of preference heterogeneity across birth cohorts, both within and across countries. We test two hypotheses that predict opposite dynamics of preference heterogeneity across generations: (i) Preference heterogeneity is constant or even higher among recent birth cohorts (persistence hypothesis) and (ii) preference heterogeneity is lower among recent birth cohorts (convergence hypothesis).

According to the persistence hypothesis, preference heterogeneity is hard-wired as the result of genetic and evolutionary processes within and across populations and changes little with socioeconomic development. It reflects long-term historical adaptation of preferences to specific geographic, climatic, and cultural environments and their selective transmission across generations (Nunn 2022). As time, risk, and social preferences are key determinants of economic behavior, persisting or growing preference heterogeneity may impede convergence in economic development between countries and raise global inequality (Henrich et al. 2010b; Henrich 2020; Sunde et al. 2022). This hypothesis is supported by evidence that cultural divides within societies are persistent or have increased lately (Giavazzi et al. 2019; Desmet and Wacziarg 2021). Recent works also find greater gender differences in preferences in countries that are more economically developed and have greater gender equality (Falk and Hermle 2018; Cuevas et al. 2021), which suggests preference heterogeneity may increase as countries develop.

In contrast, the convergence hypothesis implies that global preference heterogeneity is lower among later-born cohorts as the result of transformative processes related to globalization,

technological progress, sectoral transformation, or institutional change, which expose people to increasingly similar information, experiences, and socioeconomic conditions. Conceptually, preferences can change at the population level when people actively update them in response to changes in the ecological and socioeconomic environments that shape social interactions and influence preference formation. Preferences can also change at the population level when earlier-born cohorts are replaced by new cohorts that experienced more homogeneous environments than their predecessors during the impressionable years of preference formation. Mounting evidence suggests that individual preferences are shaped early in life during impressionable years and remain fairly stable thereafter (Krosnick and Alwin 1989; Malmendier and Nagel 2011; Schildberg-Hörisch 2018). In line with this evidence, recent findings in sociology support the view that cultural change reflects cohort replacement rather than contemporaneous social influences and updating (Vaisey and Lizardo 2016; Kiley and Vaisey 2020, 2021). In an economically and culturally increasingly connected world, cohort replacement predicts lower preference heterogeneity among later-born cohorts.

Here we examine the dynamics of preference heterogeneity using a novel empirical approach that operationalizes preference heterogeneity in terms of absolute differences in means or standard deviations of preference measures between pairs of countries (dyads). We apply this approach to preference data for 80,000 individuals elicited in representative samples of 76 countries from all continents that represent 90 percent of the world's population and income. To isolate cohort patterns in preference heterogeneity, we correct preference measures for systematic age variation over the life cycle. The dyadic approach of comparing differences in preferences within country pairs is naturally suited to study variation of preference heterogeneity across countries and allows for an in-depth analysis of confounders, effect heterogeneity, and potential channels underlying the dynamics of preference heterogeneity across birth cohorts. Moreover, this approach can be readily modified to investigate the cohort patterns of preference heterogeneity between women and men (or other population groups) within the same country.

Our results document that preference heterogeneity across countries in patience, willingness to take risks, trust, and prosociality is lower among recent birth cohorts, both in means and standard deviations of the corresponding preference distributions; the results also reveal lower preference heterogeneity between women and men within the same country among recent birth cohorts. This decline in preference heterogeneity is similar for pairs of high-income countries, pairs of low-income countries, and mixed pairs. Extended analyses suggest the magnitude

of the decline in preference heterogeneity relates to variation in country-specific preference endowments, population composition and genetic diversity, economic convergence, and variation in socioeconomic conditions prevailing during the formative years of later-born cohorts. Overall, the decline in preference heterogeneity across birth cohorts points at global cultural convergence.

This paper relates to several strands of literature on the demographics of preference heterogeneity. By documenting a decline in preference heterogeneity across birth cohorts, our evidence contributes to research on heterogeneity in preference endowments around the world (Rieger et al. 2015; Falk et al. 2018; Ruggeri et al. 2022) and introduces a global perspective of preference dynamics that generalizes previous findings obtained from samples of migrants in few selected countries (e.g., Cameron et al. 2015; Giavazzi et al. 2019; Rapoport et al. 2021). Methodologically, our analysis extends existing work on age and cohort patterns in preferences (Dohmen et al. 2017; Fitzenberger et al. 2022). By distinguishing between the moments of distributions of age-corrected and uncorrected preference measures, we disentangle cohort patterns in preference heterogeneity from country-specific heterogeneity in age profiles and thereby provide a new angle on the separability of age and cohort patterns.

Changes in preference heterogeneity between women and men constitute a potentially important dimension of dynamics of preference heterogeneity. Previous work reports seemingly contradictory evidence of considerable (but incomplete) convergence in socioeconomic outcomes between genders in high-income countries (Olivetti and Petrongolo 2016) and findings of larger gender gaps in preferences in richer countries (Falk and Hermle 2018; Cuevas et al. 2021). Our evidence indicates cohort differences in preference heterogeneity that conform with both preference convergence between genders and increased preference differentiation as countries develop. Moreover, it is consistent with evidence for differences in the variability of preferences across genders (Thöni and Volk 2021).

Our analysis also contributes to research on cultural diversity. This literature has investigated cultural diversity at the interpersonal level (Ashraf and Galor 2013; Arbatli et al. 2020) and between groups (Esteban et al. 2012), whereas our analysis investigates dynamics of diversity across cohorts. Recent work by Bertrand and Kamenica (2023) explored period patterns in cultural diversity in the United States in the context of consumption, time use, and media diet. Here we analyze global age and cohort dynamics in preferences. Work on cultural change has examined individual responses in cross-country surveys to disentangle cohort patterns from period effects (Vaisey and Lizardo 2016; Kiley and Vaisey 2020, 2021). Our analysis is the first

to focus on the variation across cohorts using a methodology based on dyadic differences, and provides new evidence of population dynamics in preference heterogeneity. Related work on the relative importance of cultural diversity across and within countries has used measures of fractionalization and cultural fixation (Desmet et al. 2017; Muthukrishna et al. 2020). Whereas this literature has focused on similarity and dissimilarity of populations in response behavior to questions about beliefs and attitudes in various dimensions, we concentrate on estimating cohort trends in preference heterogeneity. Compared with descriptive measures of cultural diversity such as the cultural fixation index, which is defined as the ratio of the between-group variance to the total variance in a cultural trait, our dyadic approach offers several methodological advantages. It enables an in-depth analysis of confounders, effect heterogeneity, potential mechanisms of the underlying dynamics of preference heterogeneity, and variation in different moments of preference distributions and relative to various comparison benchmarks. Finally, our global evidence of cohort dynamics in preference heterogeneity within countries across women and men complements and extends recent work that has investigated the dynamics of cultural diversity over time within the United States (Desmet and Wacziarg 2021).

## 2 Data and Empirical Approach

### 2.1 Data and Sample

The empirical analysis tests the persistence and convergence hypotheses using measures for preferences concerning time, risk-taking, and social interactions that were elicited in the Global Preferences Survey (Falk et al. 2018). This survey is based on a module of items that were validated in incentivized experiments to ensure their behavioral reliability (Falk et al. 2023).<sup>1</sup> The data contains information about six distinct preferences for approximately 80,000 individuals in representative samples from 76 countries around the world (24 from Europe, 7 from North America, 8 from Latin America, 22 from Asia, 14 from Africa, and Australia; see Table S.1).

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<sup>1</sup>The original validation by Falk et al. (2023) was based on a student sample from a German university. Subsequent studies were able to validate the same or similar survey items for risk preferences in the general German population (Dohmen et al. 2011) and in various populations across 65 high-income and low-income countries around the world (Rieger et al. 2015; Vieider et al. 2015; Bauer et al. 2020). Likewise, measures of time preferences were validated in 53 countries (Wang et al. 2016; Rieger et al. 2021), and social preferences were validated in the United States, Kenya, and Iran (Sapienza et al. 2013; Bauer et al. 2020; Kosfeld and Sharafi 2022). In addition, recent experimental work finds that preference measures of risk and time preferences based on hypothetical, non-incentivized survey measures are largely comparable to measures based on incentivized elicitation (Brañaz Garza et al. 2023; Hackethal et al. 2023).

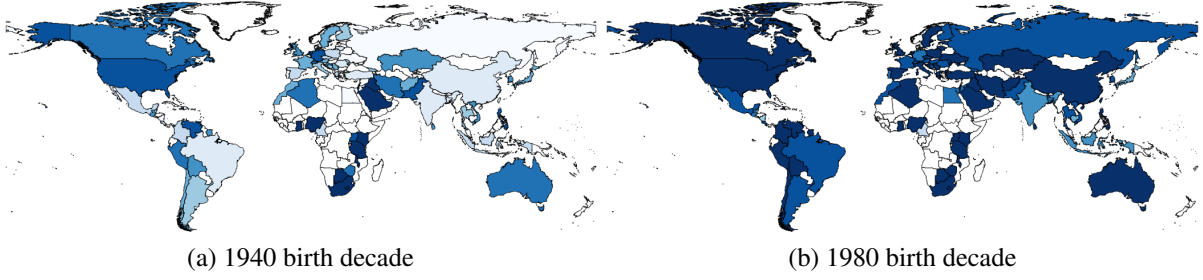


The data were collected as part of the Gallup World Poll 2012 using the same protocol in each country (for details, see Falk et al. 2018). Country samples include about 1,000 randomly sampled respondents for which ex-post representativeness is achieved by using population weights provided by the Gallup World Poll.

## **2.2 Preference Measures**

The Global Preferences Survey contains measures for patience, willingness to take risks, altruism (the willingness to incur cost in order to benefit others without expecting anything in return), trust (a positive belief about the behavior of others), positive reciprocity (the willingness to reward kind behavior by others), and negative reciprocity (the willingness to punish unkind behavior by others). Each preference measure is constructed by combining the responses to survey items related to hypothetical choice experiments and subjective self-assessments. These items were selected from a large set of candidates via a validation procedure that identified items with the highest predictive power for each preference dimension based on incentivized choices in a laboratory experiment setting; the six resulting preference measures represent weighted scores of the respective survey items (for details, see Falk et al. 2023). All preference measures are standardized to mean 0 and standard deviation 1 on the global sample of 80,000 individuals. We focus on patience, willingness to take risks, trust, and a composite measure of prosociality, which combines altruism, positive reciprocity, and negative reciprocity by averaging the three components. This is warranted by the low correlation between the three dimensions of prosociality (Falk et al. 2018; Dohmen et al. 2009), which suggests alternative ways of index construction, such as principal component analysis, might be less appropriate. Table S.2 in the Supplementary Material reports descriptive statistics.

The data indicate preference heterogeneity across birth decades that is related to age or cohort differences. A visual comparison of the country averages of the measured willingness to take risks for the 1940–1949 and 1980–1989 birth cohorts suggests heterogeneity in willingness to take risks is smaller among later-born cohorts (Figure 1); similar patterns obtain for patience, trust, and prosociality (Figures S.1–S.3). Even though countries’ preferences trend in the same direction, this evidence is not yet proof of declining preference heterogeneity because trends may simply reflect level shifts. In fact, later-born cohorts are more willing to take risks, more patient, and more prosocial than earlier-born cohorts, but less trusting (Figure S.4). At the same time, within-country preference heterogeneity, as measured by the standard deviation of each



Note: This figure shows country means in willingness to take risks in 2012 for the birth cohorts 1940–1949 (Panel a) and 1980–1989 (Panel b). Group thresholds in (a) and (b) are based on quantiles in the 1940s distribution of willingness to take risks. Darker shading corresponds to a higher willingness to take risks.

Figure 1: Willingness to take risks: 1940s and 1980s birth cohorts

preference within birth decades, is approximately constant across cohorts in risk-taking, trust, and prosociality, and, if anything, slightly increasing in patience (Figure S.5). These patterns might reflect cohort effects, selective attrition, or heterogeneity over the life cycle—for instance, due to a selective advantage of certain preferences.

## 2.3 Empirical Methodology

**Empirical Strategy.** To test whether preference heterogeneity increases, persists, or decreases across birth cohorts, we aggregate the data in cohort cells within each country and arrange the cohort-level data in country pairs. Hence, the unit of observation is a country pair (dyad),  $d(i, j)$ , which is composed of countries  $i$  and  $j$  (where  $i \neq j$ ) and which is observed for different birth cohorts  $t$ . We measure preference heterogeneity,  $H_{d(i,j),t}$ , in birth cohort  $t$  with the absolute differences in means and standard deviations of the cohort-specific preference measures between the two countries in a dyad. In doing so, we can test whether the dyadic differences in means and standard deviations vary systematically across birth cohorts (for an illustration, see Figure S.6). The use of differences in preferences within dyadic pairs is a natural approach to examine variation in between-country preference heterogeneity across birth cohorts. A key feature of this approach is that it allows us to account for systematic variation in preferences within and across country pairs, as we specify subsequently.

Formally, let  $P_{r,k,t}$  represent a preference measure for a respondent  $r$  in country  $k = i, j$  who is a member of birth cohort  $t$ . The preference mean of this cohort is given by  $\mu_{k,t} = \frac{1}{n_{k,t}} \sum_{r \in \{k,t\}} P_{r,k,t}$ , where  $n_{k,t}$  denotes the size of cohort  $t$  in country  $k$ . Then the measure of preference heterogeneity in means between two countries of a dyad,  $H_{d(i,j),t}^{mean}$ , is constructed as the absolute difference in

the cohort-specific country means,

$$H_{d(i,j),t}^{mean} = |\mu_{i,t} - \mu_{j,t}|.$$

The standard deviation of preferences of cohort  $t$  in country  $k = i, j$  is given by  $\sigma_{k,t} = \sqrt{\frac{1}{n_{k,t}} \sum_{r \in \{k,t\}} (P_{r,k,t} - \mu_{k,t})^2}$ . Then the measure of preference heterogeneity in standard deviations between two countries of a dyad,  $H_{d(i,j),t}^{sd}$ , is constructed as the absolute difference in the cohort-specific within-country standard deviations of preferences,

$$H_{d(i,j),t}^{sd} = |\sigma_{i,t} - \sigma_{j,t}|.$$

For the construction of cohort-specific means and standard deviations for each country, we use the sampling weights provided by the Gallup World Poll. On average, country-cohort cells contain 149 observations, with about 98 percent of cells including at least 10 observations and about 99.4 percent of cells including at least 5 observations. To rule out that single outliers drive the results, we impose a minimum requirement of 5 observations per country-cohort cell and code 3 cells that do not clear this requirement as missing. In robustness analyses, we also apply an alternative approach in which we focus on a common benchmark to which we compare preference means and standard deviations of a country  $j$ .

**Age-Corrected Measures.** The data show that preferences vary systematically across age groups, and that this age variation differs with levels of economic development (Figure S.7). Dynamics in preference heterogeneity may thus reflect variation across age, birth cohorts, or both. Hence, the isolation of cohort effects requires decomposing cohort variation in preferences from systematic, potentially country-specific, age variation. Most of the literature in psychology and economics assumes either explicitly or implicitly that age and cohort patterns are distinct and separable. This assumption is supported by recent evidence that shows age profiles for risk preferences and various personality traits are stable across cohorts (Fitzenberger et al. 2022). Moreover, previous work has examined the stability of preferences and found test-retest correlations similar to the levels of other personality traits (Frey et al. 2017; Kosse et al. 2020).

In view of this evidence, we also construct dyadic measures of preference heterogeneity based on age-corrected preferences. These measures purge respondents' preferences of a country-specific quadratic age trend (or a country-gender-specific quadratic age trend in separate analyses

for female and male respondents) before aggregating the data in cohort cells and arranging them in country dyads. In robustness analyses, we also apply age corrections that use higher-order polynomials or non-parametric age profiles to account for non-monotonic and discontinuous age effects. Our age correction assumes separability of age and cohort effects to the extent that they do not share the same systematic patterns. If this assumption were violated, the age correction would absorb variation in the cohort dimension, which would work toward finding persistence of preference heterogeneity as opposed to declining or increasing heterogeneity.

Formally, age-corrected preferences correspond to the residuals of regressions that project preferences in the Global Preferences Survey on a country-specific quadratic age trend, that is,

$$\tilde{P}_{r,k,t} = P_{r,k,t} - \left( \hat{\gamma}_{0,k} + \hat{\gamma}_{1,k} \text{Age}_{r,k,t} + \hat{\gamma}_{2,k} (\text{Age}_{r,k,t})^2 \right),$$

where  $\text{Age}_{r,k,t}$  denotes respondents' age and  $\hat{\gamma}_{0,k}$ ,  $\hat{\gamma}_{1,k}$ , and  $\hat{\gamma}_{2,k}$  represent country-specific coefficient estimates. We then use the age-corrected preferences to construct age-corrected analogues to our measures of preference heterogeneity,  $\tilde{H}_{d(i,j),t}^{\text{mean}}$  and  $\tilde{H}_{d(i,j),t}^{\text{sd}}$ . For the construction of cohort-specific means and standard deviations of age-corrected preferences for each country, we again use the sampling weights provided by the Gallup World Poll.

For the gender analysis, we follow an analogous protocol. In light of systematic variation in age patterns across women and men as well as across countries (Figure S.8), we first construct age-corrected measures for women and men separately on the basis of country-gender-specific  $\gamma$ -coefficients, then aggregate the data in gender-cohort cells within each country, and finally compute the absolute dyadic differences in means and standard deviations between women and men of the same birth cohort within the same country. These data allow us to investigate whether dyadic differences vary across gender-birth cohorts within countries.

Both uncorrected and age-corrected preferences are approximately normally distributed (Figures S.9 and S.10). Unconditional dyadic differences in the world sample reveal that heterogeneity in means and standard deviations of patience, willingness to take risks, trust, and prosociality is smaller among later-born cohorts than among earlier-born cohorts, suggesting preference heterogeneity has declined (Figures S.11 and S.12). This first piece of evidence highlights a key advantage of using a dyadic approach to examine the dynamics of preference heterogeneity across cohorts. Whereas within-country preference heterogeneity has been stable or even *increased* among later-born cohorts (Figure S.5), the dyadic differences indicate that preference heterogeneity has in fact *decreased*.

**Estimation Framework.** Despite the country-specific age correction, unconditional dyadic differences might still conceal systematic preference heterogeneity across countries that is unrelated to cohort effects. To account for this heterogeneity, we conduct regression analysis for country dyads at the level of birth decades. Specifically, we regress cohort-specific absolute dyadic differences in means or standard deviations,  $H_{d(i,j),t}^*$ , on a linear birth cohort trend,  $D(t)$ ,

$$H_{d(i,j),t}^* = \tau D(t) + \alpha X_{d(i,j),t} + \zeta_i + \zeta_j + \varepsilon_{d(i,j),t}$$

conditional on cohort-specific dyadic controls  $X_{d(i,j),t}$  (income differences at the time of birth; and in extended specifications also differences in educational attainment and population age structure) and country fixed effects  $\zeta_i$  and  $\zeta_j$ . In robustness analyses, we also estimate specifications that additionally control for dyad-specific fixed effects  $\zeta_{ij}$ . The error term  $\varepsilon_{d(i,j),t}$  captures idiosyncratic variation within country dyads. Standard errors are two-way clustered at the level of both countries,  $i$  and  $j$ .

