Have Preferences Become More Similar Worldwide?*

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October 30, 2024

Abstract

Recent evidence shows substantial heterogeneity in time, risk, and social preferences across and within populations; yet little is known about the dynamics of the heterogeneity in these preferences across generations. We apply a novel identification strategy based on dyadic differences in preferences using representative data for more than 450,000 individuals from 118 countries and territories. Our results document that, among later-born cohorts, preferences are more similar across countries. This decline in preference heterogeneity is similar for women and men and is related to country-specific differences in preference endowments, population composition, and socioeconomic conditions during formative years. The decline in preference heterogeneity is related to economic convergence and more pronounced the greater the preference heterogeneity among earlier-born cohorts.

JEL classification: D01, J10, J11

Keywords: Preference heterogeneity, diversity, patience, willingness to take risks, trust, prosociality

*The authors wish to thank Quamrul Ashraf, Anke Becker, Simone Bertoli, David E. Bloom, Pedro dal Bó, Matteo Cervellati, Thomas Dohmen, James Fenske, Oded Galor, Fabian Kosse, Cecilia García-Peñalosa, Stelios Michalopoulos, Peter Pedroni, Louis Putterman, Hans-Martin von Gaudecker, David Weil, Leo Zucker, seminar participants at AMSE Marseille, briq Institute Bonn, Brown University, CERDI Clermont-Ferrand, Heidelberg University, Linnaeus University, Lund University, the Max-Planck-Institute for Public Goods in Bonn, Williams College, Würzburg University, and the participants of the conference "Deep-rooted Factors in Comparative Development" at Brown University for helpful comments and suggestions. Support by the German Research Foundation (*Deutsche Forschungsgemeinschaft*) through grants 471897412 and 491578970 and through CRC TRR 190 (Project 280092119, A07) is gratefully acknowledged.
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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. The distributions of preferences thereby determine the functioning of markets, institutions, and ultimately economic development.

Recent work 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 within families (Dohmen et al. 2012; Chowdhury et al. 2022), 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. We test two hypotheses that predict opposing dynamics of preference heterogeneity: (i) Preference heterogeneity persists and is constant or even higher among recent birth cohorts (persistence hypothesis) and (ii) preference heterogeneity decreases and 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 (Giuliano and Nunn 2021; 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; Jackson and Medvedev 2024). 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).

In contrast, the convergence hypothesis implies that global preference heterogeneity decreases across birth cohorts as the result of transformative processes related to globalization,

technological progress, sectoral transformation, and institutional change that expose people to increasingly similar information, experiences, and socioeconomic conditions. Conceptually, preferences may change at the population level when people update them in response to changes in the ecological and socioeconomic environments that shape social interactions and influence preference formation. Preferences may also change at the population level as earlier-born cohorts are replaced by newer cohorts who experienced more homogeneous environments during 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; Schildberg-Hörisch 2018). In line with this evidence, recent sociological literature documents that cultural change reflects cohort replacement rather than contemporaneous social influences and updating (Vaisey and Lizardo 2016; Kiley and Vaisey 2020, 2021). Economic literature further supports the view that the socioeconomic environment during impressionable years influences preference formation with lifelong consequences (Malmendier and Nagel 2011; Kosse et al. 2020; Cotofan et al. 2023). In an economically and culturally increasingly connected world, cohort replacement thus predicts lower preference heterogeneity among later-born cohorts.

Here we examine the dynamics of preference heterogeneity using a novel empirical approach. Our approach operationalizes preference heterogeneity in terms of absolute differences in means or standard deviations of preference measures between pairs of countries (dyads) and compares those differences across birth cohorts. This dyadic approach is naturally suited to study variation in 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, it can be readily modified to investigate the cohort patterns of preference heterogeneity between population groups within the same country.

We apply this dyadic approach to preference measures from two data sets. The first data set is the Global Preferences Survey, which contains preference measures for 80,000 individuals elicited in 76 countries. The data were collected in the Gallup World Poll 2012 and provide cross-sectional information on preference heterogeneity across birth cohorts. The second data set is the World Values Survey, which contains preference measures for 380,000 individuals in 107 countries and territories observed across seven survey waves during 1981–2022. The repeated cross-sections of the World Values Survey provide longitudinal information on preference heterogeneity across birth cohorts and over time. The countries in both data sets span all continents and represent over 90 percent of the world's population and gross domestic product.

As the dynamics of preference heterogeneity might differ across preferences, we conduct our analysis for time, risk, and social preferences rather than restricting it to a single preference. To isolate cohort patterns in preference heterogeneity, we correct preference measures for systematic age variation using country period-specific age profiles. We estimate these profiles with various functional forms and show that our findings do not hinge on the specific functional form chosen.

Our results document that between-country preference heterogeneity in patience, willingness to take risks, trust, and prosociality has declined across birth cohorts. This finding holds for both means and standard deviations of the corresponding preference distributions and obtains for both data sets. We further find declines in preference heterogeneity across birth cohorts for women and men and when comparing pairs of high-income countries, pairs of low-income countries, and mixed pairs. Extended analyses suggest the magnitude of this decline relates to country-specific differences in preference endowments, population composition, and socioeconomic conditions during the formative years of later-born cohorts. Overall, the decline in preference heterogeneity across birth cohorts tends to be larger among country-pairs with greater initial differences between earlier-born cohorts, pointing to a global process of preference 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). Our findings introduce 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 dynamics of heterogeneity in uncorrected and age-corrected preference measures, we provide a new angle on the separability of age and cohort patterns.

The finding of a similar decline in preference heterogeneity across birth cohorts for women and men constitutes another important insight. Previous work reported seemingly contradictory evidence of appreciable convergence in socioeconomic outcomes between women and men in high-income countries (Olivetti and Petrongolo 2016) and larger gender gaps in preferences (Falk and Hermle 2018; Cuevas et al. 2021). Our results provide no evidence for increased or decreased gender differentiation in preferences as countries develop, consistent with a decline in socioeconomic differences between women and men.

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 birth 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 preference heterogeneity.

Work on cultural change 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 instead focuses on dyadic differences in preferences across birth cohorts, providing new evidence of population dynamics in preference heterogeneity. We concentrate on economic preferences that build the core of decision-making in economic theory. These preferences are formed early in life and tend to be stable over the life course like other psychological traits (e.g., Schildberg-Hörisch 2018; Mata et al. 2018; Fitzenberger et al. 2022). We refrain from studying dynamics in other survey measures related to values or attitudes, which are more difficult to interpret in the context of economic decision-making and whose malleability over the life course is greater and less well understood.

Related work on the relative importance of cultural diversity across and within countries has used survey-based measures of cultural distance (Alesina et al. 2017), fractionalization and cultural fixation (Desmet et al. 2017; Muthukrishna et al. 2020; Desmet and Wacziarg 2021), or variability in survey response patterns (Jackson and Medvedev 2024). Whereas this literature focused on similarity and dissimilarity of populations in response behavior to a wide range of questions about values, beliefs, and attitudes in various dimensions and focused on period trends without accounting for cohort heterogeneity, we here concentrate on estimating cohort trends in preference heterogeneity. Our dyadic approach offers several methodological advantages over descriptive measures of cultural diversity based on variation in survey responses or the cultural fixation index defined as the ratio of the between-group variance to the total variance in a cultural trait. First, it enables us to control for potential confounders and effect heterogeneity. Second, it allows us to examine plausible sources of the dynamics of preference heterogeneity. And third, it facilitates investigating variation in different moments of preference distributions and relative to various comparison benchmarks.

The remainder of this paper is structured as follows. Section 2 describes the data and our methodology. Section 3 presents our main finding of a decline in preference heterogeneity across

birth cohorts and reports results of additional analyses based on alternative data, preference measures, and extensions of our empirical approach. Section 4 discusses effect heterogeneity and potential mechanisms that may explain the documented decline in preference heterogeneity across cohorts. Section 5 concludes this paper.

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 from two data sources. Our first data source is 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).[1] The Global Preferences Survey contains information about six distinct preferences for approximately 80,000 individuals elicited in representative samples from 76 countries around the world (24 from Europe, 7 from North America, 8 from South America, 22 from Asia, 14 from Africa, and Australia). 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). Each country sample includes approximately 1,000 randomly selected respondents. Population weights provided by the Gallup World Poll are used to achieve ex-post representativeness.

Our second data source is the World Values Survey. We use this survey to verify the generality of our results and conduct analyses leveraging longitudinal variation in preferences across birth cohorts over time. The data contain information on preference measures from 380,000 individuals across 107 countries and territories around the world collected across seven waves during 1981–2022. In contrast to the Global Preferences Survey, however, the preference measures in the World Values Survey were not validated. The only validated measure available in both data sets is that for trust, which is elicited with the same survey question. Nevertheless,

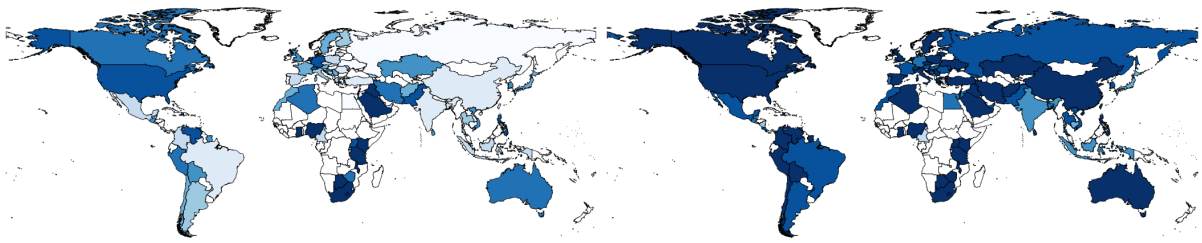
[1] The original validation by Falk et al. (2023) was based on a student sample from a German university. Several studies were able to validate the same or similar survey items for risk preferences in the general German population (Dohmen et al. 2011) and in various populations across 65 high-income 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 use of the World Values Survey allows us to provide a broad picture of cohort trends in preferences over a long period. Ex-post representativeness is achieved by using population weights provided by the World Values Survey.

2.2 Preference Measures

The Global Preferences Survey contains measures for patience, willingness to take risks, trust, altruism (the willingness to incur cost in order to benefit others without expecting anything in return), positive reciprocity (the willingness to reward kind behavior by others), and negative reciprocity (the willingness to punish unkind behavior by others). These measures capture economic and social preferences, except for trust, which reflects a positive belief about the behavior of 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 for their high predictive power in capturing each preference dimension through a validation procedure 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 approach is preferable to alternative ways of index construction such as principal component analysis because of the low correlation between the three dimensions of prosociality (Dohmen et al. 2009; Falk et al. 2018). Table S.1 in the Supplementary Material reports descriptive statistics for the Global Preferences Survey data.

When conducting the analysis with data from the World Values Survey, we use alternative, non-validated proxy measures for patience, willingness to take risks, and prosociality that were used in previous literature (Minkov and Hofstede 2012; Alesina and Giuliano 2015). Specifically, the analysis is based on responses to a question about whether thrift and saving money is a desirable quality of children as a proxy for patience, to a question about how important it is to experience adventures and taking risks as a proxy for risk-taking, and to a question about whether not being selfish (unselfishness) is a desirable quality of children as proxy for prosociality. While these measures are imperfect proxies compared to the validated measures contained in the Global Preferences Survey, they are correlated with them (Falk et al. 2018, Table II). The World Values



(a) 1940 birth decade (b) 1980 birth decade

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

Survey further contains the same question about trust as the Global Preferences Survey. Table S.2 reports descriptive statistics for the World Values Survey data.

2.3 Empirical Methodology

An inspection of the raw data indicates that worldwide preference heterogeneity varies across members of different birth cohorts. For instance, a comparison of the country averages of the measured willingness to take risks in the Global Preferences Survey for the 1940–1949 and 1980–1989 birth cohorts suggests that 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 the trends for each preference measure are similar across countries, this evidence is not yet proof of declining preference heterogeneity. These trends may simply reflect shifts in average preference levels: 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 preference within birth cohorts, is approximately constant across birth cohorts in risk-taking, trust, and prosociality, and, if anything, slightly increases in patience (Figure S.5).

Empirical Strategy. Next, we develop an empirical strategy to identify the dynamics of preference heterogeneity across birth cohorts. The raw trends in preference means and standard deviations might reflect cohort effects, age patterns, heterogeneity over the life cycle, or selective attrition due to, for instance, an advantage of certain preferences to survive to older ages. 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 (or in 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 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, $H^{mean}_{d(i,j),t}$, is constructed as the absolute difference in the cohort-specific country means,

$$H^{mean}_{d(i,j),t} = \left| \mu_{i,t} - \mu_{j,t} \right| .$$

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

$$H^{sd}_{d(i,j),t} = \left| \sigma_{i,t} - \sigma_{j,t} \right| .$$

For the construction of cohort-specific means and standard deviations for each country, we use the sampling weights provided by the Gallup World Poll and the World Values Survey. On average, country-cohort cells contain 149 observations in the Global Preferences Survey and 222 in the World Values Survey. 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 each 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, and 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 showing that age profiles for risk preferences and various personality traits are stable across birth cohorts (Fitzenberger et al. 2022). Moreover, previous work has examined and confirmed the stability of preferences by documenting 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 constructed dyadic measures of preference heterogeneity based on age-corrected preferences. These measures purge respondents' preferences of a country-specific quadratic age trend before aggregating the data in cohort cells and arranging them in country dyads. In robustness analyses, we also apply country-specific age corrections that use higher-order polynomials or non-parametric age profiles to account for potentially non-monotonic and discontinuous age effects. Our age correction implicitly assumes that age and cohort effects can be separated, and that the specification of the age profile is appropriate to disentangle the two dimensions. If the separability assumption were violated, the age correction would absorb variation in the cohort dimension. This absorption would work toward finding persistence of preference heterogeneity. Any evidence of decreasing or increasing preference heterogeneity would then constitute a lower bound of the true effect.

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,

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

where $Age_{r,k,t}$ denotes respondents' age and $\widehat{\gamma}_{0,k}$, $\widehat{\gamma}_{1,k}$, and $\widehat{\gamma}_{2,k}$ represent country-specific coefficient estimates. When analyzing the World Values Survey data, we perform this age correction separately for each survey wave. We then use the age-corrected preferences to construct age-corrected analogues to our measures of preference heterogeneity, $\tilde{H}^{mean}_{d(i,j),t}$ and $\tilde{H}^{sd}_{d(i,j),t}$. 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 and the World Values Survey.

Both uncorrected and age-corrected preferences are approximately normally distributed (Figures S.10 and S.11). 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.13 and S.14). This first piece of evidence highlights a key difference of using a dyadic approach to examine the dynamics of preference heterogeneity across birth cohorts as opposed to using an interpersonal comparison. Whereas within-country preference heterogeneity has been approximately stable (Figure S.5), the dyadic differences indicate that between-country 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 ζ_i and ζ_j. In robustness analyses, we also use specifications that additionally control for dyad-specific fixed effects ζ_{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 cohort trend $D(t)$ for seven birth decades in the Global Preferences Survey, covering the 1930s to the 1990s, and nine birth decades in the World Values Survey, covering the 1910s to the 1990s. We conduct this analysis based on both uncorrected and age-corrected measures of preference heterogeneity. The coefficient of interest is τ. The persistence hypothesis predicts that preference heterogeneity does not vary across birth cohorts, suggesting a τ close to zero. Divergence instead implies a positive estimate of τ, 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 τ, 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 more recent birth cohorts.

Note that it is inessential for the answer to our research question whether population dynamics of preference heterogeneity are associated with birth cohorts or age groups. However, it is unlikely that the variation in preference heterogeneity across country pairs is primarily associated with variation across age groups rather than birth cohorts. The dyadic design of our empirical model absorbs common age and life cycle patterns in preferences by leveraging preference heterogeneity between members of the same age group across countries. Moreover, we account for heterogeneity in country-specific age profiles by age-correcting preference measures. We will discuss this point in more detail subsequently.

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. 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, capturing systematic variation, for instance, related to cultural, historical, institutional, demographic, and geographic factors. The fixed effects also eliminate potential measurement error in preferences related to differences in the implementation of the elicitation protocol across countries for economic, cultural, and institutional reasons. Any remaining measurement error in preferences would only affect the dependent variable and thus inflate standard errors but not bias the coefficient of interest. Moreover, 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 Have Preferences Become More Similar Worldwide?

3.1 Evidence from Cross-Sectional Data in the Global Preferences Survey

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.

A significant portion of the decline in preference heterogeneity can be attributed to cohort effects even after preferences are corrected for variation in age patterns. The estimated cohort trends in preference means are about one-third to one-half smaller when preferences are age-corrected, with the exception of prosociality for which the estimated cohort trend grows larger. This result provides indirect support for the separability of age and cohort effects as the age-corrected measures retain systematic variation that is informative of the dynamics of preference heterogeneity across birth cohorts. If age and cohort effects were not separable, the age correction would absorb the joint age-cohort variation, which would work towards finding persistence in preference heterogeneity across birth cohorts.

Additional analyses with alternative, more flexible age corrections confirm that preference heterogeneity across countries is lower among recent birth cohorts. Specifically, we replicated the estimation for age-corrected measures based on country-specific cubic and quartic age trends, and for age-corrected measures that allow for flexible country-specific age patterns in 5-year age bins. These age corrections account for potentially non-monotonic and discontinuous country-specific age patterns and deliver similar results as the main analysis (Table S.3). Notably, these age corrections are equally or more flexible than similar specifications in related studies on preference heterogeneity across birth cohorts (e.g., Cotofan et al. 2023; Carreri and Teso 2023).

Extended analyses corroborate the finding of a decline in preference heterogeneity across birth cohorts. 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 while increasing the variance of preference heterogeneity explained by cohort patterns (Table S.4). 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

Table 1: Preference heterogeneity across cohorts: Regression results

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
Panel (a): Preference heterogeneity: Uncorrected measures				
Dependent variable: Dyadic differences in means				
Birth decade	-0.027**	-0.020***	-0.021***	-0.008**
	(0.011)	(0.006)	(0.005)	(0.004)
R^2	0.53	0.43	0.33	0.40
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Dependent variable: Dyadic differences in standard deviations				
Birth decade	-0.022***	-0.007***	-0.007***	-0.005***
	(0.004)	(0.003)	(0.002)	(0.002)
R^2	0.27	0.23	0.25	0.29
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Panel (b): Preference heterogeneity: Age-corrected measures				
Dependent variable: Dyadic differences in means				
Birth decade	-0.012***	-0.012***	-0.014***	-0.011***
	(0.002)	(0.003)	(0.003)	(0.002)
R^2	0.20	0.18	0.21	0.21
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Dependent variable: Dyadic differences in standard deviations				
Birth decade	-0.022***	-0.007***	-0.007***	-0.005***
	(0.004)	(0.002)	(0.002)	(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; data from the Global Preferences Survey. 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: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

heterogeneity (Table S.5). We find a similar decline in preference heterogeneity across birth cohorts as in our main analysis 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-born cohorts for which the unconditional evidence shows larger preference heterogeneity: We consistently document a decline in preference heterogeneity across birth cohorts in means, and a somewhat weaker decline in preference heterogeneity across birth cohorts in standard deviations (Figure S.8).

Quantitatively, the decline in preference heterogeneity across birth cohorts is sizable. For instance, the dyadic difference in patience among cohorts born in the 1980s is predicted to be about 0.1 standard deviations smaller than among cohorts born in the 1950s; this decline represents a decrease in preference heterogeneity of 8 percent over the period 1950–1980, as measured by the 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). The predicted declines are roughly of the same size as the female-male gap in preference levels (see, e.g., Falk et al. 2018, Table V), indicating that cohort replacement accounts for significant changes in preference heterogeneity.

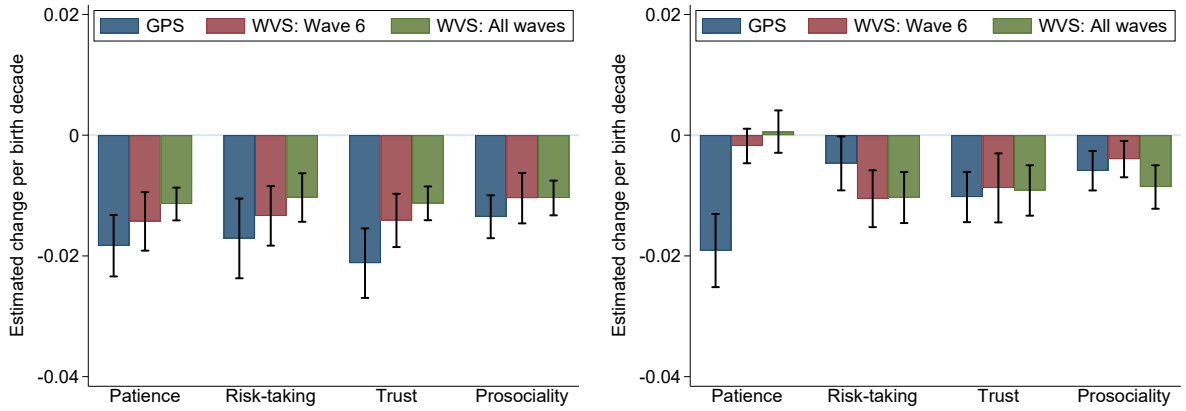
3.2 Evidence from Longitudinal Data in the World Values Survey

We next analyze cohort trends in preference heterogeneity using data from the World Values Survey. The Global Preferences Survey and the World Values Survey differ in the survey items for preference measurement, survey infrastructure, and cover country samples that do not exactly correspond to one another. These differences allow us to use the World Values Survey as an alternative data source for assessing the external and internal validity of our results.

External Validity. We compare the results from the Global Preferences Survey with those from World Values Survey in two steps. First, we present results for Wave 6 of the World Values Survey, which was approximately contemporaneous with the Global Preferences Survey. Second, we use data from all seven waves of the World Values Survey to consider longitudinal variation in preferences across birth cohorts and control for country-period-specific age patterns and confounds. The inclusion of all waves offers a comprehensive picture of cohort trends in preferences by containing information for up to 107 countries and territories over about 40 years. For this analysis, we conduct the country-specific age correction of preference measures for each survey wave separately, thereby relaxing the implicit assumption of stable age profiles over time. In addition, we account for country-wave-specific fixed effects.

The results document that the evolution of heterogeneity in patience, risk-taking, trust, and prosociality across birth cohorts is similar in the two samples, whether considering only Wave 6 of the World Values Survey or all available waves (Figure 2). Despite differences in measurement of the preference proxies, the estimated cohort trends closely resemble our main findings qualitatively and quantitatively for all preference dimensions. The only exception is the standard deviation of the patience measure of the World Values Survey. This measure is only moderately correlated with the validated patience measure in the Global Preferences Survey (Falk et al. 2018, Table II) and is arguably a less adequate measure for time preference.[2]

[2]The declining heterogeneity in trust might not only reflect an increasing homogeneity in people's preferences



(a) Means (b) Standard deviations

Note: This figure contrasts estimates of cohort trends in preference heterogeneity derived from the Global Preferences Survey (GPS) with estimates of cohort 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.9).

Figure 2: Preference heterogeneity across cohorts: Cross-sectional versus longitudinal data

Internal Validity. The results so far document that preference heterogeneity is smaller among later-born cohorts. This finding holds both for dyadic measures of preference heterogeneity based on uncorrected preferences and based on age-corrected preferences that are purged of a country-specific age profile—or, in the case of the World Values Survey, a country-wave-specific age profile. A concern is that this age correction might conflate systematic country-specific variation across age groups and birth cohorts. To address this concern, we replicate the analysis for data obtained with a more extensive correction that accounts for both country-specific age and cohort variation. Specifically, we construct dyadic measures of preference heterogeneity based on residuals of regressions that project preferences in the Global Preferences Survey on country-specific age trends and income at the time of birth. This correction follows the logic of using non-linear proxies for cohort variation (here income at birth) to disentangle the inherent multicollinearity between age and birth cohorts (see, e.g., Heckman and Robb 1985). The results confirm that preference heterogeneity in means and standard deviations is lower among

to trust others but also a convergence in their beliefs about the trustworthiness of others and, more generally, social norms toward strangers. To distinguish among these two interpretations, we replicated the analysis for two separate survey questions regarding respondents' trust in people they personally know and in people they meet for the first time. Whereas beliefs about trustworthiness of others and social norms are primary concerns when meeting people for the first time, the preference for trusting a person is arguably more important for trust in people respondents personally know. The corresponding results show a decline in heterogeneity for both measures, with the effect being slightly larger for the measure related to first-time encounters (Table S.9).

later-born cohorts (Table S.10).

To make further progress regarding the dynamics of preference heterogeneity, we use the repeated cross-sections of the World Values Survey, which provide us with longitudinal variation in preference measures for birth cohorts. This structure allows us to simultaneously correct preference measures for systematic country-specific age and cohort profiles, irrespective of the exact functional forms of those profiles. The correction is possible because the same birth cohorts are observed at different ages within the same country and the same age groups are observed across different birth cohorts. In addition to purging preferences measures of country-specific age and cohort profiles, we control for between-country variation in population age structure, accounting for the possibility that countries are in different stages of the demographic transition.

The estimation results in Table 2 demonstrate that preferences have become more similar worldwide. Notably, the cohort trends estimated from the longitudinal data in the World Values Survey fall in the same ballpark as those estimated from the cross-sectional data in the Global Preferences Survey (Table 1). This congruence of the results for cross-sectional and longitudinal data supports our econometric approach to the separation of age and cohort effects. Our finding of a decline in preference heterogeneity across birth cohorts does neither hinge on the assumption of stable age profiles in preferences over time (Figure 2) nor on the functional form we use for age-correcting the preference measures in the Global Preferences Survey (Table 2). Furthermore, by controlling for the between-country dyadic variation in population age structure in addition to removing within-country age profiles for both countries in dyadic pairs, this analysis limits the scope for age effects. Instead, the estimation results indicate a sizable decline in preference heterogeneity across birth cohorts, consistent with socialization in an increasingly homogeneous, globalized environment. We next examine potential explanations for this finding.

4 Robustness, Effect Heterogeneity, and Mechanisms

4.1 Alternative Explanations

Selection. One potential mechanism for differences in preference heterogeneity across birth cohorts could be the existence of selection related to sampling, mortality, or adaptation to heterogeneous living environments. Yet, this mechanism does not straightforwardly explain smaller preference heterogeneity among later-born cohorts. Selective sampling, such as oversampling of individuals with high cognitive ability among earlier-born cohorts in developing countries, would

Table 2: Cohort trends in preference heterogeneity: Controlling for population age structure

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
Panel (a): Dyadic differences in means				
Cross-country cohort trends (conditional on country-specific age group and cohort fixed effects)				
Birth decade	-0.019***	-0.011***	-0.015***	-0.013***
	(0.003)	(0.003)	(0.002)	(0.003)
Population share of	0.133**	-0.027	0.006	0.050
birth decade	(0.059)	(0.040)	(0.045)	(0.054)
R^2	0.26	0.44	0.33	0.31
Clusters	269	100	269	267
Observations	39237	16837	38959	38763
Panel (b): Dyadic differences in standard deviations				
Cross-country cohort trends (conditional on country-specific age group and cohort fixed effects)				
Birth decade	-0.004*	-0.014***	-0.018***	-0.012***
	(0.003)	(0.002)	(0.003)	(0.002)
Population share of	-0.044	0.409***	1.038***	0.086*
birth decade	(0.050)	(0.099)	(0.171)	(0.048)
R^2	0.39	0.29	0.32	0.47
Clusters	269	100	269	267
Observations	39124	16776	38887	38604

Note: This table shows estimates from ordinary least squares regressions for 3003 dyadic pairs composed of 78 countries observed over 7 waves and 7 birth decades in the cases of patience, trust, and prosociality, and observed over 2 waves and 7 birth decades in the case of risk-taking; data from the World Values Survey. The dependent variable is the absolute dyadic difference in means of preferences that were corrected for country-specific age group fixed effects and country-specific birth decade fixed effects (Panel a) or the absolute dyadic difference in standard deviations of preferences that were corrected for country-specific age group fixed effects and country-specific birth decade fixed effects (Panel b). The estimated cohort trends are multiplied by 10 to reflect changes per birth decade. All specifications include country-wave fixed effects for both countries in dyadic pairs and control for the share of each birth decade in the total population. Standard errors are two-way clustered at the country-wave level for both countries in dyadic pairs and reported in parentheses. Asterisks indicate significance levels: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

likely create a more similar global sample of individuals, working against a decline in preference heterogeneity. Moreover, mortality differences are closely related to systematic variation in age patterns (Falk et al. 2019) and thus accounted for in our age-corrected measures. If certain traits like high patience, low willingness to take risks, or high prosociality provide comparative advantages for survival, one would expect higher dyadic differences among later-born cohorts rather than lower ones. Specifications that control for dyadic differences in population shares of birth decades confirm the main results, suggesting historical fertility and mortality differences do not drive the trend toward increased similarity in preferences (Tables 2 and S.11). Finally, cohort differences in the understanding of survey questions do not explain the documented preference patterns. For instance, if earlier-born cohorts understand their preferences better than later-born cohorts, preference heterogeneity should be higher not lower among later-born cohorts. Such cohort differences would also lead to 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. The preference measures are bounded by the response scale of the respective survey items. Bunching in responses at these boundaries could potentially impact our findings if preference levels systematically trend over time. In fact, preferences trend across birth cohorts, as is evident from their unconditional means and standard deviations (Figures S.4 and S.5). However, these trends are moderate in magnitude and vary across preferences. Moreover, bounding effects would need to influence not only the preference measures but also their dyadic differences to affect our results. The data show that the preference distributions are approximately normal and lack any signs of bunching or bounding (Figures S.10 and S.11).