We investigate the cohort dynamics of preference heterogeneity by regressing cohort-specific absolute dyadic differences in means or standard deviations,  $H_{d(i,j),t}^*$ , on a birth cohort trend  $D(t)$ . We conduct this analysis based on both uncorrected and age-corrected measures of preference heterogeneity. The coefficient of interest is  $\tau$ . The persistence hypothesis predicts that preference heterogeneity does not vary across birth cohorts, suggesting a  $\tau$  close to zero. Divergence instead implies a positive estimate of  $\tau$ , reflecting an increase in preference heterogeneity—for instance due to an amplification of gender differences in the context of economic development and gender equalization. In contrast, the convergence hypothesis predicts a negative estimate of  $\tau$ , reflecting a decline in preference heterogeneity—for instance due to transformative processes such as globalization, technological progress, sectoral transformation, or institutional change leading to more homogeneous environments during the formation of preferences among recent-born cohorts.

Identification of the coefficient of interest requires that unobserved heterogeneity contained in the error term  $\varepsilon_{d(i,j),t}$  be unrelated to the cohort trend  $D(t)$ . When using age-corrected measures of preference heterogeneity, the empirical specifications control for country-specific age patterns in each preference dimension and allow for inference about the magnitude of potential age effects in comparison to the results based on uncorrected measures. In addition, the inclusion of fixed effects for both countries in a dyadic pair accounts for the cohort-invariant portion of preference heterogeneity in each country of the pair. The fixed effects also eliminate

potential measurement error in preferences related to differences in the implementation of the experimental protocol across countries for economic, cultural, or institutional reasons. Any remaining measurement error in preferences would only affect the dependent variable and thus inflate standard errors but not lead to bias in the coefficient of interest. Finally, as preference heterogeneity might have evolved in the context of environmental factors and evolutionary processes along the long-run development path (Henrich et al. 2010b; Falk et al. 2018; Henrich 2020), we also control for dyadic income differences at the time when cohorts were born. This control also accounts for the influence of systematic differences in the institutional environment or other factors at the time of birth that correlate with economic development and affect different dimensions of preferences across countries and birth cohorts.

### 3 Results

#### 3.1 Preference Heterogeneity across Countries

The estimation results in Table 1 show that preference heterogeneity in means and standard deviations is significantly lower among recent birth cohorts. Consistent with the convergence hypothesis, preferences among members of the same age groups in different countries are more similar to one another in later-born cohorts than in earlier-born cohorts. This pattern of declining preference heterogeneity obtains for all preferences and regardless of whether they are age-corrected or not. With the exception of prosociality, the estimated cohort trends in preference means are about one-third to one-half smaller when preferences are age-corrected. Hence, a significant portion of the decline in preference heterogeneity can be attributed to cohort effects even after preferences are corrected for systematic variation in age patterns. This provides indirect support for the separability of age and cohort effects as the age-corrected measures still retain systematic variation that is informative with respect to the dynamics of preference heterogeneity across birth cohorts. In addition, the estimated decline in preference heterogeneity in standard deviations is unaffected by the age correction. This is a further piece of evidence for separate age and cohort effects as the age correction would affect the cohort trend in the dyadic differences in standard deviations if age effects systematically correlated with cohort patterns.<sup>2</sup>

Additional analyses with alternative, more flexible age corrections confirm the finding of a significant reduction in preference heterogeneity among recent birth cohorts. Specifically, we

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<sup>2</sup>The results of Monte Carlo simulations support this observation; results are available upon request.

Table 1: Preference heterogeneity across cohorts: Regression results

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
<b>Panel (a): Preference heterogeneity between countries</b>				
<i>Dependent variable: Dyadic differences in means</i>				
Birth decade	-0.027** (0.011)	-0.020*** (0.006)	-0.021*** (0.005)	-0.008** (0.004)
$R^2$	0.53	0.43	0.33	0.40
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<i>Dependent variable: Dyadic differences in standard deviations</i>				
Birth decade	-0.022*** (0.004)	-0.005* (0.003)	-0.006*** (0.002)	-0.005*** (0.002)
$R^2$	0.28	0.23	0.28	0.34
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<b>Panel (b): Preference heterogeneity between countries (age-corrected measures)</b>				
<i>Dependent variable: Dyadic differences in means</i>				
Birth decade	-0.012*** (0.002)	-0.012*** (0.003)	-0.014*** (0.003)	-0.011*** (0.002)
$R^2$	0.20	0.18	0.21	0.21
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<i>Dependent variable: Dyadic differences in standard deviations</i>				
Birth decade	-0.022*** (0.004)	-0.007*** (0.002)	-0.007*** (0.002)	-0.005*** (0.002)
$R^2$	0.27	0.23	0.25	0.29
Clusters	74	74	74	74
Observations	14258	14258	14258	14258

*Note:* This table shows estimates from ordinary least squares regressions for 2775 dyadic pairs composed of 75 countries observed over 7 birth decades. The dependent variable is the absolute dyadic difference in means of preferences (top of Panel a), the absolute dyadic difference in standard deviations of preferences (bottom of Panel a), the absolute dyadic difference in means of age-corrected preferences (top of Panel b), or the absolute dyadic difference in standard deviations of age-corrected preferences (bottom of Panel b). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Standard errors are two-way clustered for both countries in dyadic pairs and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

replicated the estimation for age-corrected measures based on country-specific cubic or quartic age trends, or for age-corrected measures that allow for flexible country-specific age patterns in 5-year age bins. These age corrections account for potentially non-linear, non-monotonic, and discontinuous country-specific age patterns and deliver quantitatively similar results (Table S.3).

Extended analyses confirm the findings. Comparisons of the variation explained by cohort and country fixed effects indicate that the age correction substantially reduces the systematic variation in preferences across countries and increases the variance of preference heterogeneity explained by cohort patterns (Table S.4); however, this reduction does not affect the finding of a decline in preference heterogeneity across cohorts. In addition, larger disparities in living standards, as reflected by dyadic differences in income per capita at the time of birth, are associated with larger preference heterogeneity (Table S.5). Similar results obtain for the components of prosociality (Table S.6) and when we account for country-dyad fixed effects

(Table S.7). The results are also robust to omitting the earlier birth cohorts for which the unconditional evidence shows larger preference heterogeneity: We consistently find a decline in preference heterogeneity among later-born cohorts in means, and a somewhat weaker decline in preference heterogeneity in terms of standard deviations (Figure S.13).

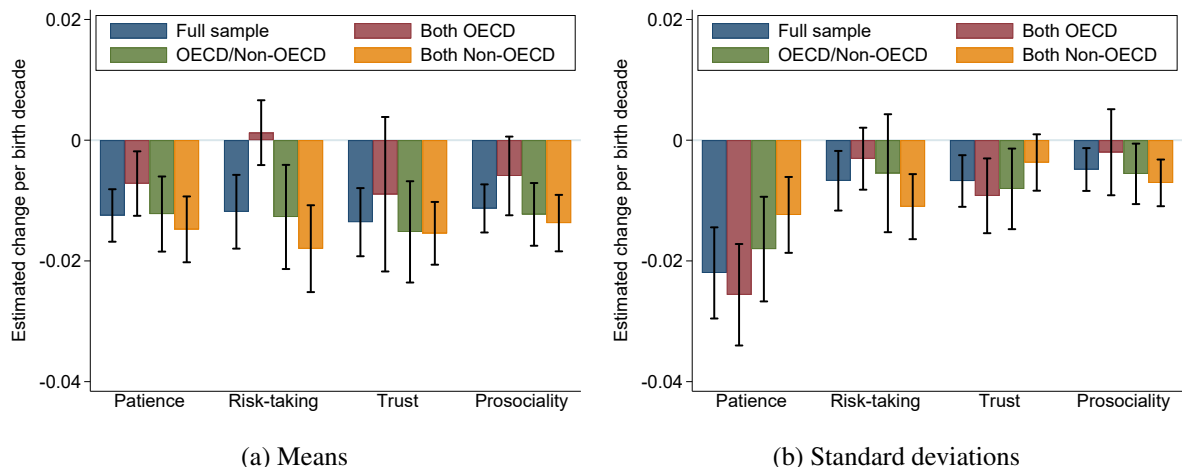
Quantitatively, the decline in preference heterogeneity is sizable. For instance, the dyadic difference in patience among cohorts born in the 1980s is about 0.1 standard deviations (corresponding to 8 percent of the dyadic difference) smaller than among cohorts born in the 1950s. This corresponds to a decrease in preference heterogeneity of 8–9 percent in 1950–1980, as measured by uncorrected dyadic differences in preference means. We find similar declines of 9–13 percent for willingness to take risks, trust, and prosociality, and somewhat larger reductions when considering dyadic differences in standard deviations of preferences (Table S.8). These estimates indicate that cohort replacement accounts for significant changes in preference heterogeneity.

### 3.2 Heterogeneity along the Development Path

We next examine variation in preference heterogeneity along the development path. To this end, we separately consider cohort trends in preferences among country pairs composed of either two high-income countries (defined as Member States of the *Organisation for Economic Co-operation and Development*, OECD) or two low-income (non-OECD) countries, or among mixed pairs composed of one high-income and low-income country. The results show that the decline in preference heterogeneity is a global phenomenon (Figure 2). Preference heterogeneity in means has declined most among non-OECD countries and least among OECD countries, with mixed pairs ranging in between. Moreover, the extent to which heterogeneity in standard deviations has declined varies across preferences. For instance, the decline among high-income countries is strongest for patience, whereas it is weakest for willingness to take risks.

Recent findings have reported greater gender-related differences in preferences in countries with higher levels of economic development and gender equalization. Therefore, we also test whether the decline in preference heterogeneity differs between women and men, and whether the gender-specific patterns are similar for high-income and low-income countries. The results reveal a significant decline for women and for men and confirm that changes in preference heterogeneity vary across levels of economic development (Figure 3). Moreover, they show that preference heterogeneity has significantly declined across cohorts among women and men,





*Note:* This figure shows estimates of cohort trends in preference heterogeneity and 95% confidence intervals for pairs of countries with different levels of development. An observation is a country pair per birth decade. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

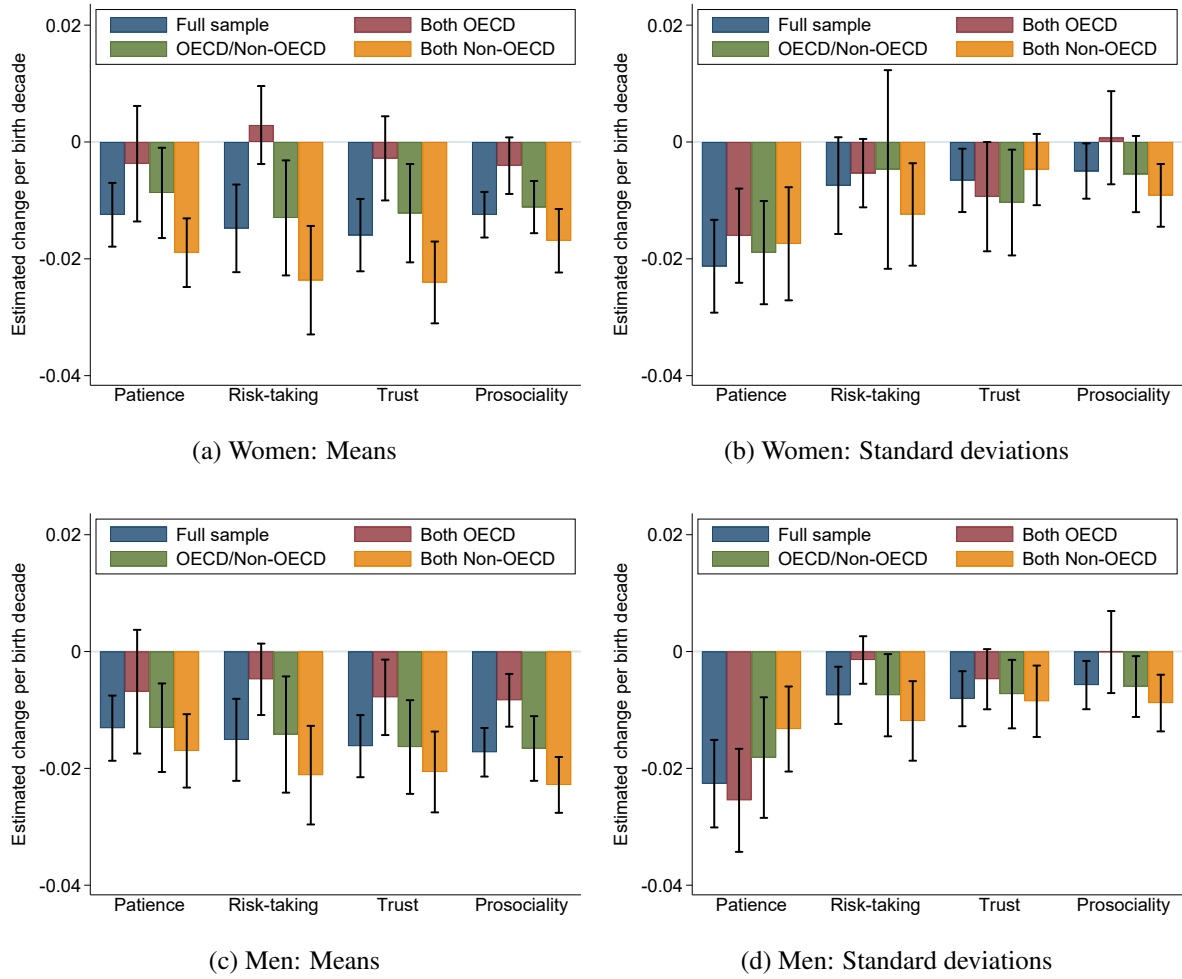
Figure 2: Preference heterogeneity across cohorts by level of economic development

both in means and standard deviations of the cohort-specific preference distributions. Additional results show no significant differences in cohort trends across genders (Figure S.14).

### 3.3 Preference Convergence between Women and Men

We next consider whether preference heterogeneity between women and men has also declined among more recent cohorts. We begin our analysis by investigating the association of preference heterogeneity between women and men with economic development, gender equality, and cohort trends. To do so, we compute gender differences in preference means and standard deviations at the country-cohort level and regress them on income per capita, an index of gender equality, and a cohort trend. This enables us to directly compare the influences of economic development, gender equalization, and cohort variation on the gender gap in preferences. Only in some cases the results reveal a systematic relation between the gender gap in preferences and economic development, or between the gender gap and gender equality (Tables S.9 and S.10). Importantly, however, the results indicate a systematic and significant negative cohort trend in gender differences even when controlling for income and gender equality. Moreover, the cohort trends account for more variation in the gender gap in preferences than economic development or gender equality.

To test whether preference heterogeneity between women and men has declined within countries, we estimate an adjusted empirical framework using dyadic differences between the



*Note:* This figure shows estimates of cohort trends in preference heterogeneity and 95% confidence intervals, estimated separately for women and men. An observation is a country pair per birth decade and gender. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panels a and c) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panels b and d). All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure 3: Preference heterogeneity across cohorts by gender

two genders in the same birth cohort and country as the dependent variable. By applying the same estimation strategy to dyadic differences between women and men in preference measures that have been corrected for country-gender-specific age patterns and controlling for country fixed effects, the estimation framework accounts for systematic gender differences within and across countries over and above the dynamics of preference differences across birth cohorts.

The estimation results in Table 2 reveal that preferences of women and men are more similar among later-born cohorts. These findings apply to heterogeneity in preference means and standard deviations and obtain irrespective of whether preferences are age-corrected or not. Additional evidence shows that the decline in preference heterogeneity between women and men is more pronounced among non-OECD countries than among OECD countries (Figure S.15).

Table 2: Variation in within-country heterogeneity of preferences between women and men

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
<b>Panel (a): Preference heterogeneity between women and men</b>				
<i>Dependent variable: Dyadic differences in means</i>				
Birth decade	-0.021*** (0.004)	-0.017*** (0.005)	-0.018*** (0.005)	-0.014*** (0.003)
$R^2$	0.31	0.24	0.22	0.21
Clusters	76	76	76	76
Observations	513	513	513	513
<i>Dependent variable: Dyadic differences in standard deviations</i>				
Birth decade	-0.014*** (0.003)	-0.015*** (0.003)	-0.014*** (0.003)	-0.008*** (0.002)
$R^2$	0.20	0.22	0.25	0.18
Clusters	76	76	76	76
Observations	513	513	513	513
<b>Panel (b): Preference heterogeneity between women and men (age-corrected measures)</b>				
<i>Dependent variable: Dyadic differences in means</i>				
Birth decade	-0.015*** (0.003)	-0.022*** (0.004)	-0.023*** (0.004)	-0.015*** (0.002)
$R^2$	0.32	0.29	0.29	0.29
Clusters	76	76	76	76
Observations	513	513	513	513
<i>Dependent variable: Dyadic differences in standard deviations</i>				
Birth decade	-0.019*** (0.003)	-0.016*** (0.003)	-0.015*** (0.003)	-0.010*** (0.002)
$R^2$	0.23	0.21	0.22	0.19
Clusters	76	76	76	76
Observations	513	513	513	513

*Note:* This table shows estimates from ordinary least squares regressions for cohort trends in preference heterogeneity between women and men for 76 countries observed over 7 birth decades. An observation is a gender dyad (women vs. men) per birth decade. The dependent variable is the absolute dyadic difference in means of preferences (top of Panel a), the absolute dyadic difference in standard deviations of preferences (bottom of Panel a), the absolute dyadic difference in means of age-corrected preferences (top of Panel b), or the absolute dyadic difference in standard deviations of age-corrected preferences (bottom of Panel b). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. All specifications include country fixed effects. Standard errors are clustered at the country level and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

This result is consistent with previous evidence of greater gender differentiation in preferences at higher levels of economic development and gender equality (Falk and Hermle 2018). At the same time, economic development does not lead to a divergence in preferences across birth cohorts; or, if so, such divergence is moderated by cultural convergence, which appears strongest among non-OECD countries. These findings reconcile the convergence in economic outcomes between women and men within countries with a greater gender gap in preferences at higher levels of economic development.

## 4 Robustness and Mechanisms

### 4.1 Robustness

**Selection.** A potential confound for our results would be the existence of selection related to sampling, mortality, or adaptation to heterogeneous living environments that would be captured by preference heterogeneity across different birth cohorts. However, such mechanisms do not provide a straightforward explanation for smaller preference heterogeneity among later-born cohorts. Selective sampling tends to work against finding a decline in heterogeneity as, for instance, oversampling of individuals with high cognitive ability among earlier-born cohorts in developing countries would lead to a more similar global sample of individuals. Moreover, mortality differences are closely related to systematic variation in age patterns (Falk et al. 2019), which are accounted for in the construction of our age-corrected measures. In addition, so long as certain traits—such as a high level of patience, low willingness to take risks, or high prosociality—provide a comparative advantage for survival, one would expect higher—not lower—dyadic differences among later-born cohorts. Specifications that control for dyadic differences in population shares of birth decades confirm the main results and suggest that historical differences in fertility and mortality do not drive the finding that preferences have become more similar among recent birth cohorts (Table S.11). Finally, cohort differences in the understanding of survey questions cannot explain the documented preference patterns. For example, if earlier-born cohorts have a better understanding of their own preferences than later-born cohorts (and if this difference is not captured by the age correction), this would imply an increase—not a decrease—in preference heterogeneity across cohorts. More generally, such cohort differences would create systematic measurement error that conflicts with the observation that unconditional standard deviations are virtually constant across birth decades in the non-dyadic data (Figure S.5).