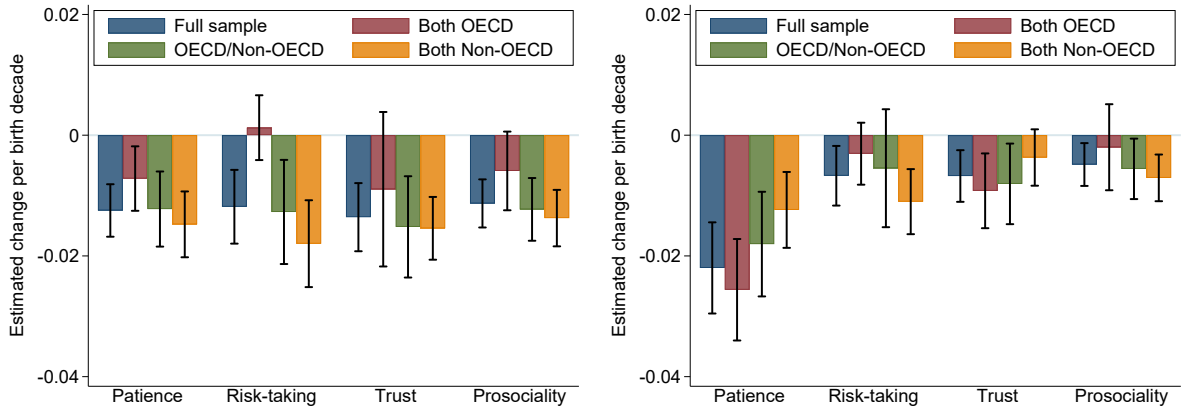
4.2 Comparison to Measures of Diversity

Recent literature on cultural and psychological diversity has used a cultural fixation index (e.g., Desmet et al. 2017; Muthukrishna et al. 2020). This index is 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. Specifically, the cultural fixation index (F_{ST}) is defined as the ratio of between-group variance relative to total variance in a cultural trait (i.e., responses to a specific survey question). A higher ratio indicates greater cultural distance.

We checked the validity of our results with this index. We operationalized this measure by computing 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 later-born cohorts (Figure S.12). Moreover, the declines in these indices across birth cohorts align with the declines observed in the dyadic differences of the preference measures. Importantly, the declines in these indices reflect unconditional trends that, unlike our main results, are not conditioned on country fixed effects and controls which are not 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 use of the cultural fixation index in the present context.

4.3 Heterogeneity along the Development Path

Heterogeneity along the development path is a prime candidate for explaining systematic variations in preference heterogeneity. Therefore, we separately analyze cohort trends in



(a) Means (b) Standard deviations

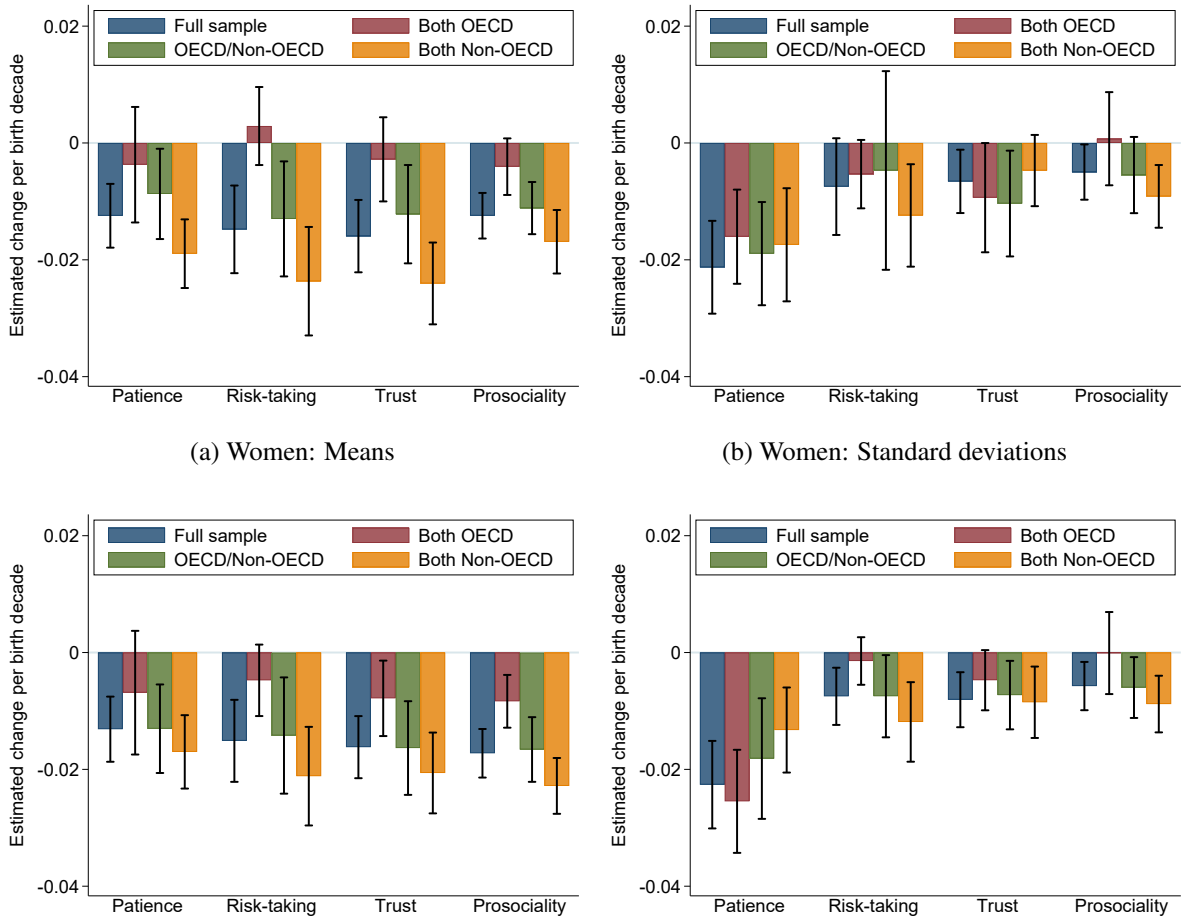
Note: This figure shows estimates of cohort trends in preference heterogeneity and 95% confidence intervals for pairs of countries with different levels of development. An observation is a country pair per birth decade. The dependent variable is the absolute dyadic difference in means of age-corrected 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 3: Preference heterogeneity across cohorts by level of economic development

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. Our analysis reveals that the decline in preference heterogeneity across birth cohorts is a global phenomenon (Figure 3). Interestingly, preference heterogeneity in means has declined most among pairs of non-OECD countries and least among pairs of OECD countries, with mixed pairs ranging in between. These results suggest that economic factors shape global dynamics in preference heterogeneity across birth cohorts.

4.4 Heterogeneity between Women and Men

Recent findings reported greater gender-related differences in preferences in countries with higher levels of economic development and gender equalization (Falk and Hermle 2018; Cuevas et al. 2021). Considering this evidence, we test whether the decline in preference heterogeneity across birth cohorts differs between women and men, and whether the gender-specific patterns are similar for high-income and low-income countries. The results show a significant decline in means and standard deviations of cohort-specific preference distributions for both women and men, confirming that changes in preference heterogeneity vary with economic development (Figure 4). Additional results show no substantive differences in cohort trends between women



(a) Women: Means

(b) Women: Standard deviations

(c) Men: Means

(d) Men: Standard deviations

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 4: Preference heterogeneity across cohorts by gender

and men, suggesting a universal pattern regardless of gender (Figure S.15).[3]

4.5 Potential Mechanisms

We end our analysis by testing potential mechanisms for the decline in preference heterogeneity across birth cohorts. We first focus on economic development and convergence, and then shift to the role of the extent of existing heterogeneity in preferences and its determinants, such as genetic diversity, population composition and mobility, and religious norms. We discuss

[3]The results from unreported analyses rule out that the decline in preference heterogeneity across countries masks an increase in preference heterogeneity between women and men within countries. In fact, estimates derived from dyadic differences between women and men in the same birth cohort and country as the dependent variable show that preference heterogeneity between women and men has also declined within countries.

each of these aspects subsequently. For brevity, we only report results based on age-corrected preferences from the Global Preferences Survey, unless otherwise noted.

Economic Convergence. To account for income dynamics as driver of the decline in preference heterogeneity across birth cohorts, 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 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.13).

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.14). Notably, this coefficient changes sign when cohort trends are included (Table S.5), suggesting that greater dyadic income differences are associated with larger preference heterogeneity. This finding implies that while economic convergence contributes to lower preference heterogeneity, it does not explain the cohort trend in preference heterogeneity. A similar result emerges 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.15). Taken together, these findings suggest economic convergence as a driver—but not the exclusive driver—of the decline in preference heterogeneity across birth cohorts.

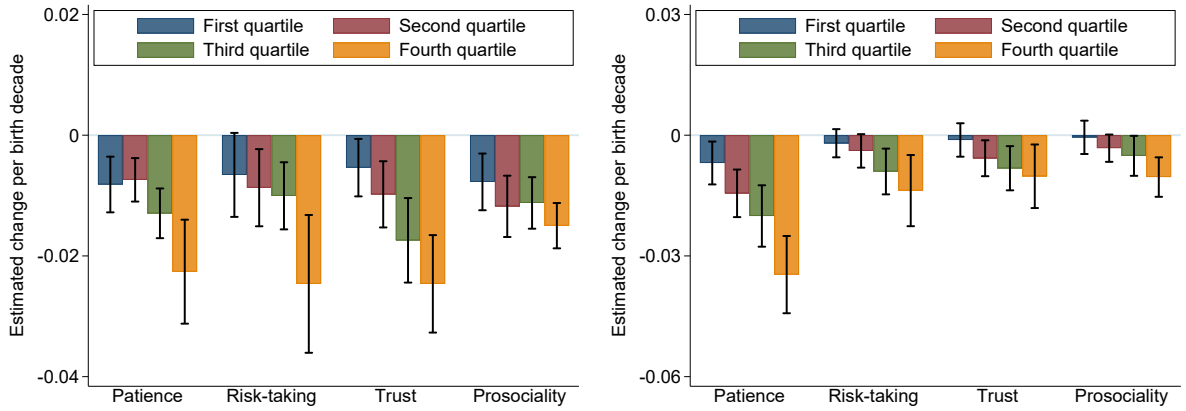
Education. The association between preference heterogeneity and economic convergence need not be restricted to incomes. Convergence in education levels across birth cohorts is another secular trend associated with economic development and convergence. Recent evidence shows that educational attainment 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 between women and men (Sloan et al. 2021). If education is correlated with certain preference characteristics, this correlation could rationalize the observed decline in preference heterogeneity across birth cohorts. Applying our estimation procedure on the basis of country pairs by cohorts to educational attainment reveals evidence of convergence in education across birth cohorts (Table S.16). Greater dyadic differences in any form of formal education are associated with

more pronounced preference heterogeneity, although this is not the case when considering only post-primary schooling (Table S.17). Nonetheless, convergence in education levels does not explain the decline in preference heterogeneity across birth cohorts 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.18). The same is true when accounting for heterogeneity in intergenerational mobility in education (Figure S.16).

Convergence to a Western Standard? The previous results indicate that income differences at the time of birth are associated with preference heterogeneity between countries, suggesting that economic convergence contributes to the decline in preference heterogeneity across birth cohorts. However, attributing the findings solely to economic development appears overly simplistic. 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 via global broadcasting and the internet—might have created a mismatch between traditional preference endowments and contemporary environments (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 first replicate the analysis with a focus on dyadic differences in cohort-specific preferences to the world average. The findings show a tendency of preferences to converge to a world mean (Figure S.17). In this scenario, 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 reveal stronger convergence in preferences among country pairs with larger initial heterogeneity (Figure 5).

These results are consistent with a global process of declining preference heterogeneity. At the same time, they raise the question whether the decline in preference heterogeneity across



(a) Means (b) Standard deviations

Note: This figure shows estimates of cohort trends in preference heterogeneity 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 in 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 5: Preference heterogeneity across birth cohorts by initial heterogeneity

birth cohorts originates from directed convergence toward a particular benchmark. An obvious candidate for this would be a "Western Standard." To test this hypothesis, we replicate the analysis focusing 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 a Western standard (Figure S.18). Notably, the cohort trends are more pronounced for countries that are not associated with Western societies through the OECD or North Atlantic Treaty Organization (NATO). One might conjecture that preferences assimilate to those of the United States as the culturally and economically most influential country. However, 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 this hypothesis (Figure S.19). We find no systematic decline in the dyadic differences in preference means or standard deviations across birth cohorts in the full sample. Only heterogeneity in patience appears to have declined relative to U.S. preferences, but the patterns differ across pairs with OECD and pairs with non-OECD countries.

A similar analysis reveals no systematic convergence toward any particular country's preferences. 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 any particular country (Figures S.20 and S.21).

Genetic Diversity. These findings raise the question of potential determinants of preference heterogeneity among earlier-born cohorts. From a long-run perspective, genetic diversity has developed through evolutionary processes since 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 historically greater 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 that has been shown to be related to preference heterogeneity (Becker et al. 2020). 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.22). Nonetheless, the findings reveal significant declines in preference heterogeneity across birth cohorts for either group.

Historical Population Composition. 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 is 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). Our results show a universal decline in preference heterogeneity, regardless of countries' population persistence (Figure S.23) and of their bilateral population flows (Figure S.24). If anything, the decline in preference heterogeneity is slightly weaker between countries that have shared common population flows since 1500. This finding aligns with evidence suggesting that cultural diversity is only weakly associated with ethnic identity (Desmet et al. 2017).

Migration. Contemporary migration is another potential explanation for the decline in preference heterogeneity. If migration is more frequent among later-born cohorts, it could explain why preference heterogeneity is lower among them. We test this conjecture by comparing the results for samples that include and exclude people with a migratory background. While this information is not available in the Global Preferences Survey, it is available in Wave 7 of the World Values Survey. The results of both samples are almost identical, indicating that contemporary migration does not explain our main finding (Table S.12).

Religious Norms. An alternative explanation for the decline in preference heterogeneity is related to secularization and the decreasing 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. 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.25). If anything, the convergence appears to be slightly stronger among pairs in which both states are secular, but this pattern varies across preferences.

Trade Relations. Last, we examine the role of trade relations and increasing economic integration for the dynamics of preference heterogeneity across birth cohorts. 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 across birth cohorts depending on the existence of free trade agreements (Figure S.26). A similar result obtains when we account for the existence of sister cities across countries as a proxy for cultural and administrative ties (Figure S.27).

5 Concluding Remarks

Our results contribute evidence of the dynamics of preference heterogeneity by demonstrating that preferences have become more similar worldwide among recent birth cohorts. Applying a novel identification strategy based on dyadic differences and using preference measures from two distinct data sets, we document a decline in between-country preference heterogeneity across birth cohorts in both means and standard deviations for patience, willingness to take risks, trust, and prosociality.

Extensive analyses confine the set of potential explanations for the decline in preference heterogeneity across birth cohorts. They show that the decline is related to economic convergence and more pronounced in dyadic pairs with greater preference heterogeneity among earlier-born birth cohorts. Specifically, our results suggest the dynamics of preference heterogeneity are influenced by variation in socioeconomic conditions prevailing during the formative years of later-born cohorts. The decline in preference heterogeneity is not only due to economic convergence but inherently linked to the extent of preference heterogeneity among earlier-born cohorts. Furthermore, our analyses indicate that the decline in preference heterogeneity across birth cohorts is related to country-specific differences in preference endowments and population composition. We only find a weak association of preference heterogeneity with country pair-specific cultural ties, economic integration, and convergence in education levels.

Taken together, we document a worldwide decline in preference heterogeneity across birth cohorts that points to convergence of preference distributions. This trend 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. Our evidence indicates a global decline in preference heterogeneity and is consistent with cultural change through replacement of earlier-born by later-born cohorts.

Our analysis intentionally concentrated on preferences that are central for economic decision-making, leaving exploration of other cultural values or attitudes to future research. More research is also needed to investigate the mechanisms underlying this convergence and especially the role of 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 in this paper for heterogeneity in decision-making and life outcomes.

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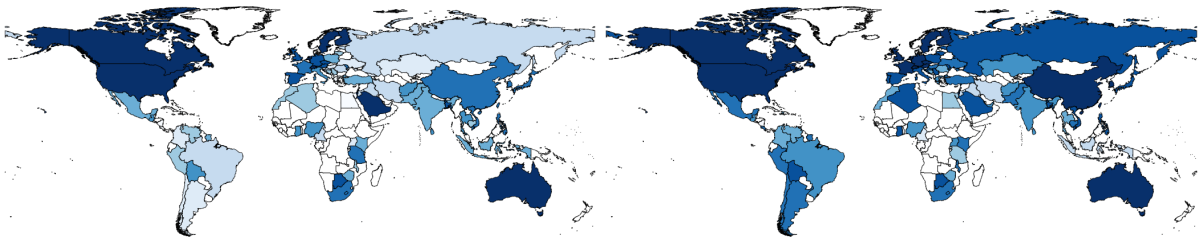
Supplementary Appendix: For Online Publication

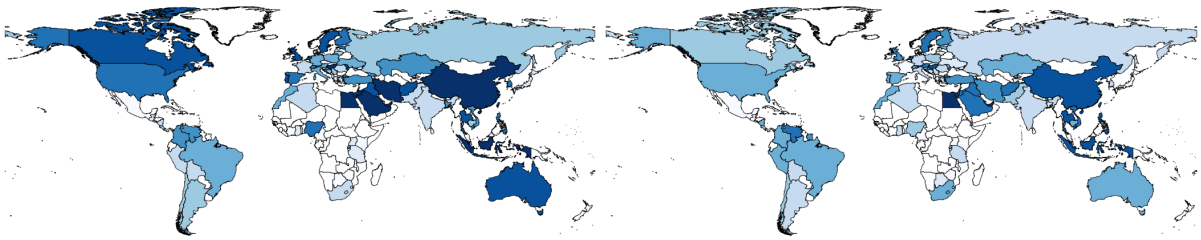
Supplementary Figures



(a) 1940 birth decade (b) 1980 birth decade

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.

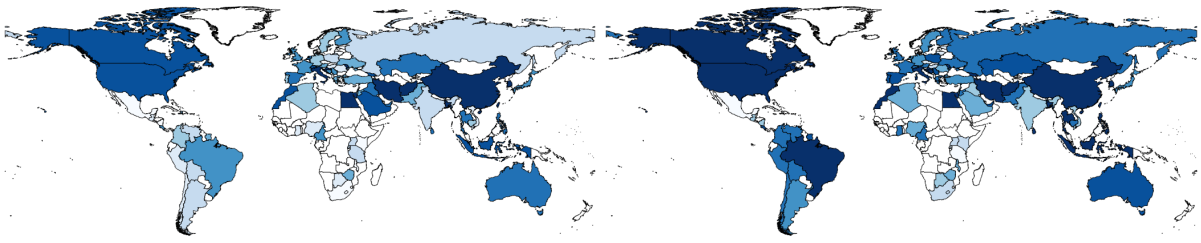
Figure S.1: Patience: 1940s and 1980s birth cohorts



(a) 1940 birth decade (b) 1980 birth decade

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.

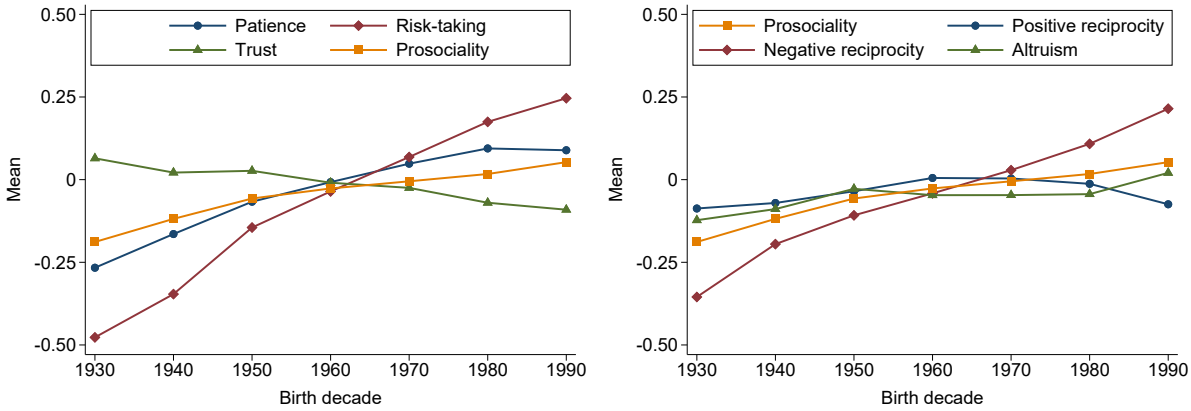
Figure S.2: Trust: 1940s and 1980s birth cohorts



(a) 1940 birth decade (b) 1980 birth decade

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.

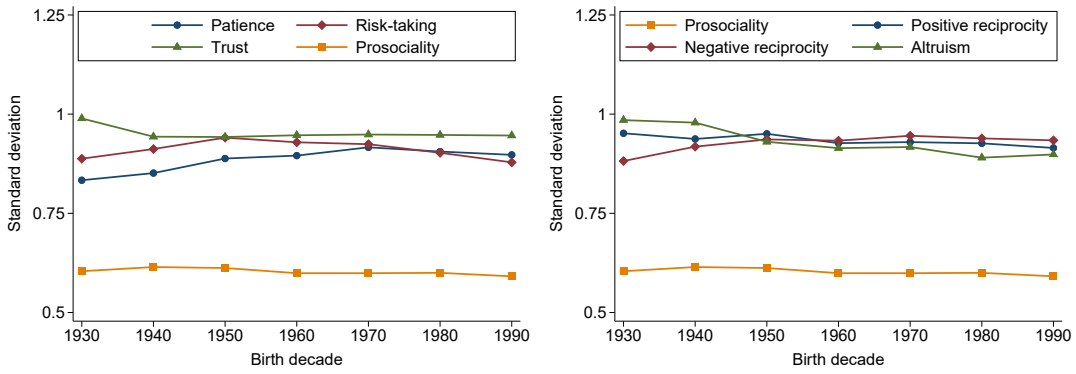
Figure S.3: Prosociality: 1940s and 1980s birth cohorts



(a) Baseline preferences (b) Prosociality

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



(a) Baseline preferences (b) Prosociality

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

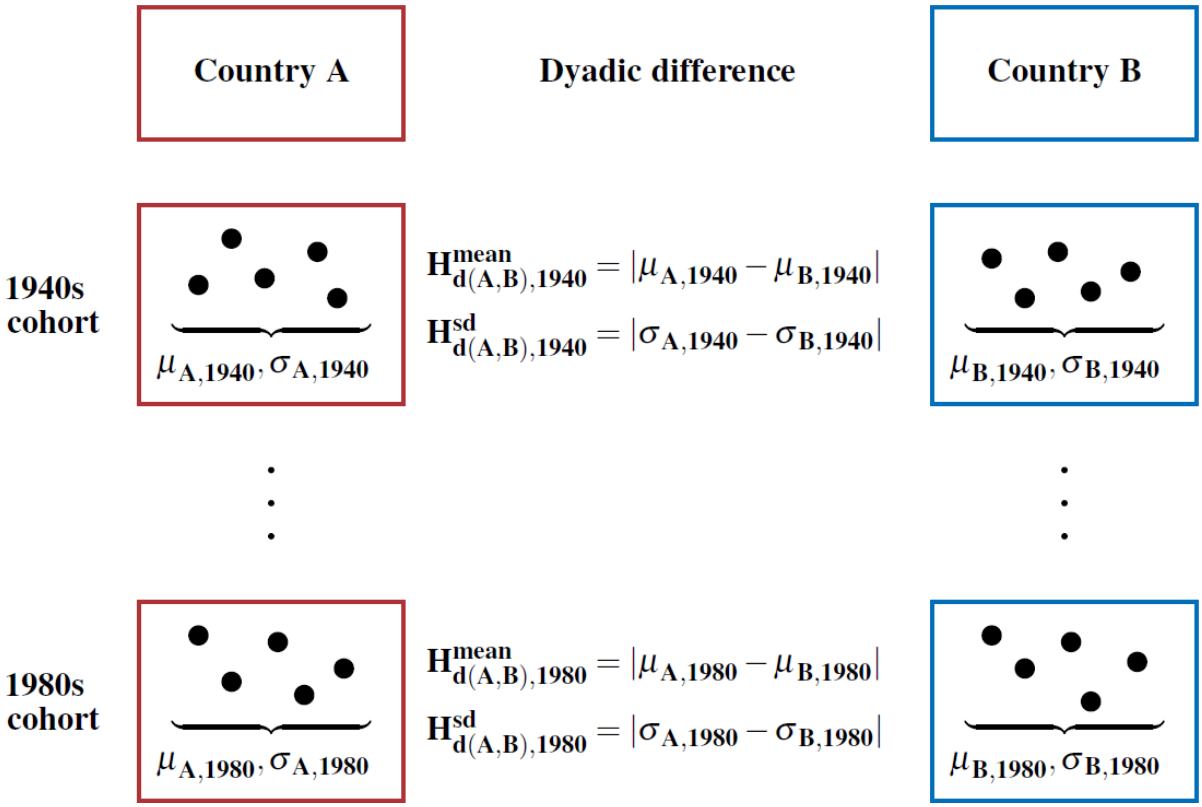
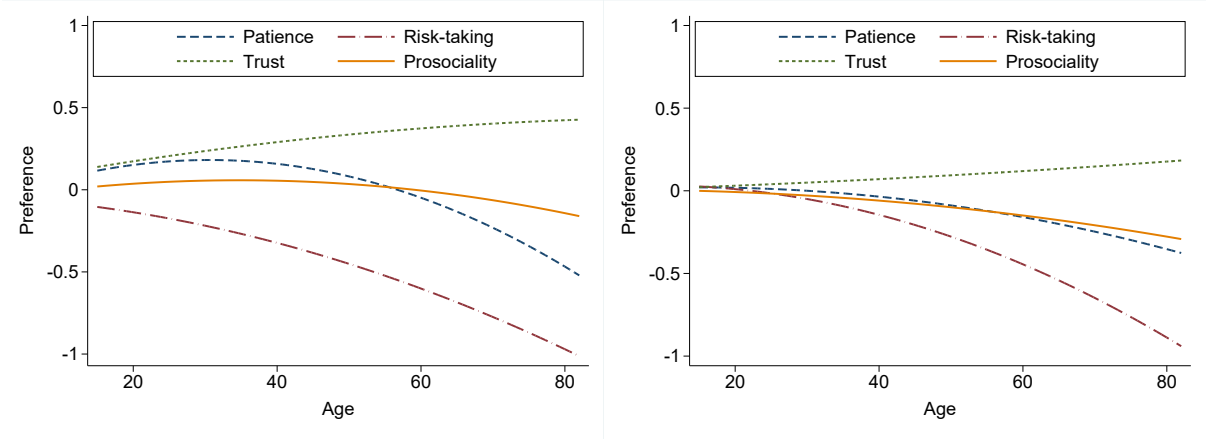


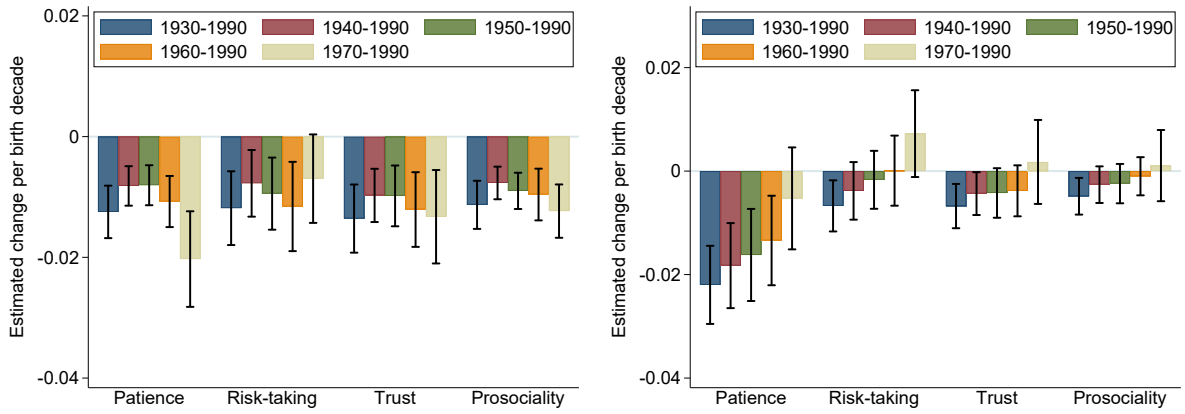
Figure S.6: Illustration of dyadic differences



(a) OECD countries (b) Non-OECD countries

Note: This figure shows age profiles in individual preferences conditional on country fixed effects. 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.

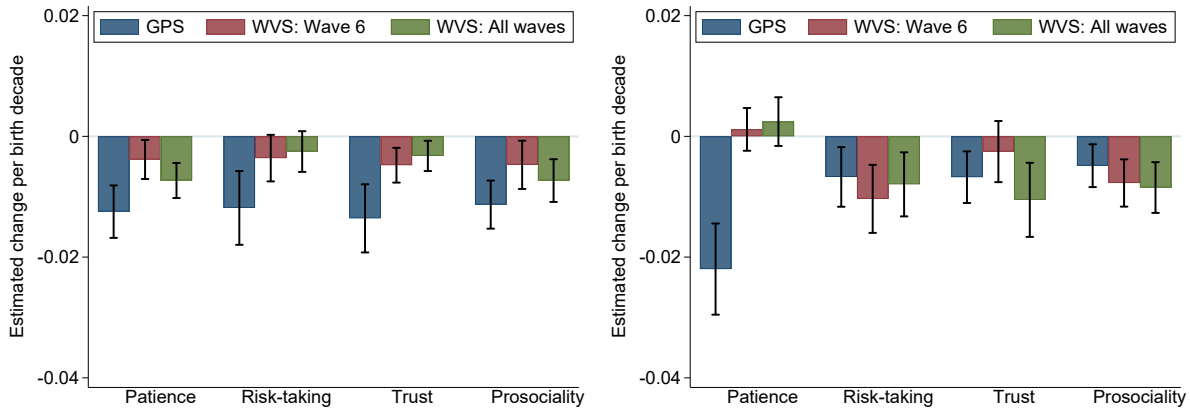
Figure S.7: Age profiles by economic development



(a) Means (b) Standard deviations)

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.