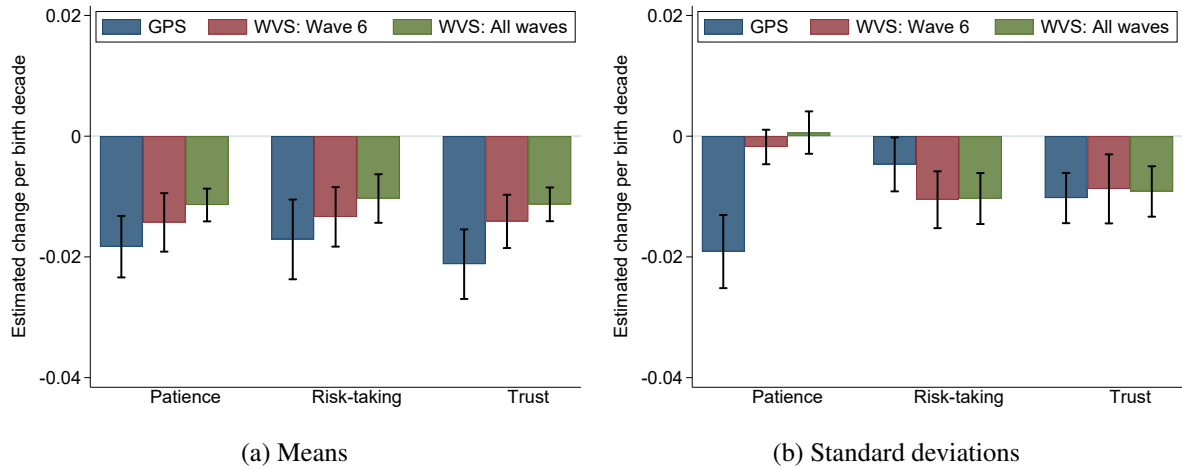
**Bunching in Responses.** It is also unlikely that bunching in responses due to the measurement of preferences on bounded intervals drives our finding of a decline in preference heterogeneity. While preferences trend across cohorts, as reflected by their unconditional means and standard deviations (Figures S.4 and S.5), these trends are moderate in scale and heterogeneous across preferences. However, to have an influence on the main findings, bounding effects would not only have to affect preference measures but also their dyadic differences. The distributions

of preferences in the data are well-behaved and approximately normal, lacking any signs of bunching or bounding (Figures S.9 and S.10).

**External Validity and Validation of Results with Longitudinal Data.** Another question centers on the external validity and generality of our results. To examine the robustness and comparability of our results based on data from the Global Preferences Survey, we replicate the analysis using data from the World Values Survey. While the only directly comparable measure available in the World Values Survey is the measure for trust, which is elicited with the same survey question, we also replicate the analysis for alternative, non-validated proxy measures for patience and the willingness to take risks that have been used in previous literature (e.g., Minkov and Hofstede 2012; Alesina and Giuliano 2015). These measures are based on responses to a question about how important it is to experience adventures and taking risks as proxy for risk-taking, and to a question about whether thrift and saving money is a desirable quality of children as proxy for patience. The Global Preferences Survey and the World Values Survey differ in survey infrastructure and cover country samples that do not exactly correspond to one another. This allows us to validate our results with an alternative data source.

We proceed in two steps. First, we present results for Wave 6 of the World Values Survey, which was conducted about at the same time as the Global Preferences Survey. Second, we use the fact that the World Values Survey is designed as a repeated cross-section, and responses for the same questions are available for several waves in some countries. This allows us to extend the analysis and use longitudinal variation to control for country-period-specific age patterns and confounds. Moreover, the incorporation of all seven waves provides a broader picture of cohort trends in preferences by containing information for up to 107 countries and territories over a period of about 40 years. For this analysis, we conduct the country-specific age correction of preference measures for each survey wave separately, which relaxes the implicit assumption of a stable age profile over time. In addition, we account for country-wave-specific fixed effects.

The results document that the evolution of heterogeneity in patience, risk-taking, and trust across cohorts is similar in the two samples, regardless of whether considering only Wave 6 of the World Values Survey or all available waves (Figure 4). Despite differences in measurement of the other preference proxies, the estimated cohort trends closely resemble our main findings qualitatively and quantitatively for all three preference dimensions. The only exception is the standard deviation of the patience measure of the World Values Survey.



*Note:* This figure contrasts estimates of cohort trends and in preference heterogeneity derived from the Global Preferences Survey (GPS) with trends derived from cross-sectional and longitudinal variation in the World Values Survey (WVS). An observation is a country pair per birth decade. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). Data in the World Values Survey are normalized to have mean 0 and standard deviation 1 to make them comparable to the standardized measures of the Global Preferences Survey. All specifications include fixed effects for both countries in dyadic pairs. 95% confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs. Including controls for economic development at the time of birth implies a loss of about a third of the observations due to limited data availability of income data for older cohorts in countries sampled in the World Values Survey. Additional analyses with controls for economic development at the time of birth for this limited sample confirm our findings (Figure S.16).

Figure 4: Preference heterogeneity across cohorts: External validity

**Comparison to Measures of Diversity.** We also checked the validity of our results with the cultural fixation index ( $F_{ST}$ ) that is used in literature on cultural and psychological diversity (Desmet et al. 2017; Muthukrishna et al. 2020). This index provides a descriptive measure of cultural distance based on similarity in response behavior, treating responses as phenotypical expressions and thus paralleling measures of genotype frequencies used in biology. The index is defined as the ratio of between-group variance relative to total variance in a cultural trait. The greater the share of between-group differences in total variance, the more culturally distant are the groups from one another. To operationalize this measure for our research question, we compute the cultural distance from the world average for each preference and birth decade separately from respondents' preferences. The results confirm that preference heterogeneity, measured by the cultural fixation index, is lower among more recent birth cohorts (Figure S.17). In addition, the estimated declines in the cultural fixation indices across birth cohorts closely match the declines for dyadic differences in preference heterogeneity. Importantly, the figure depicts unconditional trends that, unlike our main results, are not conditioned on country fixed effects and controls because those cannot be included in the construction of the cultural fixation index. The possibility to explicitly consider these factors in our dyadic approach constitutes a methodological advantage over the alternative approach of using the cultural fixation index.

## 4.2 Potential Mechanisms

Potential mechanisms that may explain a decline in preference heterogeneity relate to genetic diversity, population composition and mobility, cultural diversity, and convergence in socioeconomic conditions. We discuss each of these mechanisms subsequently. For brevity, we only report results based on age-corrected preferences.

**Genetic Diversity.** From a long-run perspective, genetic diversity has emerged through evolutionary processes dating back to prehistoric times. As greater global exposure to similar influences promotes cultural assimilation among later-born cohorts, one might conjecture that the decline in preference heterogeneity is stronger among populations with greater historically grown diversity. To verify this conjecture, we use an ancestry-adjusted index of genetic diversity among contemporary populations, constructed by Ashraf and Galor (2013), which builds on heterogeneity in precolonial ancestral populations and accounts for population flows across countries in the post-1500 era. We test whether the cohort dynamics of preference heterogeneity differ with respect to genetic distance among country pairs. The results show that preference heterogeneity has decreased more among country pairs with large differences in genetic diversity than among pairs with small differences in genetic diversity (Figure S.18). Nonetheless, the findings reveal significant declines in preference heterogeneity among either group.

**Historical Population Composition and Cultural Change.** Preference heterogeneity might also depend on historically determined differences in population composition. Because of post-1500 population flows, populations differ in the size of their native population shares. For instance, the current U.S. population consists almost entirely of a non-native population that has descended from European, African, and other ancestral populations, whereas other countries, such as China, experienced only minor migration flows over the past half millennium. We assess the role of population persistence, and hence homogeneity in a historical sense, by using data on countries' population shares that descend from foreign source countries due to post-1500 migration (Putterman and Weil 2010). The results show a universal decline in preference heterogeneity regardless of countries' population persistence (Figure S.19) and of their bilateral population flows (Figure S.20). If anything, the decline in preference heterogeneity is slightly weaker between countries that shared common population flows since 1500. This finding is consistent with recent evidence that suggests cultural diversity is only weakly related to ethnic

identity (Desmet et al. 2017).

An alternative explanation for the decline in preference heterogeneity is related to secularization and the declining influence of religious norms. To investigate this possibility, we replicate the analysis by distinguishing countries in terms of state secularism. Secular states stipulate a separation of political and religious institutions in terms of a clear distinction between government and religion, between laws and religious norms based on scriptures, and the absence of religious discrimination or favoritism. To investigate the role of secularism, we separately consider cohort trends in preferences among country pairs composed of either two countries with secular constitutions, or two countries with non-secular constitutions, or among mixed pairs composed of countries with secular and non-secular constitutions. The results show no significant differences in the estimated cohort trends in preference heterogeneity (Figure S.21). If anything, the convergence appears to be slightly stronger among pairs in which both states are secular, but this pattern varies across preferences.

**Economic Convergence.** To account for income dynamics as driver of the decline in preference heterogeneity, the baseline specifications control for dyadic income differences at the time of birth. Without this control, the estimated cohort trends are even larger. One reason for this pattern might be that income differences are correlated with preference heterogeneity. Another reason might be sample composition because we can include additional observations (cohorts) in the analysis for which income at birth is missing. The issue of sample composition especially pertains to earlier-born cohorts in low-income countries. Additional analyses confirm that excluding the income control leaves the results unaffected (Table S.12). In specifications that only focus on incomes and ignore cohort variation, we find that larger dyadic income differences at birth are associated with smaller heterogeneity in preference means, whereas larger income differences are associated with larger heterogeneity in preferences' standard deviations (Table S.13). The decline in preference heterogeneity need not be restricted to income differences. A similar result obtains when we compare country pairs whose per-capita incomes have strongly converged to country pairs whose per-capita incomes have only weakly converged or diverged (Table S.14). Taken together, these findings suggest economic convergence as a driver—but not the exclusive driver—of the decline in preference heterogeneity.

**Education.** Convergence in education levels across birth cohorts is another secular trend associated with economic development and convergence. Recent evidence shows that educational



attainment around the world has increased over the past century, entailing a partial global convergence across countries (Morrisson and Murtin 2013; Lee and Lee 2016) and within countries between women and men (Sloan et al. 2021). If education is correlated with certain preference characteristics, this could rationalize the observed decline in preference heterogeneity across cohorts. When we apply our estimation procedure on the basis of country pairs by cohorts to educational attainment, we indeed find evidence of convergence in education across birth cohorts (Table S.15). Moreover, greater dyadic differences in any form of formal education are associated with larger heterogeneity in preferences, although this is not the case when considering only post-primary schooling (Table S.16). However, convergence in education levels cannot explain the decline in preference heterogeneity documented in our main results. Estimates of extended specifications that control for dyadic differences in education levels deliver similar evidence as the main results (Table S.17). The same is true when accounting for heterogeneity in intergenerational mobility in education (Figure S.22).

**Globalization.** We next examine the role of globalization and increasing economic integration for preference heterogeneity. To this end, we replicate the analysis while accounting for the existence of a free trade agreement between the two countries in a dyadic pair. The findings for preference heterogeneity remain essentially unchanged and the estimates show no significant difference in the decline of preference heterogeneity depending on the existence of free trade agreements (Figure S.23). A similar result obtains when we account for the existence of sister cities across countries as proxy for cultural ties (Figure S.24).

**Convergence to a Western Standard?** The results show that income differences at the time of birth contribute to the decline in preference heterogeneity. However, a purely development-based explanation for the findings appears overly narrow. Psychological traits associated traditionally with Western culture have been linked to higher levels of economic development and a better adaptation to the corresponding economic and social living conditions (Henrich et al. 2010a,b). Historically, other traits might have provided a better fit to different, more diverse living conditions (see, e.g., Gorodnichenko and Roland 2017). Global development and other broad trends—such as the spread of Western values and access to increasingly similar information due to global broadcasting and the internet—might have led to a mismatch between traditional preference endowments and the environment (Nunn 2022). A greater mismatch of traditional preferences with the prevailing socioeconomic environment should thus be associated

with weaker adherence to traditional preference endowments and instead with more pronounced adjustments in preferences across generations (Giuliano and Nunn 2021). If more recent birth cohorts adapt to this environment, preferences would converge to a Western standard, and the speed of this convergence would depend on initial differences in preference endowments.

To test this hypothesis, we replicate the analysis and focus attention on dyadic differences in cohort-specific preferences to the average of Western countries. Specifically, we compare preference heterogeneity relative to a Western benchmark for which we combine the cohort-specific means and standard deviations of 16 traditional Western societies. The results indicate preference convergence to this Western standard (Figure S.25). In addition, they show that the cohort trends are larger for countries that are not associated with Western societies through the OECD or North Atlantic Treaty Organization (NATO). In this context, one might conjecture that preferences assimilate to those of the United States as the culturally and economically most influential country. The results of an analysis that focuses on dyadic differences in cohort-specific preferences between the United States and all other countries do not support the hypothesis of assimilation of preferences to those of the U.S. population (Figure S.26). We find no systematic decline in the dyadic differences in preference means or standard deviations across cohorts in the full sample. Only for patience, preference heterogeneity appears to have declined relative to U.S. preferences, yet with mixed patterns across OECD and non-OECD countries. A similar analysis does not reveal systematic convergence to preferences of particular influential countries. Specifically, we replicate the analysis for all countries and separately estimate the decline in preference heterogeneity relative to each country in the sample. With few exceptions, preference heterogeneity has declined for each country relative to the rest of the world; however, there is no systematic pattern of greater convergence toward particular countries (Figures S.27 and S.28).

These results suggest that the decline in preference heterogeneity did not originate from directed convergence toward a particular benchmark but instead reflects a global process of cultural convergence. This is consistent with the finding of preferences converging to a world mean (Figure S.29). In this case, the decline in preference heterogeneity across birth cohorts should be more pronounced the larger the initial differences in preferences among earlier-born cohorts. The data indeed show stronger convergence in preferences among country pairs with larger initial heterogeneity (Figure S.30). These pieces of evidence indicate global cultural convergence due to replacement of older birth cohorts by younger birth cohorts.

## 5 Concluding Remarks

Our results contribute evidence of the dynamics of preference heterogeneity by demonstrating that preferences are more similar among later-born cohorts than among earlier-born cohorts. Using a novel identification strategy based on dyadic differences, we document declining preference heterogeneity in both means and standard deviations for patience, willingness to take risks, trust, and prosociality across countries. These findings hold regardless of whether we consider preference heterogeneity among high-income or low-income countries or preferences of women or men. In addition, we find a similar decline in preference heterogeneity between women and men within countries.

Extensive analyses confine the set of potential explanations for declining preference heterogeneity among recent birth cohorts. They show that the decline is stronger the larger preference heterogeneity among earlier birth cohorts. Moreover, they indicate that the decline in preference heterogeneity is related to country-specific differences in preference endowments, variation in preferences over the life cycle, population composition, and economic convergence. We only find a weak association of preference heterogeneity with country pair-specific cultural ties, economic integration, and convergence in education levels. Finally, the results suggest dynamics of preference heterogeneity are influenced by variation in socioeconomic conditions prevailing during the formative years of later-born cohorts.

Taken together, our evidence documents a worldwide decline in preference heterogeneity that is consistent with convergence of preference distributions. This decline might be related to the exposure of more recent birth cohorts to an increasingly homogeneous global environment during their formative years, which leads to the emergence of more similar preferences compared to earlier cohorts whose preference endowments were shaped by more diverse living conditions. More research is needed to investigate the mechanisms underlying the convergence of preferences, and, in particular, the role of increasingly similar information and experiences to which individuals are exposed during preference formation. Another avenue for future research relates to the implications of the global preference convergence documented here for heterogeneity in decision making and life outcomes around the world.

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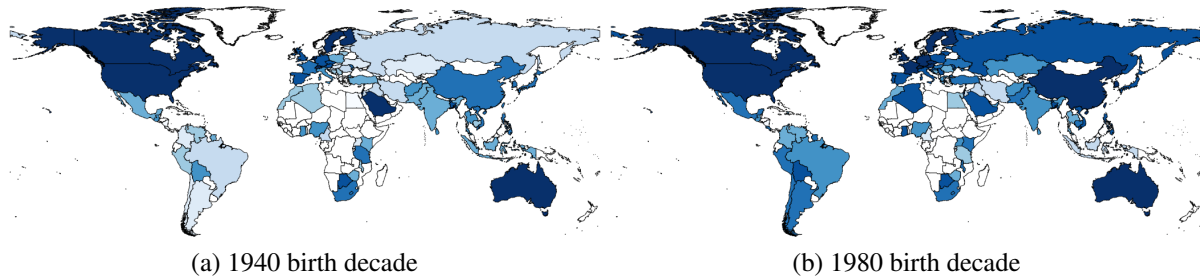
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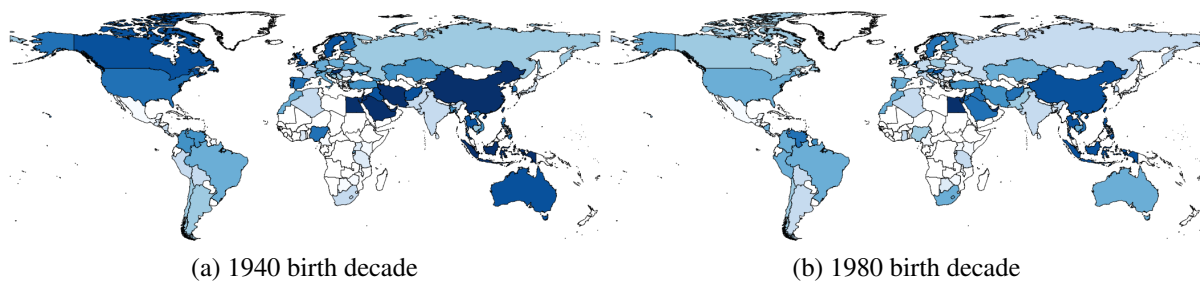
# Supplementary Appendix: For Online Publication

## Supplementary Figures



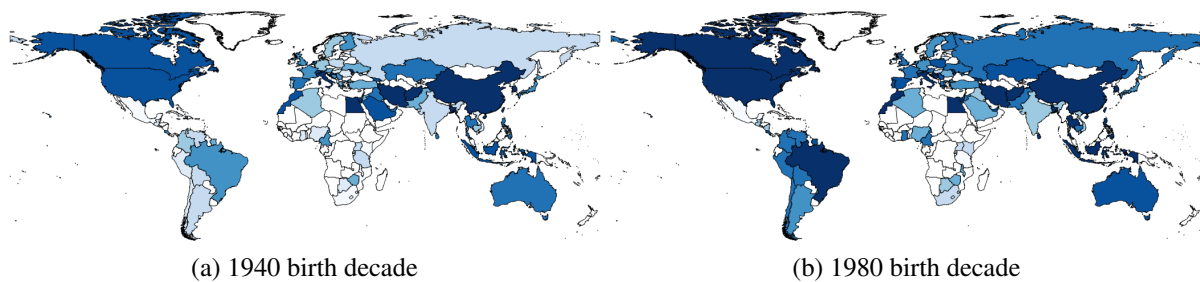
*Note:* This figure shows country means in patience in 2012 for the birth cohorts 1940–1949 (Panel a) and 1980–1989 (Panel b). Group thresholds in (a) and (b) are based on quantiles in the 1940s distribution of patience. Darker shading corresponds to higher levels of patience.

Figure S.1: Patience: 1940s and 1980s birth cohorts



*Note:* This figure shows country means in trust in 2012 for the birth cohorts 1940–1949 (Panel a) and 1980–1989 (Panel b). Group thresholds in (a) and (b) are based on quantiles in the 1940s distribution of trust. Darker shading corresponds to higher levels of trust.