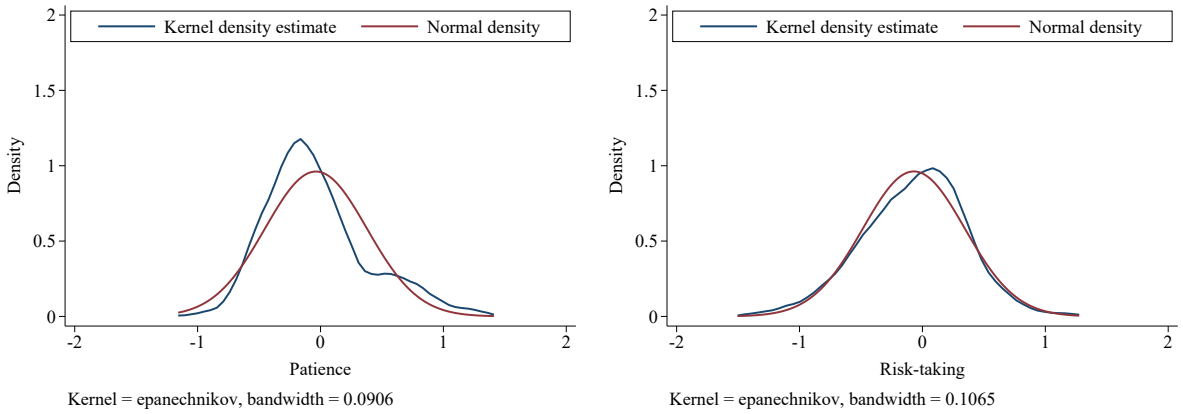
Figure S.8: Preference heterogeneity across cohorts: Various subsamples



(a) Means (b) Standard deviations)

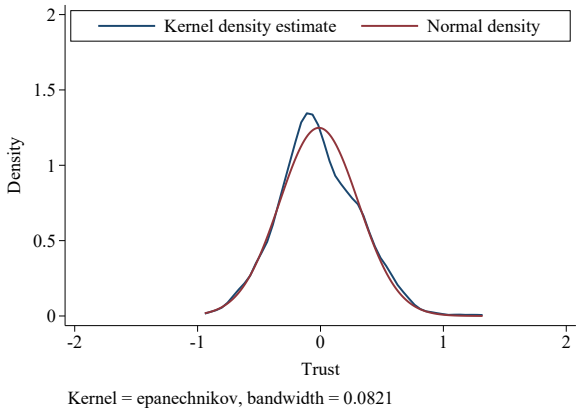
Note: This figure contrasts estimates of cohort trends in preference heterogeneity derived from the Global Preferences Survey (GPS) with trends derived from cross-sectional and longitudinal variation in the World Values Survey (WVS). An observation is a country pair per birth decade. The dependent variable 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.9: Preference heterogeneity across cohorts: Replication with World Values Survey

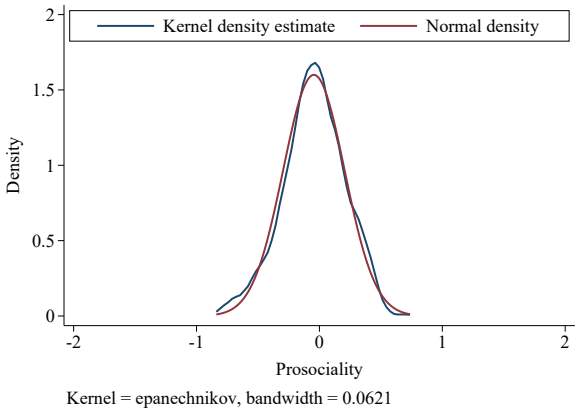


(a) Patience

(b) Risk-taking



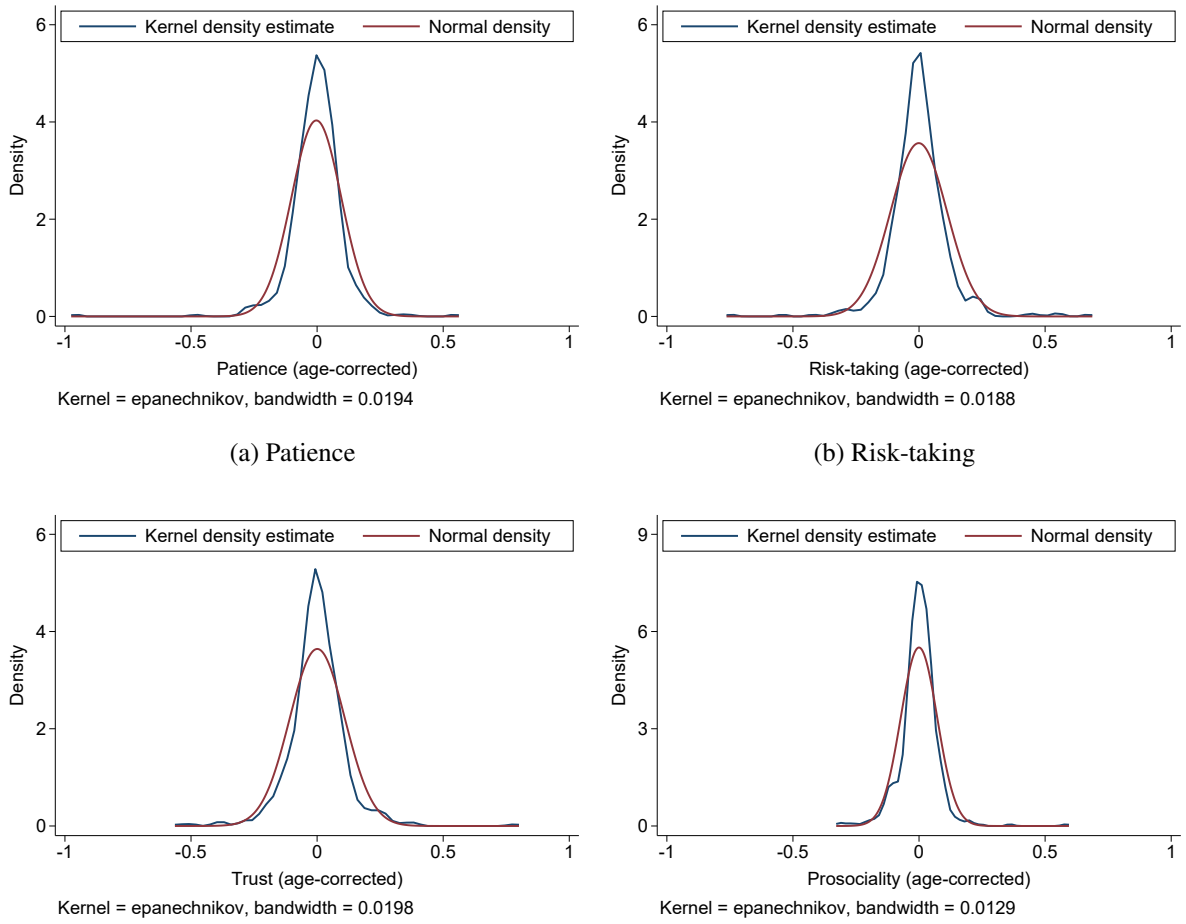
(c) Trust



(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.10: Dispersion of preferences at the country-birth decade level



(a) Patience

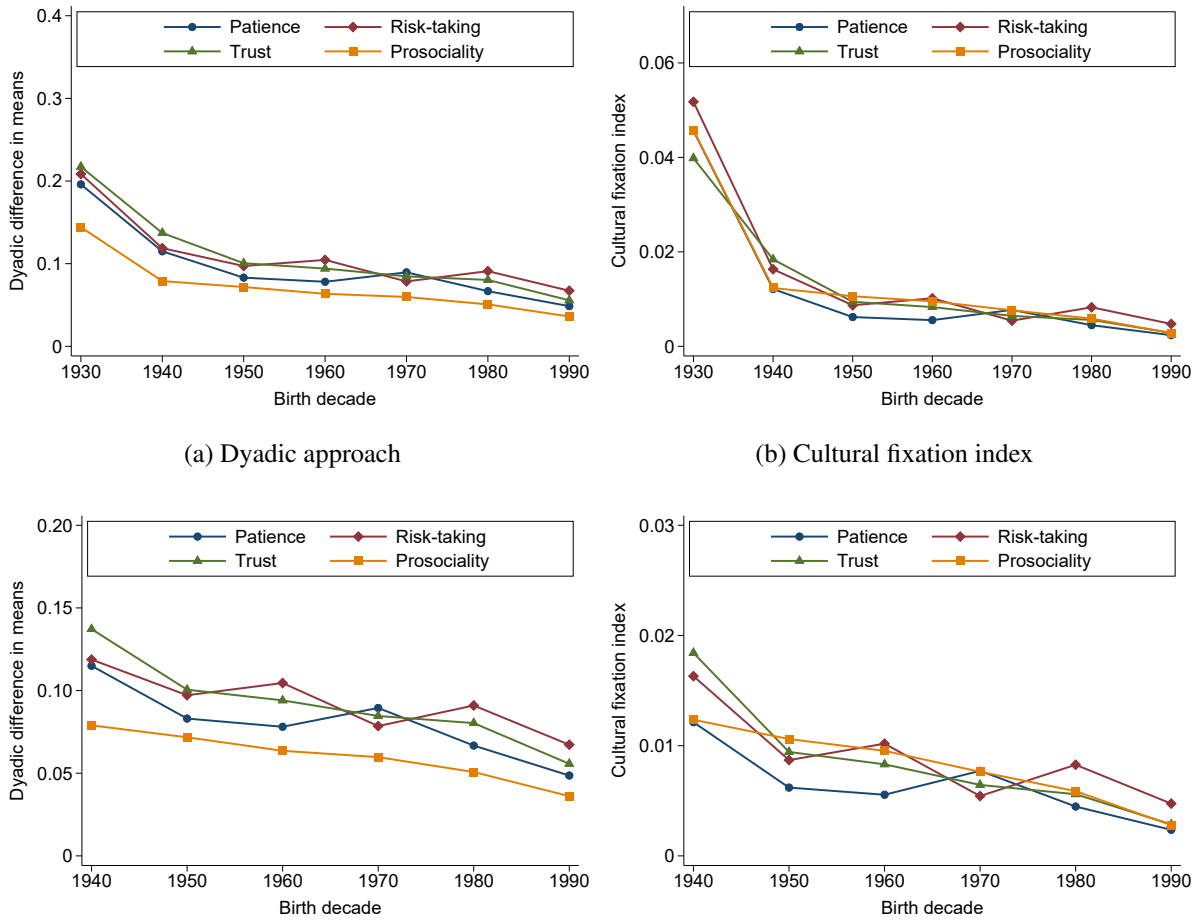
(b) Risk-taking

(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.11: Dispersion of age-corrected preferences at the country-birth decade level



(a) Dyadic approach

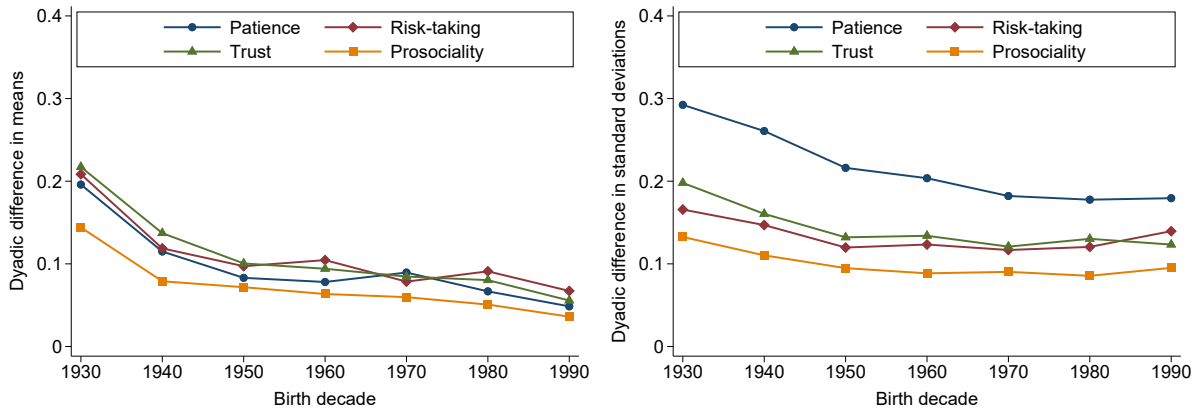
(b) Cultural fixation index

(c) Dyadic approach (without 1930 birth decade)

(d) Cultural fixation index (without 1930 birth decade)

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.

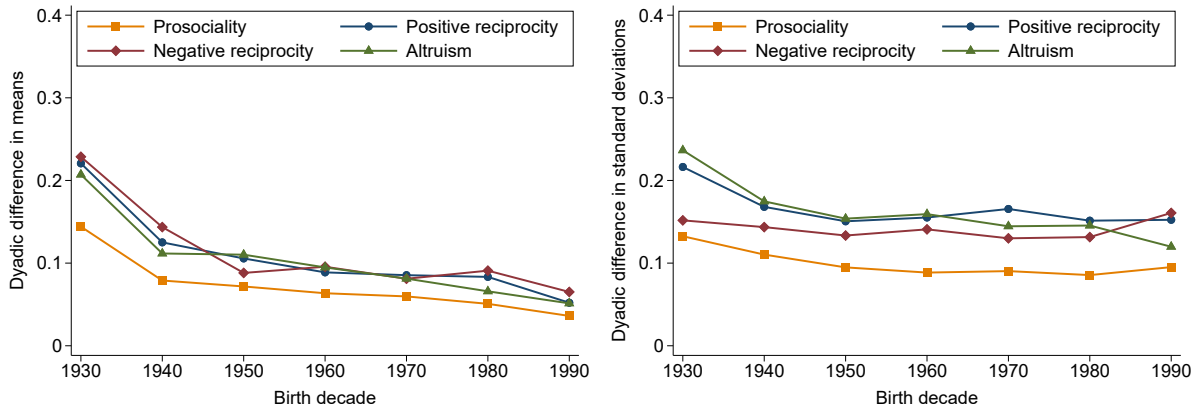
Figure S.12: Evolution of preference heterogeneity: Dyadic approach vs. cultural fixation index



(a) Means (b) Standard deviations

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.

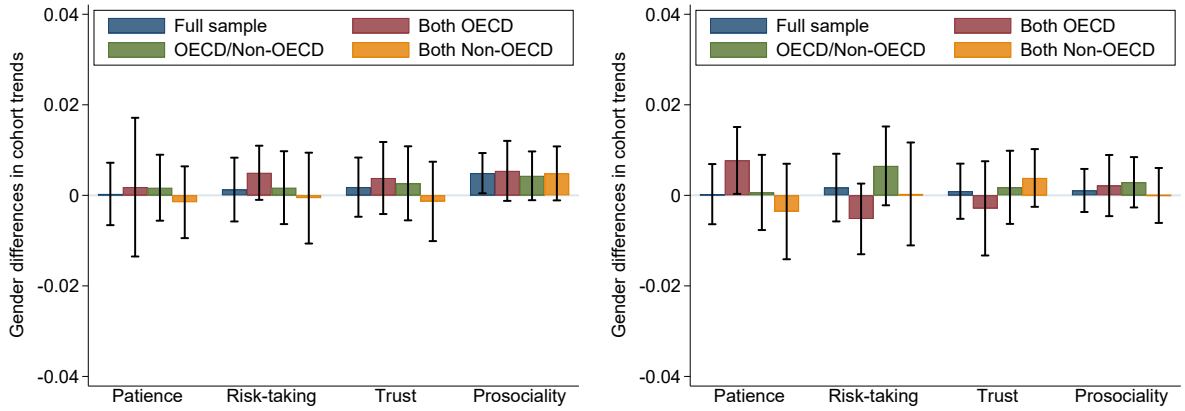
Figure S.13: Evolution of preference heterogeneity: Unconditional evidence by birth decade



(a) Means (b) Standard deviations

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.