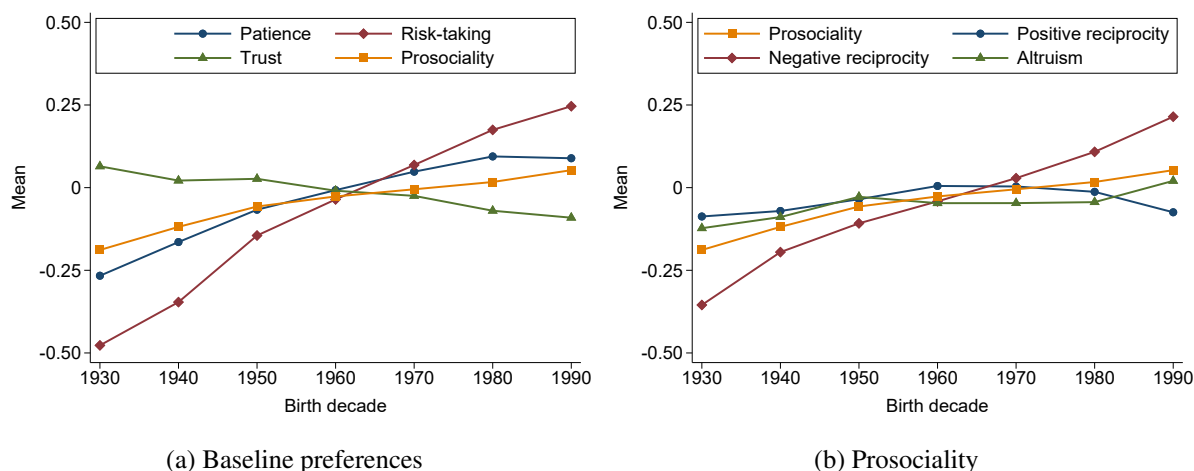
Figure S.2: Trust: 1940s and 1980s birth cohorts



*Note:* This figure shows country means in prosociality in 2012 for the birth cohorts 1940–1949 (Panel a) and 1980–1989 (Panel b). Group thresholds in (a) and (b) are based on quantiles in the 1940s distribution of prosociality. Darker shading corresponds to higher levels of prosociality.

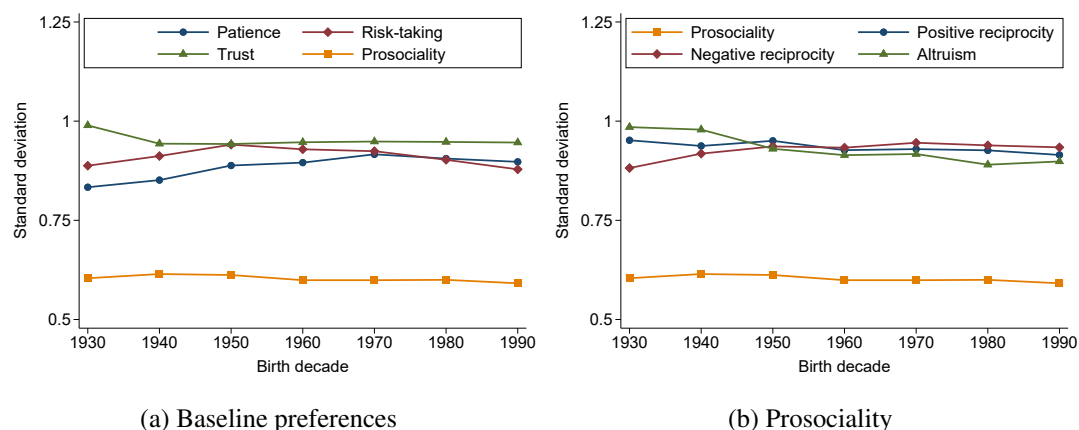
Figure S.3: Prosociality: 1940s and 1980s birth cohorts





*Note:* This figure shows the unconditional means of preferences for survey respondents of different birth decades. Panel (a) plots the means of patience, willingness to take risks, trust, and a composite measure of prosociality. Panel (b) plots the composite measure of prosociality and the means of its components: positive reciprocity, negative reciprocity, and altruism. The composite index is constructed as the unweighted sum of all components. All preference measures have been standardized on the global sample.

Figure S.4: Evolution of preferences: Unconditional means by birth decade



*Note:* This figure shows the unconditional standard deviations of preferences for survey respondents of different birth decades. Panel (a) plots the standard deviations of patience, willingness to take risks, trust, and a composite measure of prosociality. Panel (b) plots the composite measure of prosociality and the means of its components: positive reciprocity, negative reciprocity, and altruism. The composite index is constructed as the unweighted sum of all components. All preference measures have been standardized on the global sample.

Figure S.5: Evolution of preferences: Unconditional standard deviations by birth decade

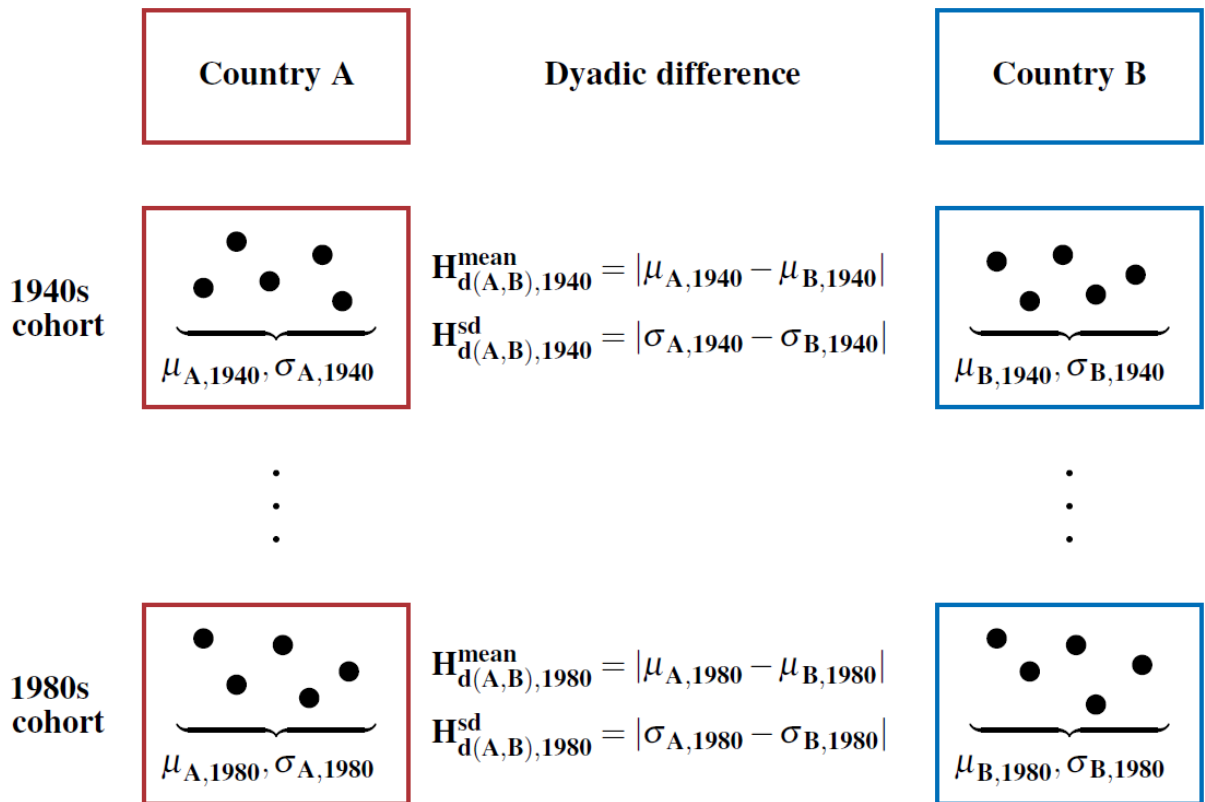
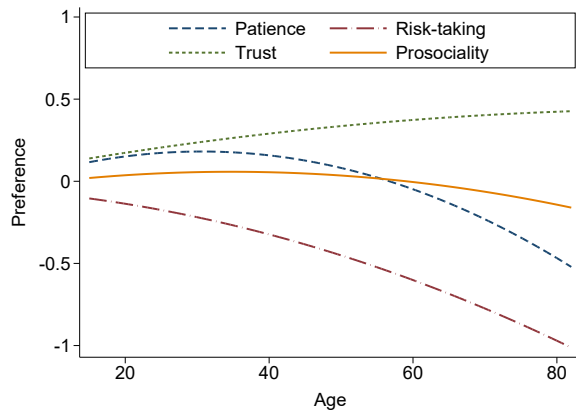
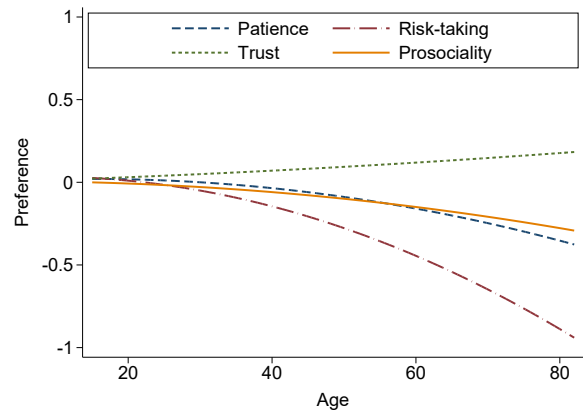


Figure S.6: Illustration of dyadic differences



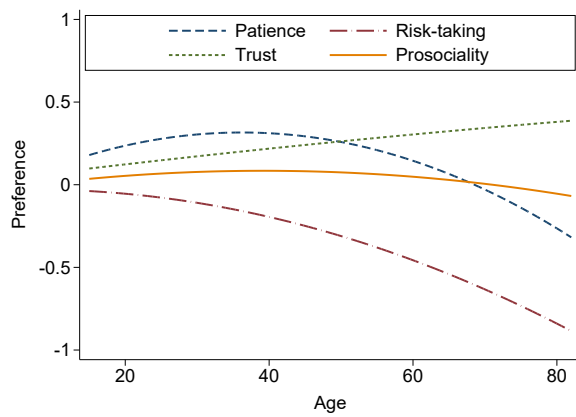
(a) OECD countries



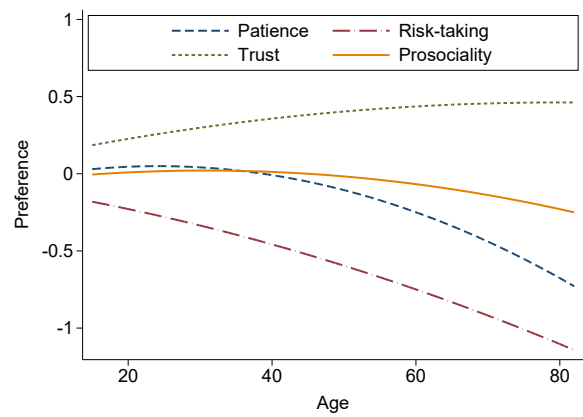
(b) Non-OECD countries

Note: This figure shows age profiles in individual preferences conditional on country fixed effects and gender. Each graph is an augmented component plus residuals plot in which the vertical axis represents the component of a preference that is predicted by a quadratic age trend plus the residuals from a regression on country fixed effects and a gender dummy.

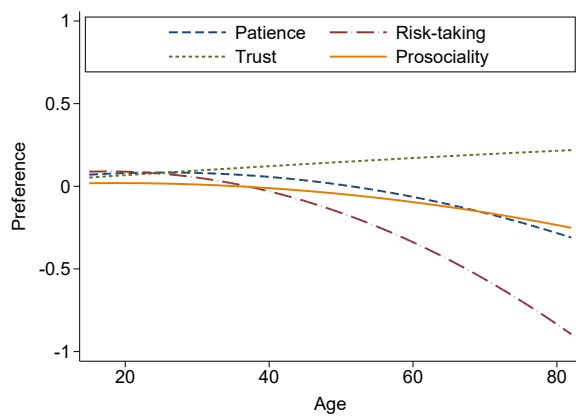
Figure S.7: Age profiles by economic development



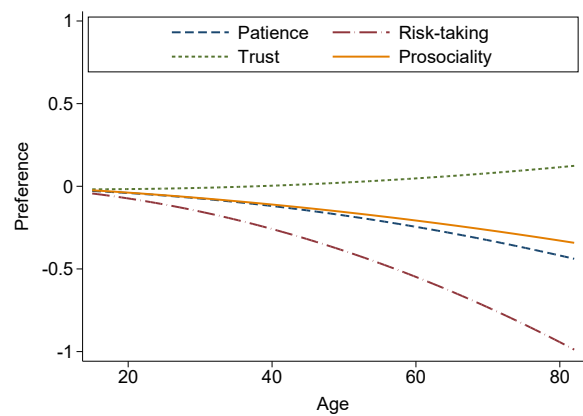
(a) OECD countries: Men



(b) OECD countries: Women



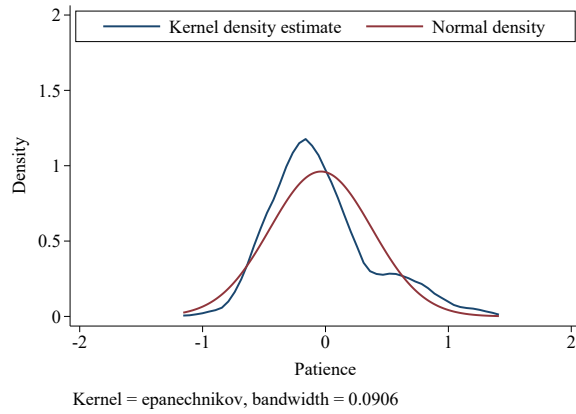
(c) Non-OECD countries: Men



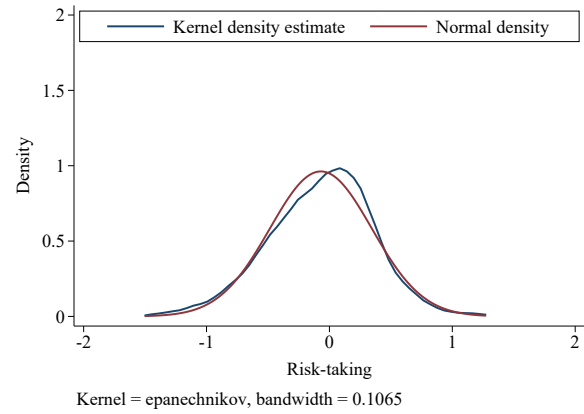
(d) Non-OECD countries: Women

Note: This figure shows age profiles in individual preferences conditional on country fixed effects and gender. Each graph is an augmented component plus residuals plot in which the vertical axis represents the component of a preference that is predicted by a quadratic age trend plus the residuals from a regression on country fixed effects and a gender dummy.

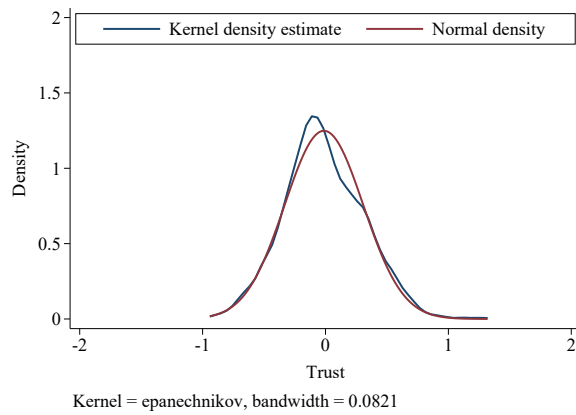
Figure S.8: Age profiles by economic development and gender



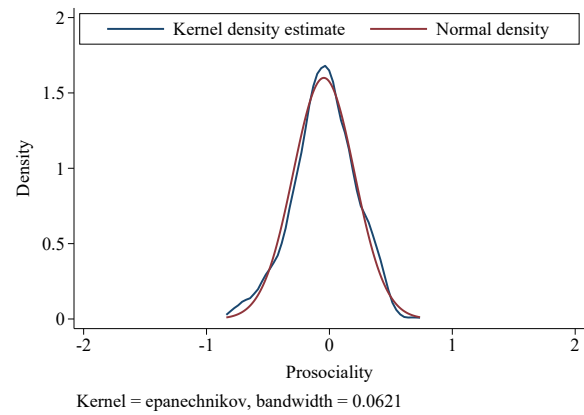
(a) Patience



(b) Risk-taking



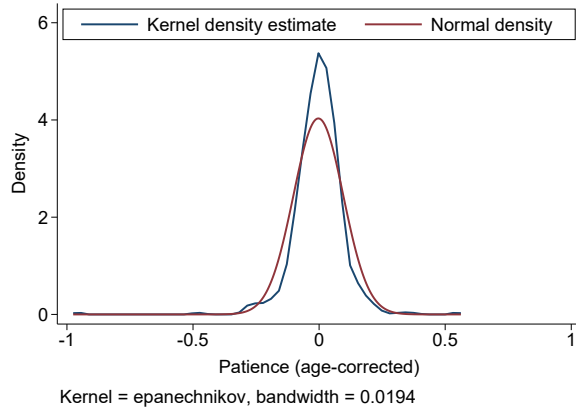
(c) Trust



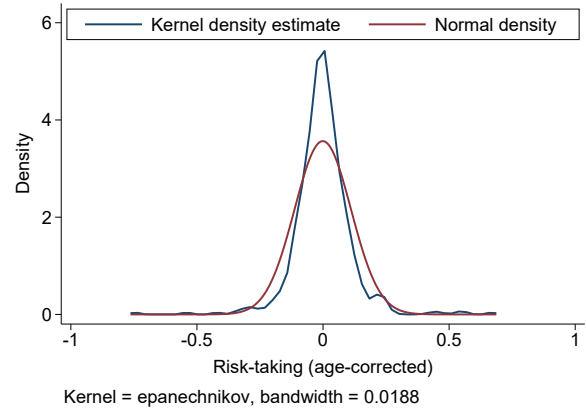
(d) Prosociality

*Note:* This figure shows kernel density plots of preferences at the country-birth decade level and contrasts them with the corresponding normal density.