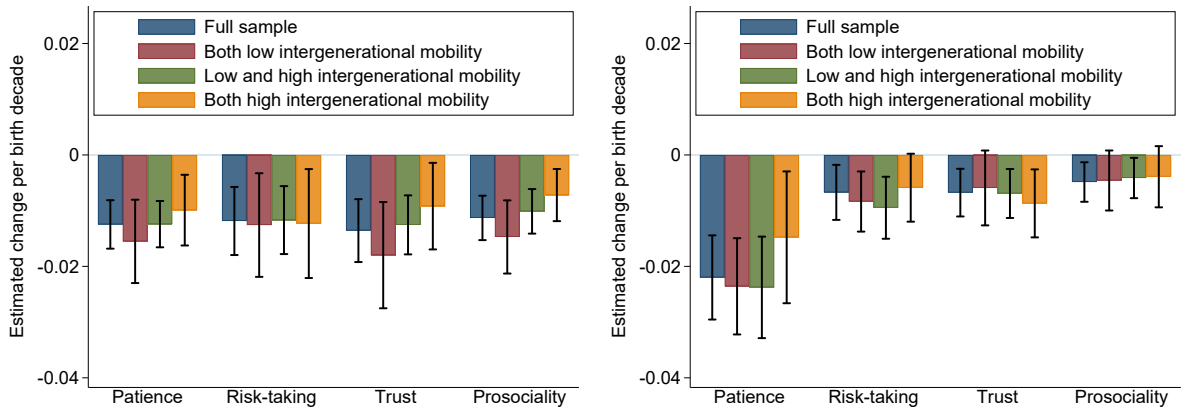
Figure S.14: Evolution of preference heterogeneity in prosociality: Unconditional evidence by birth decade



(a) Means: Interaction coefficient female (b) Standard deviations: Interaction coefficient female

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.

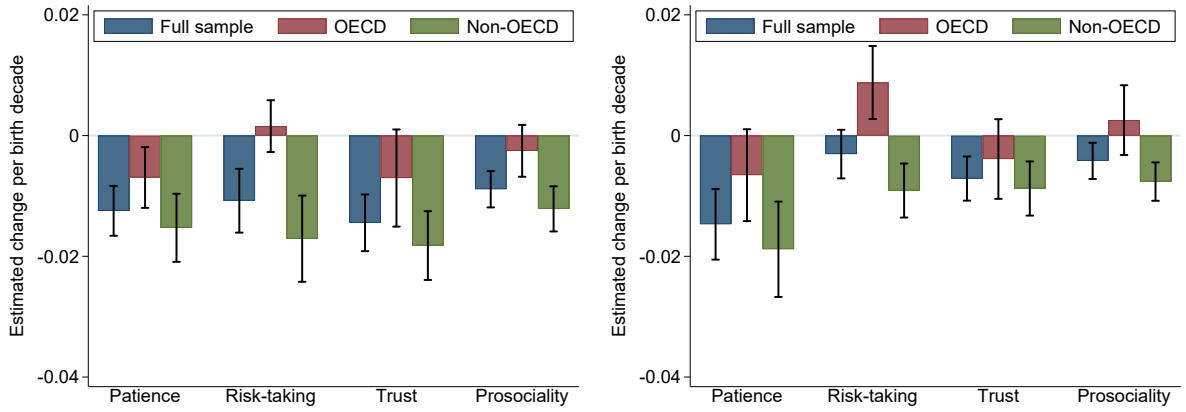
Figure S.15: Gender differences in cohort trends: Pooled estimation with interactions



(a) Means (b) Standard deviations

Note: This figure shows estimates of cohort trends in preference heterogeneity 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.

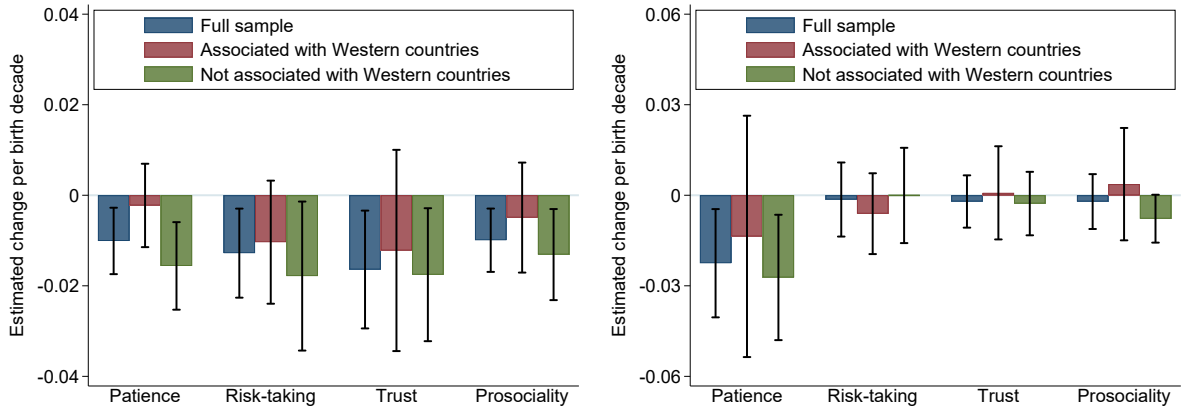
Figure S.16: Preference heterogeneity across cohorts by intergenerational mobility



(a) Means (b) Standard deviations

Note: This figure shows estimates of cohort trends in preference heterogeneity 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.

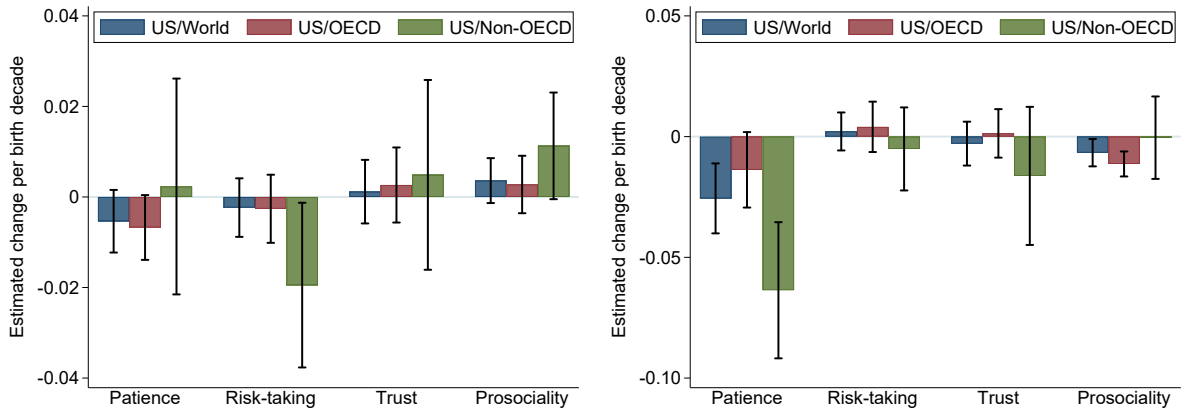
Figure S.17: Do preferences converge to a world mean?



(a) Means (b) Standard deviations

Note: This figure shows estimates of cohort trends in preference heterogeneity 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.18: Do preferences converge to those of Western countries?

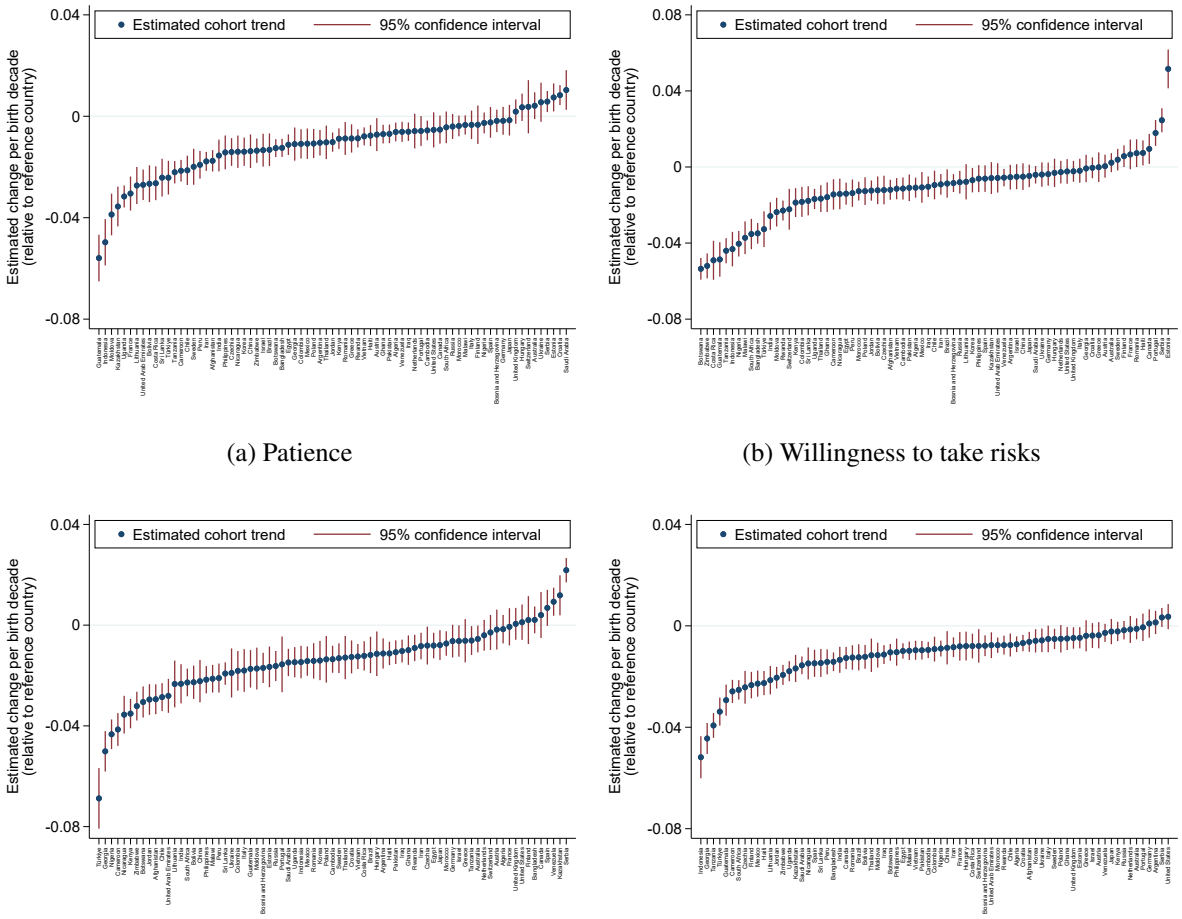


(a) Means

(b) Standard deviations

Note: This figure shows estimates of cohort trends in preference heterogeneity 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.19: Do preferences converge to those of the United States?



(a) Patience

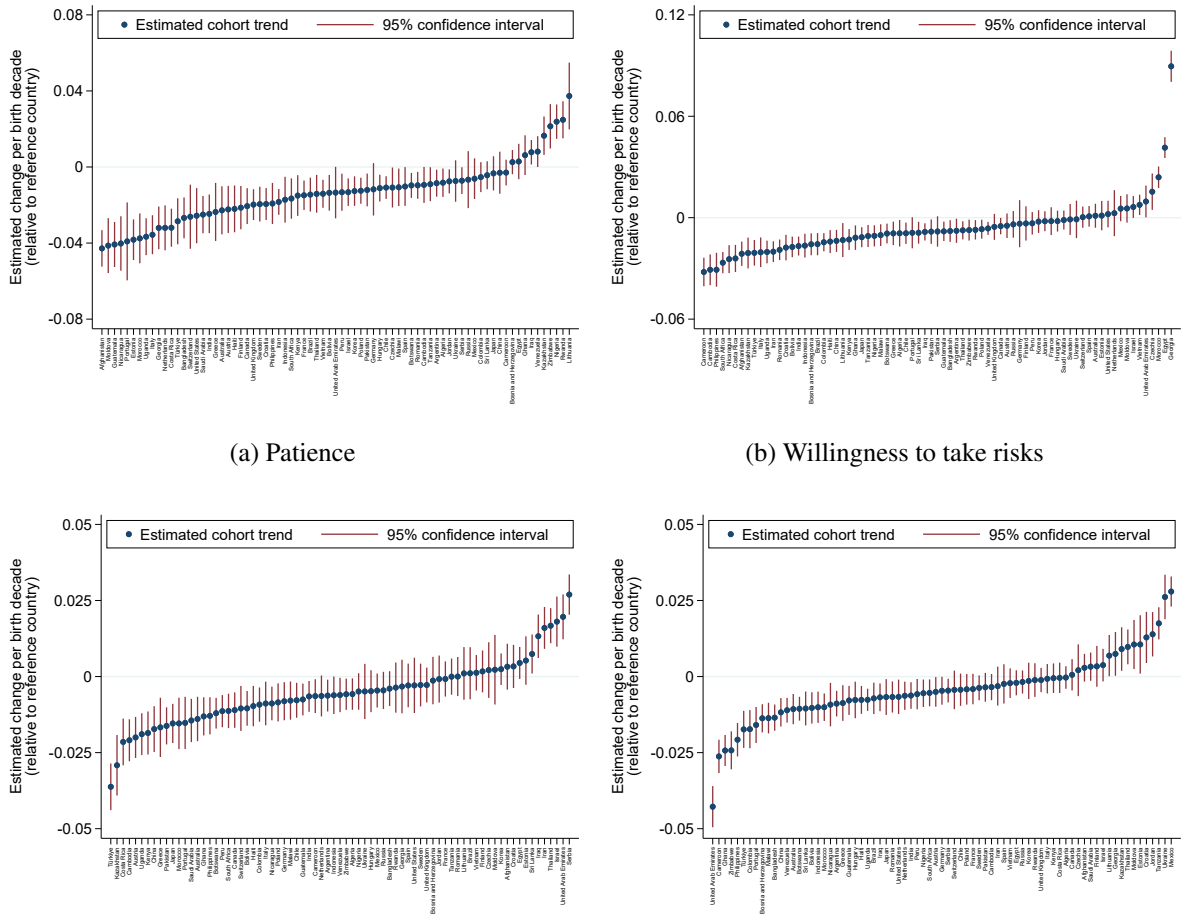
(b) Willingness to take risks

(c) Trust

(d) Prosociality

Note: This figure shows estimates of cohort trends in preference heterogeneity 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 means of age-corrected patience (Panel a), the absolute dyadic difference in means of age-corrected willingness to take risks (Panel b), the absolute dyadic difference in means of age-corrected trust (Panel c), or the absolute dyadic difference in means 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.20: Preference heterogeneity across cohorts by country: Means



(a) Patience

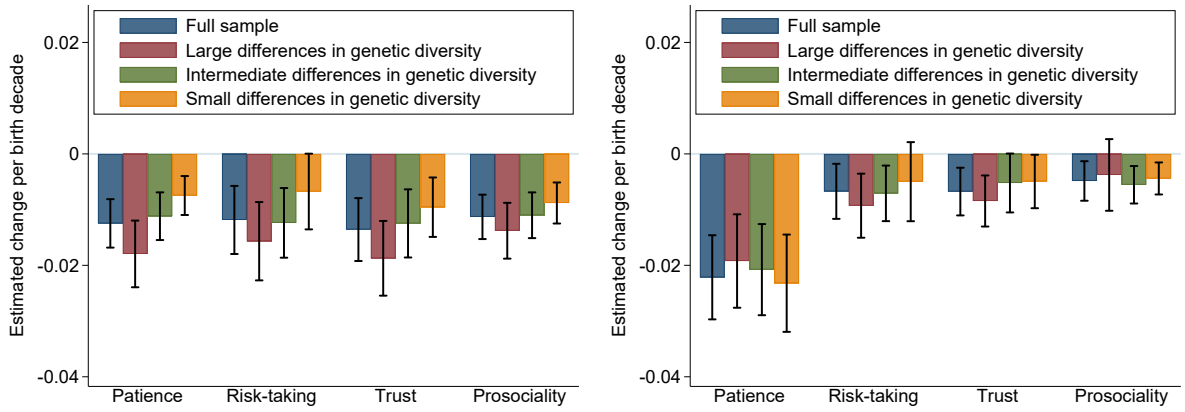
(b) Willingness to take risks

(c) Trust

(d) Prosociality

Note: This figure shows estimates of cohort trends in preference heterogeneity 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.

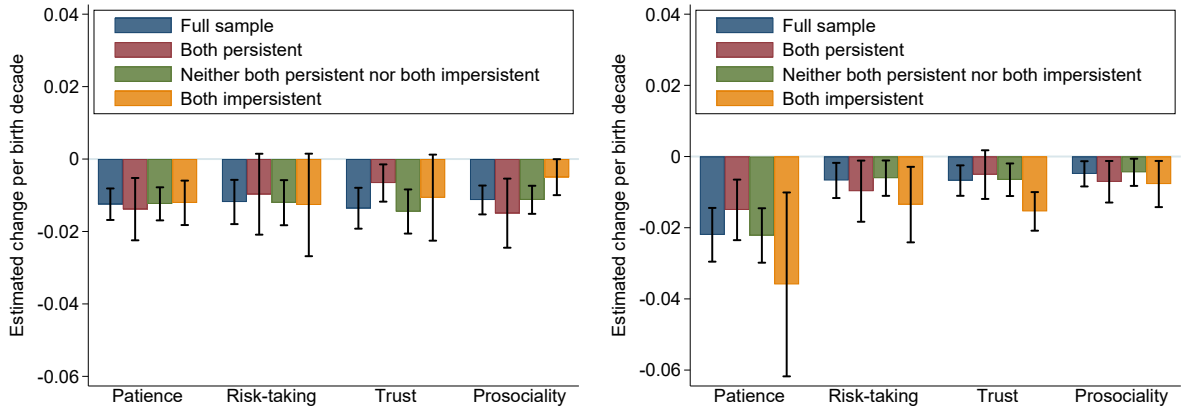
Figure S.21: Preference heterogeneity across cohorts by country: Standard deviations



(a) Means (b) Standard deviations

Note: This figure shows estimates of cohort trends in preference heterogeneity 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 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.

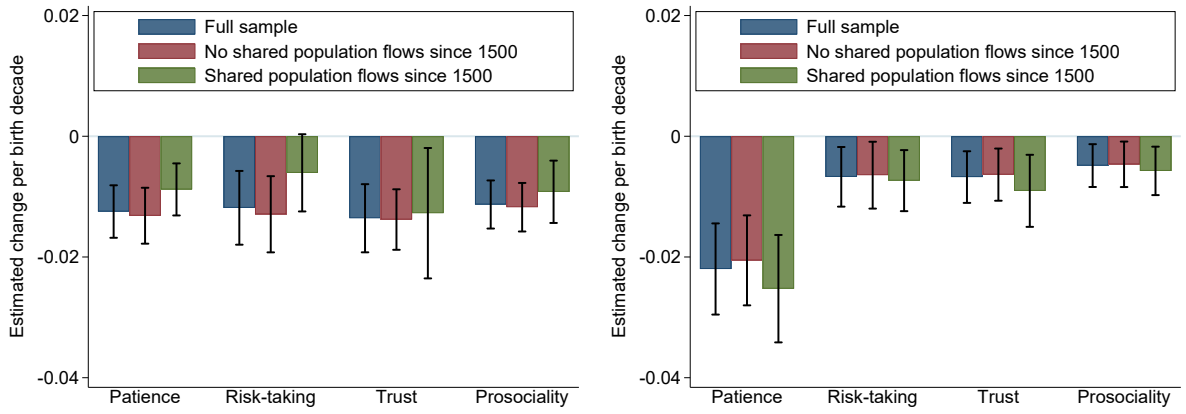
Figure S.22: Preference heterogeneity across cohorts by genetic diversity



(a) Means (b) Standard deviations

Note: This figure shows estimates of cohort trends in preference heterogeneity 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 impersistent 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 impersistent. 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.

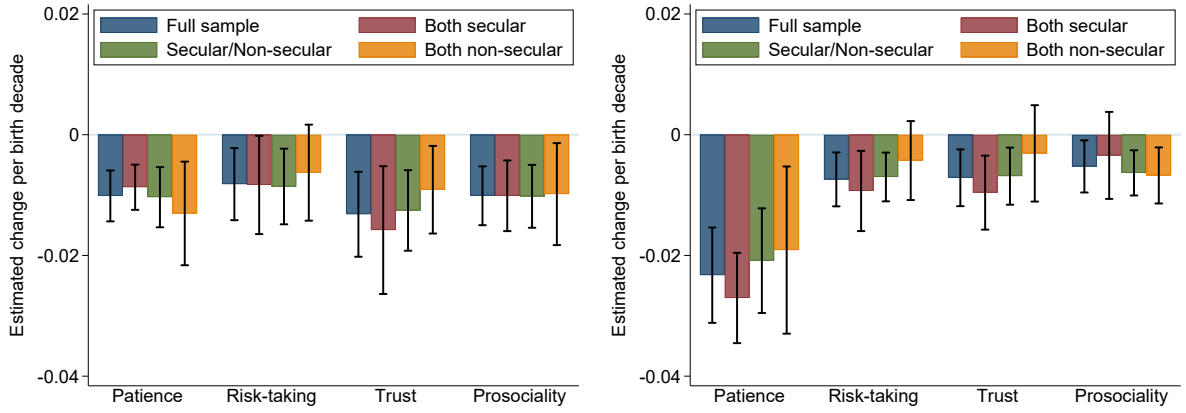
Figure S.23: Preference heterogeneity across cohorts by historical population persistence



(a) Means (b) Standard deviations

Note: This figure shows estimates of cohort trends in preference heterogeneity 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.

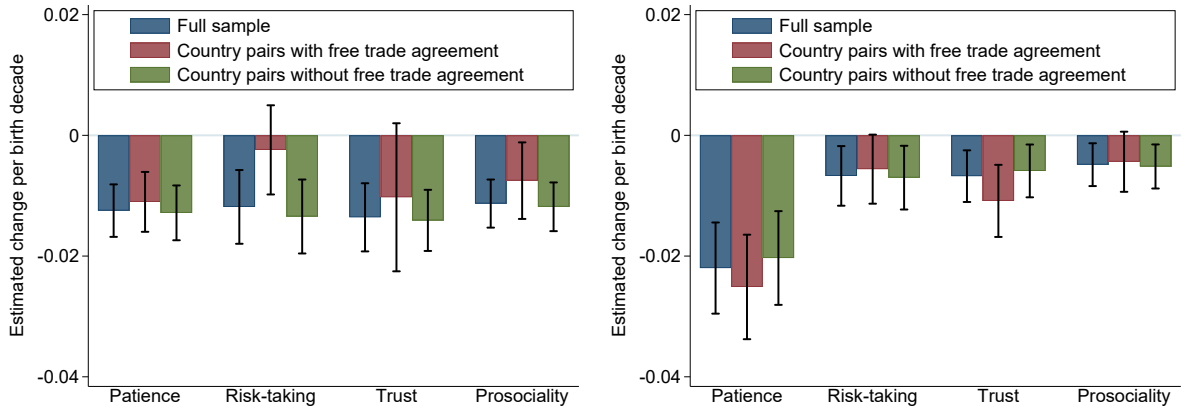
Figure S.24: Preference heterogeneity across cohorts by common historical population shares



(a) Means (b) Standard deviations

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.

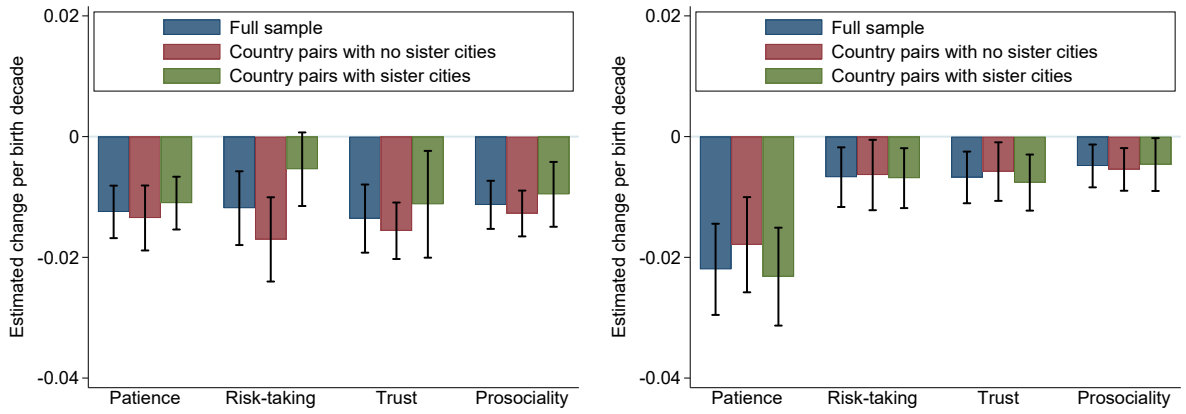
Figure S.25: Preference heterogeneity across cohorts by secularism



(a) Means (b) Standard deviations

Note: This figure shows estimates of cohort trends in preference heterogeneity 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.26: Preference heterogeneity among country pairs with and without free trade agreements



(a) Means (b) Standard deviations

Note: This figure shows estimates of cohort trends in preference heterogeneity 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.27: Preference heterogeneity among country pairs with and without sister cities

Supplementary Tables

Table S.1: Descriptive statistics: Global Preferences Survey

Variable	Observations	Mean	Standard deviation	Minimum	Maximum
Dyadic differences in means					
Patience	19,585	0.44	0.35	0.00	1.94
Patience (age-corrected)	19,585	0.09	0.10	0.00	1.50
Risk-taking	19,585	0.37	0.30	0.00	2.40
Risk-taking (age-corrected)	19,585	0.11	0.11	0.00	1.41
Trust	19,585	0.36	0.27	0.00	1.93
Trust (age-corrected)	19,585	0.11	0.11	0.00	1.28
Prosociality	19,585	0.27	0.20	0.00	1.45
Prosociality (age-corrected)	19,585	0.07	0.07	0.00	0.90
Positive reciprocity	19,585	0.40	0.31	0.00	1.78
Positive reciprocity (age-corrected)	19,585	0.11	0.11	0.00	1.14
Negative reciprocity	19,585	0.37	0.29	0.00	1.77
Negative reciprocity (age-corrected)	19,585	0.11	0.12	0.00	1.33
Altruism	19,585	0.41	0.32	0.00	2.08
Altruism (age-corrected)	19,585	0.10	0.10	0.00	1.01
Dyadic differences in standard deviations					
Patience	19,585	0.22	0.17	0.00	1.24
Patience (age-corrected)	19,585	0.21	0.17	0.00	1.24
Risk-taking	19,585	0.13	0.10	0.00	0.79
Risk-taking (age-corrected)	19,585	0.13	0.10	0.00	0.78
Trust	19,585	0.14	0.11	0.00	1.10
Trust (age-corrected)	19,585	0.14	0.11	0.00	1.10
Prosociality	19,585	0.10	0.08	0.00	0.57
Prosociality (age-corrected)	19,585	0.10	0.08	0.00	0.57
Positive reciprocity	19,585	0.17	0.13	0.00	1.22
Positive reciprocity (age-corrected)	19,585	0.16	0.13	0.00	1.21
Negative reciprocity	19,585	0.14	0.11	0.00	0.81
Negative reciprocity (age-corrected)	19,585	0.14	0.11	0.00	0.81
Altruism	19,585	0.16	0.13	0.00	1.36
Altruism (age-corrected)	19,585	0.16	0.13	0.00	1.34
Dyadic differences in income					
Income per capita	14,258	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. 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.2: Descriptive statistics: World Values Survey

Variable	Observations	Mean	Standard deviation	Minimum	Maximum
Dyadic differences in means					
Patience	47,768	0.34	0.26	0.00	1.89
Patience (age-corrected)	47,768	0.07	0.08	0.00	1.02
Risk-taking	20,207	0.36	0.28	0.00	1.92
Risk-taking (age-corrected)	20,207	0.08	0.09	0.00	1.60
Trust	47,470	0.42	0.34	0.00	1.83
Trust (age-corrected)	47,470	0.07	0.08	0.00	1.17
Prosociality	47,247	0.33	0.25	0.00	1.71
Prosociality (age-corrected)	47,247	0.07	0.08	0.00	1.14
Dyadic differences in standard deviations					
Patience	47,768	0.12	0.14	0.00	1.19
Patience (age-corrected)	47,768	0.12	0.14	0.00	1.19
Risk-taking	20,207	0.15	0.12	0.00	1.28
Risk-taking (age-corrected)	20,207	0.15	0.12	0.00	1.28
Trust	47,470	0.24	0.21	0.00	1.32
Trust (age-corrected)	47,470	0.24	0.21	0.00	1.33
Prosociality	47,247	0.16	0.16	0.00	1.22
Prosociality (age-corrected)	47,247	0.16	0.16	0.00	1.22
Dyadic differences in income					
Income per capita	178,920	7900.46	8474.76	0.10	54025.20

Note: This table shows descriptive statistics for 5671 dyadic pairs composed of countries and territories observed over 7 waves and 7 birth decades. 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 World Values 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)
Panel (a): Preferences corrected with cubic age trends				
Dependent variable: Dyadic differences in means				
Birth decade	-0.010***	-0.014***	-0.011***	-0.008***
	(0.002)	(0.003)	(0.002)	(0.001)
R^2	0.20	0.22	0.22	0.23
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Dependent variable: Dyadic differences in standard deviations				
Birth decade	-0.022***	-0.007***	-0.007***	-0.005**
	(0.004)	(0.002)	(0.002)	(0.002)
R^2	0.27	0.23	0.25	0.29
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Panel (b): Preferences corrected with quartic age trends				
Dependent variable: Dyadic differences in means				
Birth decade	-0.007***	-0.012***	-0.009***	-0.008***
	(0.002)	(0.002)	(0.002)	(0.001)
R^2	0.18	0.20	0.23	0.23
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Dependent variable: Dyadic differences in standard deviations				
Birth decade	-0.022***	-0.007***	-0.006***	-0.004**
	(0.004)	(0.003)	(0.002)	(0.002)
R^2	0.27	0.24	0.25	0.29
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Panel (c): Preferences corrected with dummies for 5-year age bins				
Dependent variable: Dyadic differences in means				
Birth decade	-0.006***	-0.005***	-0.004***	-0.004***
	(0.001)	(0.001)	(0.001)	(0.001)
R^2	0.17	0.16	0.12	0.19
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Dependent variable: Dyadic differences in standard deviations				
Birth decade	-0.022***	-0.007**	-0.007***	-0.004**
	(0.004)	(0.003)	(0.002)	(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)
Panel (a): Country-specific variation								
Uncorrected preference measures								
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
Age-corrected preference measures								
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
Panel (b): Variation in dyadic differences								
Uncorrected preference measures								
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
Age-corrected preference measures								
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 how much variation in uncorrected and age-corrected preference measures is 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)
Panel (a): Preference heterogeneity: Uncorrected measures				
Dependent variable: Dyadic differences in means				
Log income per capita	0.201***	0.014***	0.020***	0.010**
	(0.048)	(0.005)	(0.006)	(0.004)
R^2	0.53	0.43	0.33	0.40
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Dependent variable: Dyadic differences in standard deviations				
Log income per capita	0.036***	0.028***	0.007*	0.015***
	(0.011)	(0.007)	(0.004)	(0.003)
R^2	0.27	0.23	0.25	0.29
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Panel (b): Preference heterogeneity: Age-corrected measures				
Dependent variable: Dyadic differences in means				
Log income per capita	0.004*	0.009***	0.005*	0.006***
	(0.002)	(0.003)	(0.002)	(0.002)
R^2	0.20	0.18	0.21	0.21
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Dependent variable: Dyadic differences in standard deviations				
Log income per capita	0.036***	0.028***	0.007*	0.015***
	(0.011)	(0.007)	(0.004)	(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	Positive reciprocity	Negative reciprocity	Altruism
	(1)	(2)	(3)	(4)
Panel (a): Dyadic differences in means				
Birth decade	-0.011***	-0.013***	-0.011***	-0.017***
	(0.002)	(0.003)	(0.003)	(0.002)
R^2	0.21	0.20	0.18	0.24
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Panel (b): Dyadic differences in standard deviations				
Birth decade	-0.005***	-0.007**	0.001	-0.010***
	(0.002)	(0.003)	(0.003)	(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	Risk-taking	Trust	Prosociality
	(1)	(2)	(3)	(4)
Panel (a): Dyadic differences in means				
Birth decade	-0.012***	-0.012***	-0.014***	-0.012***
	(0.001)	(0.001)	(0.001)	(0.000)
R^2	0.30	0.30	0.31	0.31
Countries	74	74	74	74
Observations	14258	14258	14258	14258
Panel (b): Dyadic differences in standard deviations				
Birth decade	-0.015***	-0.008***	-0.006***	-0.005***
	(0.001)	(0.001)	(0.001)	(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)
Panel (a): Means				
Change in dyadic differences	-8.5***	-9.6***	-11.4***	-12.6***
(in percent)	(1.5)	(2.5)	(2.4)	(2.2)
Panel (b): Standard deviations				
Change in dyadic differences	-30.7***	-15.2***	-14.3***	-14.7***
(in percent)	(5.3)	(5.6)	(4.5)	(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: Trust: Preference or Belief about Social Norms?

Absolute dyadic difference in	Trust in people I personally know (1)	Trust in people I meet for the first time (2)
Panel (a): Preference heterogeneity: Uncorrected measures		
Dependent variable: Dyadic differences in means		
Birth decade	-0.007**	-0.023***
	(0.003)	(0.003)
R^2	0.43	0.41
Clusters	97	97
Observations	32397	32087
Dependent variable: Dyadic differences in standard deviations		
Birth decade	-0.009***	-0.013***
	(0.002)	(0.002)
R^2	0.21	0.26
Clusters	97	97
Observations	32397	32087
Panel (b): Preference heterogeneity: Age-corrected measures		
Dependent variable: Dyadic differences in means		
Birth decade	-0.018***	-0.023***
	(0.002)	(0.002)
R^2	0.27	0.29
Clusters	97	97
Observations	32397	32087
Dependent variable: Dyadic differences in standard deviations		
Birth decade	-0.010***	-0.013***
	(0.002)	(0.002)
R^2	0.21	0.26
Clusters	97	97
Observations	32397	32087

Note: This table shows estimates from ordinary least squares regressions for 4753 dyadic pairs composed of 98 countries observed in Waves 5–7 of the World Values Survey. The dependent variable is the absolute dyadic difference in means of trust (top of Panels a and b) or the absolute dyadic difference in standard deviations of trust (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. 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.10: Preference heterogeneity across cohorts: Income per capita correction

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
Panel (a): Dyadic differences in means				
Birth decade	-0.014***	-0.013***	-0.012***	-0.012***
	(0.002)	(0.003)	(0.003)	(0.002)
R^2	0.25	0.24	0.24	0.25
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Panel (b): Dyadic differences in standard deviations				
Birth decade	-0.022***	-0.007**	-0.007***	-0.005**
	(0.004)	(0.002)	(0.002)	(0.002)
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 corrected preferences (Panel a) or the absolute dyadic difference in standard deviations of corrected preferences (Panel b). Preferences are corrected with country-specific quadratic age trends and a control for income per capita at the time of birth. 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.11: Preference heterogeneity across cohorts: Controlling for population age structure

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
Panel (a): Dyadic differences in means				
Birth decade	-0.013***	-0.012***	-0.014***	-0.011***
	(0.002)	(0.003)	(0.003)	(0.002)
Population share of	0.087**	-0.064	-0.016	0.043
birth decade	(0.040)	(0.052)	(0.031)	(0.039)
R^2	0.20	0.18	0.21	0.21
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Panel (b): Dyadic differences in standard deviations				
Birth decade	-0.022***	-0.007***	-0.007***	-0.005***
	(0.004)	(0.002)	(0.002)	(0.002)
Population share of	0.170	-0.159**	0.020	-0.080*
birth decade	(0.138)	(0.073)	(0.073)	(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: Preference heterogeneity across cohorts: Regression results without immigrants

Absolute dyadic difference in	Patience (1)	Trust (2)	Prosociality (3)
Panel (a): Preference heterogeneity when including immigrants			
Dependent variable: Dyadic differences in means			
Birth decade	-0.017***	-0.011***	-0.022***
	(0.002)	(0.002)	(0.004)
R^2	0.23	0.19	0.28
Clusters	58	58	58
Observations	8379	8354	8379
Dependent variable: Dyadic differences in standard deviations			
Birth decade	-0.007	-0.027***	-0.019***
	(0.006)	(0.006)	(0.004)
R^2	0.37	0.33	0.55
Clusters	57	57	57
Observations	8053	8029	8053
Panel (b): Preference heterogeneity when excluding immigrants			
Dependent variable: Dyadic differences in means			
Birth decade	-0.018***	-0.013***	-0.022***
	(0.002)	(0.002)	(0.004)
R^2	0.22	0.22	0.28
Clusters	58	58	58
Observations	8128	8103	8128
Dependent variable: Dyadic differences in standard deviations			
Birth decade	-0.007	-0.028***	-0.019***
	(0.006)	(0.007)	(0.004)
R^2	0.36	0.33	0.56
Clusters	57	57	57
Observations	8053	8029	8053

Note: This table shows estimates from ordinary least squares regressions for 1711 dyadic pairs composed of 59 countries observed in Wave 7 of the World Values Survey. The dependent variable is the absolute dyadic difference in means of preferences (top of Panels a and b) or the absolute dyadic difference in standard deviations of 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: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Table S.13: 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)	No income (full sample) (9)	Baseline specification (10)	No income (BL sample) (11)	No income (full sample) (12)
Panel (a): Dyadic differences in means												
Birth decade	-0.012***	-0.012***	-0.018***	-0.012***	-0.010***	-0.017***	-0.014***	-0.013***	-0.021***	-0.011***	-0.010***	-0.014***
	(0.002)	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)
Income differences	0.004*	—	—	0.009***	—	—	0.005*	—	—	0.006***	—	—
(at time of birth)	(0.002)	—	—	(0.003)	—	—	(0.002)	—	—	(0.002)	—	—
R^2	0.20	0.20	0.23	0.18	0.18	0.20	0.21	0.21	0.26	0.21	0.21	0.24
Clusters	74	74	75	74	74	75	74	74	75	74	74	75
Observations	14258	14258	19585	14258	14258	19585	14258	14258	19585	14258	14258	19585
Panel (b): Dyadic differences in standard deviations												
Birth decade	-0.022***	-0.016***	-0.019***	-0.007***	-0.002	-0.005**	-0.007***	-0.005***	-0.010***	-0.005***	-0.002	-0.006***
	(0.004)	(0.003)	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Income differences	0.036***	—	—	0.028***	—	—	0.007*	—	—	0.015***	—	—
(at time of birth)	(0.011)	—	—	(0.007)	—	—	(0.004)	—	—	(0.003)	—	—
R^2	0.27	0.25	0.23	0.23	0.21	0.16	0.25	0.25	0.23	0.29	0.28	0.23
Clusters	74	74	75	74	74	75	74	74	75	74	74	75
Observations	14258	14258	19585	14258	14258	19585	14258	14258	19585	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.14: Preference heterogeneity across cohorts: No time trend

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
Panel (a): Dyadic differences in means				
Income differences	-0.011***	-0.005	-0.012***	-0.008***
(at time of birth)	(0.003)	(0.003)	(0.003)	(0.003)
R^2	0.14	0.14	0.15	0.14
Clusters	74	74	74	74
Observations	14258	14258	14258	14258
Panel (b): Dyadic differences in standard deviations				
Income differences	0.009	0.020***	-0.001	0.009**
(at time of birth)	(0.009)	(0.007)	(0.004)	(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.15: Preference heterogeneity across cohorts by income convergence

Absolute dyadic difference in	Patience		Risk-taking		Trust		Prosociality	
	$\tau^y < \tilde{\tau}$	$\tau^y > \tilde{\tau}$	$\tau^y < \tilde{\tau}$	$\tau^y > \tilde{\tau}$	$\tau^y < \tilde{\tau}$	$\tau^y > \tilde{\tau}$	$\tau^y < \tilde{\tau}$	$\tau^y > \tilde{\tau}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Panel (a): Dyadic differences in means								
Birth decade	-0.014***	-0.010***	-0.014***	-0.007*	-0.015***	-0.014***	-0.012***	-0.011***
	(0.002)	(0.003)	(0.003)	(0.004)	(0.003)	(0.004)	(0.002)	(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
Panel (b): Dyadic differences in standard deviations								
Birth decade	-0.013***	-0.032***	-0.008***	-0.008***	-0.006***	-0.009***	-0.007***	-0.004
	(0.002)	(0.005)	(0.002)	(0.002)	(0.002)	(0.003)	(0.002)	(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. τ^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 $\tilde{\tau}$ refers to the median slope coefficient.The sample is split into country pairs whose per-capita incomes have strongly converged ($\tau^y > \tilde{\tau}$) and country pairs whose income levels have only weakly converged or diverged ($\tau^y < \tau^y$). 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.16: Convergence in education levels

Dependent variable:	Population share with no schooling (1)	Population share with post-primary schooling (2)
Birth decade	-4.143***	-2.787***
	(0.373)	(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.17: Can convergence in education levels explain the decline in preference heterogeneity?

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
Panel (a): Dyadic differences in the population share with no schooling				
Dependent variable: Dyadic differences in means				
Population share with	0.129***	0.139***	0.144***	0.103***
no schooling	(0.022)	(0.025)	(0.025)	(0.017)
R^2	0.14	0.15	0.15	0.16
Clusters	71	71	71	71
Observations	17547	17547	17547	17547
Dependent variable: Dyadic differences in standard deviations				
Population share with	0.189***	0.054***	0.072***	0.049***
no schooling	(0.034)	(0.015)	(0.020)	(0.014)
R^2	0.22	0.14	0.19	0.22
Clusters	71	71	71	71
Observations	17547	17547	17547	17547
Panel (b): Dyadic differences in the population share with post-primary schooling				
Dependent variable: Dyadic differences in means				
Population share with	-0.026***	-0.037***	-0.016*	-0.010
post-primary schooling	(0.009)	(0.011)	(0.009)	(0.007)
R^2	0.10	0.11	0.09	0.11
Clusters	71	71	71	71
Observations	17547	17547	17547	17547
Dependent variable: Dyadic differences in standard deviations				
Population share with	0.052*	-0.014*	0.000	0.000
post-primary schooling	(0.031)	(0.007)	(0.011)	(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.18: Preference heterogeneity across cohorts: Controlling for convergence in education

Absolute dyadic difference in	Patience (1)	Risk-taking (2)	Trust (3)	Prosociality (4)
Panel (a): Convergence in any form of formal education				
Dependent variable: Dyadic differences in means				
Birth decade	-0.012***	-0.009***	-0.012***	-0.009***
	(0.002)	(0.003)	(0.003)	(0.002)
Population share with no schooling	0.030	0.048**	0.013	0.044*
	(0.018)	(0.023)	(0.020)	(0.023)
R^2	0.20	0.19	0.21	0.22
Countries	71	71	71	71
Observations	13337	13337	13337	13337
Dependent variable: Dyadic differences in standard deviations				
Birth decade	-0.020***	-0.007**	-0.007***	-0.005**
	(0.004)	(0.003)	(0.002)	(0.002)
Population share with no schooling	0.072*	-0.001	-0.001	-0.000
	(0.037)	(0.018)	(0.013)	(0.010)
R^2	0.29	0.22	0.24	0.29
Countries	71	71	71	71
Observations	13337	13337	13337	13337
Panel (b): Convergence in post-primary education				
Dependent variable: Dyadic differences in means				
Birth decade	-0.013***	-0.012***	-0.013***	-0.012***
	(0.002)	(0.003)	(0.003)	(0.002)
Population share with post-primary schooling	-0.021***	-0.026***	-0.018***	-0.013***
	(0.006)	(0.006)	(0.005)	(0.004)
R^2	0.20	0.18	0.21	0.21
Countries	71	71	71	71
Observations	13337	13337	13337	13337
Dependent variable: Dyadic differences in standard deviations				
Birth decade	-0.021***	-0.008***	-0.007***	-0.005**
	(0.004)	(0.003)	(0.002)	(0.002)
Population share with post-primary schooling	0.048**	-0.023**	-0.010	-0.001
	(0.024)	(0.010)	(0.009)	(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: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.