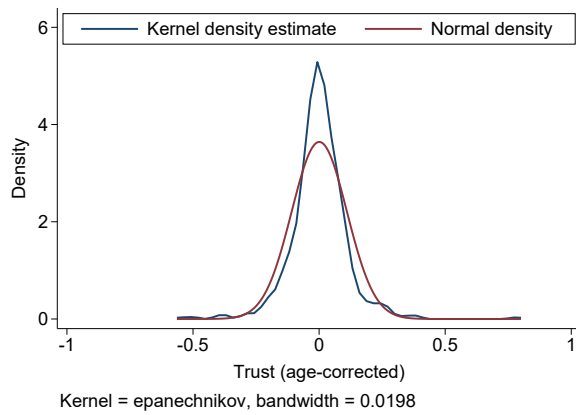
Figure S.9: Dispersion of preferences at the country-birth decade level



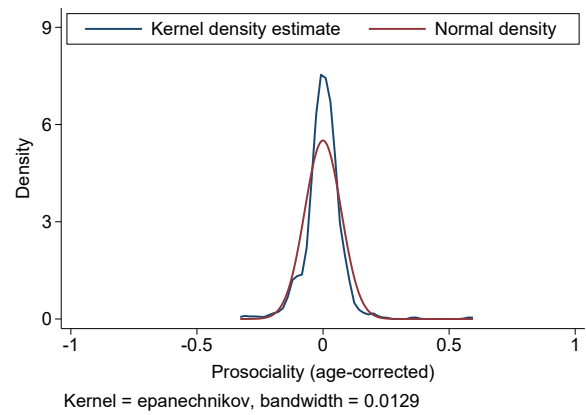
(a) Patience



(b) Risk-taking



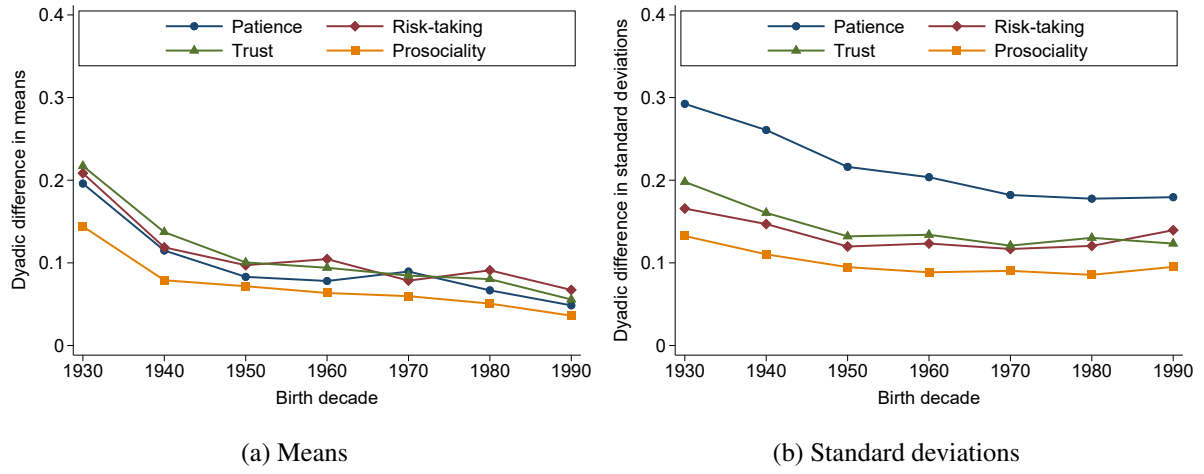
(c) Trust



(d) Prosociality

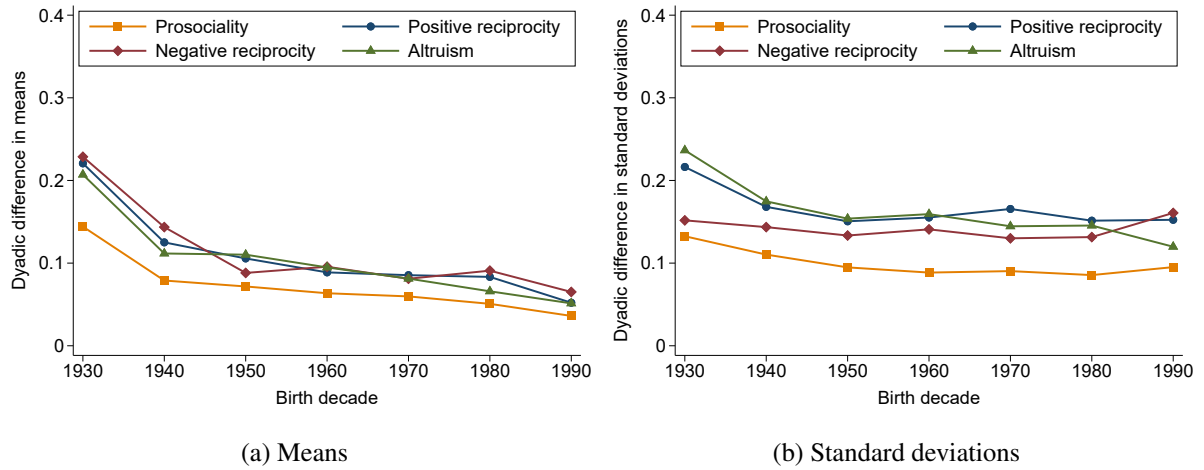
*Note:* This figure shows kernel density plots of age-corrected preferences at the country-birth decade level and contrasts them with the corresponding normal density.

Figure S.10: Dispersion of age-corrected preferences at the country-birth decade level



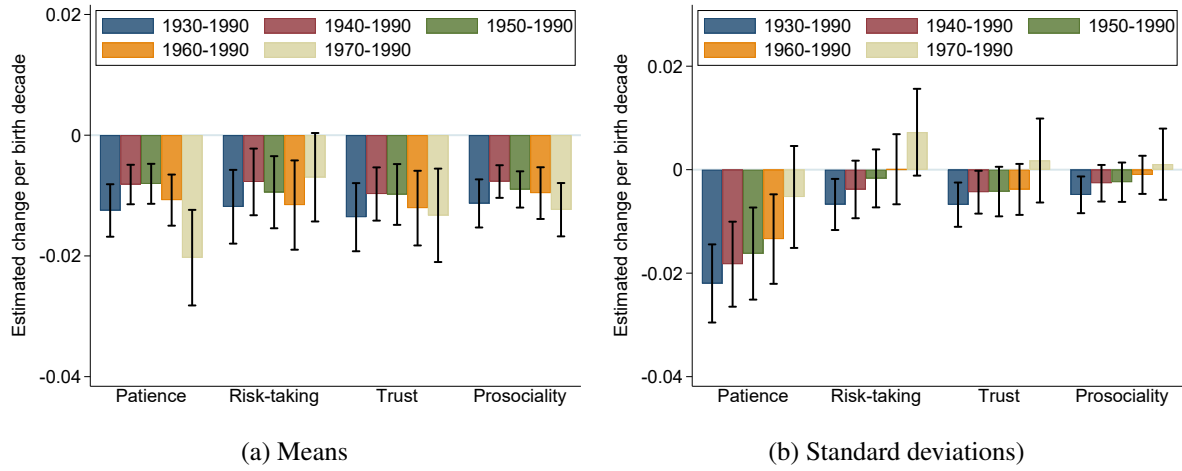
Note: This figure shows the evolution of preference heterogeneity in patience, willingness to take risks, trust, and prosociality. Panel (a) plots absolute dyadic differences in means of age-corrected preferences. Panel (b) plots absolute dyadic differences in standard deviations of age-corrected preferences.

Figure S.11: Evolution of preference heterogeneity: Unconditional evidence by birth decade



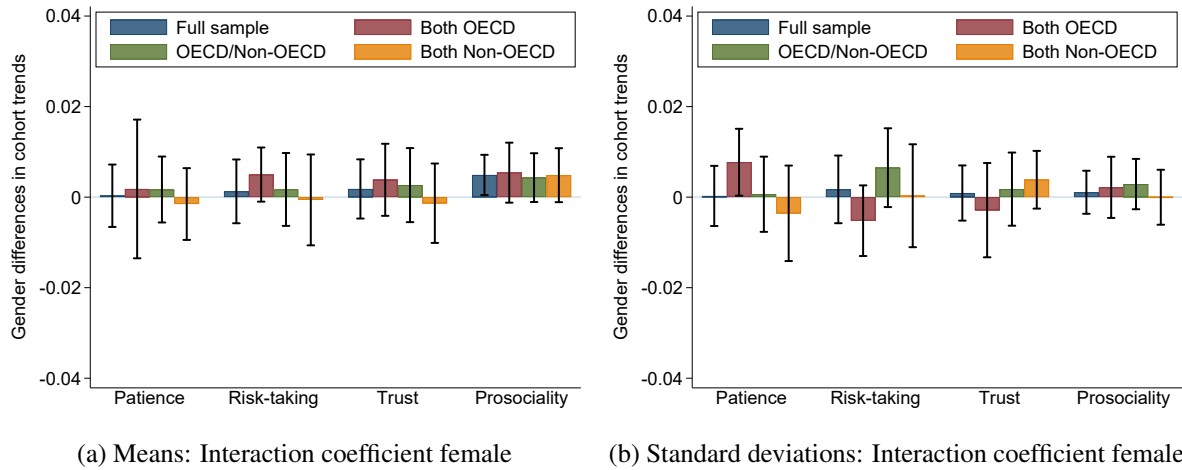
Note: This figure shows the evolution of preference heterogeneity in prosociality and its components. Panel (a) plots absolute dyadic differences in means of age-corrected preferences. Panel (b) plots absolute dyadic differences in standard deviations of age-corrected preferences.

Figure S.12: Evolution of preference heterogeneity in prosociality: Unconditional evidence by birth decade



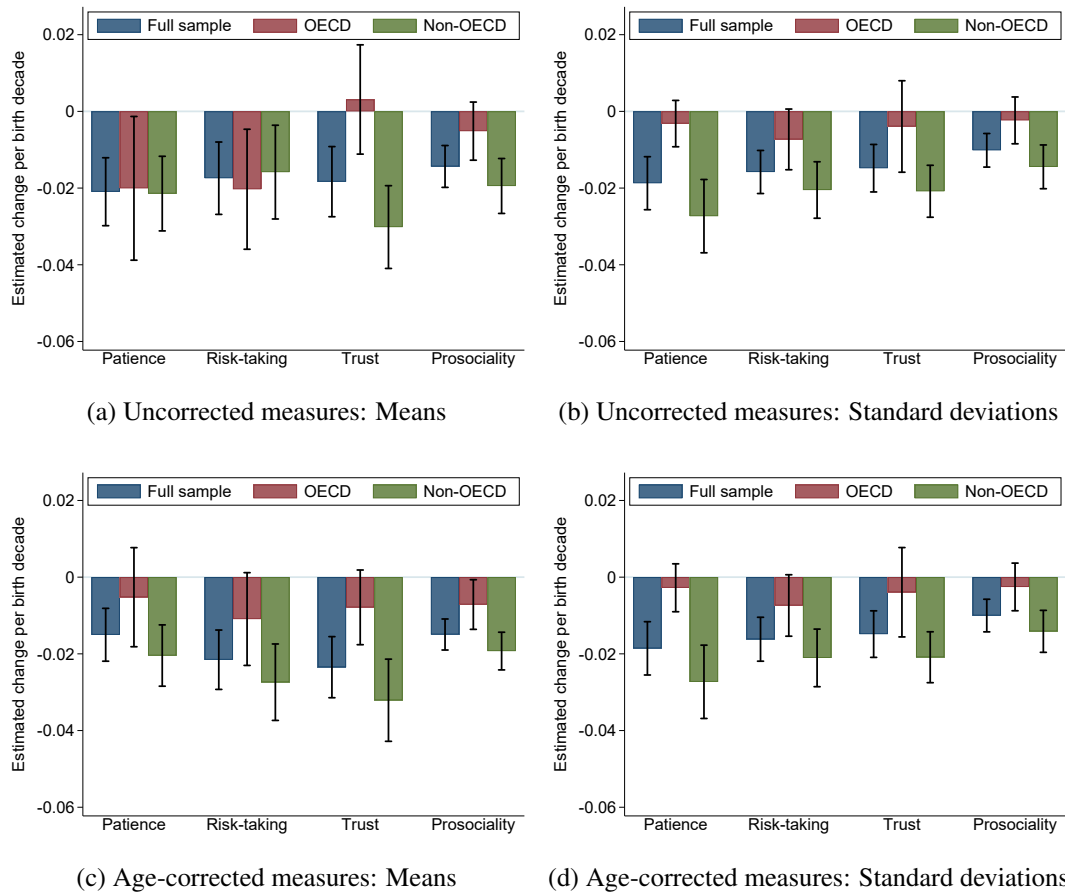
*Note:* This figure contrasts estimates of cohort trends in preference heterogeneity obtained with the full sample and estimates from restricted samples that systematically eliminate early birth cohorts. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). An observation is a country pair per birth decade. All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. 95% confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure S.13: Preference heterogeneity across cohorts: Various subsamples



*Note:* This figure shows the interaction coefficient of the cohort trend (coefficient of birth decade) with the respondents' gender (female = 1), and the corresponding 95% confidence intervals obtained from ordinary least squares for 2775 dyadic pairs composed of 75 countries observed over 7 birth decades. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). An observation is a country pair per birth decade. All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. 95% confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

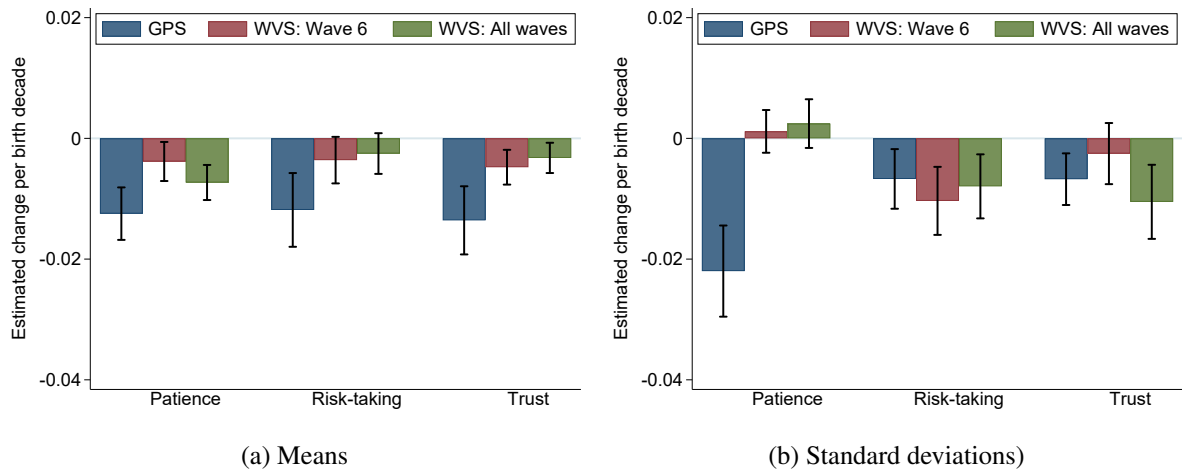
Figure S.14: Gender differences in cohort trends: Pooled estimation with interactions



*Note:* This figure shows estimates of cohort trends and 95% confidence intervals, estimated for within-country dyadic differences between women and men. An observation is a gender dyad (women vs. men) per birth decade for 76 countries observed over 7 birth decades. The dependent variable is the absolute dyadic difference in means of preferences (Panel a), the absolute dyadic difference in standard deviations of preferences (Panel b), the absolute dyadic difference in means of age-corrected preferences (Panel c), or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel d). All specifications include country fixed effects. Confidence intervals are based on standard errors that are clustered at the country level.

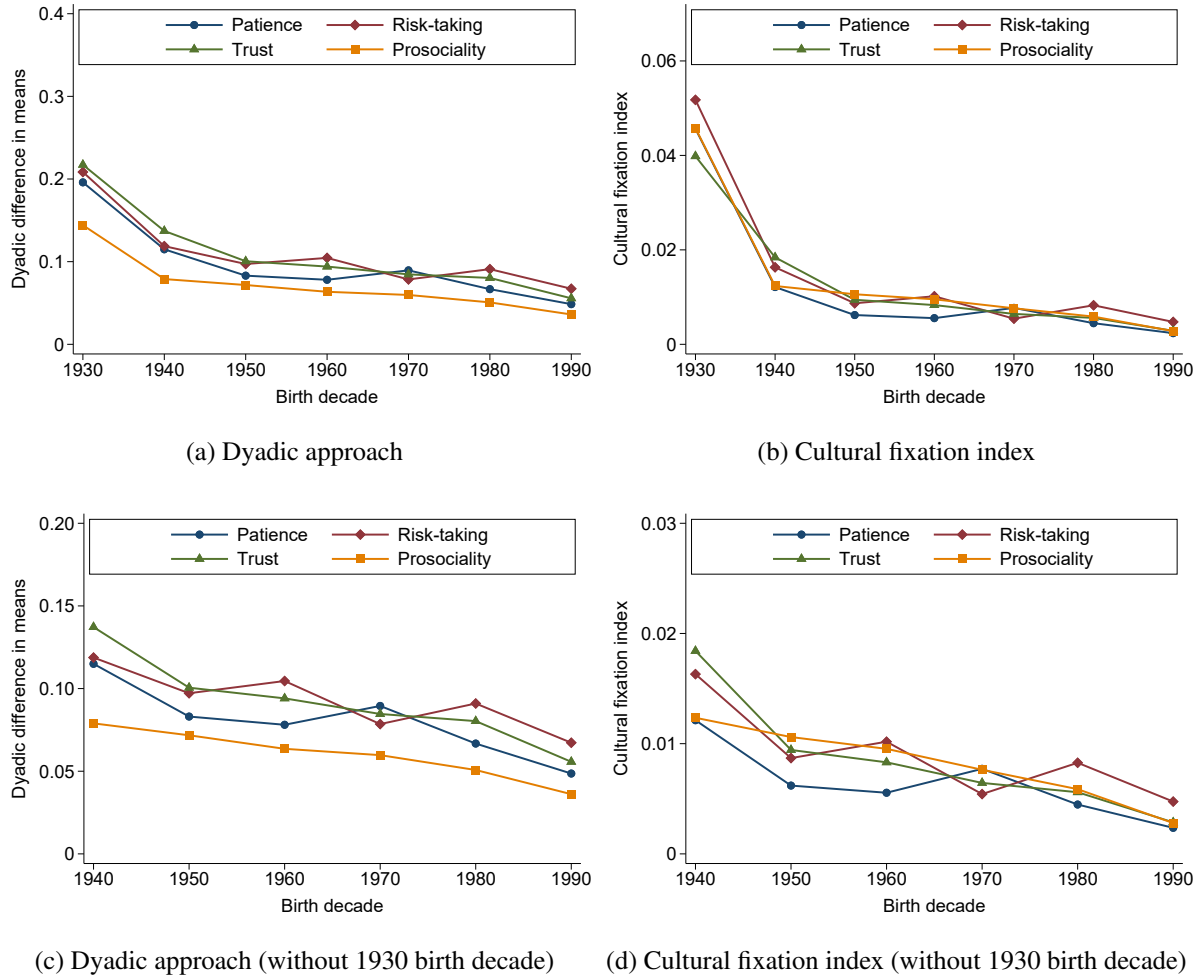
**Figure S.15: Within-country preference heterogeneity between women and men by level of economic development**





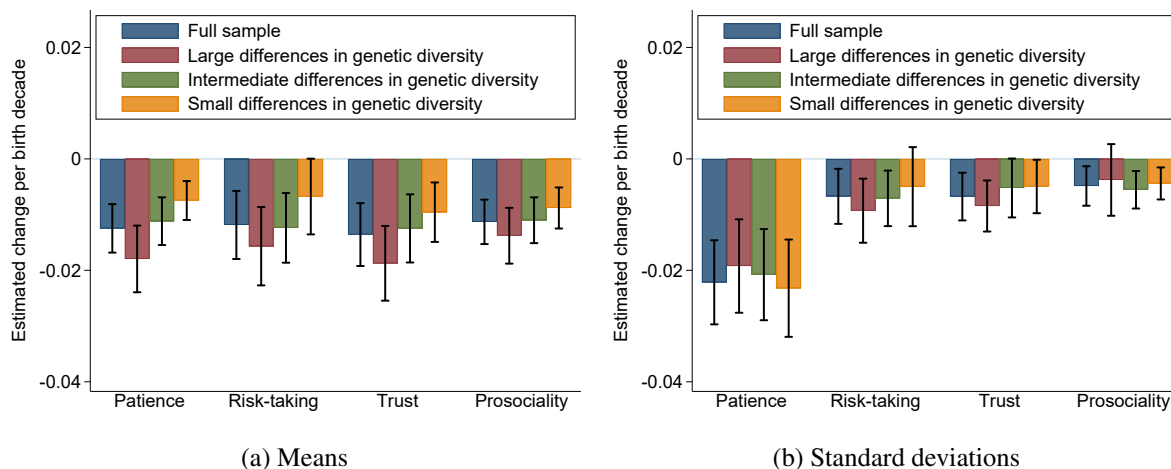
*Note:* This figure contrasts estimates of cohort trends in preference heterogeneity derived from the Global Preferences Survey (GPS) with trends derived from cross-sectional and longitudinal variation in the World Values Survey (WVS). An observation is a country pair per birth decade. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). Data in the World Values Survey are normalized to have mean 0 and standard deviation 1 to make them comparable to the standardized measures of the Global Preferences Survey. All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. 95% confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure S.16: Preference heterogeneity across cohorts: Replication with World Values Survey



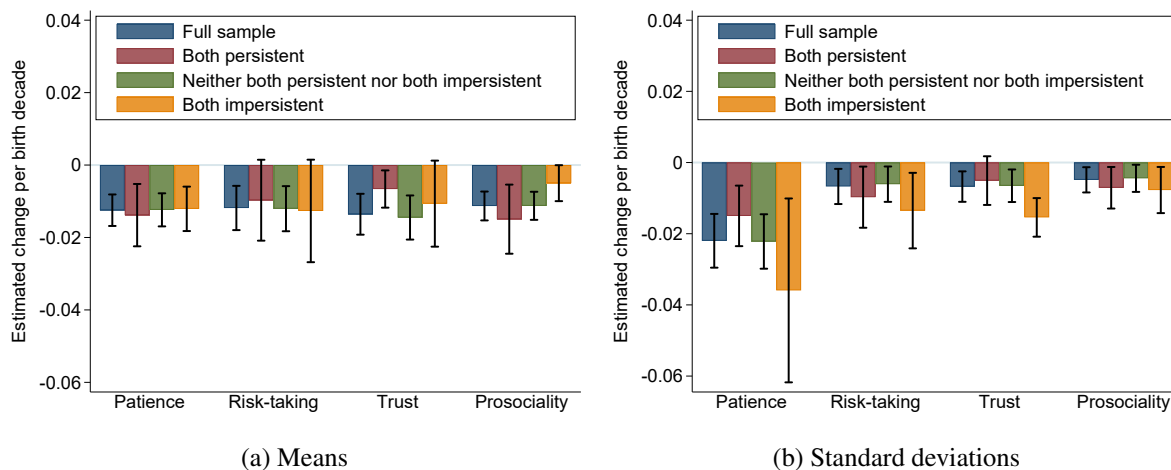
*Note:* This figure shows the evolution of preference heterogeneity across birth decades based on the dyadic approach and a cultural fixation index for continuous data (see, e.g., Muthukrishna et al. 2020). Panels (a) and (c) depict dyadic differences in means of age-corrected preferences. Panels (b) and (d) depict the corresponding cultural fixation indices.

Figure S.17: Evolution of preference heterogeneity: Dyadic approach vs. cultural fixation index



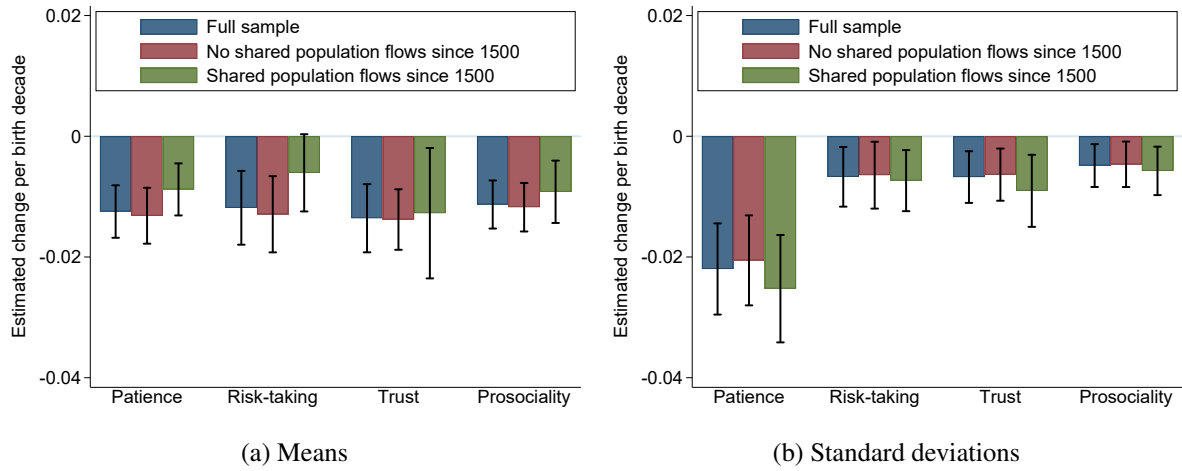
*Note:* This figure shows estimates of cohort trends and 95% confidence intervals for pairs of countries with different levels of ancestry-adjusted genetic diversity (Ashraf and Galor 2013). An observation is a country pair per birth decade. Large differences in genetic diversity correspond to country pairs drawn from the top quartile of the dyadic differences in ancestry-adjusted genetic diversity; small differences correspond to country pairs from the bottom quartile; intermediate differences correspond to country pairs from the second and third quartile. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure S.18: Preference heterogeneity across cohorts by genetic diversity



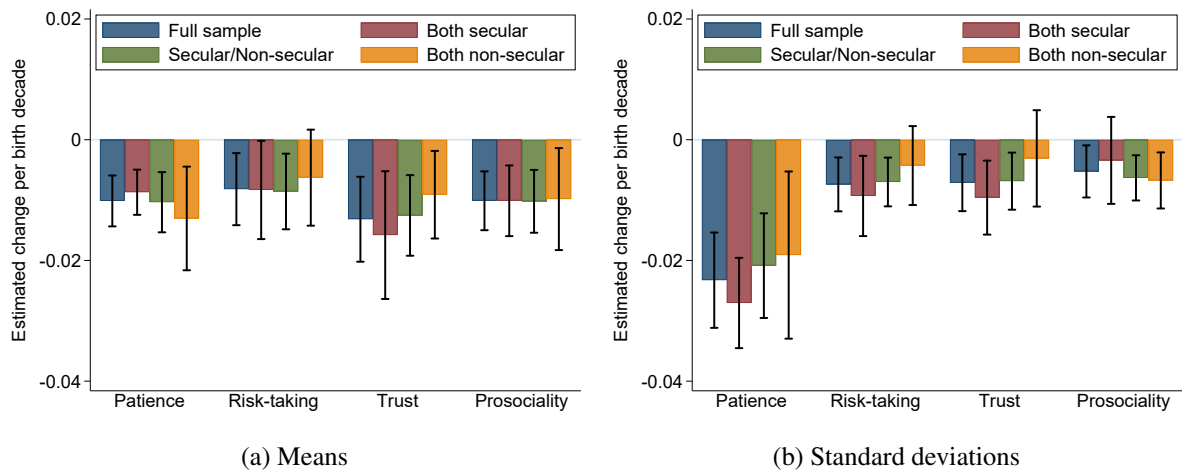
*Note:* This figure shows estimates of cohort trends and 95% confidence intervals for pairs of countries with different degrees of persistence in population composition as reflected by post-1500 population flows (Putterman and Weil 2010). An observation is a country pair per birth decade. Persistence is measured in terms of the share of the population that corresponds to the native population as of 1500. Country pairs are labeled as persistent if their corresponding share is in the top quartile of the cross-country persistence distribution; country pairs are labeled as impermanent if their corresponding share is in the bottom quartile of the cross-country persistence distribution; all other country pairs are labeled as neither persistent nor impermanent. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure S.19: Preference heterogeneity across cohorts by historical population persistence



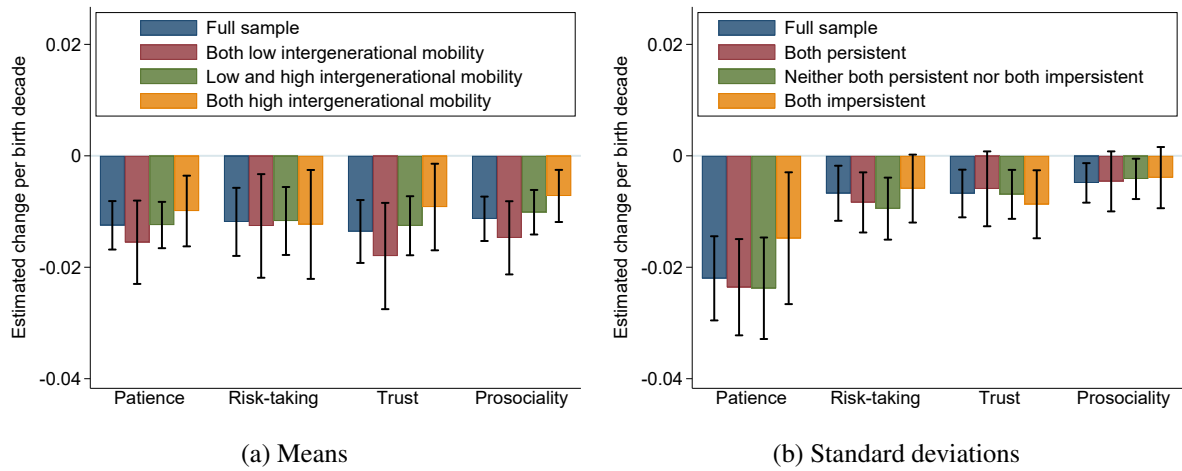
*Note:* This figure shows estimates of cohort trends and 95% confidence intervals for pairs of countries with different degrees of overlap in their historical population composition when accounting for post-1500 population flows (Putterman and Weil 2010). An observation is a country pair per birth decade. No shared population corresponds to country pairs that have not experienced any bilateral migratory population flows post-1500 from one country to the other. Shared population corresponds to country pairs that have experienced bilateral migratory population flows post-1500 from one country to the other. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure S.20: Preference heterogeneity across cohorts by common historical population shares



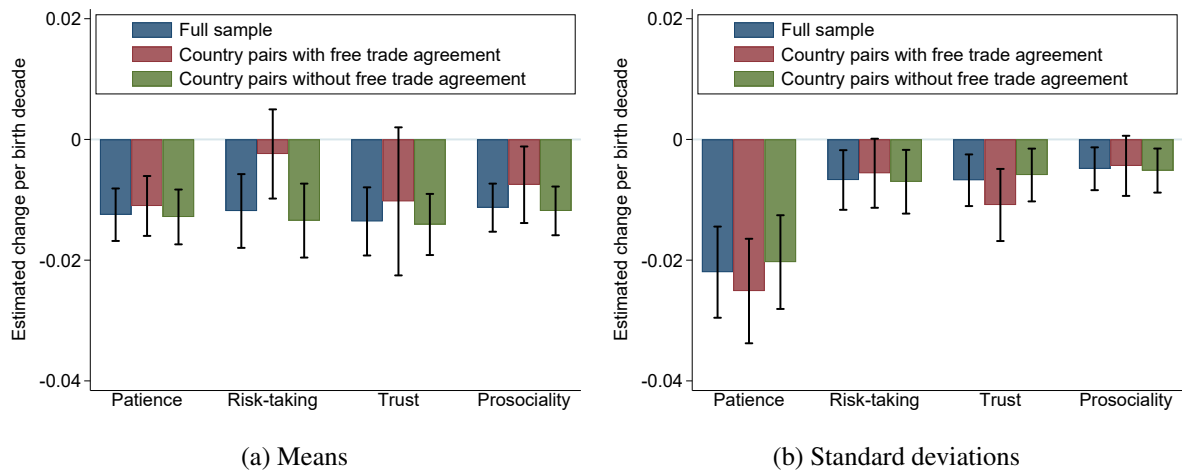
*Note:* This figure shows estimates of cohort trends in preference heterogeneity and 95% confidence intervals for pairs of countries with secular and non-secular constitutions (data obtained from World Population Review; <https://worldpopulationreview.com/>). An observation is a country pair per birth decade, with 1770 country pairs composed of 60 countries. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure S.21: Preference heterogeneity across cohorts by secularism



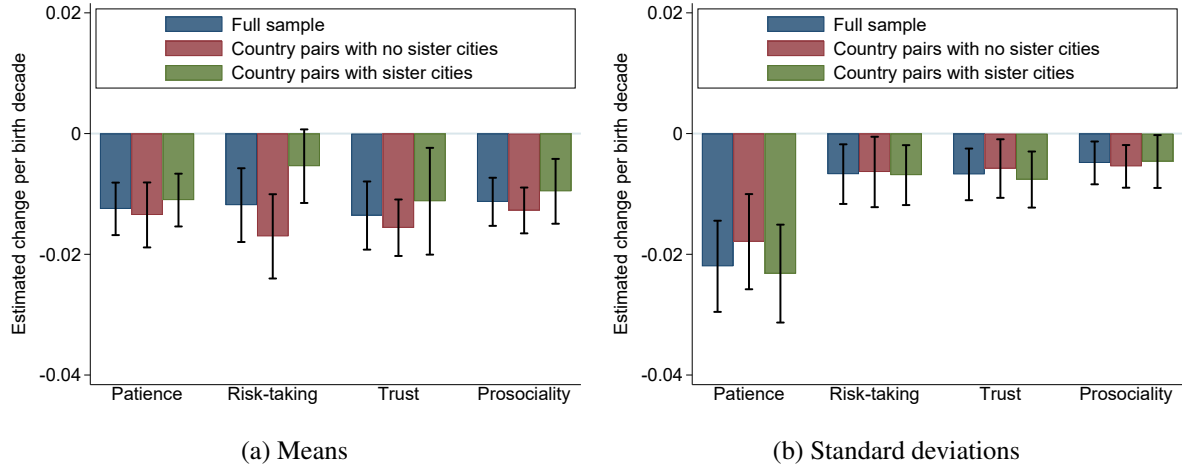
*Note:* This figure shows estimates of cohort trends and 95% confidence intervals for pairs of countries with different intergenerational mobility, as measured by the Global Database on Intergenerational Mobility, provided by the World Bank (<https://www.worldbank.org/en/topic/poverty/brief/what-is-the-global-database-on-intergenerational-mobility-gdim>). An observation is a country pair per birth decade. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure S.22: Preference heterogeneity across cohorts by intergenerational mobility



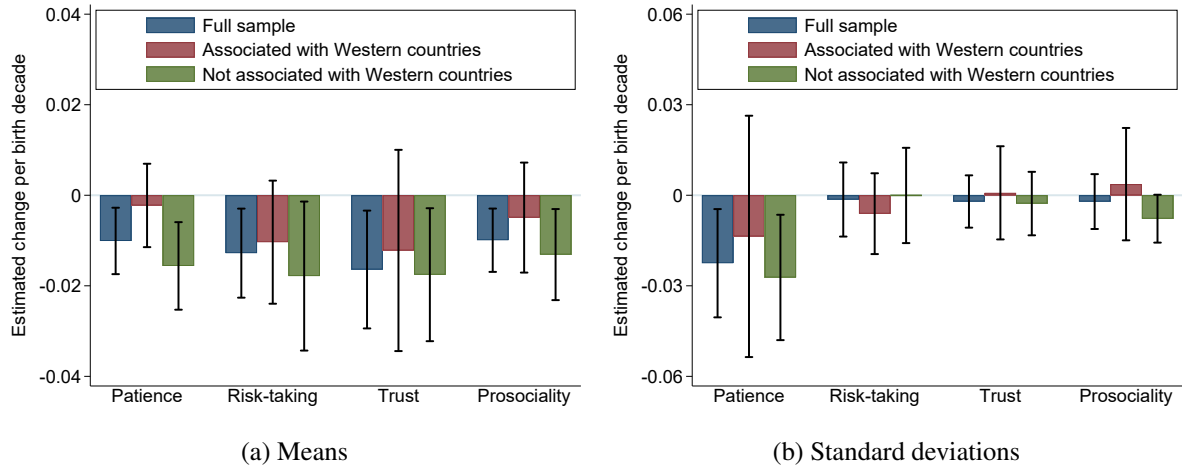
*Note:* This figure shows estimates of cohort trends and 95% confidence intervals for pairs of countries with and without free trade agreements. An observation is a country pair per birth decade. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure S.23: Preference heterogeneity among country pairs with and without free trade agreements



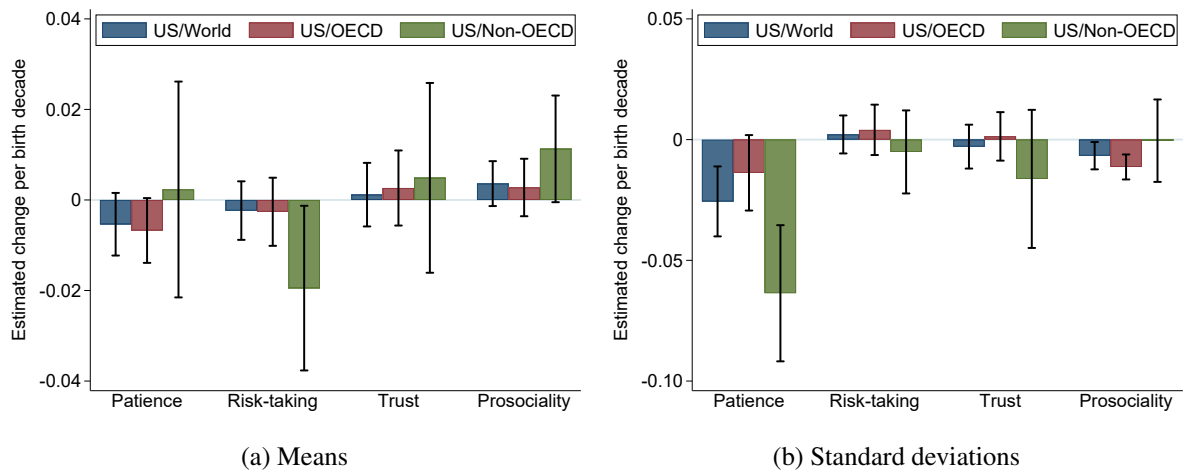
*Note:* This figure shows estimates of cohort trends and 95% confidence intervals for pairs of countries with and without sister cities. An observation is a country pair per birth decade. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure S.24: Preference heterogeneity among country pairs with and without sister cities



*Note:* This figure shows estimates of cohort trends and 95% confidence intervals for convergence of the preferences of 59 countries to those of the respective mean for 16 traditional Western societies (including 11 European Union members before the 2004 East enlargement, Australia, Canada, Israel, Switzerland, and the United States). 12 countries are defined to be associated with Western countries because they are members of OECD or NATO and not counted as traditional Western societies (7 European countries, Chile, Japan, Korea, Mexico, and Turkey). All other 47 countries are defined as not associated with Western countries. An observation is a country pair per birth decade. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). All specifications include dyad fixed effects and control for economic development at the time of birth. Confidence intervals are based on standard errors that are clustered at the dyad level.

Figure S.25: Do preferences converge to those of Western countries?

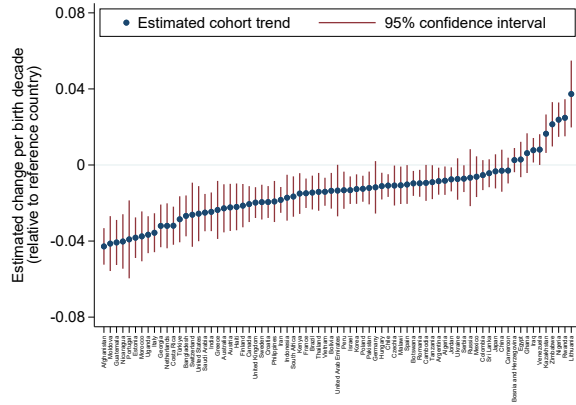


*Note:* This figure shows estimates of cohort trends and 95% confidence intervals for convergence of other countries' preferences to those of the United States. An observation is a dyadic pair between the United States and one of 74 countries per birth decade. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). All specifications include dyad fixed effects and control for economic development at the time of birth. Confidence intervals are based on standard errors that are clustered at the dyad level.

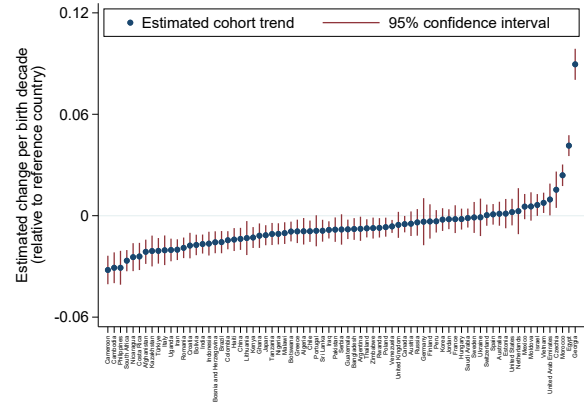
Figure S.26: Do preferences converge to those of the United States?



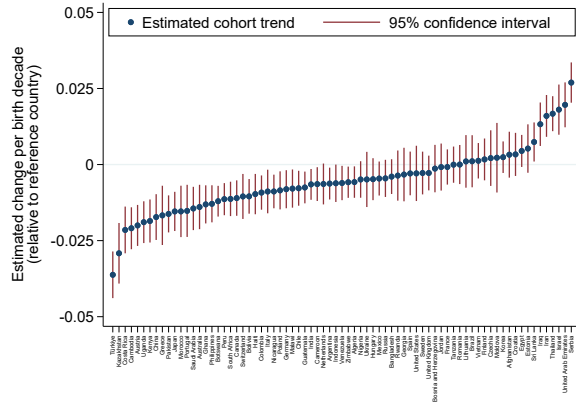




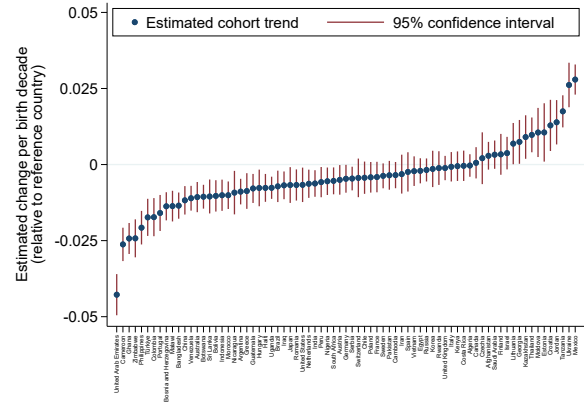
(a) Patience



(b) Willingness to take risks



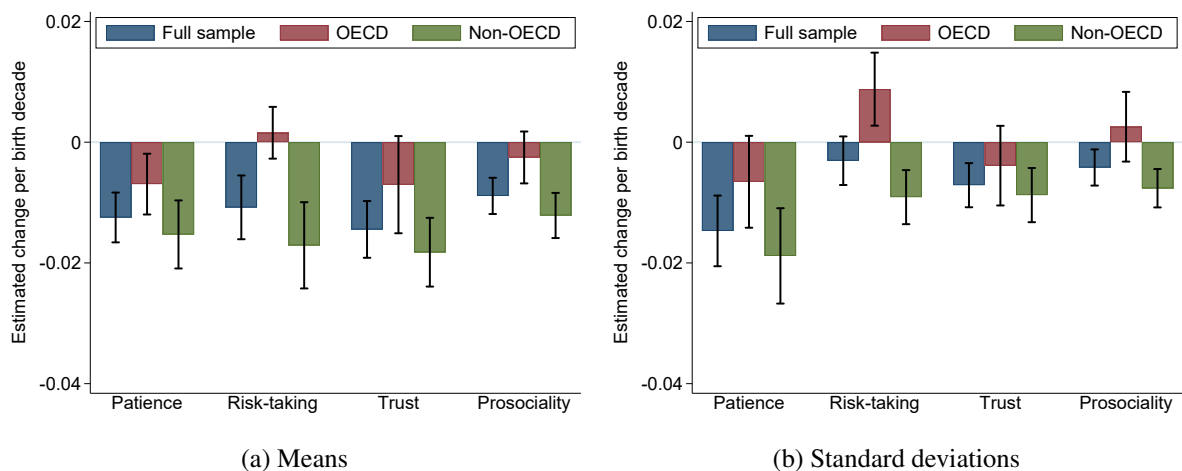
(c) Trust



(d) Prosociality

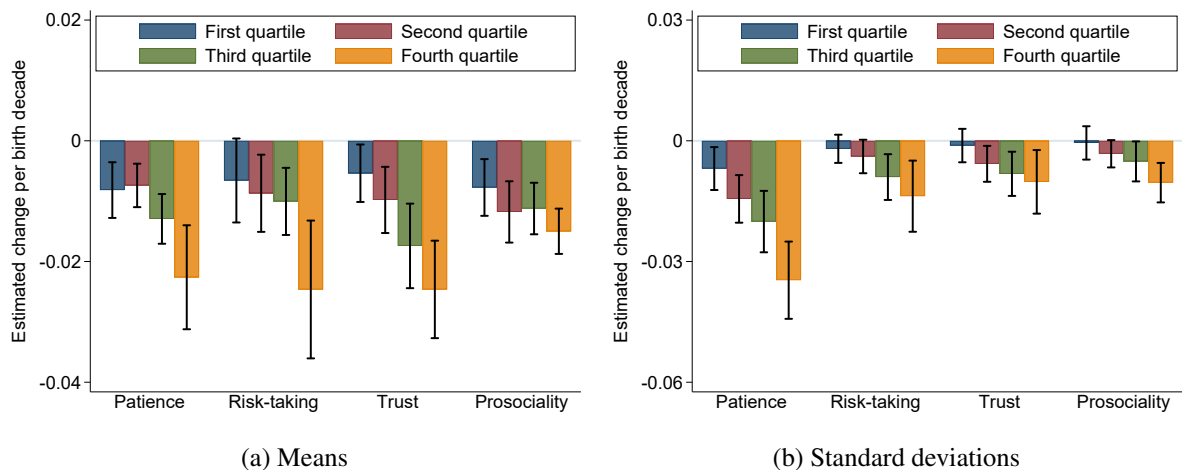
*Note:* This figure shows estimates of cohort trends and 95% confidence intervals for convergence of other countries' preferences to those of a given reference country. An observation is a dyadic pair between the reference country and one of 74 countries per birth decade. The dependent variable is the absolute dyadic difference in standard deviations of age-corrected patience (Panel a), the absolute dyadic difference in standard deviations of age-corrected willingness to take risks (Panel b), the absolute dyadic difference in standard deviations of age-corrected trust (Panel c), or the absolute dyadic difference in standard deviations of age-corrected prosociality (Panel d). All specifications include dyad fixed effects and control for economic development at the time of birth. Confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure S.28: Preference heterogeneity across cohorts by country: Standard deviations



*Note:* This figure shows estimates of cohort trends and 95% confidence intervals for convergence of countries' preferences to those of the world mean. An observation is a dyadic pair between the world mean and one of 75 countries per birth decade. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). All specifications include dyad fixed effects and control for economic development at the time of birth. Confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure S.29: Do preferences converge to a world mean?



*Note:* This figure shows estimates of cohort trends and 95% confidence intervals for pairs of countries with different initial heterogeneity in preferences. An observation is a country pair by birth decade. Country pairs are grouped into quartiles according to the size of their absolute dyadic differences in preference heterogeneity, as measured of 1940. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). All specifications include fixed effects for both countries in the dyadic pair and control for economic development at the time of birth. Confidence intervals are based on standard errors that are two-way clustered for both countries in dyadic pairs.

Figure S.30: Preference heterogeneity across birth cohorts by initial heterogeneity

## Supplementary Tables

Table S.1: List of countries in sample

Country	In OECD (as of 2012)	Country	In OECD (as of 2012)
Afghanistan	no	Kazakhstan	no
Algeria	no	Kenya	no
Argentina	no	Lithuania	no
Australia	yes	Malawi	no
Austria	yes	Mexico	yes
Bangladesh	no	Morocco	no
Bolivia	no	Netherlands	yes
Bosnia & Herzegovina	no	Nicaragua	no
Botswana	no	Nigeria	no
Brazil	no	Pakistan	no
Cambodia	no	Peru	no
Cameroon	no	Philippines	no
Canada	yes	Poland	yes
Chile	yes	Portugal	yes
China	no	Republic of Korea	yes
Colombia	no	Republic of Moldova	no
Costa Rica	no	Romania	no
Croatia	no	Russian Federation	no
Czechia	yes	Rwanda	no
Egypt	no	Saudi Arabia	no
Estonia	yes	Serbia	no
Finland	yes	South Africa	no
France	yes	Spain	yes
Georgia	no	Sri Lanka	no
Germany	yes	Suriname	no
Ghana	no	Sweden	yes
Greece	yes	Switzerland	yes
Guatemala	no	Thailand	no
Haiti	no	Türkiye	yes
Hungary	yes	Uganda	no
India	no	Ukraine	no
Indonesia	no	United Arab Emirates	no
Iran	no	United Kingdom	yes
Iraq	no	United Republic of Tanzania	no
Israel	yes	United States of America	yes
Italy	yes	Venezuela	no
Japan	yes	Vietnam	no
Jordan	no	Zimbabwe	no

Note: This table lists all 76 countries in the sample and their member status in the Organisation of Economic Co-operation and Development as of 2012. In the regression analysis, Suriname is omitted because of missing data for gross domestic income per capita at the time of birth.

Table S.2: Descriptive statistics

Variable	Observations	Mean	Standard deviation	Minimum	Maximum
<i>Dyadic differences in means</i>					
Patience	19,585	0.44	0.35	0.00	1.94
Patience (residualized)	19,585	0.09	0.10	0.00	1.50
Risk-taking	19,585	0.37	0.30	0.00	2.40
Risk-taking (residualized)	19,585	0.11	0.11	0.00	1.41
Trust	19,585	0.36	0.27	0.00	1.93
Trust (residualized)	19,585	0.11	0.11	0.00	1.28
Prosociality	19,585	0.27	0.20	0.00	1.45
Prosociality (residualized)	19,585	0.07	0.07	0.00	0.90
Positive reciprocity	19,585	0.40	0.31	0.00	1.78
Positive reciprocity (residualized)	19,585	0.11	0.11	0.00	1.14
Negative reciprocity	19,585	0.37	0.29	0.00	1.77
Negative reciprocity (residualized)	19,585	0.11	0.12	0.00	1.33
Altruism	19,585	0.41	0.32	0.00	2.08
Altruism (residualized)	19,585	0.10	0.10	0.00	1.01
<i>Dyadic differences in standard deviations</i>					
Patience	19,585	0.22	0.17	0.00	1.24
Patience (residualized)	19,585	0.21	0.17	0.00	1.24
Risk-taking	19,585	0.13	0.10	0.00	0.79
Risk-taking (residualized)	19,585	0.13	0.10	0.00	0.78
Trust	19,585	0.14	0.11	0.00	1.10
Trust (residualized)	19,585	0.14	0.11	0.00	1.10
Prosociality	19,585	0.10	0.08	0.00	0.57
Prosociality (residualized)	19,585	0.10	0.08	0.00	0.57
Positive reciprocity	19,585	0.17	0.13	0.00	1.22
Positive reciprocity (residualized)	19,585	0.16	0.13	0.00	1.21
Negative reciprocity	19,585	0.14	0.11	0.00	0.81
Negative reciprocity (residualized)	19,585	0.14	0.11	0.00	0.81
Altruism	19,585	0.16	0.13	0.00	1.36
Altruism (residualized)	19,585	0.16	0.13	0.00	1.34
<i>Dyadic differences in income</i>					
Income per capita	14258	7802.79	7739.29	0.10	39466.50

Note: This table shows descriptive statistics for 2850 dyadic pairs composed of 76 countries and observed over 7 birth decades. Preference data cover all country-birth cells, except for the 1930 birth decades in Algeria and Egypt. Reported numbers reflect absolute differences in means and standard deviations within dyadic pairs over birth decades. Means and standard deviations refer to country-specific, birth decade-specific variation in preferences across individuals. Data in the Global Preferences Survey are standardized to mean 0 and standard deviation 1. Income per capita refers to gross domestic product per person in birth decades and is measured in real 2011-international US dollar.

Table S.3: Preference heterogeneity across cohorts: Higher-order age correction

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
<b>Panel (a): Preferences corrected with cubic age trends</b>				
<i>Dependent variable: Dyadic differences in means</i>				
Birth decade	-0.010*** (0.002)	-0.014*** (0.003)	-0.011*** (0.002)	-0.008*** (0.001)
$R^2$	0.20	0.22	0.22	0.23
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<i>Dependent variable: Dyadic differences in standard deviations</i>				
Birth decade	-0.022*** (0.004)	-0.007*** (0.002)	-0.007*** (0.002)	-0.005** (0.002)
$R^2$	0.27	0.23	0.25	0.29
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<b>Panel (b): Preferences corrected with quartic age trends</b>				
<i>Dependent variable: Dyadic differences in means</i>				
Birth decade	-0.007*** (0.002)	-0.012*** (0.002)	-0.009*** (0.002)	-0.008*** (0.001)
$R^2$	0.18	0.20	0.23	0.23
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<i>Dependent variable: Dyadic differences in standard deviations</i>				
Birth decade	-0.022*** (0.004)	-0.007*** (0.003)	-0.006*** (0.002)	-0.004** (0.002)
$R^2$	0.27	0.24	0.25	0.29
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<b>Panel (c): Preferences corrected with dummies for 5-year age bins</b>				
<i>Dependent variable: Dyadic differences in means</i>				
Birth decade	-0.006*** (0.001)	-0.005*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)
$R^2$	0.17	0.16	0.12	0.19
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<i>Dependent variable: Dyadic differences in standard deviations</i>				
Birth decade	-0.022*** (0.004)	-0.007** (0.003)	-0.007*** (0.002)	-0.004** (0.002)
$R^2$	0.27	0.24	0.26	0.29
Clusters	74	74	74	74
Observations	14258	14258	14258	14258

*Note:* This table shows estimates from ordinary least squares regressions for 2775 dyadic pairs composed of 75 countries observed over 7 birth decades. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (top of Panels a, b, and c) or the absolute dyadic difference in standard deviations of age-corrected preferences (bottom of Panels a, b, and c). Preferences are corrected with country-specific cubic age trends (Panel a), with country-specific quartic age trends (Panel b), or with country-specific dummies for 5-year age bins. The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Standard errors are two-way clustered for both countries in dyadic pairs and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table S.4: Variation explained by cohort fixed effects and country fixed effects

Absolute dyadic difference in	Patience		Risk-taking		Trust		Prosociality	
	Cohort FE (1)	Country FE (2)	Cohort FE (3)	Country FE (4)	Cohort FE (5)	Country FE (6)	Cohort FE (7)	Country FE (8)
<b>Panel (a): Country-specific variation</b>								
<i>Uncorrected preference measures</i>								
$R^2$	0.090	0.787	0.350	0.469	0.025	0.770	0.093	0.753
Observations	527	527	527	527	527	527	527	527
<i>Age-corrected preference measures</i>								
$R^2$	0.005	0.042	0.017	0.037	0.011	0.027	0.011	0.042
Observations	527	527	527	527	527	527	527	527
<b>Panel (b): Variation in dyadic differences</b>								
<i>Uncorrected preference measures</i>								
$R^2$	0.003	0.422	0.035	0.337	0.009	0.335	0.018	0.274
Observations	19585	19585	19585	19585	19585	19585	19585	19585
<i>Age-corrected preference measures</i>								
$R^2$	0.181	0.102	0.135	0.110	0.182	0.104	0.191	0.113
Observations	19585	19585	19585	19585	19585	19585	19585	19585

*Note:* This table shows shares of variation of uncorrected and age-corrected preference measures explained by cohort and country fixed effects ( $R^2$ ). Cohort fixed effects correspond to birth decade effects. Country fixed effects correspond to fixed effects for each of the two countries in a given dyad.

Table S.5: Preference heterogeneity across cohorts: Coefficients for income control

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
<b>Panel (a): Preference heterogeneity between countries</b>				
<i>Dependent variable: Dyadic differences in means</i>				
Log income per capita	0.201*** (0.048)	0.014*** (0.005)	0.020*** (0.006)	0.010** (0.004)
$R^2$	0.53	0.43	0.33	0.40
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<i>Dependent variable: Dyadic differences in standard deviations</i>				
Log income per capita	0.040*** (0.011)	0.030*** (0.008)	0.007** (0.004)	0.016*** (0.003)
$R^2$	0.28	0.23	0.28	0.34
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<b>Panel (b): Preference heterogeneity between countries (age-corrected measures)</b>				
<i>Dependent variable: Dyadic differences in means (age-corrected)</i>				
Log income per capita	0.004* (0.002)	0.009*** (0.003)	0.005* (0.002)	0.006*** (0.002)
$R^2$	0.20	0.18	0.21	0.21
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<i>Dependent variable: Dyadic differences in standard deviations (age-corrected)</i>				
Log income per capita	0.036*** (0.011)	0.028*** (0.007)	0.007* (0.004)	0.015*** (0.003)
$R^2$	0.27	0.23	0.25	0.29
Clusters	74	74	74	74
Observations	14258	14258	14258	14258

*Note:* This table shows the coefficients of the control for differences in income per capita at the time of birth for the specifications reported in Table 1. Estimates are derived from ordinary least squares regressions for 2775 dyadic pairs composed of 75 countries observed over 7 birth decades. The dependent variable is the absolute dyadic difference in means of preferences (top of Panel a), the absolute dyadic difference in standard deviations of preferences (bottom of Panel a), the absolute dyadic difference in means of age-corrected preferences (top of Panel b), or the absolute dyadic difference in standard deviations of age-corrected preferences (bottom of Panel b). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Standard errors are two-way clustered for both countries in dyadic pairs and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table S.6: Preference heterogeneity across cohorts: Regression results for prosociality

Absolute dyadic difference in	Prosociality (1)	Positive reciprocity (2)	Negative reciprocity (3)	Altruism (4)
<b>Panel (a): Dyadic differences in means</b>				
Birth decade	-0.011*** (0.002)	-0.013*** (0.003)	-0.011*** (0.003)	-0.017*** (0.002)
$R^2$	0.21	0.20	0.18	0.24
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<b>Panel (b): Dyadic differences in standard deviations</b>				
Birth decade	-0.005*** (0.002)	-0.007** (0.003)	0.001 (0.003)	-0.010*** (0.003)
$R^2$	0.29	0.29	0.28	0.23
Clusters	74	74	74	74
Observations	14258	14258	14258	14258

*Note:* This table shows estimates from ordinary least squares regressions for 2775 dyadic pairs composed of 75 countries observed over 7 birth decades. The dependent variable is the absolute dyadic difference in means of age-corrected preference (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Standard errors are two-way clustered for both countries in dyadic pairs and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table S.7: Preference heterogeneity across cohorts: Controlling for dyad fixed effects

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
<b>Panel (a): Dyadic differences in means</b>				
Birth decade	-0.012*** (0.001)	-0.012*** (0.001)	-0.014*** (0.001)	-0.012*** (0.000)
$R^2$	0.30	0.30	0.31	0.31
Countries	74	74	74	74
Observations	14258	14258	14258	14258
<b>Panel (b): Dyadic differences in standard deviations</b>				
Birth decade	-0.015*** (0.001)	-0.008*** (0.001)	-0.006*** (0.001)	-0.005*** (0.000)
$R^2$	0.60	0.47	0.52	0.48
Countries	74	74	74	74
Observations	14258	14258	14258	14258

*Note:* This table shows estimates from ordinary least squares for 2775 dyadic pairs composed of 75 countries observed over 7 birth decades. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. All specifications include fixed effects for both countries in dyadic pairs, a fixed effect for dyadic pairs, and control for economic development at the time of birth. Heteroskedasticity-robust standard errors are reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .



Table S.8: Estimated decline in preference heterogeneity between 1950 and 1980 birth cohorts

	Patience	Willingness to take risks	Trust	Prosociality
	(1)	(2)	(3)	(4)
<b>Panel (a): Means</b>				
Change in dyadic differences (in percent)	-8.5*** (1.5)	-9.6*** (2.5)	-11.4*** (2.4)	-12.6*** (2.2)
<b>Panel (b): Standard deviations</b>				
Change in dyadic differences (in percent)	-30.7*** (5.3)	-15.2*** (5.6)	-14.3*** (4.5)	-14.7*** (5.4)

*Note:* This table shows the estimated change in dyadic preference differences in means (Panel a) and standard deviations (Panel b) of (uncorrected) preferences between 1950 and 1980 birth cohorts. Values are derived by combining the estimated cohort trends multiplied by 3 with the unconditional differences in preferences for the 1950 birth decade.

Table S.9: Preference heterogeneity between women and men across countries

Controlling for	Economic development (1)	Gender equality (2)	Cohort trends (3)	Full controls (4)	Cohort trends and fixed effects (5)
<b>Panel (a): Heterogeneity in patience between women and men</b>					
Log income per capita	0.011* (0.006)	— —	— —	0.012* (0.006)	— —
Gender equality	— —	0.584*** (0.162)	— —	0.558*** (0.150)	— —
Birth decade	— —	— —	-0.022*** (0.005)	-0.021*** (0.005)	-0.021*** (0.005)
$R^2$	0.01	0.04	0.07	0.11	0.31
Clusters	75	70	70	70	70
Observations	507	475	475	475	475
<b>Panel (b): Heterogeneity in willingness to take risks between women and men</b>					
Log income per capita	0.006 (0.005)	— —	— —	0.008* (0.005)	— —
Gender equality	— —	0.158 (0.208)	— —	0.140 (0.206)	— —
Birth decade	— —	— —	-0.015*** (0.005)	-0.015*** (0.005)	-0.015*** (0.005)
$R^2$	0.00	0.00	0.03	0.04	0.23
Clusters	75	70	70	70	70
Observations	507	475	475	475	475
<b>Panel (c): Heterogeneity in trust between women and men</b>					
Log income per capita	-0.004 (0.006)	— —	— —	-0.005 (0.006)	— —
Gender equality	— —	0.150 (0.144)	— —	0.116 (0.146)	— —
Birth decade	— —	— —	-0.019*** (0.005)	-0.019*** (0.005)	-0.019*** (0.005)
$R^2$	0.00	0.00	0.04	0.05	0.22
Clusters	75	70	70	70	70
Observations	507	475	475	475	475
<b>Panel (d): Heterogeneity in prosociality between women and men</b>					
Log income per capita	-0.005** (0.002)	— —	— —	-0.006** (0.003)	— —
Gender equality	— —	-0.051 (0.093)	— —	-0.077 (0.095)	— —
Birth decade	— —	— —	-0.013*** (0.003)	-0.014*** (0.003)	-0.014*** (0.003)
$R^2$	0.01	0.00	0.06	0.07	0.20
Clusters	75	70	70	70	70
Observations	507	475	475	475	475

*Note:* This table shows estimates from ordinary least squares regressions for determinants of preference heterogeneity between women and men for 75 countries observed over 7 birth decades. An observation is a country per birth decade. The dependent variable is the absolute gender difference in means of patience (Panel a), the absolute gender difference in means of willingness to take risks (Panel b), the absolute gender difference in means of trust (Panel c), or the absolute gender difference in means of prosociality (Panel d). Economic development is measured with 2012 real gross domestic product per capita in national accounts obtained from Penn World Tables (Feenstra et al. 2015). Gender equality is proxied with an index from the 2012 Global Gender Gap Report published by the World Economic Forum (Hausmann et al. 2012). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. Standard errors are clustered at the country level and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table S.10: Preference heterogeneity between women and men across countries (age-corrected measures)

Controlling for	Economic development (1)	Gender equality (2)	Cohort trends (3)	Full controls (4)	Cohort trends and fixed effects (5)
<b>Panel (a): Heterogeneity in patience between women and men</b>					
Log income per capita	0.006 (0.005)	—	—	0.004 (0.005)	—
Gender equality	—	0.257** (0.109)	—	0.235** (0.110)	—
Birth decade	—	—	-0.015*** (0.004)	-0.015*** (0.004)	-0.015*** (0.004)
$R^2$	0.01	0.01	0.06	0.08	0.32
Clusters	75	70	70	70	70
Observations	507	475	475	475	475
<b>Panel (b): Heterogeneity in willingness to take risks between women and men</b>					
Log income per capita	-0.007** (0.004)	—	—	-0.007* (0.004)	—
Gender equality	—	-0.027 (0.115)	—	-0.065 (0.121)	—
Birth decade	—	—	-0.020*** (0.004)	-0.020*** (0.004)	-0.020*** (0.004)
$R^2$	0.01	0.00	0.09	0.10	0.30
Clusters	75	70	70	70	70
Observations	507	475	475	475	475
<b>Panel (c): Heterogeneity in trust between women and men</b>					
Log income per capita	-0.007** (0.003)	—	—	-0.008** (0.004)	—
Gender equality	—	-0.078 (0.113)	—	-0.120 (0.111)	—
Birth decade	—	—	-0.022*** (0.004)	-0.022*** (0.004)	-0.023*** (0.004)
$R^2$	0.01	0.00	0.11	0.12	0.29
Clusters	75	70	70	70	70
Observations	507	475	475	475	475
<b>Panel (d): Heterogeneity in prosociality between women and men</b>					
Log income per capita	-0.007*** (0.002)	—	—	-0.009*** (0.002)	—
Gender equality	—	-0.026 (0.055)	—	-0.057 (0.050)	—
Birth decade	—	—	-0.015*** (0.002)	-0.015*** (0.002)	-0.015*** (0.002)
$R^2$	0.03	0.00	0.13	0.17	0.29
Clusters	75	70	70	70	70
Observations	507	475	475	475	475

*Note:* This table shows estimates from ordinary least squares regressions for determinants of preference heterogeneity between women and men for 75 countries observed over 7 birth decades. An observation is a country per birth decade. The dependent variable is the absolute gender difference in means of age-corrected patience (Panel a), the absolute gender difference in means of age-corrected willingness to take risks (Panel b), the absolute gender difference in means of age-corrected trust (Panel c), or the absolute gender difference in means of age-corrected prosociality (Panel d). Economic development is measured with 2012 real gross domestic product per capita in national accounts obtained from Penn World Tables (Feenstra et al. 2015). Gender equality is proxied with an index from the 2012 Global Gender Gap Report published by the World Economic Forum (Hausmann et al. 2012). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. Standard errors are clustered at the country level and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table S.11: Preference heterogeneity across cohorts: Controlling for population age structure

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
<b>Panel (a): Dyadic differences in means</b>				
Birth decade	-0.013*** (0.002)	-0.012*** (0.003)	-0.014*** (0.003)	-0.011*** (0.002)
Population share of birth decade	0.087** (0.040)	-0.064 (0.052)	-0.016 (0.031)	0.043 (0.039)
$R^2$	0.20	0.18	0.21	0.21
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<b>Panel (b): Dyadic differences in standard deviations</b>				
Birth decade	-0.022*** (0.004)	-0.007*** (0.002)	-0.007*** (0.002)	-0.005*** (0.002)
Population share of birth decade	0.170 (0.138)	-0.159** (0.073)	0.020 (0.073)	-0.080* (0.045)
$R^2$	0.27	0.24	0.25	0.29
Clusters	74	74	74	74
Observations	14258	14258	14258	14258

*Note:* This table shows estimates from ordinary least squares regressions for 2775 dyadic pairs composed of 75 countries observed over 7 birth decades. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth and the share of each birth decade in the total population. Standard errors are two-way clustered for both countries in dyadic pairs and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table S.12: Regression results with and without controls for dyadic differences in income per capita at time of birth

Absolute dyadic difference in	Patience		Risk-taking			Trust		Prosociality			
	Baseline specification (1)	No income (BL sample) (2)	No income (full sample) (3)	Baseline specification (4)	No income (BL sample) (5)	No income (full sample) (6)	Baseline specification (7)	No income (BL sample) (8)	Baseline specification (10)	No income (BL sample) (11)	No income (full sample) (12)
Panel (a): Dyadic differences in means											
Birth decade	-0.012*** (0.002)	-0.012*** (0.002)	-0.018*** (0.003)	-0.012*** (0.003)	-0.010*** (0.003)	-0.017*** (0.003)	-0.014*** (0.003)	-0.013*** (0.003)	-0.011*** (0.002)	-0.010*** (0.002)	-0.014*** (0.002)
Income differences (at time of birth)	0.004* (0.002)	—	—	0.009*** (0.003)	—	—	0.005* (0.002)	—	0.006*** (0.002)	—	—
R <sup>2</sup>	0.20	0.20	0.23	0.18	0.18	0.20	0.21	0.21	0.21	0.21	0.24
Clusters	74	74	75	74	74	75	74	74	74	74	75
Observations	14258	14258	19585	14258	14258	19585	14258	14258	14258	14258	19585
Panel (b): Dyadic differences in standard deviations											
Birth decade	-0.022*** (0.004)	-0.016*** (0.003)	-0.019*** (0.003)	-0.007*** (0.002)	-0.002 (0.002)	-0.005*** (0.002)	-0.007*** (0.002)	-0.005*** (0.002)	-0.005*** (0.002)	-0.002 (0.002)	-0.006*** (0.002)
Income differences (at time of birth)	0.036*** (0.011)	—	—	0.028*** (0.007)	—	—	0.007* (0.004)	—	0.015*** (0.003)	—	—
R <sup>2</sup>	0.27	0.25	0.23	0.23	0.21	0.16	0.25	0.25	0.29	0.28	0.23
Clusters	74	74	75	74	74	75	74	74	74	74	75
Observations	14258	14258	19585	14258	14258	19585	14258	14258	14258	14258	19585

*Note:* This table shows estimates from ordinary least squares regressions for dyadic pairs. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. All specifications include fixed effects for both countries in dyadic pairs. The baseline specification corresponds to the specification in Table 1 and includes a control for economic development at the time of birth. No income (BL sample) corresponds to the same specification without a control for economic development at the time of birth, estimated on the exact same sample as the baseline specification in Table 1. No income (full sample) corresponds to the same specification without a control for economic development at the time of birth, estimated on the full sample for which preference information is available. This sample contains one additional country due to missing information about income at birth. Standard errors are two-way clustered for both countries in dyadic pairs and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table S.13: Preference heterogeneity across cohorts: No time trend

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
<b>Panel (a): Dyadic differences in means</b>				
Income differences (at time of birth)	-0.011*** (0.003)	-0.005 (0.003)	-0.012*** (0.003)	-0.008*** (0.003)
$R^2$	0.14	0.14	0.15	0.14
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
<b>Panel (b): Dyadic differences in standard deviations</b>				
Income differences (at time of birth)	0.009 (0.009)	0.020*** (0.007)	-0.001 (0.004)	0.009** (0.004)
$R^2$	0.22	0.23	0.24	0.28
Clusters	74	74	74	74
Observations	14258	14258	14258	14258

*Note:* This table shows estimates from ordinary least squares regressions for 2775 dyadic pairs composed of 75 countries observed over 7 birth decades. The dependent variable is the absolute dyadic difference in means of age-corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). The income measure is real GDP per capita in international dollars, the respective coefficient has been scaled by 10,000. All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Standard errors are two-way clustered for both countries in dyadic pairs and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table S.14: Preference heterogeneity across cohorts by income convergence

Absolute dyadic difference in	Patience		Risk-taking		Trust		Prosociality	
	$\tau^y < \bar{\tau}$ (1)	$\tau^y > \bar{\tau}$ (2)	$\tau^y < \bar{\tau}$ (3)	$\tau^y > \bar{\tau}$ (4)	$\tau^y < \bar{\tau}$ (5)	$\tau^y > \bar{\tau}$ (6)	$\tau^y < \bar{\tau}$ (7)	$\tau^y > \bar{\tau}$ (8)
<b>Panel (a): Dyadic differences in means</b>								
Birth decade	-0.014*** (0.002)	-0.010*** (0.003)	-0.014*** (0.003)	-0.007* (0.004)	-0.015*** (0.003)	-0.014*** (0.004)	-0.012*** (0.002)	-0.011*** (0.002)
$R^2$	0.23	0.19	0.21	0.18	0.22	0.20	0.24	0.20
Clusters	73	71	73	71	73	71	73	71
Observations	6898	7360	6898	7360	6898	7360	6898	7360
<b>Panel (b): Dyadic differences in standard deviations</b>								
Birth decade	-0.013*** (0.002)	-0.032*** (0.005)	-0.008*** (0.002)	-0.008*** (0.002)	-0.006*** (0.002)	-0.009*** (0.003)	-0.007*** (0.002)	-0.004 (0.003)
$R^2$	0.30	0.41	0.21	0.36	0.30	0.28	0.31	0.31
Clusters	73	71	73	71	73	71	73	71
Observations	6898	7360	6898	7360	6898	7360	6898	7360

*Note:* This table shows estimates from ordinary least squares regressions for 2775 dyadic pairs composed of 75 countries observed over 7 birth decades. The sample is split according to dynamics in dyadic income differences.  $\tau^y$  refers to the slope coefficient from a regression of absolute dyadic differences in income per capita in a birth decade on a linear time trend and  $\bar{\tau}$  refers to the median slope coefficient. The sample is split into country pairs whose per-capita incomes have strongly converged ( $\tau^y > \bar{\tau}$ ) and country pairs whose income levels have only weakly converged or diverged ( $\tau^y < \bar{\tau}$ ). The dependent variable is the absolute dyadic difference in means of age-corrected average preferences (Panel a) or the absolute dyadic difference in standard deviations of age-corrected preferences (Panel b). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Standard errors are two-way clustered for both countries in dyadic pairs and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table S.15: Convergence in education levels

Dependent variable:	Population share with no schooling (1)	Population share with post-primary schooling (2)
Birth decade	-4.143*** (0.373)	-2.787*** (0.614)
$R^2$	0.55	0.29
Countries	71	71
Observations	13337	13337

*Note:* This table shows estimates from ordinary least squares regressions for 2556 dyadic pairs composed of 72 countries observed over 7 birth decades. The dependent variable is the share of the population without formal schooling (1) or the share of the population with post-primary schooling (2). Data on educational attainment are from Barro and Lee (2013). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Standard errors are two-way clustered for both countries in dyadic pairs and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .

Table S.16: Can convergence in education levels explain the decline in preference heterogeneity?

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
<b>Panel (a): Dyadic differences in the population share with no schooling</b>				
<i>Dependent variable: Dyadic differences in means</i>				
Population share with no schooling	0.129*** (0.022)	0.139*** (0.025)	0.144*** (0.025)	0.103*** (0.017)
$R^2$	0.14	0.15	0.15	0.16
Clusters	71	71	71	71
Observations	17547	17547	17547	17547
<i>Dependent variable: Dyadic differences in standard deviations</i>				
Population share with no schooling	0.189*** (0.034)	0.054*** (0.015)	0.072*** (0.020)	0.049*** (0.014)
$R^2$	0.22	0.14	0.19	0.22
Clusters	71	71	71	71
Observations	17547	17547	17547	17547
<b>Panel (b): Dyadic differences in the population share with post-primary schooling</b>				
<i>Dependent variable: Dyadic differences in means</i>				
Population share with post-primary schooling	-0.026*** (0.009)	-0.037*** (0.011)	-0.016* (0.009)	-0.010 (0.007)
$R^2$	0.10	0.11	0.09	0.11
Clusters	71	71	71	71
Observations	17547	17547	17547	17547
<i>Dependent variable: Dyadic differences in standard deviations</i>				
Population share with post-primary schooling	0.052* (0.031)	-0.014* (0.007)	0.000 (0.011)	0.000 (0.006)
$R^2$	0.19	0.14	0.18	0.21
Clusters	71	71	71	71
Observations	17547	17547	17547	17547

*Note:* This table shows estimates from ordinary least squares regressions for dyadic pairs composed of 71 countries observed over 7 birth decades. Differences in education levels are measured by dyadic differences in the population share with no schooling (Panel a) or by differences in education levels are measured by dyadic differences in the population share with post-primary schooling (Panel b). The dependent variable is the absolute dyadic difference in means of age-corrected preferences (top of Panels a and b) or the absolute dyadic difference in standard deviations of age-corrected preferences (bottom of Panels a and b). All specifications include fixed effects for both countries in dyadic pairs and control for economic development at the time of birth. Standard errors are two-way clustered for both countries in dyadic pairs and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .



Table S.17: Preference heterogeneity across cohorts: Controlling for convergence in education

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
<b>Panel (a): Convergence in any form of formal education</b>				
<i>Dependent variable: Dyadic differences in means</i>				
Birth decade	-0.012*** (0.002)	-0.009*** (0.003)	-0.012*** (0.003)	-0.009*** (0.002)
Population share with no schooling	0.030 (0.018)	0.048** (0.023)	0.013 (0.020)	0.044* (0.023)
$R^2$	0.20	0.19	0.21	0.22
Countries	71	71	71	71
Observations	13337	13337	13337	13337
<i>Dependent variable: Dyadic differences in standard deviations</i>				
Birth decade	-0.020*** (0.004)	-0.007** (0.003)	-0.007*** (0.002)	-0.005** (0.002)
Population share with no schooling	0.072* (0.037)	-0.001 (0.018)	-0.001 (0.013)	-0.000 (0.010)
$R^2$	0.29	0.22	0.24	0.29
Countries	71	71	71	71
Observations	13337	13337	13337	13337
<b>Panel (b): Convergence in post-primary education</b>				
<i>Dependent variable: Dyadic differences in means</i>				
Birth decade	-0.013*** (0.002)	-0.012*** (0.003)	-0.013*** (0.003)	-0.012*** (0.002)
Population share with post-primary schooling	-0.021*** (0.006)	-0.026*** (0.006)	-0.018*** (0.005)	-0.013*** (0.004)
$R^2$	0.20	0.18	0.21	0.21
Countries	71	71	71	71
Observations	13337	13337	13337	13337
<i>Dependent variable: Dyadic differences in standard deviations</i>				
Birth decade	-0.021*** (0.004)	-0.008*** (0.003)	-0.007*** (0.002)	-0.005** (0.002)
Population share with post-primary schooling	0.048** (0.024)	-0.023** (0.010)	-0.010 (0.009)	-0.001 (0.006)
$R^2$	0.29	0.22	0.24	0.29
Countries	71	71	71	71
Observations	13337	13337	13337	13337

*Note:* This table shows estimates from ordinary least squares for 2556 dyadic pairs composed of 72 countries observed over 7 birth decades. Specifications in Panel (a) control for absolute dyadic differences in the population share without formal schooling, whereas specifications in Panel (b) control for absolute dyadic differences in the population share with post-primary education (data from Barro and Lee 2013). The dependent variable is the absolute dyadic difference in means of age-corrected preferences (top of Panels a and b) or the absolute dyadic difference in standard deviations of age-corrected preferences (bottom of Panels a and b). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. All specifications include fixed effects for both countries in dyadic pairs, and control for economic development at the time of birth. Standard errors are two-way clustered for both countries in dyadic pairs and reported in parentheses. Asterisks indicate significance levels: \*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ .