

The illusion of moral decline

<https://doi.org/10.1038/s41586-023-06137-x>

Received: 11 July 2022

Accepted: 26 April 2023

Published online: 07 June 2023

Open access

 Check for updates
Adam M. Mastroianni^{1✉} & Daniel T. Gilbert²

Anecdotal evidence indicates that people believe that morality is declining^{1,2}. In a series of studies using both archival and original data ($n = 12,492,983$), we show that people in at least 60 nations around the world believe that morality is declining, that they have believed this for at least 70 years and that they attribute this decline both to the decreasing morality of individuals as they age and to the decreasing morality of successive generations. Next, we show that people's reports of the morality of their contemporaries have not declined over time, suggesting that the perception of moral decline is an illusion. Finally, we show how a simple mechanism based on two well-established psychological phenomena (biased exposure to information and biased memory for information) can produce an illusion of moral decline, and we report studies that confirm two of its predictions about the circumstances under which the perception of moral decline is attenuated, eliminated or reversed (that is, when respondents are asked about the morality of people they know well or people who lived before the respondent was born). Together, our studies show that the perception of moral decline is pervasive, perdurable, unfounded and easily produced. This illusion has implications for research on the misallocation of scarce resources³, the underuse of social support⁴ and social influence⁵.

The social fabric appears to be unravelling: civility seems like an old-fashioned habit, honesty like an optional exercise and trust like the relic of another time. Some observers⁶ claim that “the process of our moral decline” began with the “sinking of the foundations of morality” and proceeded to “the final collapse of the whole edifice”, which brought us “finally to the dark dawning of our modern day, in which we can neither bear our immoralities nor face the remedies needed to cure them”. But as apt as this description of our times may seem, it was written more than 2,000 years ago by the historian Livy, who was bemoaning the declining morality of his fellow Roman citizens. From ancient to modern times, social observers have often lamented the ugly turns their societies have taken, and have often suggested that a recent decline in morality—in kindness, honesty and basic human decency—was among the causes^{2,7}.

Why have so many different people in so many different times and places been convinced that their fellow citizens are now less moral than they once were? One possibility is that morality has, in fact, been declining worldwide for millennia—declining so steadily and so precipitously that people in every era have been able to observe that decline in the brief span of a human lifetime. The other possibility is that the perception of moral decline is a psychological illusion to which people all over the world and throughout history have been susceptible. We provide evidence for the latter possibility. First, we show that people in at least 60 nations do indeed believe that morality is declining, and that they have believed this for at least 70 years. Second, we show that people attribute this decline both to the decreasing morality of individuals as they age and to the decreasing morality of successive generations. Third, we show that people's reports of the current morality of their contemporaries have not declined over time, which strongly suggests that the perception of moral decline is an illusion. Fourth and finally, we describe tests of a simple psychological mechanism that can produce

the illusion of moral decline and can predict some of the circumstances under which it will be attenuated, eliminated or reversed (for example, when respondents are asked about the morality of people they know well or people who lived before the respondent was born).

Do people perceive moral decline?

Morality refers primarily to people's treatment of each other⁸, which ranges from the altruistic⁹ to the barbaric¹⁰. But like most social observers, Livy was not remarking on the moral extremes—on the rare heroic deed or occasional heinous crime that few people ever perform or experience. Rather, he was remarking on the ways in which ordinary people behave in their daily lives. Do modern people, like Livy, believe that their contemporaries are less honest and kind than they used to be? Do they think their neighbours are less generous and less helpful, that their co-workers are more likely to treat each other disrespectfully and betray each other's trust? Survey researchers have been asking people about their perceptions of changes in these everyday moral qualities since at least 1949, but the full corpus of relevant survey data has never been systematically assembled and analysed. We began by doing that.

In study 1, we searched the databases of major survey research providers (using search terms shown in the Supplementary Information) and found 177 survey items that asked representative samples of a total of 220,772 US Americans if and how they thought other people's morality had changed over time (Supplementary Table 1). These items were administered over a 70-year span from 1949 to 2019. Typical items included: “Do you think that over the last few decades our society has become less honest and ethical in its behavior, more honest and ethical, or has there been no change in the extent to which people behave honestly and ethically?” and “Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?”

¹Columbia University, New York, NY, USA. ²Harvard University, Cambridge, MA, USA. ✉e-mail: adam.m.mastroianni@gmail.com

(further methodological details can be found in the concluding method section as well as in the Supplementary Information). On 84.18% of the items, the majority of participants reported that morality had declined. A linear model indicated that the proportion of participants who reported moral decline was not significantly influenced by the year in which the survey was administered, $b = 0.07$, 95% confidence interval (CI) = $[-0.11, 0.24]$, $t(175) = 0.77$, $P = 0.45$, adjusted $R^2 = -0.002$, and the same model fit in a Bayesian framework indicated strong evidence of no effect (Bayes Factor of 0.04), which is to say that US Americans have been reporting moral decline at the same rate for as long as researchers have been asking them about it. (These and all tests we report are two-tailed).

The perception of moral decline was not unique to US Americans. We resampled the databases of major survey research providers and found 58 survey items that asked a total of 354,120 participants in 59 nations other than the United States if and how they thought other people's morality had changed over time (Supplementary Table 2). These items were administered over a 13-year span from 1996 to 2007.

In studies 2a–c, we asked samples of US Americans to rate how “kind, honest, nice, and good” people were in 2020 (the year the studies were conducted), as well as in various other years that differed by study. Methodological details can be found in the concluding method section and in the Supplementary Information. As Fig. 2 shows, participants in

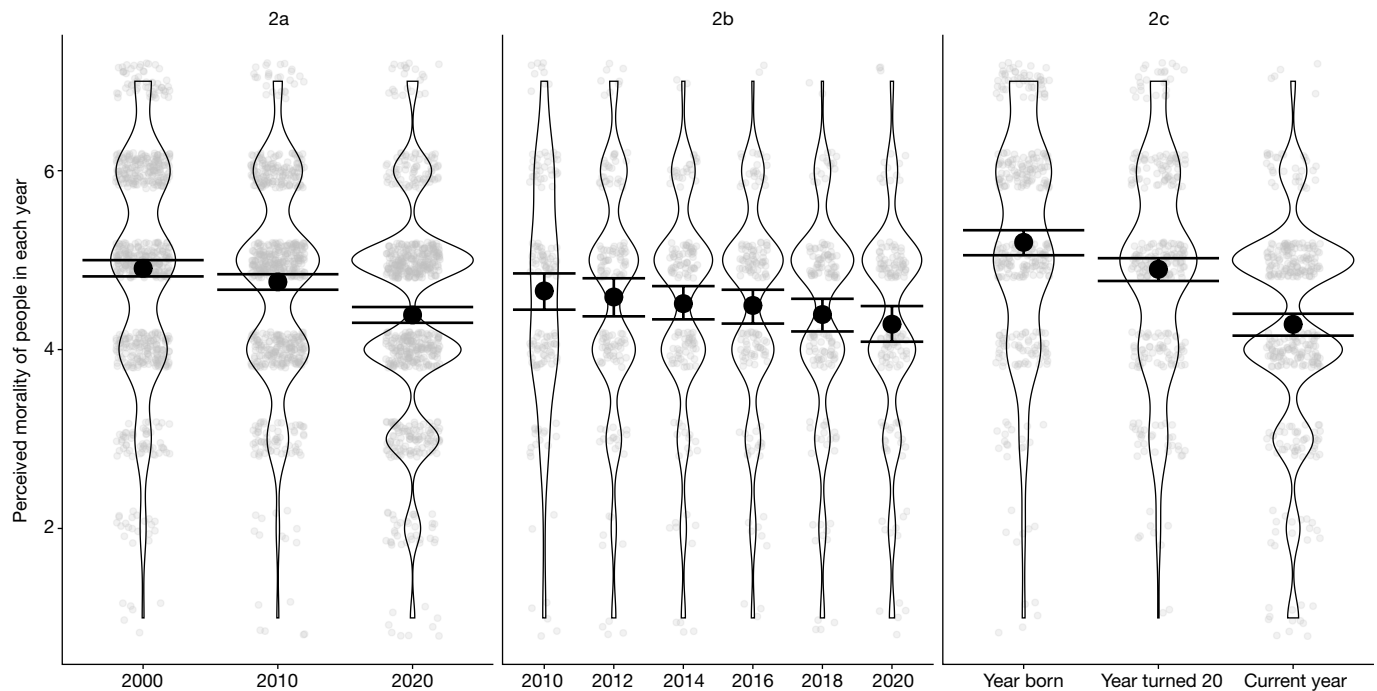


Fig. 2 | Results of studies 2a–c. The panels show the results of studies 2a (left panel), 2b (middle panel) and 2c (right panel). Opaque points represent means. Transparent points represent individual observations jittered for legibility. Error bars represent 95% CIs. Study 2a $n = 698$, study 2b $n = 148$ and study 2c $n = 347$.

study 2a ($n = 698$ respondents on Prolific), study 2b ($n = 185$ respondents on Amazon Mechanical Turk) and study 2c ($n = 347$ respondents on Amazon Mechanical Turk) perceived moral decline. Specifically, in study 2a, participants rated people as less kind, honest, nice and good in 2020 (mean (M) = 4.39) than in 2010 ($M = 4.76$, $b = -0.37$, 95% CI = $[-0.46, -0.28]$, $t(1394) = -9.38$, $P < 0.001$, Cohen's $d = -0.50$), or in 2000 ($M = 4.91$, $b = -0.52$, 95% CI = $[-0.62, -0.43]$, $t(1394) = -13.23$, $P < 0.001$, $d = -0.71$), and as less kind, honest, nice and good in 2010 than in 2000, $b = -0.15$, 95% CI = $[-0.25, -0.06]$, $t(1394) = -3.85$, $P < 0.001$, $d = -0.21$. We also conducted two direct replications of study 2a (one of which was preregistered; Supplementary Information), which produced the same results.

In study 2b, participants rated people as less kind, honest, nice and good in 2020 ($M = 4.28$) than in 2016 ($M = 4.49$, $b = -0.21$, 95% CI = $[-0.43, 0.006]$, $t(735) = -2.87$, $P = 0.047$, $d = -0.33$), in 2014 ($M = 4.51$, $b = -0.23$, 95% CI = $[-0.45, -0.01]$, $t(735) = -3.14$, $P = 0.02$, $d = -0.37$), in 2012: $M = 4.59$, $b = -0.30$, 95% CI = $[-0.52, -0.09]$, $t(735) = -4.16$, $P < 0.001$, $d = -0.48$) and in 2010 $M = 4.66$, $b = -0.37$, 95% CI = $[-0.59, -0.16]$, $t(735) = -5.08$, $P < 0.001$, $d = -0.59$). Participants in study 2b also rated people in 2018 as less kind, honest, nice and good than in people in 2010 ($b = -0.26$, 95% CI = $[-0.48, -0.05]$, $t(735) = -3.61$, $P = 0.004$, $d = -0.32$). No other comparisons were significant (all $P > 0.05$).

In study 2c, participants rated people as less kind, honest, nice and good in 2020 ($M = 4.28$) than in the year the participant turned 20 years old ($M = 4.89$, $b = -0.61$, 95% CI = $[-0.77, -0.45]$, $t(675) = -9.21$, $P < 0.001$, $d = -0.72$) and in the year the participant was born ($M = 5.20$, $b = -0.92$, 95% CI = $[-1.07, -0.76]$, $t(667) = -14.27$, $P < 0.001$, $d = -1.08$). Participants also rated people as less kind, honest, nice and good in the year the participant turned 20 years old than in the year the participant was born, $b = -0.31$, 95% CI = $[-0.47, -0.15]$, $t(675) = -4.70$, $P < 0.001$, $d = -0.37$.

In studies 2a–c, we also examined the effects of age, gender, race, education (1 = did not finish high school; 6 = graduate degree), political ideology (-2 = very liberal; 2 = very conservative) and parental status (0 = not parent; 1 = parent) on perceptions of moral decline using an exploratory linear regression. In study 2a, more conservative

participants perceived more decline, $b = -0.18$, 95% CI = $[-0.27, -0.09]$, $t(684) = -4.03$, $P < 0.001$. No other effects in study 2a were significant (all $P > 0.05$). An additional exploratory one-sample t -test indicated that, although more conservative participants perceived more moral decline than did more liberal participants, more liberal participants perceived moral decline as well, $M = -0.35$, 95% CI = $[-0.47, -0.23]$, $t(398) = -4.96$, $d = 0.28$, $P < 0.001$, $d = 0.28$. In study 2b, no other effects were significant (all $P > 0.05$). In study 2c, more conservative participants perceived more moral decline than did more liberal participants, $b = -0.15$, 95% CI = $[-0.28, -0.12]$, $t(329) = -2.15$, $P = 0.03$, but more liberal participants perceived moral decline as well, $M = -0.80$, 95% CI = $[-1.02, -0.58]$, $t(159) = -7.23$, $P < 0.001$, $d = 0.57$.

In study 2c, older participants perceived more moral decline than did younger participants, $b = -0.02$, 95% CI = $[-0.03, -0.004]$, $t(329) = -2.61$, $P = 0.01$. No other effects were significant (all $P > 0.05$). We further investigated the effect of age in study 2c by creating two moral decline scores: specifically, (1) we subtracted participants' ratings of people in the year the participant was 20 years old from their ratings of people in 2020 and (2) we subtracted participants' ratings of people in the year the participant was born from their ratings of people in 2020. An exploratory linear model indicated that older participants perceived more moral decline than did younger participants both compared to the year in which they turned 20 years old: $b = -0.02$, $t(320) = -3.30$, 95% CI = $[-0.03, -0.007]$, $P < 0.001$, and compared to the year in which they were born: $b = -0.02$, $t(345) = -3.77$, 95% CI = $[-0.04, -0.01]$, $P < 0.001$. Did older participants perceive more moral decline simply because they were considering longer periods of time? Yes. We created a measure of the annual rate of moral decline by subtracting the participants' ratings of people in the year the participant was born from their rating of people in 2020, and then dividing that value by the participant's age. We then fit an exploratory linear model with the perceived annual rate of moral decline as the outcome and age as a predictor. The main effect of age was not significant, $b = -0.0002$, 95% CI = $[-0.0005, 0.0002]$, $t(345) = -1.05$, $P = 0.29$, and refitting the same model in a Bayesian framework provided strong evidence that perceived moral

decline per year did not differ by age (100% of high-density interval (HDI) in the region of practical equivalence (ROPE)). In other words, younger and older participants did not report different annual rates of moral decline, which is to say that they reported different total amounts of moral decline only because they were reporting on moral decline across different numbers of years.

To what do people attribute moral decline?

People clearly perceive moral decline, but to what do they attribute it? There are two possibilities. The average morality of a population may decline between two points in time (T_1 and T_2) because (1) individuals who are moral at T_1 are less moral when they reach T_2 (a phenomenon we refer to as ‘personal change’), and/or (2) older people who were alive at T_1 but who died before T_2 are more moral than younger people who were alive at T_2 but who were not yet born (or who were not yet adults and therefore not sampled) at T_1 (a phenomenon we refer to as ‘interpersonal replacement’). When the average morality of a population declines over very short time periods (for example, a day), the decline is probably the result of personal change (because very few people who were measured at T_1 were not also measured at T_2), and when the average morality of a population declines over very long time periods (for example, 200 years), the decline is necessarily the result of interpersonal replacement (because no human being lives for 200 years and therefore no one who was measured at T_1 was also measured at T_2).

So, what about moral decline over the intermediate time periods that participants in studies 2a–c were asked about? To which of these sources—personal change or interpersonal replacement—do people attribute such decline? In study 3 ($n = 319$ respondents on Amazon Mechanical Turk), we asked a sample of US Americans to rate how “kind, honest, nice, and good” people were in 2020 (the year the study was conducted) and in 2005. Methodological details can be found in the Methods and in the Supplementary Information. Next, participants rated the morality of two exclusive subsets of this population. The first subset was people who were living adults in both 2005 and 2020. The difference between these ratings was a measure of participants’ perceptions of personal change between the 2 years. The second subset was people who were living adults in either 2005 or 2020, but not in both years. The difference between these ratings was a measure of participants’ perceptions of interpersonal replacement between the 2 years.

A paired samples *t*-test indicated that participants perceived moral decline, rating people as less kind, honest, nice and good in 2020 ($M = 4.35$) than in 2005 ($M = 4.89$), $t(318) = -9.88$, 95% CI = $[-0.65, -0.44]$, $d = 0.55$, $P < 0.001$. To determine whether participants attributed this moral decline to personal change and/or to interpersonal replacement, we used linear regression to determine whether and how well participants’ perceptions of personal change and of interpersonal replacement predicted their perceptions of moral decline. Both measures significantly predicted participants’ perceptions of moral decline (personal change $b = 0.50$, 95% CI = $[0.40, 0.59]$, $t(316) = 9.96$, $P < 0.001$; interpersonal replacement $b = 0.17$, $t(316) = 6.52$, 95% CI = $[0.12, 0.22]$, $P < 0.001$; adjusted $R^2 = 0.36$). We refit the model to include age, gender, race, political ideology, education and parental status as covariates, and the effects of personal change and interpersonal replacement both remained significant (personal change $b = 0.50$, 95% CI = $[0.40, 0.60]$, $t(304) = 9.87$, $P < 0.001$; interpersonal replacement $b = 0.18$, 95% CI = $[0.13, 0.23]$, $t(304) = 6.71$, $P < 0.001$; adjusted $R^2 = 0.38$).

In short, participants in study 3 believed that morality had declined on average over a 15-year period, and they attributed that decline both to the decreasing morality of individuals over time and to the decreasing morality of successive generations^{13,14}. The fact that people attribute moral decline to both sources may help explain why their perceptions of moral decline are so robust, appearing in study 3, in the archival data of study 1 and in the original data collected for studies 2a–c.

Is morality declining?

People believe that morality is declining. Is it? Societies keep (or at least leave) reasonably good records of extremely immoral behaviour such as slaughter and conquest, slavery and subjugation or murder and rape, and careful analyses of those historical records strongly suggest that these objective indicators of immorality have decreased significantly over the last few centuries^{15,16}. On average, modern humans treat each other far better than their forebears ever did—which is not what one would expect if honesty, kindness, niceness and goodness had been decreasing steadily, year after year, for millennia. Although there are no similarly objective historical records of everyday morality—of how often people offer their seats to an elderly person, give directions to a lost tourist or help their neighbour fix a fence—there are subjective measures of such things.

Recall that in study 1, we examined people’s reports of moral change, which were obtained when survey researchers asked people to mentally compare the morality of people in the present to the morality of people at some point in the past and then report the direction of the difference. But, for decades, survey researchers have also been asking people to report directly on the moral values, traits and behaviours of themselves and their contemporaries in the present: “Were you treated with respect all day yesterday?” or “Would you say that most of the time people try to be helpful, or that they are mostly just looking out for themselves?” or “During the past 12 months, how often have you carried a stranger’s belongings, like groceries, a suitcase, or shopping bag?” (Supplementary Tables 3 and 4). If, as people all over the world claim, morality has been declining steadily and precipitously for decades, then people’s reports of current morality should also have declined over the years. Have they?

In study 4, we searched the databases of major survey research providers (using search terms listed in the Supplementary Information) and found 107 items that were administered to 4,483,136 people across a 55-year span from 1965 to 2020, and that (1) asked participants to report on some aspect of current morality and (2) were administered at least twice, at times that were at least 10 years apart (Supplementary Table 3 shows the items). To determine whether people’s reports of the current morality of their contemporaries changed over time, we fit a linear model for each survey. The year of each survey was always entered as a predictor, and the outcome was always the average perception of current morality. Because these surveys generally had large samples—some with hundreds of thousands of participants—the significance of *P* values is not very meaningful, so we used R^2 values as a measure of effect size. To shed further light on the size of these effects, we also fit analogous models in a Bayesian framework.

The results of both analyses were clear: people’s reports of the current morality of their contemporaries were stable over time. On average, the year in which the survey was conducted explained less than 0.3% of the variance in responses, and in almost all cases it explained less than 1% (Supplementary Table 4). This result was confirmed by Bayesian analysis, which showed that 100% of the HDI was within the ROPE in all but one case, indicating that any changes over time were negligible at best. We repeated these analyses for data collected from non-US samples (33 samples, $n = 7,432,736$) and found similar results: on average, the year in which the survey was conducted explained less than 0.2% of the variance in responses (all items and results for the non-US sample are listed in Supplementary Table 4). In short, studies 1–3 showed that when people are explicitly asked to assess moral change, they claim that morality has declined, but study 4 shows that when people are asked to assess the current morality of their contemporaries, their assessments do not change over time.

Could this be because words can change meaning over time? If residents of Los Angeles in both 1942 and 2022 described traffic as ‘heavy’, it would be a mistake to conclude that traffic had not actually increased. Words such as ‘heavy’ and ‘moral’ are inherently ambiguous, and if

people adapt to changes in traffic or morality, then people in different decades may use the same ambiguous word to describe very different states of affairs. This is unlikely to be the case in study 4 because in addition to including a few items that measured traits and values with ambiguous terms such as ‘morality’, the dataset (Supplementary Tables 3 and 4) mainly contained items that measured specific and relatively unambiguous moral behaviours, such as “Within the past 12 months, have you been assaulted or mugged?” or “During the past 12 months, have you let a stranger go ahead of you in line?” Answers to specific and unambiguous questions such as these did not change over time. It seems rather improbable that people were less likely to allow strangers into a line in 2020 than in 2010, but that somehow in that 10-year span, the meaning of words such as ‘stranger’ and ‘line’ had changed in ways that masked that objective decline in kindness.

The subjective measures we analysed are not definitive, of course, but they strongly suggest that the widespread perception of moral decline is an illusion. Moreover, studies that use the rare objective measure of changes in everyday moral behaviour suggest the same thing. For instance, Yuan et al.¹⁷ showed that rates of cooperation in the Prisoner’s Dilemma game have increased significantly between 1956 and 2017, and in the Supplementary Information, we report the results of a study (Supplementary study 3) showing that most people mistakenly believe that such cooperation has declined.

Why do people perceive moral decline?

The results of studies 1–3 suggest that people believe that morality has declined, and the results of study 4 suggest that this belief is illusory. If morality has not declined, then why do people think it has? Although there are surely many good answers to this question, we suggest that one of them has to do with the fact that when two well-established psychological phenomena work in tandem, they can produce an illusion of moral decline. First, numerous studies have shown that human beings are especially likely to seek and attend to negative information about others^{18–20}, and mass media indulge this tendency with a disproportionate focus on people behaving badly²¹. As such, people may encounter more negative information than positive information about the morality of ‘people in general’, and this ‘biased exposure effect’ may help explain why people believe that current morality is relatively low. Second, numerous studies have shown that when people recall positive and negative events from the past, the negative events are more likely to be forgotten²², more likely to be misremembered as their opposite^{23,24} and more likely to have lost their emotional impact²⁵. This ‘biased memory effect’ may help explain why people believe that past morality was relatively high. Working together, these two phenomena can produce an illusion of moral decline. Specifically, biased exposure to information about current morality may make the present seem like a moral wasteland, biased memory for information about past morality may make the past seem like a moral wonderland and when people in a wasteland remember being in a wonderland, they may naturally conclude that the landscape has changed.

This ‘biased exposure and memory’ (BEAM) mechanism comports well with the results of the studies we have described, but it also makes at least two testable predictions. Specifically, the BEAM mechanism predicts that the illusion of moral decline should be attenuated, eliminated or even reversed when (1) people are exposed to a disproportionate amount of positive rather than negative information about the moral behaviour of others, as they are with their families, friends and associates, and (2) when people are asked about times for which they have little or no information in memory, such as in the years before they were born. In the Supplementary Information, we provide a mathematical model of the BEAM mechanism and show how the model makes these two predictions, which we tested in studies 5a and 5b.

Study 5a ($n = 283$ respondents on Amazon Mechanical Turk) tested the hypothesis that the illusion of moral decline is attenuated,

eliminated or reversed when participants are asked to rate people in their personal worlds rather than people in general. As described in the Methods (and Supplementary Information), we began by measuring participants’ perceptions of (1) overall moral decline; (2) personal change among people in general and (3) interpersonal replacement among people in general. Then we measured participants’ perceptions of (4) personal change among people in their personal worlds and (5) interpersonal replacement among people in their personal worlds. We explained that the phrase ‘personal worlds’ referred to “all the people with whom you currently interact, in person or otherwise, in your everyday life. This probably includes friends, family members, coworkers, classmates, neighbors, etc.”.

We used one-sample t -tests to determine whether each of the measures described above differed significantly from zero. First, participants on average perceived moral decline: they believed that people in general were not as kind, honest, nice and good in 2020 as they were in 2005 ($M = -0.36$, $t(282) = -6.04$, 95% CI = $[-0.48, -0.25]$, $d = 0.36$, $P < 0.001$). Second, participants believed that individuals in 2020 were not as kind, honest, nice and good as those same individuals had been in 2005, $M = -0.15$, $t(282) = -2.67$, 95% CI = $[-0.26, -0.04]$, $d = 0.16$, $P = 0.008$, and that younger people in 2020 were not as kind, honest, nice and good as older people were in 2005, $M = -0.44$, $t(282) = -5.82$, 95% CI = $[-0.59, -0.29]$, $d = 0.35$, $P < 0.001$. In other words, as in study 3, participants believed that morality had declined among individuals and between successive generations. These results are illustrated in Fig. 3.

Did participants believe the same things about people in their personal worlds? No. First, participants believed that the individuals who were in their personal worlds in both 2005 and 2020 had shown moral improvement over that period rather than moral decline, $M = 0.23$, $t(255) = 4.86$, 95% CI = $[0.14, 0.33]$, $d = 0.30$, $P < 0.001$. Second, although participants believed that the younger people who were in their personal worlds in 2020 (but not in 2005) were not as kind, honest, nice and good as the older people who were in their personal worlds in 2005 (but not in 2020), $M = -0.23$, $t(144) = -3.23$, 95% CI = $[-0.38, -0.09]$, $d = 0.27$, $P = 0.002$, this difference was smaller among people in their personal worlds than it was among people in general, $t(144) = -2.56$, 95% CI = $[-0.40, -0.05]$, $d = 0.18$, $P = 0.01$.

To investigate the effects of demographic variables on the perception of moral decline, we fit the same exploratory model used in studies 2a–c. The outcome variable was participants’ perceptions of moral decline between 2005 and 2020. Older participants perceived more moral decline than did younger participants, $b = -0.02$, 95% CI = $[-0.03, -0.005]$, $t(272) = -2.93$, $P = 0.004$, and non-parents perceived more moral decline than did parents, $b = 0.29$, 95% CI = $[0.02, 0.56]$, $t(271) = 2.12$, $P = 0.03$, adjusted $R^2 = 0.07$. No other effects were significant (all $P > 0.05$).

In short, participants in study 5a believed that morality had declined among people in general, but this effect was reversed (in the case of personal change) or attenuated (in the case of interpersonal replacement) among the people they personally knew. We hasten to note that there are surely many reasons why people might think differently about people in their personal worlds than about people in general and that the BEAM mechanism is, at best, just one.

Study 5b ($n = 387$ respondents on Amazon Mechanical Turk) tested the hypothesis that the illusion of moral decline is attenuated, eliminated or reversed when participants are asked to rate the morality of people in general in the years before the participant was born. Participants rated how kind, honest, nice and good people in general are or were at four points in time: in the current year (which was 2021), 20 years after the participant was born, the year the participant was born, 20 years before the participant was born and 40 years before the participant was born. We fit the same model and planned contrasts used in studies 2a–c. As in our previous studies, participants perceived moral decline among people in general in the years after the participant was born. Specifically, participants believed that people in general

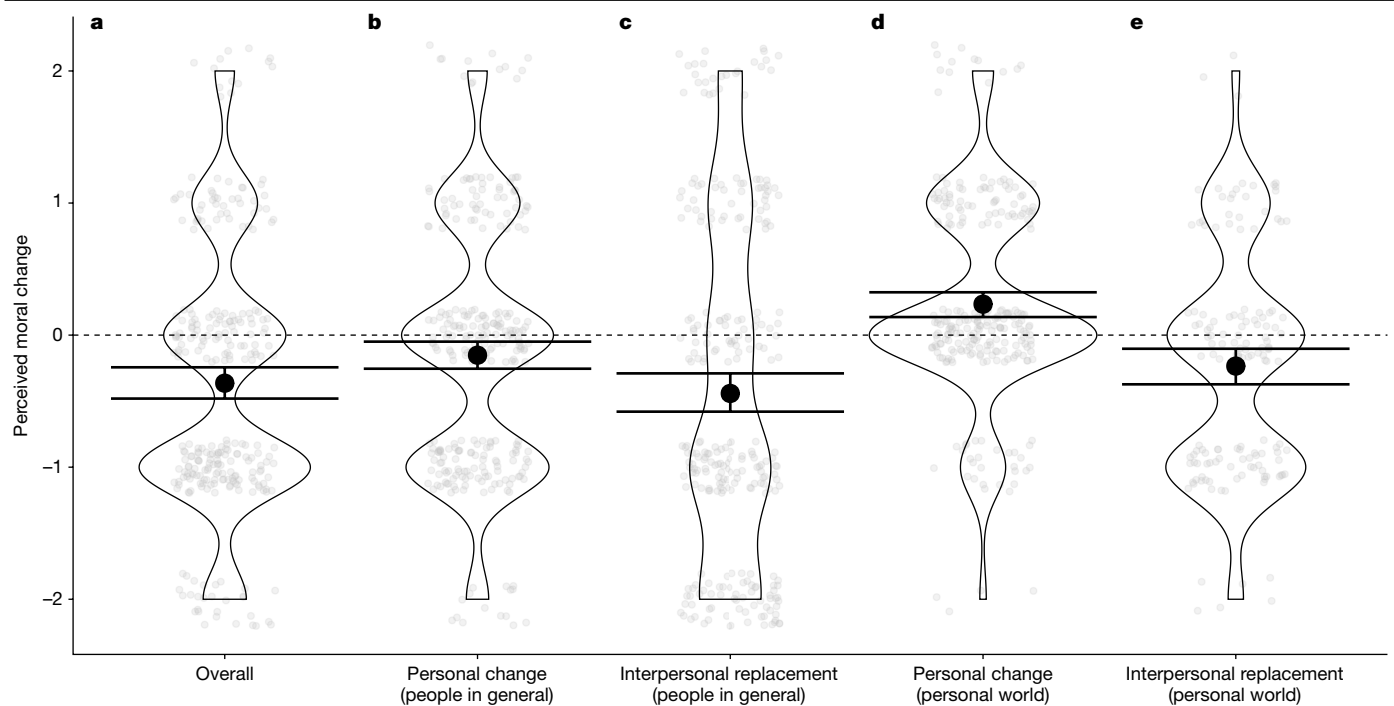


Fig. 3 | Results of study 5a. a–e. From left to right, this figure shows the perceived difference in morality of (a) people in general in 2005 and people in general in 2020 (overall) (b), people in general who were sampled both in 2005 and 2020 (personal change among people in general) (c), people in general who were sampled in 2005 or 2020 but not in both years (interpersonal replacement among people in general) (d), people in the participant's personal world who

were sampled both in 2005 and 2020 (personal change among people in personal world) and (e) people in the participant's personal world who were sampled in 2005 or 2020 but not in both years (interpersonal replacement among people in participant's personal world). Opaque points represent means. Transparent points represent individual observations jittered for legibility. Error bars represent 95% CIs. $n = 283$.

were (1) less kind, honest, nice and good in 2021 ($M = 4.27$) than they were in the year the participant was 20 years old ($M = 4.96$), $b = -0.68$, 95% CI = $[-0.85, -0.51]$, $t(1513) = -10.07$, $P < 0.001$, $d = -0.75$ and (2) less kind, honest, nice and good in the year the participant was 20 years old than they were in the year the participant was born ($M = 5.13$), $b = -0.18$, 95% CI = $[-0.35, -0.01]$, $t(1513) = -2.60$, $P = 0.03$, $d = -0.19$. However, there was no evidence to suggest that participants perceived moral decline in the years before they were born. Specifically, there was no evidence that participants believed that people in general were (1) any more or less kind, honest, nice and good in the year the participant was born ($M = 5.13$) than they were 20 years before the participant was born ($M = 5.14$), $b = -0.01$, 95% CI = $[-0.17, 0.15]$, $t(1506) = -0.16$, $P = 0.87$, $d = -0.01$ and (2) any more or less kind, honest, nice and good 20 years before the participant was born ($M = 5.14$) than they were 40 years before the participant was born ($M = 5.05$), $b = 0.09$, 95% CI = $[-0.24, 0.04]$, $t(1506) = -1.42$, $P = 0.31$, $d = 0.10$. Equivalence tests using the 'parameters' package in R²⁶ indicated that there was insufficient evidence to conclude that participants' ratings for 40 years before their birth and 20 years before their birth were equivalent (91.74% of HDI in ROPE, $P = 0.09$; if anything, participants perceived moral improvement between these years), but that there was sufficient evidence to conclude that participants' ratings for 20 years before their birth and the year of their birth were equivalent (100% of HDI in ROPE, $P = 0.003$). In short, participants believed that moral decline began at about roughly the same time they appeared on Earth. These results are illustrated in Fig. 4.

To investigate the effects of demographic variables on the perception of moral decline, we fit the same exploratory model used in studies 2a–c. The outcome variable was perceived moral decline between the year of the participant's birth and 2021. More conservative participants perceived more moral decline than did more liberal participants, $b = -0.33$, 95% CI = $[-0.45, -0.22]$, $t(374) = -5.81$, $P < 0.001$, but a one-sample t -test indicated that more liberal participants perceived moral decline as well,

$b = -0.46$, 95% CI = $[-0.64, -0.28]$, $t(196) = -5.11$, $P < 0.001$, $d = 0.36$. Although older participants perceived more moral decline than did younger participants, $b = -0.01$, 95% CI = $[-0.02, -0.003]$, $t(374) = -2.60$, $P = 0.009$, this was because older participants were perceiving moral decline over a longer period of time. Indeed, the same analysis used in study 2c indicated no evidence that older and younger participants perceived different annual rates of moral decline between the year they were born and 2021, $b = 0.000005$, 95% CI = $[-0.0003, 0.0003]$, $t(385) = 0.04$, $P = 0.97$, consistent with the results of study 2c.

Studies 5a and 5b show that when participants were asked to assess the morality of people about whom they had mainly positive information in memory (that is, people in their personal worlds) or about whom they had little or no information in memory (that is, people who lived before the participants were born), the perception of moral decline was attenuated, eliminated or reversed, just as the BEAM mechanism predicts. The illusion of moral decline is a robust phenomenon that surely has several causes, and no one can say which of them produced the illusion that our studies have documented. Studies 5a and 5b do not directly implicate the BEAM mechanism in that production but they do make it a viable candidate for future research.

Discussion

Participants in the foregoing studies believed that morality has declined, and they believed this in every decade and in every nation we studied. They believed the decline began somewhere around the time they were born, regardless of when that was, and they believed it continues to this day. They believed the decline was a result both of individuals becoming less moral as they move through time and of the replacement of more moral people by less moral people. And they believed that the people they personally know and the people who lived before they did are exceptions to this rule. About all these things, they

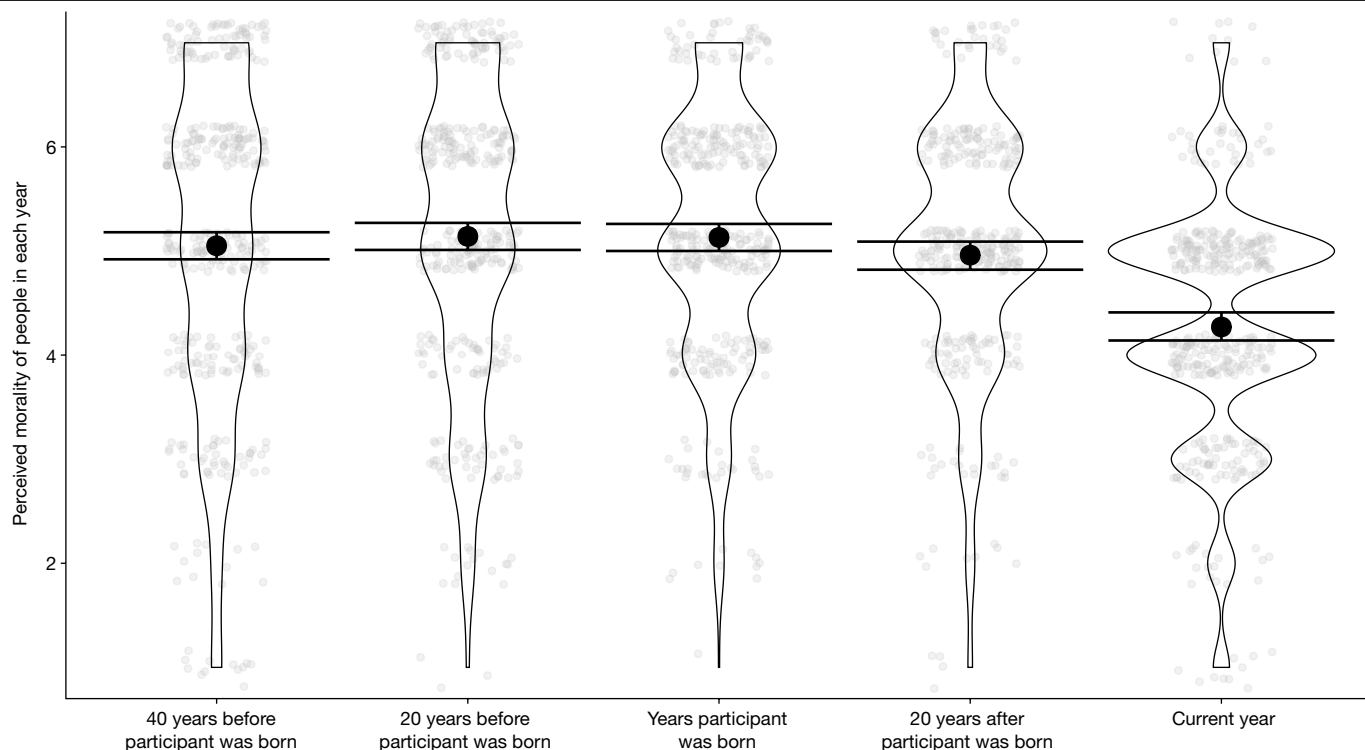


Fig. 4 | Results of Study 5b. The figure shows the perceived morality of people in various years. Opaque points represent means. Transparent points represent individual observations jittered for legibility. Error bars represent 95% CIs. $n = 387$.

were almost certainly mistaken. One reason they may have held these mistaken beliefs is that they may typically have encountered more negative than positive information about the morality of contemporaries whom they did not personally know, and the negative information may have faded more quickly from memory or lost its emotional impact more quickly than the positive information did, leading them to believe that people today are not as kind, nice, honest or good as once upon a time they were.

Like all studies, ours have limitations. For example, studies 1 and 4 made use of archival data that were not collected for the purposes to which we put them and that were therefore less than ideal. For example, some of the items we analysed asked participants for their perceptions of changes in ‘moral values’ without specifying what those values were, some failed to specify the time in the past to which the present was to be compared, and some contained ambiguous wording that was not optimal for extracting accurate measures of people’s perceptions of moral decline. Moreover, all the items asked participants about the presence or absence of moral decline rather than asking them to rate the level of morality of people in both the present and the past. These limitations were addressed by studies 2a–c, but these studies had limitations of their own (for example, all participants were from the United States). And although studies 5a–b demonstrated the viability of the BEAM mechanism, they do not tell us whether it was the cause of the illusion of moral decline that our other studies documented.

With that said, the illusion of moral decline seems to be a robust phenomenon that may have troubling consequences. For example, in 2015, 76% of US Americans agreed that “addressing the moral breakdown of the country” should be a high priority for their government²⁷. The United States faces many well-documented problems, from climate change and terrorism to racial injustice and economic inequality—and yet, most US Americans believe their government should devote scarce resources to reversing an imaginary trend. The belief that everyday morality is on the wane may also affect people’s interpersonal

behaviour. For example, research shows that people are reluctant to seek the aid and comfort of those whom they do not know because they underestimate how willingly those people would provide it^{4,28,29}. The illusion of moral decline may be one of the reasons people do not depend as much as they might on the kindness of strangers—an act that might well ameliorate the illusion itself. The illusion of moral decline may also leave people dangerously susceptible to manipulation by bad actors. Research shows that people are especially influenced by ‘dynamic norms’, which are perceived changes in customary ways of behaving⁵. If low morality is a cause for concern, then declining morality may be a veritable call to arms, and leaders who promise to halt that illusory slide—to “make America great again”, as it were—may have out-sized appeal. Our studies indicate that the perception of moral decline is pervasive, perdurable, unfounded and easily produced. Achieving a better understanding of this phenomenon would seem a timely task.

Online content

Any methods, additional references, Nature Portfolio reporting summaries, source data, extended data, supplementary information, acknowledgements, peer review information; details of author contributions and competing interests; and statements of data and code availability are available at <https://doi.org/10.1038/s41586-023-06137-x>.

1. Eibach, R. P. & Libby, L. K. In *Social and Psychological Bases of Ideology and System Justification* (ed. Jost, J. T. et al.) 402–423 (Oxford Univ. Press, 2009).
2. Herman, A. *The Idea of Decline in Western History* (Free Press, 1997).
3. Thaler, R. H. & Sunstein, C. R. *Nudge: Improving Decisions about Health, Wealth and Happiness* (Penguin Books, 2009).
4. Epley, N., Kardas, M., Zhao, X., Atir, S. & Schroeder, J. Undersociality: miscalibrated social cognition can inhibit social connection. *Trends Cogn. Sci.* **26**, 406–418 (2022).
5. Sparkman, G. & Walton, G. M. Dynamic norms promote sustainable behavior, even if it is counternormative. *Psychol. Sci.* **28**, 1663–1674 (2017).
6. Conway, R. S. & Walters, C. F. *Titus Livius (Livy) Ab urbe condita (History of Rome)* (Oxford Univ. Press, 1914).
7. Murphy, A. R. Augustine and the rhetoric of Roman decline. *Hist. Polit. Thought* **26**, 586–606 (2005).

8. Ellemers, N., van der Toorn, J., Paunov, Y. & van Leeuwen, T. The psychology of morality: a review and analysis of empirical studies published from 1940 through 2017. *Personal. Soc. Psychol. Rev.* **23**, 332–366 (2019).
9. Marsh, A. A. et al. Neural and cognitive characteristics of extraordinary altruists. *Proc. Natl Acad. Sci. USA* **111**, 15036–15041 (2014).
10. Wygant, D. B., Pardini, D. A., Marsh, A. A. & Patrick, C. J. in *Handbook of Psychopathy* 2nd edn (ed. Patrick, C. J.) 755–778 (The Guilford Press, 2018).
11. *Summer 2002 Survey Data* (Pew Research Center, 2002).
12. *Spirit and Power – A 10-Country Survey of Pentecostals* (Pew Research Center, 2006).
13. Protzko, J. & Schooler, J. W. Who denigrates today's youth?: the role of age, implicit theories, and sharing the same negative trait. *Front. Psychol.* **13**, 723515 (2022).
14. Protzko, J. & Schooler, J. W. Kids these days: why the youth of today seem lacking. *Sci. Adv.* **5**, eaav5916 (2022).
15. Pinker, S. *The Better Angels of our Nature: Why Violence has Declined* (Viking, 2011).
16. Pinker, S. *Enlightenment Now: The Case for Reason, Science, Humanism, and Progress* (Viking, 2018).
17. Yuan, M. et al. Did cooperation among strangers decline in the United States? A cross-temporal meta-analysis of social dilemmas (1956–2017). *Psychol. Bull.* **148**, 129–157 (2022).
18. Baumeister, R. F., Bratslavsky, E., Finkenauer, C. & Vohs, K. D. Bad is stronger than good. *Rev. Gen. Psychol.* **5**, 323–370 (2001).
19. Rozin, P. & Royzman, E. B. Negativity bias, negativity dominance, and contagion. *Personal. Soc. Psychol. Rev.* **5**, 296–320 (2001).
20. Pratto, F. & John, O. P. Automatic vigilance: the attention-grabbing power of negative social information. *J. Pers. Soc. Psychol.* **61**, 380–391 (1991).
21. Soroka, S. & McAdams, S. News, politics, and negativity. *Polit. Commun.* **32**, 1–22 (2015).
22. Breslin, C. W. & Safer, M. A. Effects of event valence on long-term memory for two baseball championship games. *Psychol. Sci.* **22**, 1408–1412 (2011).
23. D'Argembeau, A. & Van der Linden, M. Remembering pride and shame: self-enhancement and the phenomenology of autobiographical memory. *Memory* **16**, 538–547 (2008).
24. Mitchell, T. R., Thompson, L., Peterson, E. & Cronk, R. Temporal adjustments in the evaluation of events: the 'rosy view'. *J. Exp. Soc. Psychol.* **33**, 421–448 (1997).
25. Skowronski, J. J., Walker, W. R., Henderson, D. X. & Bond, G. D. in *Advances in Experimental Social Psychology* Vol. 49 (eds. Olson, J. M. & Zanna, M. P.) 163–218 (Elsevier, 2014).
26. Lüdtke, D., Ben-Shachar, M., Patil, I. & Makowski, D. Extracting, computing and exploring the parameters of statistical models using R. *J. Open Source Softw.* **553**, 2445 (2020).
27. Pew Research Center for the People & the Press Research Center Poll: January 2015 Political Survey (Version 2). *Roper Center for Public Opinion Research* <https://doi.org/10.25940/ROPER-31096284> (2015).
28. Zhao, X. & Epley, N. Surprisingly happy to have helped: underestimating prosociality creates a misplaced barrier to asking for help. *Psychol. Sci.* <https://doi.org/10.1177/0956797622109761> (2022).
29. Dungan, J. A., Munguia Gomez, D. M. & Epley, N. Too reluctant to reach out: receiving social support is more positive than expressers expect. *Psychol. Sci.* <https://doi.org/10.1177/09567976221082942> (2022).

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit <http://creativecommons.org/licenses/by/4.0/>.

© The Author(s) 2023

Methods

Study 1

In study 1, we conducted keyword-term searches of the Roper Center for Public Opinion iPoll Database, and manually searched the databases of the General Social Survey, Pew Research Center, Gallup, the American National Election Studies, the World Values Survey, the European Social Survey and the European Values Survey to locate survey items that asked participants if and how they thought other people's morality had changed over time. In our analyses, we included all surveys that (1) used a representative sample of US American participants, and (2) explicitly asked participants about their perceptions of changes in values, traits and behaviours that have traditionally been taken as indicators of morality by a wide range of US Americans (for example, kindness, honesty, respect). We excluded from our analyses items that asked participants about their perceptions of special topics whose moral relevance either changed considerably over time (for example, men holding doors for women) or differed substantially across members of the population (for example, attending church). We also excluded items that asked participants about the morality of special subpopulations (for example, 'Evangelicals' or 'the Wisconsin legislature') rather than about all US Americans or about people in general. Further information, including search terms and all survey items included in study 1, can be found in the Supplementary Information. We also sampled our database for survey items administered to participants who lived outside the United States. Because there were fewer such surveys, we did not exclude surveys with non-representative samples, as we did with our US sample.

Study 2a

All original data collection in this and subsequent studies followed all ethical regulations and was approved by the Institutional Review Board of Harvard University.

Participants. We recruited a nationally representative sample of US American adults using Prolific, an online sample provider. This sample was constructed to represent the US American adult population in terms of gender, race and age. Because we did not know the size of the effect we were studying, we sought to make our sample comparable in size to the samples in study 1 by recruiting 1,000 participants. Nine-hundred and ninety-nine people (507 female, 487 male, 5 other, $M_{\text{age}} = 45.74$ years, 73% white, 13% Black, 7% Asian, 4% Hispanic, 1% American Indian or Alaska Native, 1% other, 2% 'more than one of the above') were paid US\$0.75 each for their participation.

Procedure. Study 2a was conducted in 2020. After providing informed consent, participants confirmed their Prolific ID, per the site's usage policy. They then read the following instructions: "Thanks! In this study, we'll ask you how kind, honest, nice, and good people were at various points in time. If you're not sure, that's okay, just give your best guess". Participants then rated how "kind, honest, nice, and good" people are today, were 10 years ago and were 20 years ago, using seven-point Likert scales with endpoints labelled 'not very' and 'very'. As a consistency check, participants were then asked to recall whether they had given higher, equal or lower ratings to people today compared to people 20 years ago. Participants then answered some open-ended exploratory questions that asked them to explain the thinking behind their answers. Participants then answered some demographic questions (Supplementary Table 6). Embedded among these demographic questions was an 'attention check question' that instructed participants to select the option 'other' and to type the word 'sky'. Finally, participants were compensated and dismissed.

Exclusions. One hundred and eighty-one participants failed the attention check embedded in the demographics and were excluded from all analyses. Another 120 participants gave answers to the consistency

check question that were inconsistent with their previous answers; they were also excluded. This left 698 participants in all analyses (372 female, 322 male, four other, $M_{\text{age}} = 46.37$, 74% white, 12% Black, 6% Asian, 4% Hispanic, 1% American Indian or Alaska Native, 2% more than one of the above). These exclusions do not meaningfully affect the results.

Analysis. To analyse the data, we fit a linear mixed effects model using the lme4 package in R³⁰, extracted *P* values using the lmerTest package³¹ and calculated planned contrasts using the emmeans package³², using a Holm–Bonferroni correction for multiple comparisons. The outcome was participants' ratings and the predictor was the year of those ratings (one factor with three levels: 2020, 2010 and 2000). The model included a fixed effect of the year of each rating and a random intercept for each participant. For this and all models, we checked model assumptions by plotting the outcome variable, residuals and fitted values. All tests we report are two-tailed.

Study 2b

Participants. We powered study 2b to detect an effect of $d = 0.30$ or larger, reasoning that this would be sufficient to detect effects similar to the effect we detected in Study 2a. Two-hundred and thirty-six people responded to an advertisement for a study on Amazon Mechanical Turk. To participate, respondents had to pass a three-item test that required them to know that (1) children in kindergarten are 3 or 4 years old, (2) a US American ZIP code is a series of five digits and (3) eating turkey is not associated with Halloween. Thirty-six respondents answered at least one of these three questions incorrectly and were not allowed to participate. The remaining 200 respondents (81 female, 119 male, $M_{\text{age}} = 35.81$ years, 72% white, 12% Black, 9% Hispanic, 6% Asian, 3% more than one of the above) were allowed to participate in the study in exchange for US\$0.75.

Procedure. After providing informed consent, participants followed study 2a's procedure except they were asked about different years. Specifically, participants were first asked, "How kind, honest, nice, and good are people today?" and were then asked the same question for "two years ago", "four years ago", "six years ago", "eight years ago" and "ten years ago", in that order. All questions were answered using a seven-point Likert scale with endpoints labelled 'not very' and 'very'. As a consistency check, participants then answered the following question: "When it comes to being kind, honest, nice, and good—are people more so today compared to ten years ago, less so today compared to ten years ago, or the same?" Participants were then asked to explain their answer in an open-ended question. Finally, participants were asked some demographic questions, as well as an attention check question that required them to select the option 'other' and to type the word 'day'. Participants were compensated and dismissed.

Exclusions. Fifteen participants failed the attention check, and a further 37 participants failed the consistency check by giving an answer that was inconsistent with their scale ratings. The data from these participants were excluded from all analyses, leaving 148 participants (59 female, 89 male, $M_{\text{age}} = 36.59$ years, 75% white, 9% Black, 7% Hispanic, 5% Asian, 1% Hawaiian or Pacific Islander, 3% more the one of the above). These exclusions only meaningfully affect the results in one case, namely, that when all participants are included, the difference between 2020 and 2016 is not significant.

Analysis. We fit the same model we fit in study 2a except that in this case the factor in the model had six levels (2020, 2018, 2016, 2014, 2012 and 2010).

Study 2c

Participants. We sought to recruit a sample of people who varied widely in terms of age. As such, we created a survey with a quota of

Article

50 participants in each of the following age groups: 18–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64 and 65–69 years. This sample size gave us sufficient power to detect the effects we had detected in studies 2a and 2b. Respondents selected their age group on accessing the study, and once the quota for a group was reached, further respondents from that group were not allowed to participate. Respondents younger than 18 or older than 69 were not allowed to participate.

Respondents responded to an advertisement for a study on Amazon Mechanical Turk. Respondents who accessed the survey before the quota for their age group was reached were asked to complete a three-item test of English proficiency and knowledge of US American culture. Specifically, they were required to demonstrate that they knew that (1) bell bottoms are not a type of footwear, (2) an RSVP is a required response to a wedding invitation and (3) a sign reading ‘out of order’ is best paired with an elevator. Three hundred and one respondents answered one or more of these questions incorrectly and were not allowed to participate. The remaining 484 respondents (225 female, 257 male, two other, $M_{\text{age}} = 41.27$ years, 72% white, 15% Black, 7% Asian, 4% Hispanic, 1% American Indian or Alaska Native, 2% more than one of the above) were allowed to participate in the study in exchange for US\$0.75.

Procedure. Study 2c was conducted in 2020. Participants responded to an advertisement for a study on Amazon Mechanical Turk. After providing informed consent, participants reported how “kind, honest, nice and good” people are today. They then reported how “kind, honest, nice and good” people were when they (the participants) were about 20 years old, and at about the time they (the participants) were born. This was done by adjusting the wording of the subsequent questions on the basis of the participant’s age. For example, if the participant was between 30 and 34 years old, they were asked “How kind, honest, nice, and good were people about ten years ago?” and then “How kind, honest, nice, and good were people about 30 years ago?” If participants were under 25 years, they answered only the questions for today and when they were born. All questions were answered using a seven-point Likert scale with endpoints labelled ‘not very’ and ‘very’. As in previous studies, participants were then given a consistency check that required them to remember whether they had rated people today as more, equally or less moral compared to people in the year they were born. Participants then answered some further exploratory and demographic questions. Embedded among them was an attention check that required participants to select the option ‘other’ and type the word ‘apple’. Finally, participants were compensated and dismissed.

Exclusions. Twenty-eight participants failed the attention check and their data were excluded from all analyses. Seventy-three more participants reported an age at the end of the study that was inconsistent with the age group they selected at the beginning of the study and the data from these participants were also excluded from all analyses. An extra 64 participants failed the consistency check and data from these participants were also excluded from all analyses. The data from the remaining 347 participants (174 female, 172 male, one other, $M_{\text{age}} = 42.57$ years, 78% white, 9% Black, 7% Asian, 4% Hispanic, 2% ‘more than one of the above’) were included in all analyses. These exclusions do not meaningfully change the results.

Analysis. We fit the same model we fit in study 2b except that in this case the factor in the model had three levels (today, the year the participant turned 20, the year the participant was born).

Study 3

Participants. Respondents responded to an advertisement for a study on Amazon Mechanical Turk. As in study 2c, we sought to

recruit a sample of people who varied widely in terms of age and that was large enough to provide sufficient power to detect the effects we had detected in studies 2a and 2b. We created a survey with quota of 150 for each of three age groups: 20–34, 35–49 and 50–64. Any-one younger than 20 or older than 64 was not allowed to participate. Respondents were asked to complete the same test of English language and US American culture as in study 2c. Four hundred and forty-four respondents (202 female, 242 male, $M_{\text{age}} = 40.42$ years, 77% white, 9% Black, 7% Asian, 5% Hispanic, 1% ‘more than one of the above’) provided informed consent and became participants in the study in exchange for US\$0.75.

Procedure. Study 3 was conducted in 2020. After providing informed consent, participants reported how “kind, honest, nice, and good” people are in the present (2020) and also “about 15 years ago” (about 2005) on seven-point Likert scales with endpoints labelled ‘not very’ and ‘very’ and then completed a consistency check that asked them to recall the answers they had just given. The difference between these two ratings was used as a measure of participants’ perception of moral decline between 2005 and 2020. Participants then answered the following questions using the same seven-point Likert scales: “How kind, honest, nice, and good are people who are currently between the ages of 35 and 95?”; “How kind, honest, nice, and good are people who are currently between the ages of 20 and 35?”; “Thinking again of people who are currently between the ages of 35 and 95, how kind, honest, nice, and good were they about 15 years ago?” and “About 15 years ago, how kind, honest, nice, and good were people who were then between the ages of 80 and 95?” Participants then answered some demographics questions, among which was embedded an ‘attention check question’ that instructed participants to select the option ‘other’ and to type the word ‘cloud’. Finally, participants were compensated and dismissed.

Exclusions. Forty-eight participants failed the attention check, and a further 15 participants reported an age at the end of the study that was inconsistent with the age group they reported at the beginning of the study. An extra 77 participants failed the consistency check. The data from all of these participants were excluded from all analyses, leaving 319 participants (154 female, 165 male, $M_{\text{age}} = 41.02$, 77% white, 8% Black, 8% Asian, 5% Hispanic, 1% more than one of the above). These exclusions do not meaningfully affect the results.

Calculating personal change and interpersonal replacement. We created a personal change score by subtracting ratings of 20–80-year olds about 15 years ago (in 2005) from ratings of 35–95-year olds in the present (2020). We created an interpersonal replacement score by subtracting ratings of 80–95-year olds about 15 years ago (in 2005) from ratings of 20–35-year olds in the present (2020). The descriptive statistics for people in general and each of the subgroups about which participants were asked are shown in Extended Data Fig. 1.

Analysis. Using a standard linear model, we entered participants’ personal change and cohort replacement scores as predictors, and the outcome was participants’ overall perception of moral decline between 2005 and 2020.

Study 4

In study 4, we conducted keyword-term searches of the Roper Center for Public Opinion iPoll Database (using search terms shown in the Supplementary Information), and manually searched the databases of the General Social Survey, Pew Research Center, Gallup, the American National Election Studies, the World Values Survey, the European Social Survey and the European Values Survey to locate survey items that asked participants questions about their own and other people’s morality. As in study 1, questions were considered

relevant to morality if they asked about values, attitudes, traits and behaviours that we thought would be considered relevant to kindness, honesty, niceness and goodness by a wide range of US Americans. We included US samples only if they were nationally representative, but also collected non-representative samples if they were collected outside the United States to maximize non-US representation. The latter were analysed separately. To be included, each survey had to be administered at least twice, and the most recent administration could not be earlier than 2010. Further information, including search terms and all survey items included in study 4, can be found in the Supplementary Information.

Analysis. We fit a linear model for each survey. The year of each survey was always entered as a predictor and the outcome was always the average perception of current morality. We used R^2 values as a measure of effect size. We fit Bayesian models using the Rstanarm package in R³³ and extracted the percentage of the 89% HDI that was contained in the ROPE, which was by default defined as ± 0.1 standard deviations. We used the package's default Markov Chain Monte Carlo and prior settings ($M = 0$, scale of 2.5).

Study 5a

Participants. As in study 2c, we sought to recruit a sample of people who varied widely in terms of age and that was large enough to provide sufficient power to detect the effects we had detected in previous studies. We created a survey with a quota of 50 participants in each of three age groups: 20–34, 35–49 and 50–64 years. Anyone who was either younger than 20 years or older than 64 years was not allowed to participate.

One thousand and twenty-one people responded to an advertisement for a study on Amazon Mechanical Turk. They completed the same test of English language and US American culture as in study 2c. Five hundred and twenty-one respondents answered at least one of the questions incorrectly and were not allowed to participate. The remaining 500 respondents (204 female, 293 male, three other, $M_{\text{age}} = 37.74$ years, 65% white, 24% Black, 7% Asian, 2% Hispanic, 1% American Indian or Alaska Native, 1% more than one of the above) provided informed consent and became participants in the study in exchange for US\$0.75.

Procedure. Study 5a was conducted in 2021. After providing informed consent, participants completed the same procedure as was used in study 2c, with two more questions. Specifically, participants rated how “kind, honest, nice, and good” people in general were 20 years before the participant was born and also 40 years before the participant was born. These years were adjusted on the basis of the age of the participant.

Exclusions. One hundred and seventy-nine participants failed the first attention check, and another 21 failed the second attention check. Another 15 participants reported an age at the end of the study that was inconsistent with the birth year they reported at the beginning. The data from all these participants were excluded from all analyses. The remaining 283 participants (139 female, 143 male, one other, $M_{\text{age}} = 38.77$ years, 78% white, 11% Black, 8% Asian, 2% Hispanic, 1% more than one of the above) were included in all analyses. These exclusions affect the results in a few cases. Specifically, when excluded participants are included, the overall perception of moral decline and personal change for people in general are not significant. All other effects remain significant.

Analysis. We fit the same model we fit in study 2c except that the factor in the model had five levels (2020, the year the participant turned 20, the year the participant was born, 20 years before the participant was born and 40 years before the participant was born).

Study 5b

Participants. Because this study was a replication and extension of study 2c, we sought to collect a similar sample size to have the power to detect similar effects, and we used the same age quotas as in Study 2c. One thousand eighty-two people responded to an advertisement for a study on Amazon Mechanical Turk. Twenty-one of these opened the study but did not complete it. Five hundred and sixty people responded after the quota for their age group had been reached and were not allowed to participate in the study. Respondents who responded before the quota for their age group was reached completed the same three-item test of US American culture and English language used in study 2c. Twenty-three respondents answered one or more of these questions incorrectly and were not allowed to participate in the study. The remaining 499 respondents (225 female, 241 male, three other, $M_{\text{age}} = 43.96$ years, 78% white, 10% Asian, 5% Black, 4% Hispanic, 3% more than one of the above) were allowed to participate in the study in exchange for US\$0.75.

Procedure. Study 5b was conducted in 2021. After providing informed consent, participants completed the same procedure used in study 2c. They further rated people's morality 20 and 40 years before the year that they were born.

Exclusions. Forty-four participants failed the attention check and their data were excluded from all analyses. Seven more participants reported an age at the end of the study that was inconsistent with the age group they selected at the beginning of the study and their data were also excluded from all analyses. Sixty-one more participants failed the consistency check and their data were also excluded from all analyses. The data from the remaining 387 participants (206 female, 178 male, three other, $M_{\text{age}} = 44.04$ years, 79% white, 11% Asian, 4% Black, 3% Hispanic, 2% more than one of the above) were included in all analyses. These exclusions affect the results in one case: when excluded participants are included, participants perceived moral improvement from 40 years before birth to 20 years before birth. All other effects remain the same.

Analysis. We fit the same model we fit in study 2c except that in this case the factor in the model had five levels (the year 2020, the year the participant turned 20 years old, the year the participant was born, 20 years before the participant was born and 40 years before the participant was born).

Reporting summary

Further information on research design is available in the Nature Portfolio Reporting Summary linked to this article.

Data availability

All materials and original data are available at <https://osf.io/t83zy/> (<https://doi.org/10.17605/OSF.IO/T83ZY>). The data analysed in studies 1 and 4 are the property of the polling organizations that produced them and cannot be posted. Instructions for accessing these data are also available at <https://osf.io/t83zy/>.

Code availability

The code necessary to reproduce all analyses is available at <https://osf.io/t83zy/>, except for studies 1 and 4, which requires access to proprietary data.

30. Bates, D., Mächler, M., Bolker, B. & Walker, S. Fitting linear mixed-effects models using lme4. *J. Stat. Softw.* **67**, 1–48 (2015).
31. Kuznetsova, A., Brockhoff, P. B. & Christensen, R. H. B. lmerTest package: tests in linear mixed effects models. *J. Stat. Softw.* <https://doi.org/10.18637/jss.v082.i13> (2017).
32. Lenth, R. emmeans: estimated marginal means, aka least-squares means. R package version 1.4.7 (R Foundation for Statistical Computing, 2020).

Article

33. Goodrich, B., Gabry, J., Ali, I. & Brilleman, S. rstanarm: Bayesian applied regression modeling via Stan. R package version 2.21.1 (R Foundation for Statistical Computing, 2020).

Acknowledgements We thank P. Menon for her mathematical assistance, M. Vollberg for his coding assistance, D. Blumenthal for his assistance with data collection and F. Cushman, N. Epley, S. Pinker, R. Baumeister, A. Wood Brooks and T. Wilson for comments on the manuscript.

Author contributions A.M.M. collected and analysed the data. A.M.M. and D.T.G. developed the study concepts, developed the study designs, drafted the manuscript and approved the manuscript.

Competing interests The authors declare no competing interests.

Additional information

Supplementary information The online version contains supplementary material available at <https://doi.org/10.1038/s41586-023-06137-x>.

Correspondence and requests for materials should be addressed to Adam M. Mastroianni.

Peer review information *Nature* thanks Roy Baumeister and the other, anonymous, reviewer(s) for their contribution to the peer review of this work.

Reprints and permissions information is available at <http://www.nature.com/reprints>.



Extended Data Fig. 1 | Descriptive Statistics in Study 3. Error bars represent 95% confidence intervals. Transparent points represent individual observations jittered for legibility.

Reporting Summary

Nature Portfolio wishes to improve the reproducibility of the work that we publish. This form provides structure for consistency and transparency in reporting. For further information on Nature Portfolio policies, see our [Editorial Policies](#) and the [Editorial Policy Checklist](#).

Statistics

For all statistical analyses, confirm that the following items are present in the figure legend, table legend, main text, or Methods section.

n/a Confirmed

- ☐ ☒ The exact sample size (n) for each experimental group/condition, given as a discrete number and unit of measurement
- ☐ ☒ A statement on whether measurements were taken from distinct samples or whether the same sample was measured repeatedly
- ☐ ☒ The statistical test(s) used AND whether they are one- or two-sided
Only common tests should be described solely by name; describe more complex techniques in the Methods section.
- ☐ ☒ A description of all covariates tested
- ☐ ☒ A description of any assumptions or corrections, such as tests of normality and adjustment for multiple comparisons
- ☐ ☒ A full description of the statistical parameters including central tendency (e.g. means) or other basic estimates (e.g. regression coefficient) AND variation (e.g. standard deviation) or associated estimates of uncertainty (e.g. confidence intervals)
- ☐ ☒ For null hypothesis testing, the test statistic (e.g. F , t , r) with confidence intervals, effect sizes, degrees of freedom and P value noted
Give P values as exact values whenever suitable.
- ☐ ☒ For Bayesian analysis, information on the choice of priors and Markov chain Monte Carlo settings
- ☐ ☒ For hierarchical and complex designs, identification of the appropriate level for tests and full reporting of outcomes
- ☐ ☒ Estimates of effect sizes (e.g. Cohen's d , Pearson's r), indicating how they were calculated

Our web collection on [statistics for biologists](#) contains articles on many of the points above.

Software and code

Policy information about [availability of computer code](#)

Data collection Original data was collected using Qualtrics survey software.

Data analysis Data analysis was conducted using the R statistical software version 4.0.2. Additionally, we used the following packages: lme4 (v. 1.1-23), lmerTest (3.1-2) and emmeans (1.4.7). All external packages used are included in the code package available on OSF: <https://osf.io/t83zy/>

For manuscripts utilizing custom algorithms or software that are central to the research but not yet described in published literature, software must be made available to editors and reviewers. We strongly encourage code deposition in a community repository (e.g. GitHub). See the Nature Portfolio [guidelines for submitting code & software](#) for further information.

Data

Policy information about [availability of data](#)

All manuscripts must include a [data availability statement](#). This statement should provide the following information, where applicable:

- Accession codes, unique identifiers, or web links for publicly available datasets
- A description of any restrictions on data availability
- For clinical datasets or third party data, please ensure that the statement adheres to our [policy](#)

All original data is publicly available on OSF: <https://osf.io/t83zy/>. The archival data is proprietary and cannot be shared publicly, but the data documents for Studies 1 and 4 include links through which data can be accessed for anyone with institutional access.

Human research participants

Policy information about [studies involving human research participants and Sex and Gender in Research](#).

Reporting on sex and gender	Participants self-reported their gender in our original studies by selecting "male", "female", or "other". We did not hypothesize any interactions between gender and our main results. We included gender as a covariate in our exploratory analyses, and no effects were significant in any study.
Population characteristics	Demographics questions are listed verbatim in Table S6 in the Supplementary Material. Demographic breakdowns for each study before and after exclusions are given in the Concluding Methods.
Recruitment	In our original studies, participants were recruited on the Prolific platform and on the Amazon Mechanical Turk platform via an advertisement for a short study.
Ethics oversight	All studies were approved by the Institutional Review Board of Harvard University.

Note that full information on the approval of the study protocol must also be provided in the manuscript.

Field-specific reporting

Please select the one below that is the best fit for your research. If you are not sure, read the appropriate sections before making your selection.

☐ Life sciences ☒ Behavioural & social sciences ☐ Ecological, evolutionary & environmental sciences

For a reference copy of the document with all sections, see nature.com/documents/nr-reporting-summary-flat.pdf

Behavioural & social sciences study design

All studies must disclose on these points even when the disclosure is negative.

Study description	Our studies are mixed methods. Studies 1 and 4 are analyses of archival data. Studies 2a-c, 3, 5a-b, and S1-S3 are original surveys.
Research sample	The samples for Studies 2a and S1 are from the Prolific survey platform and it is designed to be representative of the adult population of the United States in terms of age, race, and gender. The samples for Studies 2b, 3, and 5a, S2, and S3 are convenience samples from Amazon Mechanical Turk. Studies 2c and 5b are from Amazon Mechanical Turk, but were additionally filtered to get a broader range of age representation. These samples were used because previous research has suggested that they are broadly similar to other samples traditionally used in psychology (e.g., Paolacci, Chandler, Ipeirotis, 2010). Archival data for Studies 1 and 4 came from a large number of polling data providers, including Gallup, Pew, the American National Election Studies, and the General Social Survey, as well as hundreds of results indexed in the Roper iPoll online database.
Sampling strategy	The samples for Studies 2a and S1 were designed to be nationally representative of the adult population of the United States in terms of age, race, and gender by the Prolific platform. All other original studies were open to anyone on Amazon Mechanical Turk, with the exceptions described above. In our original studies, because we did not know the size of the effect we were seeking to detect, we used a guideline of the sample size required to detect an effect of $d = .3$ using a two-tailed, one-sample t-test ($N = 146$). We collected larger samples than this number for a number of reasons: a) to account for possible exclusions, b) to obtain a nationally representative sample (Study 2a) or samples with broader age representation (Studies 2c and 5b), and c) to ensure that we reached sufficient numbers of participants who experienced cohort replacement and individual change in their personal worlds (Study 5a). Sample sizes were determined a priori and no data was analyzed before reaching our target N .
Data collection	For studies 2a-c, 3, and 5a-b, and S1-3, participants completed the survey online at a time and place of their choosing. The researchers were not present.
Timing	Study 2a: June 2020 Study 2b: January 2020 Study 2c: January 2020 Study 3: March 2020 Study 5a: May 2020 Study 5b: March 2021 Study S1: November 2022 Study S2: January 2020 Study S3: September 2022 The archival data used in Studies 1 and 4 were collected between 1949 and 2020.
Data exclusions	Participants were only excluded if they failed one or more attention and quality control checks, which were specific to each study. These are listed for each study in the Concluding Methods. We also note whenever exclusions affect results. These exclusions were decided upon a priori.
Non-participation	We report for each study in the Concluding Methods whether there were any participants who began but did not finish the study.

Reporting for specific materials, systems and methods

We require information from authors about some types of materials, experimental systems and methods used in many studies. Here, indicate whether each material, system or method listed is relevant to your study. If you are not sure if a list item applies to your research, read the appropriate section before selecting a response.

Materials & experimental systems

n/a	Involved in the study
<input checked="" type="checkbox"/>	<input type="checkbox"/> Antibodies
<input checked="" type="checkbox"/>	<input type="checkbox"/> Eukaryotic cell lines
<input checked="" type="checkbox"/>	<input type="checkbox"/> Palaeontology and archaeology
<input checked="" type="checkbox"/>	<input type="checkbox"/> Animals and other organisms
<input checked="" type="checkbox"/>	<input type="checkbox"/> Clinical data
<input checked="" type="checkbox"/>	<input type="checkbox"/> Dual use research of concern

Methods

n/a	Involved in the study
<input checked="" type="checkbox"/>	<input type="checkbox"/> ChIP-seq
<input checked="" type="checkbox"/>	<input type="checkbox"/> Flow cytometry
<input checked="" type="checkbox"/>	<input type="checkbox"/> MRI-based neuroimaging

SUPPLEMENTAL INFORMATION

Section 1: Additional Details of Studies Appearing in Main Text.....	2
Search Terms Used in Studies 1 and 4.....	2
A Note on the Calculation of the Grand Means in Study 1	2
Table S1: Archival Survey Questions (US Sample), Study 1	4
Table S2: Archival Survey Questions (non-US Sample), Study 1	27
Table S3: Archival Survey Questions (US Sample) and Results, Study 4	35
Table S4: Archival Survey Questions (non-US Sample) and Results, Study 4.....	63
Additional Analyses in Study 5a.....	70
Table S5: Regression Coefficients for Each of the Four Models Fit in Study 5a.....	71
Table S6: Demographics Questions Used in Studies 2a-c, 3, and 5a-b	72
Section 2: Additional Studies Not Appearing in Main Text	73
Study S1: Pre-registered Replication of Study 2a.....	73
Study S2: Replication of Study 2a with Participants from MTurk	74
Study S3: Estimated Rates of Cooperation in Prisoner's Dilemma Games (1956-2017).....	75
Section 3: Discussion of Related Literature.....	80
Other Demonstrations of the Perception of Moral Decline	80
Potential Causes of the Perception of Moral Decline	83
Section 4: Mathematical Model of the BEAM Mechanism.....	85
Section 5: References in Supplemental Information Section.....	90

SECTION 1: ADDITIONAL DETAILS OF STUDIES APPEARING IN MAIN TEXT

Search Terms Used in Studies 1 and 4

We searched the following databases (hyperlinked to source): [General Social Survey](#), [Pew Research Center](#), [Gallup](#), the [American National Election Studies](#), the [World Values Survey](#), the [European Social Survey](#), and the [European Values Survey](#). In addition, we queried the [Roper Center for Public Opinion](#) using the following search terms: *moral/morality, kind/kindness, honest/honesty, nice/niceness, good/goodness, polite/politeness, rude/rudeness, ethics/ethical, lazy/laziness, hardworking, selfish/selfishness/selflessness, trust/trustworthy/untrustworthy, values, standards, safer place.*

In Study 1, to find surveys that specifically asked participants to compare people in the present to people at some point in the past, we also combined the above search terms with the following terms: *compared, generation, today, Years ago, worse/better/same, more/less/same, past.* We also searched for surveys that had the following tags in the Roper iPoll system: *morality, civility, crime rate, young people, values.* This search was conducted over several months in 2019 and 2020, before Roper iPoll transitioned to a new database and search interface, which may now return slightly different results.

A Note on the Calculation of the Grand Means in Study 1

There are two ways to compute the grand mean of the surveys included in Study 1, and each has a unique problem. One method is to weight the result of each survey by its sample size before averaging across surveys (the *weighted method*) and the other is to average the results across surveys without regard to the survey's sample size (the *unweighted method*). The problem

with the weighted method is that it can allow items with unusual wordings or unusual content to have an outsize influence on the grand mean simply because the survey containing those items happened to have had large N's. The problem with the unweighted method is that it allows items from surveys with very small Ns (whose results are less trustworthy) to have the same influence on the grand mean as do surveys with very large Ns (whose results are more trustworthy).

We used the unweighted method because, in the present case, the first of these problems is significant and the second of these problems is not. Specifically, as Tables S1 and S2 show, the items included in Study 1 differed quite dramatically in terms of their wording and their content (e.g., “Would you say, compared to the past, people of different races and ethnicities are now treated much more equally, a little more equally, a little less equally, much less equally, or that there has been no real change?” vs. “Compared with 20 years ago, has the rate of violent crime in the United States increased or decreased?”). It seemed important that conclusions about the general perception of moral decline not be overly influenced by a few unusual items that happened to be worded in unusual ways or that happened to focus on particular topics. In contrast, although N did differ across surveys, all Ns were quite substantial, which is to say that even the surveys with the smallest N's provided trustworthy results. When all results are trustworthy, then the unweighted method's problem is not a problem, but its strengths are still strengths. For these reasons, we used the unweighted method to calculate the grand means in Study 1.

With all this said, it is worth noting that the weighted and unweighted methods produced the same general result. In both cases, the majority of participants perceived moral decline (61.44% using the weighted approach and 84.18% using the unweighted approach).

Table S1: Archival Survey Questions (US Sample), Study 1

#	Source	Question	Year	N
1	Pew	(As I read a list of some problems, please tell me if you think the country is making progress, losing ground, or if things are about the same as they have been.)...Low moral and ethical standards...Do you think the country is making progress, losing ground, or are things about the same as they have been when it comes to...low moral and ethical standards?	2008	1489
2	NBC News/Wall Street Journal	(For each of the decades I name, please tell me whether you feel the nation's morals and values were much higher in that decade than they are now, somewhat higher than now, somewhat lower than now, or much lower than they are now.)... The 1960s	1996	2003
3	NBC News/Wall Street Journal	(For each of the decades I name, please tell me whether you feel the nation's morals and values were much higher in that decade than they are now, somewhat higher than now, somewhat lower than now, or much lower than they are now.)... The 1970s	1996	2003
4	NBC News/Wall Street Journal	(For each of the decades I name, please tell me whether you feel the nation's morals and values were much higher in that decade than they are now, somewhat higher than now, somewhat lower than now, or much lower than they are now.)... The 1980s	1996	2003
5	Center for Survey Research, University of Virginia	(How strong would you say the US (United States) decline or improvement is in each of the following areas...strong decline, moderate decline, holding steady, moderate improvement, or strong improvement?)... American moral and ethical standards	1996	2047

6	NORC	(I'd like to ask you a few questions about civility in our society. By civility, I mean showing respect for the people you deal with. For example, respecting other people's opinions, being courteous, helping others, and showing good sportsmanship.)...In general, when most Americans debate issues facing the country do you think they are more civil today compared to 10 years ago, less civil, or about as civil as they were 10 years ago?	2011	1006
7	Gallup	(I'm going to read you several more statements and ask you whether, in general, you agree or disagree.)... Moral and ethical standards are declining so much in America these days that something drastic must be done.	1964	1564
8	Pew	(Now I'd like to ask some questions about some of the problems we face in this country today. For each problem I mention, please tell me how you think affecting this country today, and how much this problem affects you personally.)...Do you think the problem of...low moral and ethical standards is about the same as it has been, that the country is making progress in this area, or that the country is losing ground?	1996	1204
9	NBC News/Wall Street Journal	(Over the past decade of 2000 to 2009, do you feel that America has gained ground, has stayed about the same, or has lost ground in each of the following areas?)...Moral values	2009	1008
10	NBC News/Wall Street Journal	(Over the past decade of 2000 to 2009, do you feel that America has gained ground, has stayed about the same, or has lost ground in each of the following areas?)...Treating one another with respect	2009	1008
11	Center for Survey Research, University of Virginia	(Please consider the following statements and tell me whether you completely agree, mostly agree, mostly disagree, or completely disagree with each statement.)... In general, Americans lived more moral and ethical lives 50 years ago.	1996	2047

12	NBC News	(Thinking about where America stands today as compared to four years ago, for each of the following things, please tell me whether you think that things are better off, about the same, or worse off than they were four years ago.)...Moral values and standards	2005	1007
13	NBC/Wall Street Journal	Compared to ten years ago, would you say that Americans now are more polite to each other or less polite to each other?	1999	1006
14	NORC	Compared with 10 years ago, would you say that when it comes to...the willingness of people to help each other, things in this country have generally gotten better, gotten worse, or stayed about the same? (If Better/Worse, ask:) Is that a lot better/worse or a little better/worse?	2011	1087
15	NORC	Compared with 10 years ago, would you say that when it comes to...the willingness of people to help each other, things in this country have generally gotten better, gotten worse, or stayed about the same? Is that a lot better/worse or a little better/worse?	2013	1008
16	Harris Survey	Compared with ten years ago, would you say morality in the United States is lower today, higher, or not changed much?	1971	1600
17	CBS News/New York Times	Considering just the moral climate of the country today, do you feel things in this country are generally going in the right direction or do you feel things have pretty seriously gotten off on the wrong track?	2004	885
18	Pew	Do you think that Americans used to treat each other with more respect and courtesy in the past, or is this just nostalgia for a past that never existed?	2002	2013
19	Parents Magazine Poll	Do you think that over the last few decades our society has become less honest and ethical in its behavior, more honest and ethical, or has there been no change in the extent to which people behave honestly and ethically?	1989	1000
20	Gallup	Generally speaking, do you think moral values have become stronger in the U.S. (United States) in the last twenty-five years, do you think they have become weaker or do you think they have stayed about the same?	1996	1001

21	Pew	Here is a list of things that may or may not be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all. Moral decline.	2006	739
22	Time/Yankelovich	Now here are some statements which represent some traditional American values. Will you tell me for each one whether you strongly believe in this statement, partially believe it or don't believe it. The state of morality in this country is bad and getting worse.	1976	951
23	Center for Survey Research and Analysis, University of Connecticut	Overall, would you say that the moral values in American society are improving, deteriorating, or aren't they changing all that much?	1997	1026
24	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2019	1009
25	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2018	1024
26	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2017	1011
27	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2016	1025
28	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2015	1024
29	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2014	1028
30	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2013	1535
31	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2012	1024
32	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2011	1018

33	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2010	1029
34	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2009	1015
35	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2008	1017
36	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2007	1003
37	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2006	1002
38	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2005	1005
39	Gallup/CNN/USA Today	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2004	1015
40	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2004	1000
41	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2003	1005
42	Gallup	Right now, do you think the state of moral values in this country as a whole is getting better or getting worse?	2002	1012
43	Opinion Research Corporation	Some people say there has been a general letdown in ethical and moral standards among the American people as a whole in recent years. Others say ethical and moral standards are as good as ever. Which do you agree with?	1964	1021
44	Time/Yankelovich	The following are a number of criticisms that have been made in recent years about American society. Will you tell me for each one how you personally feel? The state of morals in this country are pretty bad and getting worse.	1974	1238
45	NBC News/Wall Street Journal	Thinking back to when you were growing up, would you say that the social and moral values in the United States were the same as today, higher than today, or lower than today?	1999	2011

46	Market Strategies	Thinking specifically about the state of the country's morals and values, do you feel things are generally going in the right direction, or do you feel things have pretty seriously gotten off on the wrong track?	1999	800
47	NBC News/Wall Street Journal	Which of the following statements comes closest to expressing how you feel about the state of morals in this country at the present time... they are pretty bad and getting worse, they are pretty bad but getting better, they are pretty good but getting worse, or they are pretty good and getting better?	1996	2003
48	NORC	Which of the statements on this card comes closest to expressing how you feel about the state of morals in this country at the present time? They are pretty bad and getting worse, they are pretty bad but getting better, they are pretty good but getting worse, they are pretty good and getting better	1964	1975
49	NBC News/Wall Street Journal	Which one of the following statements comes closest to expressing how you feel about the state of morals in this country at the present time?...They are pretty bad and getting worse, they are pretty bad but getting better, they are pretty good but getting worse, they are pretty good and getting better	2004	1003
50	YouGov - PTN	Thinking about the nation as a whole, do you think crimes motivated by hatred (racist, anti-religious, homophobic and anti-ethnic) over the past 12 months are higher or lower compared to ten years ago?	2019	1500
51	Economist - PTN	Thinking about the nation as a whole, do you think the number of violent crime incidents (homicide, sexual assault, robbery, serious assault) over the past 12 months is higher or lower compared to ten years ago?	2017	2692
52	Economist - PTN	In the last year would you say crime in the country has increased, decreased, or stayed about the same?	2017	2692
53	Economist - PTN	Thinking about the nation as a whole, do you think the number of violent crime incidents (homicide, sexual assault, robbery, serious assault) over the past 12 months is higher or lower compared to ten years ago?	2017	2692

54	YouGov - PTN	Compared with 20 years ago, has the rate of violent crime in the United States increased or decreased?	2014	1000
55	Kaiser Family Foundation	Compared with 20 years ago, has the rate of violent crime in the United States increased or decreased?	1996	1514
56	Gallup - PTN	Has the crime rate in the US increased, decreased, or stayed the same in the past 10 years?	1989	1235
57	Barna Research Group - PTN	Percentage of Americans who believe the values and morals of America are declining.	2013	2083
58	NBC News - PTN	Now I would like to read you several more statements about some of the social issues facing America. For each issue, please tell me whether you agree strongly, agree somewhat, disagree somewhat, or disagree strongly with that statement: traditional moral values have grown weaker and need to be strengthened	1993	1502
59	Marist	Do you think Americans overall are more respectful, less respectful, or about as respectful of each other as they were a few years ago?	2019	1084
60	NPR	From what you have read or heard, do you think, compared to 25 years ago, the per capita gun murder rate in the U.S. is higher, lower, or about the same?	2019	880
61	Economist	Compared with 20 years ago, has the number of gun crimes in America gone up, gone down or stayed the same?	2013	1000
62	Pew	(And compared to the past, have things gotten better, worse or stayed the same?)...Being friendly and helpful toward their neighbors	2002	2013
63	Pew	(And compared to the past, have things gotten better, worse or stayed the same?)...Being kind and considerate toward people with physical handicaps	2002	2013
64	Pew	(And compared to the past, have things gotten better, worse or stayed the same?)...The problem of littering	2002	2013
65	Pew	(And compared to the past, have things gotten better, worse or stayed the same?)...Treating African Americans with respect and courtesy	2002	2013
66	Pew	(And compared to the past, have things gotten better, worse or stayed the same?)...Treating gay people with respect and courtesy	2002	2013

67	Pew	(And compared to the past, have things gotten better, worse or stayed the same?)...Treating Hispanics with respect and courtesy	2002	2013
68	Pew	(And compared to the past, have things gotten better, worse or stayed the same?)...Treating the elderly with respect and courtesy	2002	2013
69	Gallup	(Does the following word apply more to young people in their teens and 20s today or young people in that same age group 20 years ago?)... Materialistic	1989	1249
70	Gallup	(Does the following word apply more to young people in their teens and 20s today or young people in that same age group 20 years ago?)... Patriotic	1989	1249
71	Gallup	(Does the following word apply more to young people in their teens and 20s today or young people in that same age group 20 years ago?)... Reckless	1989	1249
72	Gallup	(Does the following word apply more to young people in their teens and 20s today or young people in that same age group 20 years ago?)... Selfish	1989	1249
73	CBS News	Compared to 10 years ago, do you think more people today are willing to take responsibility when they have done something wrong, fewer people today are willing to take responsibility when they have done something wrong, or hasn't this changed much in the past 10 years?	1994	871
74	Associated Press/Ipsos	Compared to 20 or 30 years ago, do you think people are more rude, less rude, or about the same?	2005	1001
75	NORC	Compared to 20 or 30 years ago, do you think people are more rude, less rude, or about the same?	2016	1004
76	Gallup	Compared to ten years ago, are people more honest, less honest, or about the same today?	1987	1005
77	Roper/US News & World Report	Compared to ten years ago, are people more honest, less honest, or about the same today?	1987	1005
78	LA Times	Do you believe that life today is getting better or worse in terms of morals?	1985	2308

79	Gallup	Do you believe that life today is getting better or worse in terms of: morals?	1968	1536
80	Washington Post/Harvard/Kaiser	Do you think people in general lead as good lives honest and moral as they used to?	1998	1018
81	Roper/US News & World Report	Do you think people in general today are more honest and moral than they were in the 1950's, or less honest and moral than then, or about the same as they were in the 1950's?	1985	1003
82	Pew	Do you think people in general today lead as good lives - honest and moral - as they used to?	2002	2002
83	Ben Gaffin and Associates	Do you think people in general today lead as good lives--honest and moral--as they used to?	1952	2987
84	Gallup	Do you think people in general today lead as good lives--honest and moral--as they used to?	1965	2783
85	Gallup	Do you think people in general today lead as good lives--honest and moral--as they used to?	1976	1538
86	Pew	Do you think people in general today lead as good lives--honest and moral--as they used to?	2005	1505
87	Gallup	Do you think that people today are more willing or less willing to help each other than they used to be, say ten years ago?	1982	1729
88	Louis Harris and Associates	Do you think that people's motivation to work today is stronger or not as strong as it was ten years ago?	1980	1201
89	Gallup	Do you think the human race is getting better or worse from the standpoint of moral conduct?	1949	1500
90	NBC News/Wall Street Journal	For each of the decades I name, please tell me whether you feel the nation's morals and values were much higher in that decade than they are now, somewhat higher than now, somewhat lower than now, or much lower than they are now.... The 1950s	1996	2003
91	Barna Research Group	How have people's attitudes, lifestyles and behaviors changed in the last 10 years: moral values?	1993	687

92	NBC	In general, do you think people today are a lot more honest, somewhat more honest, somewhat less honest, a lot less honest or about the same as 20 years ago?	1996	504
93	NBC News	In general, do you think people today are a lot more honest, somewhat more honest, somewhat less honest, a lot less honest or about the same as 20 years ago?	1995	1009
94	NBC News	In general, do you think people today are a lot more honest, somewhat more honest, somewhat less honest, a lot less honest or about the same as 20 years ago?	1996	504
95	Barna Report	When it comes to moral values, do you think things have gotten better, gotten worse, or stayed about the same compared to 10 years ago?	1993	1205
96	Barna Report	When it comes to people's selfishness, do you think things have gotten better, gotten worse, or stayed about the same compared to 10 years ago?	1993	1205
97	American Enterprise Institute	Would you say that people are more willing, less willing, or about as willing to help their neighbors as they were twenty-five years ago?	1981	1500
98	World Public Opinion - PTN	Thinking about the course of your lifetime, would you say, compared to the past, people of different races and ethnicities are now treated much more equally, a little more equally, a little less equally, much less equally, or that there has been no real change?	2008	1819
99	CBS News - PTN	In the last eight years, do you think crime has increased, decreased, or stayed about the same?	1989	1533
100	Associated Press	Compared to 20 or 30 years ago, do you think people are more rude, less rude, or about the same?	2016	1004
101	Associated Press	Compared to 20 or 30 years ago, do you think people are more rude, less rude, or about the same?	2005	NA
102	Pew	(Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem or not a problem at all.)...Moral decline	2002	1501

103	LA Times	Generally speaking, would you say the nation is undergoing a period of moral improvement, or a period of moral decline?	1989	3583
104	Roper	Here is a list of possible causes of some of our problems in this country. (Card shown respondent) Would you call off the ones you think are the major causes of our problems today? (Lack of good leadership, Permissiveness in the courts, Permissiveness of parents, Selfishness - people not thinking of others, Wrongdoing in government, Radical attempts to force change, Growing conservatism, Too much emphasis on money and materialism, Too much technology, A letdown in moral values, Too much commitment to other nations in the world, Too little interest in other nations in the world).	1982	2000
105	LA Times	What do you think is the single most urgent problem facing this country today: crime, or education, or the environment, or foreign trade, or government spending, or inflation, or the moral decline of society, or unemployment, or the fear of war, or what? I could repeat those, if you wish. Is there another one of those problems you consider almost as important?	1989	2095
106	Newsweek - PTN	Do you think the United States is in a moral and spiritual decline?	1994	600
107	Knight Ridder - PTN	Do you think the United States is in a moral and spiritual decline?	1992	1387
108	Marist College	In general, do you believe moral values in this country are headed in the right direction or the wrong direction?	2009	2243
109	Public Religion Research Institute	Now, as I read some statements on a few different topics, please tell me if you completely agree, mostly agree, mostly disagree or completely disagree with each one....The main cause of America's problems is moral decay.	2012	3003
110	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2004	1008

111	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2019	903
112	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2019	907
113	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2019	903
114	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2018	823
115	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2018	900
116	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2018	905

117	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2018	929
118	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2018	900
119	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2018	905
120	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2018	900
121	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2018	902
122	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2018	901

123	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2018	900
124	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2018	901
125	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2017	901
126	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2017	905
127	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2017	904
128	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2017	903

129	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2017	901
130	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2017	904
131	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2017	904
132	TIPP/Investor's Business Daily/Christian Science Monitor	In general, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics?...Very satisfied, somewhat satisfied, not very satisfied, not at all satisfied	2017	909
133	TIPP/Investor's Business Daily/Christian Science Monitor	How satisfied are you with the direction that the country is going in at this time in terms of morals and ethics?...Very satisfied, somewhat satisfied, not very satisfied, not at all satisfied	2017	885
134	TIPP/Investor's Business Daily/Christian Science Monitor	In general, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics?...Very satisfied, somewhat satisfied, not very satisfied, not at all satisfied	2016	934

135	TIPP/Investor's Business Daily/Christian Science Monitor	How satisfied are you with the direction that the country is going in at this time in terms of morals and ethics?...Very satisfied, somewhat satisfied, not very satisfied, not at all satisfied	2016	921
136	TIPP/Investor's Business Daily/Christian Science Monitor	How satisfied are you with the direction that the country is going in at this time in terms of morals and ethics?...Very satisfied, somewhat satisfied, not very satisfied, not at all satisfied	2016	908
137	TIPP/Investor's Business Daily/Christian Science Monitor	How satisfied are you with the direction that the country is going in at this time in terms of morals and ethics?...Very satisfied, somewhat satisfied, not very satisfied, not at all satisfied	2016	902
138	TIPP/Investor's Business Daily/Christian Science Monitor	How satisfied are you with the direction that the country is going in at this time in terms of morals and ethics?...Very satisfied, somewhat satisfied, not very satisfied, not at all satisfied	2016	914
139	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2004	1008
140	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2004	938

141	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2004	1003
142	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2004	981
143	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2004	1003
144	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2004	958
145	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2004	920
146	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2003	905

147	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2003	903
148	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2003	901
149	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2003	901
150	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2003	901
151	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2003	919
152	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2003	906

153	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2003	928
154	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2003	900
155	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2003	902
156	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2002	900
157	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2002	900
158	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2002	912

159	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2002	914
160	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2002	903
161	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2002	924
162	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2002	900
163	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2002	906
164	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2002	900

165	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2002	921
166	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2002	902
167	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2002	906
168	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2001	921
169	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2001	920
170	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2001	925

171	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2001	909
172	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2001	949
173	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2001	909
174	TIPP/Investor's Business Daily/Christian Science Monitor	Okay, and generally speaking, how satisfied are you with the direction that the country is going in at this time in terms of morals and ethics? Would you say you are...very satisfied, somewhat satisfied, not very satisfied, or not at all satisfied?	2001	909
175	Economist - PTN	The government has reported a steady decline in the rate of violent crime over the last twenty years. Do you think the government is correct and the rate of violent crime has decreased or do you think the rate of violent crime has remained the same or even increased over the past twenty years?	2019	1500
176	Kaiser Family Foundation - PTN	For each issue I read please tell me if you think it is a major problem facing our country, a minor problem or not a problem at all. Decline in moral values.	1999	3884

177	YouGov	The government has reported a steady decline in the rate of violent crime over the last twenty years. Do you think the government is correct and the rate of violent crime has decreased or do you think the rate of violent crime has remained the same or even increased over the past twenty years?	2014	1000
-----	--------	--	------	------

Table S2: Archival Survey Questions (non-US Sample), Study 1

#	Source	Question	Country	Year	N
1	Gallup	Do you believe that society as a whole is less moral today than it was 50 years ago, or do you not believe that?	UK	1996	1000
2	Pew	Here is a list of things that may or may not be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all. Moral decline.	Brazil	2006	700
3	Pew	Here is a list of things that may or may not be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all. Moral decline.	Chile	2006	600
4	Pew	Here is a list of things that may or may not be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all. Moral decline.	Guatemala	2006	1005
5	Pew	Here is a list of things that may or may not be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all. Moral decline.	Kenya	2006	655
6	Pew	Here is a list of things that may or may not be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all. Moral decline.	Nigeria	2006	650
7	Pew	Here is a list of things that may or may not be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all. Moral decline.	South Africa	2006	800

8	Pew	Here is a list of things that may or may not be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all. Moral decline.	India	2006	726
9	Pew	Here is a list of things that may or may not be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all. Moral decline.	Philippines	2006	1000
10	Pew	Here is a list of things that may or may not be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all. Moral decline.	South Korea	2006	600
11	YouGov	Compared with ten years ago, when Labour came to power, do you think Britain is a fairer society, or less fair, or has there been little change?	UK	2007	589
12	Eurobarometer	If you compare the situation with 5 years ago, would you say that the following types of discrimination are more common or less common in our country? Discrimination on the basis of ethnic origin.	EU	2007	51718
13	Eurobarometer	If you compare the situation with 5 years ago, would you say that the following types of discrimination are more common or less common in our country? Discrimination on the basis of gender.	EU	2007	51718
14	Eurobarometer	If you compare the situation with 5 years ago, would you say that the following types of discrimination are more common or less common in our country? Discrimination on the basis of sexual orientation.	EU	2007	51718
15	Eurobarometer	If you compare the situation with 5 years ago, would you say that the following types of discrimination are more common or less common in our country? Discrimination on the basis of age.	EU	2007	51718

16	Eurobarometer	If you compare the situation with 5 years ago, would you say that the following types of discrimination are more common or less common in our country? Discrimination on the basis of religion or beliefs.	EU	2007	51718
17	Eurobarometer	If you compare the situation with 5 years ago, would you say that the following types of discrimination are more common or less common in our country? Discrimination on the basis of disability.	EU	2007	51718
18	Market & Opinion Research International - PTN	I am going to read out some statements. I would like you to tell me how strongly you agree or disagree with each. Young people today do more for society and the community than their parents' generation did.	UK	2000	No information included
19	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Angola	2002	780
20	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Argentina	2002	814
21	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Bangladesh	2002	689
22	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Bolivia	2002	782
23	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Brazil	2002	1000

24	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Britain	2002	501
25	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Bulgaria	2002	514
26	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Canada	2002	500
27	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Czech Republic	2002	500
28	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	France	2002	507
29	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Germany	2002	1000
30	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Ghana	2002	702
31	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Guatemala	2002	500

32	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Honduras	2002	506
33	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	India	2002	2189
34	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Indonesia	2002	1017
35	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Italy	2002	5018
36	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Ivory Coast	2002	708
37	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Japan	2002	702
38	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Kenya	2002	658
39	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Lebanon	2002	1000

40	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Mali	2002	697
41	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Mexico	2002	996
42	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Nigeria	2002	1000
43	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Pakistan	2002	2032
44	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Peru	2002	711
45	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Philippines	2002	700
46	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Poland	2002	500
47	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Russia	2002	1002

48	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	South Africa	2002	700
49	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	South Korea	2002	719
50	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Senegal	2002	710
51	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Slovakia	2002	500
52	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Tanzania	2002	720
53	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Turkey	2002	1005
54	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Uganda	2002	1008
55	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Ukraine	2002	500

56	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Uzbekistan	2002	700
57	Pew	Here is a list of things that may be problems in our country. As I read each one, please tell me if you think it is a very big problem, a moderately big problem, a small problem, or not a problem at all...moral decline.	Venezuela	2002	700
58	ICM/Guardian	The Labour government came to power in 1997. With that in mind, do you agree or disagree with the following statement? People have become more selfish about money.	UK	2006	No information included

Table S3: Archival Survey Questions (US Sample) and Results, Study 4

	Source	Question	Response options	Years	N	<i>b</i>	R ²	% of 89% HDI in ROPE
1	Gallup	How would you rate the overall state of moral values in this country today?	Excellent [4], Good [3], Only Fair [2], Poor [1]	2002-2020	20,863	-0.006	0.002	100
2	Gallup	Next, we'd like to know how you feel about the state of the nation in each of the following areas. For each one, please say whether you are -- very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied. If you don't have enough information about a particular subject to rate it, just say so. How about -- the moral and ethical climate?	Very satisfied [4], Somewhat satisfied [3], Somewhat dissatisfied [2], Very dissatisfied [1]	2001-2008, 2012-2020	17,015	-0.01	0.008	100
3	Gallup	Which of the following things, if any, have you, personally, done in the past 12 months? How about Donated money to any other charitable cause	Yes [1], No [0]	2001, 2003, 2005, 2008, 2009a, 2009b, 2013, 2017, 2020	9,222	-0.02	0.002	100
4	Gallup	Which of the following things, if any, have you, personally, done in the past 12 months? Given blood	Yes [1], No [0]	2001, 2003, 2005, 2008, 2013, 2017, 2020	7,131	-0.01	0.001	100

5	Gallup	Which of the following things, if any, have you, personally, done in the past 12 months? Volunteered your time to any other charitable cause	Yes [1], No [0]	2001, 2003, 2005, 2008, 2009a, 2009b, 2013, 2017, 2020	9,222	0.006	0.0003	100
6	Gallup	Does your supervisor always create an environment that is trusting and open, or not? (asked only of those with a job and a supervisor)	Yes [1], No [0]	2008, 2009, 2010, 2011, 2012, 2013, 2014	957,762	0.02	0.0001	100
7	Gallup	Do you feel safe walking alone at night in the city or area where you live?	Yes [1], No [0]	2008, 2009, 2010, 2011, 2012, 2013	1,774,388	0.01	0.00005	100
8	Gallup	On a five-point scale, where 5 means strongly agree and 1 means strongly disagree, please rate your level of agreement with the following items. You always feel safe and secure.	1 [strongly disagree] - 5 [strongly agree]	2014-2017	691,671	0.001	0.000001	100
9	Gallup	Have you done any of the following in the past month? How about volunteered your time to an organization?	Yes [1], No [0]	2007-2019	12,126	-0.02	0.001	100
10	Gallup	Within the last 12 months, have you had money or property stolen from you or another household member?	Yes [1], No [0]	2006-2019	12,561	0.002	0.000007	100

11	Gallup	Now, please think about yesterday, from the morning until the end of the day. Think about where you were, what you were doing, who you were with, and how you felt. Were you treated with respect all day yesterday?	Yes [1], No [0]	2006-2019	14,255	0.009	0.0002	100
12	Gallup	Do you feel safe walking alone at night in the city or area where you live?	Yes [1], No [0]	2006-2019	12,505	-0.02	0.0007	100
13	Gallup	If you were in trouble, do you have relatives or friends you can count on to help you whenever you need them, or not?	Yes [1], No [0]	2006, 2008-2019	12,935	-0.04	0.004	100
14	Gallup	Please tell me which, if any, of these incidents have happened to you or your household within the last twelve months? Your house or apartment broken into.	Yes [1], No [0]	2000-2019	19,348	-0.004	0.00006	100
15	Gallup	Within the past 12 months, have you been assaulted or mugged?	Yes [1], No [0]	2015-2019	4,118	-0.11	0.002	87.59
16	Gallup	Next, I'm going to read some things people do because of their concern over crime. Please tell me which, if any, of these things you, yourself, do or have done. Keep a dog for protection.	Yes [1], No [0]	2000, 2001, 2002, 2003, 2005, 2007	6,064	-0.004	0.00002	100

17	Gallup	Have you done any of the following in the past month? How about helped a stranger or someone you didn't know who needed help?	Yes [1], No [0]	2007-2019	12,126	0.0009	0.000002	100
18	Gallup	Next, I'm going to read some things people do because of their concern over crime. Please tell me which, if any, of these things you, yourself, do or have done. Avoid going to certain places or neighborhoods you might otherwise want to go to.	Yes [1], No [0]	2000, 2001, 2002, 2003, 2005, 2007	6,064	-0.01	0.0002	100
19	Gallup	Next, I'm going to read some things people do because of their concern over crime. Please tell me which, if any, of these things you, yourself, do or have done. Carry mace or pepper spray.	Yes [1], No [0]	2000, 2001, 2002, 2003, 2005, 2007	6,064	-0.03	0.0006	100
20	Gallup	Next, I'm going to read some things people do because of their concern over crime. Please tell me which, if any, of these things you, yourself, do or have done. Had a burglar alarm installed in your home.	Yes [1], No [0]	2000, 2001, 2002, 2003, 2005, 2007	6,064	0.06	0.004	100

21	Gallup	Next, I'm going to read some things people do because of their concern over crime. Please tell me which, if any, of these things you, yourself, do or have done. Carry a knife for defense.	Yes [1], No [0]	2000, 2001, 2002, 2003, 2005, 2007	6,064	0.03	0.001	100
22	Gallup	Next, I'm going to read some things people do because of their concern over crime. Please tell me which, if any, of these things you, yourself, do or have done. Carry a gun for defense.	Yes [1], No [0]	2000, 2001, 2002, 2003, 2005, 2007	6,064	0.005	0.00002	100
23	Gallup	Next, I'm going to read some things people do because of their concern over crime. Please tell me which, if any, of these things you, yourself, do or have done. Bought a gun for protection of yourself or your home.	Yes [1], No [0]	2000, 2001, 2002, 2003, 2005, 2007	6,064	-0.004	0.00002	100
24	Gallup	Have you, personally, EVER been the victim of a crime where you were physically harmed, or threatened with physical harm?	Yes [1], No [0]	2000, 2011	2,024	-0.02	0.001	100

25	Gallup	Next, I'm going to read a list of problems facing the country. For each one, please tell me if you personally worry about this problem a great deal, a fair amount, only a little or not at all? First, how much do you personally worry about crime and violence?	Great deal [4], fair amount [3], only a little [2], not at all [1]	2001-2008, 2010-2020	18,789	-0.005	0.001	100
26	Gallup	Please tell me which, if any, of these incidents have happened to you or your household within the last twelve months? You or another household member had your computer or smartphone hacked and the information stolen by unauthorized persons.	Yes [1], No [0]	2003-2011, 2014	10,154	0.06	0.005	100
27	Gallup	Please tell me which, if any, of these incidents have happened to you or your household within the last twelve months? You or another household member had information from a credit card used at a store stolen by computer hackers.	Yes [1], No [0]	2014-2016	3,049	-0.007	0.000005	100

28	Gallup	Please tell me which, if any, of these incidents have happened to you or your household within the last twelve months? You or another household member had personal, credit card or financial information stolen by computer hackers	Yes [1], No [0]	2017-2019	3,089	-0.05	0.0003	100
29	Gallup	Please tell me which, if any, of these incidents have happened to you or your household within the last twelve months? You or another household member was the victim of identity theft.	Yes [1], No [0]	2009, 2010, 2011, 2013, 2015-2019	9,212	0.06	0.007	100
30	Gallup	Please tell me which, if any, of these incidents have happened to you or your household within the last twelve months? You or another household member was sexually assaulted.	Yes [1], No [0]	2000, 2002-2011, 2013-2019	18,337	0.01	0.0003	100
31	Gallup	Please tell me which, if any, of these incidents have happened to you or your household within the last twelve months? You or another household member mugged or physically assaulted.	Yes [1], No [0]	2000-2011, 2013-2019	19,348	-0.008	0.0003	100

32	Gallup	Please tell me which, if any, of these incidents have happened to you or your household within the last twelve months? Money or property taken from you or another household member by force, with gun, knife, weapon or physical attack, or by threat of force.	Yes [1], No [0]	2000-2011, 2013-2019	19,348	-0.002	0.00001	100
33	Gallup	Please tell me which, if any, of these incidents have happened to you or your household within the last twelve months? A home, car, or property owned by you or another household member vandalized.	Yes [1], No [0]	2000-2011, 2013-2019	19,348	-0.008	0.0003	100
34	Gallup	Please tell me which, if any, of these incidents have happened to you or your household within the last twelve months? A car owned by you or another household member stolen.	Yes [1], No [0]	2000-2011, 2013-2019	19,348	-0.02	0.001	100
35	Gallup	Please tell me which, if any, of these incidents have happened to you or your household within the last twelve months? Money or property stolen from you or another member of your household.	Yes [1], No [0]	2000-2011, 2013-2019	19,348	0.006	0.0002	100

36	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Having your email, passwords or electronic records hacked into?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2014, 2016	2,065	0.01	0.0001	100
37	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Having the credit card information you have used at stores stolen by computer hackers?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2014-2016	3,080	-0.02	0.0001	100
38	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Having your personal, credit card, or financial information stolen by computer hackers?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2017-2019	3,089	0.04	0.001	100
39	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Being a victim of identity theft?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2009, 2010, 2011, 2013, 2015-2019	9,212	0.003	0.00007	100

40	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Being a victim of terrorism?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2001-2011, 2013-2019	18,336	-0.02	0.01	100
41	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Being the victim of a hate crime?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2000, 2001, 2003-2011, 2013-2019	18,346	0.01	0.005	100
42	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Being attacked while driving your car?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2000, 2001, 2003-2011, 2013-2019	18,346	-0.008	0.002	100
43	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Having a school-aged child of yours physically harmed while attending school?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2000-2011, 2013-2019	19,348	-0.005	0.0008	100
44	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Being assaulted or killed by a coworker or other employee where you work?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2000-2011, 2013-2019	19,348	0.001	0.0001	100

45	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Having your car stolen or broken into?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2000-2011, 2013-2019	19,348	-0.005	0.0007	100
46	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Being sexually assaulted?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2000-2011, 2013-2019	19,796	-0.0004	0.000005	100
47	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Your home being burglarized when you are not there?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2000-2011, 2013-2019	19,796	-0.004	0.0006	100
48	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Your home being burglarized when you are there?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2000-2011, 2013-2019	19,796	-0.002	0.00008	100
49	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Getting murdered?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2000-2011, 2013-2019	19,796	0.004	0.0006	100

50	Gallup	How often do you, yourself, worry about the following things -- frequently, occasionally, rarely or never? How about -- Getting mugged?	Frequently [4], Occasionally [3], Rarely [2], Never [1]	2000-2011, 2013-2019	19,796	0.001	0.00007	100
51	Gallup	Overall, how would you describe the problem of crime in the area where you live -- is it extremely serious, very serious, moderately serious, not too serious or not serious at all?	Extremely [5], Very [4], Somewhat [3], Not too [2], Not at all [1]	2000, 2003-2011, 2013-2019	17,819	0.002	0.0001	100
52	Gallup	Overall, how would you describe the problem of crime in the United States -- is it extremely serious, very serious, moderately serious, not too serious or not serious at all?	Extremely [5], Very [4], Somewhat [3], Not too [2], Not at all [1]	2000, 2003-2011, 2013-2019	18,025	- 0.0002	0.000002	100
53	Gallup	Is there any area near where you live -- that is, within a mile -- where you would be afraid to walk alone at night?	Yes [1], No [0]	1965, 1967, 1968, 1972, 1975, 1977, 1979, 1981, 1982, 1983, 1989, 1990, 1992, 1993, 1994, 1996, 1997, 2000-2011, 2013-2019	37,882	-0.006	0.002	100

54	General Social Survey	Now I'm going to read you a list of statements that might or might not describe your main job. Please tell me whether you strongly agree, agree, disagree, or strongly disagree with each of these statements. I. At the place where I work, I am treated with respect	Strongly agree [5], Agree [4], Neither agree nor disagree [3], Disagree [2], Strongly disagree [1]	2002, 2006, 2010, 2014, 2018	7,301	-0.004	0.001	100
55	General Social Survey	Would you say that most of the time people try to be helpful, or that they are mostly just looking out for themselves?	Helpful [1], Depends [2], Looking out for self [3]	1972, 1973, 1975, 1976, 1978, 1980, 1983, 1984, 1986, 1987, 1988, 1990, 1991, 1993, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018	41,009	0.002	0.0006	100
56	General Social Survey	Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with the following statements: A. People should be willing to help others who are less fortunate	Strongly agree [5], Agree [4], Neither agree nor disagree [3], Disagree [2], Strongly disagree [1]	2002, 2004, 2012, 2014	5,248	0.001	0.00006	100

57	General Social Survey	Now I'm going to read you another list of statements about your main job. For each, please tell me if the statement is very true, somewhat true, not too true, or not at all true with respect to the work you do. N. The people I work with can be relied on when I need help	Very true [4], Somewhat true [3], Not too true [2], Not at all true [1]	2002, 2006, 2010, 2014, 2018	7,235	-0.001	0.0001	100
58	General Social Survey	During the past 12 months, how often have you done each of the following things: D. Allowed a stranger to go ahead of you in line	More than once a week [6], Once a week [5], Once a month [4], At least 2-3 times in the past year [3], Once in the past year [2], Not at all [1]	2002, 2004, 2012, 2014	4,916	0.003	0.0002	100
59	General Social Survey	During the past 12 months, how often have you done each of the following things: G. Offered your seat on a bus or in a public place to a stranger who was standing	More than once a week [6], Once a week [5], Once a month [4], At least 2-3 times in the past year [3], Once in the past year [2], Not at all [1]	2002, 2004, 2012, 2014	5,138	0.0006	0.000006	100

60	General Social Survey	During the past 12 months, how often have you done each of the following things: I. Carried a stranger's belongings, like groceries, a suitcase, or shopping bag	More than once a week [6], Once a week [5], Once a month [4], At least 2-3 times in the past year [3], Once in the past year [2], Not at all [1]	2002, 2004, 2012, 2014	5,157	0.003	0.0001	100
61	General Social Survey	During the past 12 months, how often have you done each of the following things: J. Given directions to a stranger	More than once a week [6], Once a week [5], Once a month [4], At least 2-3 times in the past year [3], Once in the past year [2], Not at all [1]	2002, 2004, 2012, 2014	4,978	-0.001	0.003	100
62	General Social Survey	During the past 12 months, how often have you done each of the following things: A. Donated blood	More than once a week [6], Once a week [5], Once a month [4], At least 2-3 times in the past year [3], Once in the past year [2], Not at all [1]	2002, 2004, 2012, 2014	5,257	-0.01	0.004	100

63	General Social Survey	During the past 12 months, how often have you done each of the following things: B. Given food or money to a homeless person	More than once a week [6], Once a week [5], Once a month [4], At least 2-3 times in the past year [3], Once in the past year [2], Not at all [1]	2002, 2004, 2012, 2014	5,091	0.01	0.002	100
64	General Social Survey	During the past 12 months, how often have you done each of the following things: C. Returned money to a cashier after getting too much change	More than once a week [6], Once a week [5], Once a month [4], At least 2-3 times in the past year [3], Once in the past year [2], Not at all [1]	2002, 2004, 2012, 2014	5,181	-0.02	0.01	100
65	General Social Survey	During the past 12 months, how often have you done each of the following things: E. Done volunteer work for a charity	More than once a week [6], Once a week [5], Once a month [4], At least 2-3 times in the past year [3], Once in the past year [2], Not at all [1]	2002, 2004, 2012, 2014	5,084	0.005	0.0003	100

66	General Social Survey	During the past 12 months, how often have you done any of the following things for people you know personally, such as relatives, friends, neighbors or other acquaintances? B. Lent quite a bit of money to another person	More than once a week [6], Once a week [5], Once a month [4], At least 2-3 times in the past year [3], Once in the past year [2], Not at all [1]	2002, 2004, 2012, 2014	4,041	-0.02	0.005	100
67	General Social Survey	During the past 12 months, how often have you done each of the following things: K. Let someone you didn't know well borrow a item of some value like dishes or tools.	More than once a week [6], Once a week [5], Once a month [4], At least 2-3 times in the past year [3], Once in the past year [2], Not at all [1]	2002, 2004, 2012, 2014	5,198	-0.004	0.0003	100
68	General Social Survey	During the past 12 months, how often have you done each of the following things: H. Looked after a person's plants, mail, or pets while they were away	More than once a week [6], Once a week [5], Once a month [4], At least 2-3 times in the past year [3], Once in the past year [2], Not at all [1]	2002, 2004, 2012, 2014	5,149	-0.01	0.002	100

69	General Social Survey	The following are things that you may experience in your daily life. Please tell me how often these occur. A. I feel a selfless caring for others.	Many times a day [6], Every day [5], Most days [4], Some days [3], Once in a while [2], Never or almost never [1]	2002, 2004, 2012, 2014	5,151	- 0.0002	0.0000004	100
70	General Social Survey	Please tell me whether you strongly agree, agree, neither agree nor disagree, disagree, or strongly disagree with the following statements: C. Personally assisting people in trouble is very important to me	Strongly agree [5], Agree [4], Neither agree nor disagree [3], Disagree [2], Strongly disagree [1]	2002, 2004, 2012, 2014	5,247	0.005	0.001	100
71	General Social Survey	Is there any area right around here--that is, within a mile--where you would be afraid to walk alone at night?	Yes [1], No [0]	1973, 1974, 1976, 1977, 1980, 1982, 1984, 1985, 1987, 1988, 1990, 1991, 1993, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018	39,441	-0.01	0.005	100

72	General Social Survey	Other people take credit for my work or ideas.	Often [4], Sometimes [3], Rarely [2], Never [1]	2004, 2012	2,931	0.03	0.008	100
73	General Social Survey	D. People at work treat me in a manner that puts me down or address me in unprofessional terms, either publicly or privately.	Often [4], Sometimes [3], Rarely [2], Never [1]	2004, 2012	2,937	0.006	0.0008	100
74	General Social Survey	H. People at work throw things, slam doors, or hit objects when they are upset with me.	Often [4], Sometimes [3], Rarely [2], Never [1]	2004, 2012	2,942	-0.003	0.0003	100
75	General Social Survey	I. People at work shout or yell at me in a hostile manner.	Often [4], Sometimes [3], Rarely [2], Never [1]	2004, 2012	2,940	0.006	0.001	100
76	General Social Survey	M. At work, people are treated with respect.	Strongly agree [4], Agree [3], Disagree [2], Strongly disagree [1]	2004, 2012	2,939	-0.006	0.001	100
77	General Social Survey	N. In my workplace, people "look the other way" when others are threatened, intimidated, or put down.	Strongly agree [4], Agree [3], Disagree [2], Strongly disagree [1]	2004, 2012	2,887	0.06	0.09	100

78	General Social Survey	Generally speaking, would you say that people can be trusted or that you can't be too careful in dealing with people?	Can trust [3], Depends [2], Can't be too careful [1]	1972, 1973, 1975, 1976, 1980, 1983, 1984, 1986, 1987, 1988, 1990, 1991, 1993, 1994, 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014	41,258	-0.006	0.008	100
79	General Social Survey	Now, I'm going to ask you about various events and conditions that happen to people. I'm interested in those that happened to you during the last 12 months, that is since (CURRENT MONTH), (1990/2003). As I ask you about the specific events, please think carefully, so I can record things accurately. F. Next, did any of the following criminal or legal events occur to you since (CURRENT MONTH), (1990/2003)... 1. A robbery (e.g. a mugging or stick-up).	1 = yes, 2 = no	1991, 2004	2,341	0.0002	-0.0004	100

80	General Social Survey	<p>During the past 12 months, how often have you done any of the following things for people you know personally, such as relatives, friends, neighbors or other acquaintances?</p> <p>A. Helped someone outside of your household with housework or shopping</p>	<p>More than once a week [6], Once a week [5], Once a month [4], At least two or three times in the past year [3], Once in the past year [2], Not at all in the past year [1]</p>	2002, 2004, 2012, 2014	5,042	-0.05	0.03	100
81	General Social Survey	<p>During the past 12 months, how often have you done any of the following things for people you know personally, such as relatives, friends, neighbors or other acquaintances?</p> <p>C. Spent time talking with someone who was a bit down or depressed</p>	<p>More than once a week [6], Once a week [5], Once a month [4], At least two or three times in the past year [3], Once in the past year [2], Not at all in the past year [1]</p>	2002, 2004, 2012, 2014	5,043	-0.02	0.004	100

82	General Social Survey	During the past 12 months, how often have you done any of the following things for people you know personally, such as relatives, friends, neighbors or other acquaintances? D. Helped somebody to find a job	More than once a week [6], Once a week [5], Once a month [4], At least two or three times in the past year [3], Once in the past year [2], Not at all in the past year [1]	2002, 2004, 2012, 2014	5,047	0.001	0.00003	100
83	General Social Survey	There are different opinions as to what it takes to be a good citizen. As far as you are concerned personally on a scale of 1 to 7, where 1 is not at all important and 7 is very important, how important is it, Å¶ H. To help people in America who are worse off than yourself	1 [not at all important] - 7 [very important]	2004, 2014	2,712	-0.02	0.005	100
84	General Social Survey	There are different opinions as to what it takes to be a good citizen. As far as you are concerned personally on a scale of 1 to 7, where 1 is not at all important and 7 is very important, how important is it, Å¶ I. To help people in the rest of the world who are worse off than yourself	1 [not at all important] - 7 [very important]	2004, 2014	2,689	-0.02	0.003	100

85	General Social Survey	During the past 12 months, how often have you done each of the following things: F. Given money to a charity	More than once a week [6], Once a week [5], Once a month [4], At least two or three times in the past year [3], Once in the past year [2], Not at all in the past year [1]	2002, 2004, 2012, 2014	3,568	-0.02	0.005	100
86	KRC Research	Generally speaking, do you believe there is a major problem, minor problem, or not much of a problem with the general tone and level of civility in the country today?	Major problem [3], Minor problem [2], Not much of a problem [1]	2010-2017, 2019	9192	0.006	0.0008	100
87	KRC Research	In an average 7-day week, how many times would you say you encounter incivility, in your in-person interactions with people and online in social networks [2016-2019: "and in your online interactions with people]? Please use your best estimate. IN-PERSON INTERACTIONS.	0, 1-5, 6-10, 11-15, 16+	2013-2017, 2019	5628	-0.13	0.005	100

88	KRC Research	In an average 7-day week, how many times would you say you encounter incivility, in your in-person interactions with people and online in social networks [2016-2019: "and in your online interactions with people]? Please use your best estimate. ONLINE INTERACTIONS.	0, 1-5, 6-10, 11-15, 16+	2013-2017, 2019	5628	0.03	0.0002	100
89	KRC Research	[ASKED OF THOSE EMPLOYED] How would you describe the general tone and level of civility in your place of employment?	Very civil [4], Somewhat civil [3], Somewhat uncivil [2], Very uncivil [1]	2016, 2017, 2019	1606	-0.002	0.00001	100
90	KRC Research	Which of the following, if any, have you personally experienced? [instances of incivility]	Any [1], None [0]	2011-2016	6,134	-0.04	0.0007	100
91	World Values Survey	Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?	Can't be too careful [1], Most people can be trusted [0]	1981, 1995, 1999, 2001, 2006, 2011, 2017	8,902	0.003	0.003	100
92	World Values Survey	Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five. UNSELFISHNESS	Not mentioned [0], Mentioned as important [1]	1981, 1995, 1999, 2001, 2006, 2011, 2017	14,154	0.002	0.001	100

93	World Values Survey	How much respect is there for individual human rights nowadays (in our country)?. Do you feel there is:	A great deal of respect for individual human rights [1], Fairly much respect [2], Not much respect [3], No respect at all [4]	1999, 2001, 2006, 2011, 2017	8,304	0.02	0.005	100
94	World Values Survey	Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five. TOLERANCE	Not mentioned [0], Mentioned as important [1]	1981, 1995, 1999, 2001, 2006, 2011, 2017	14,154	0.004	0.004	100
95	World Values Survey	I'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? People of another religion.	Trust completely [1], Trust somewhat [2], Don't trust very much [3], Do not trust at all [4]	2006, 2011, 2017	5932	0.02	0.001	100
96	World Values Survey	I'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? People of another nationality.	Trust completely [1], Trust somewhat [2], Don't trust very much [3], Do not trust at all [4]	2006, 2011, 2017	5921	-0.006	0.0002	100

97	World Values Survey	I'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? People you know personally.	Trust completely [1], Trust somewhat [2], Don't trust very much [3], Do not trust at all [4]	2006, 2011, 2017	5958	0.003	0.00009	100
98	World Values Survey	I'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? People you meet for the first time.	Trust completely [1], Trust somewhat [2], Don't trust very much [3], Do not trust at all [4]	2006, 2011, 2017	5971	0.002	0.00001	100
99	World Values Survey	I'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? Your neighborhood.	Trust completely [1], Trust somewhat [2], Don't trust very much [3], Do not trust at all [4]	2006, 2011, 2017	5965	0.008	0.0003	100
100	World Values Survey	I'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? Your family.	Trust completely [1], Trust somewhat [2], Don't trust very much [3], Do not trust at all [4]	2006, 2011, 2017	5978	0.02	0.003	100

101	World Values Survey	Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair? Please show your response on this card, where 1 means that „Äúpeople would try to take advantage of you,,Äù and 10 means that „Äúpeople would try to be fair,Äù:	Most people try to take advantage of me [1] - Most people try to be fair [10]	2006, 2011	3436	0.001	0.00003	100
102	European Values Survey	Here is a list of qualities which children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five. Tolerance and respect for other people	[participants could choose the quality from the list or not]	1981-2017 (but varies by country)	4164	.02	0.02	100
103	European Values Survey	Here is a list of qualities which children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five. Unselfishness	[participants could choose the quality from the list or not]	1981-2017 (but varies by country)	4164	.02	0.02	100
104	European Values Survey	Please look carefully at the following list of voluntary organisations and activities and say ... b) which, if any, are you currently doing unpaid voluntary work for? Social welfare services for elderly, handicapped or deprived people	[participants could indicate they currently do unpaid work, or not]	1981-2017 (but varies by country)	4164	- 0.0008	-0.00006	100

105	European Values Survey	Please look carefully at the following list of voluntary organisations and activities and say ... b) which, if any, are you currently doing unpaid voluntary work for? And do you currently do any unpaid work for any of them? Third world development or human rights	[participants could indicate they currently do unpaid work, or not]	1981-2017 (but varies by country)	4164	-0.001	0.001	100
106	European Values Survey	Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?	Most people can be trusted (recoded as 1), can't be too careful (recoded as 0)	1981-2017 (but varies by country)	4041	0.01	0.008	100
107	European Values Survey	Here are some aspects of a job that people say are important. Please look at them and tell me which ones you personally think are important in a job? A useful job for society	[participants could choose the quality from the list or not]	1981-2017 (but varies by country)	4164	-0.002	-0.0001	100

Table S4: Archival Survey Questions (non-US Sample) and Results, Study 4

	Source	Question	Response options	Years	N	B	R²	% of 89% HDI in ROPE
1	World Values Survey	And for which, if any, are you currently doing unpaid voluntary work? Unpaid work social welfare service for elderly, handicapped or deprived people	[mentioned or not]	1981-2018 (but varies by country)	49958	0.007	0.008	100
2	World Values Survey	Here are some more aspects of a job that people say are important. Please look at them and tell me which ones you personally think are important in a job? Useful for society	[mentioned or not]	1981-2018 (but varies by country)	21905	0.05	0.001	37%
3	World Values Survey	Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five. Not being selfish (unselfishness)	[mentioned or not]	1981-2018 (but varies by country)	404605	0.003	0.003	100
4	World Values Survey	How much respect is there for individual human rights nowadays in this country?	1 = a lot, 4 = no respect at all	1981-2018 (but varies by country)	288573	-0.006	0.0009	100

5	World Values Survey	Now I will briefly describe some people. Using this card, would you please indicate for each description whether that person is very much like you, like you, somewhat like you, not like you, or not at all like you? : "It is important to help people living nearby; to care for their needs"	1 = not at all like me, 6 = very much like me	1981-2018 (but varies by country)	111196	-0.02	0.001	100
6	World Values Survey	Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five. Tolerance and respect for other people	[mentioned or not]	1981-2018 (but varies by country)	408509	0.003	0.002	100
7	World Values Survey	I'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? People of another religion	1 = trust completely, 4 = do not trust at all	1981-2018 (but varies by country)	212738	-0.003	0.00009	100
8	World Values Survey	I 'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? People of another nationality	1 = trust completely, 4 = do not trust at all	1981-2018 (but varies by country)	211855	-0.002	0.00004	100
9	World Values Survey	I 'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? People you know personally	1 = trust completely, 4 = do not trust at all	1981-2018 (but varies by country)	224599	0.008	0.001	100

10	World Values Survey	And for which, if any, are you currently doing unpaid voluntary work? Unpaid work for human rights	[mentioned or not]	1981-2018 (but varies by country)	48958	0.0007	0.0004	100
11	World Values Survey	Using the responses on this card, could you tell me how much you trust [Nationality] people in general?	1 = trust completely, 4 = do not trust at all	1981-2018 (but varies by country)	21314	0.17	0.003	29.36
12	World Values Survey	I 'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? People you meet for the first time	1 = trust completely, 4 = do not trust at all	1981-2018 (but varies by country)	221110	-0.004	0.0001	100
13	World Values Survey	I 'd like to ask you how much you trust people from various groups. Could you tell me for each whether you trust people from this group completely, somewhat, not very much or not at all? Your family	1 = trust completely, 4 = do not trust at all	1981-2018 (but varies by country)	22109	-0.32	0.02	13.1
14	World Values Survey	Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?	1 = most people can be trusted, 2 = need to be very careful	1981-2018 (but varies by country)	393873	0.003	0.002	100
15	World Values Survey	Do you think most people would try to take advantage of you if they got a chance, or would they try to be fair?	1 = most people try to take advantage of me, 10 = most people try to be fair	1981-2018 (but varies by country)	53007	0.02	0.0009	100

16	European Social Survey	All rounds: Using this card, generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people? Please tell me on a score of 0 to 10, where 0 means you can't be too careful and 10 means that most people can be trusted.	0 = you can't be too careful, 10 = most people can be trusted	2002-2018 (but varies by country)	421379	0.02	0.0002	100
17	European Social Survey	Have you or a member of your household been the victim of a burglary or assault in the last 5 years?	1 = yes, 2 = no	2002-2018 (but varies by country)	421416	0.004	0.00009	100
18	European Social Survey	All rounds: Using this card, do you think that most people would try to take advantage of you if they got the chance, or would they try to be fair?	0 = most people try to take advantage of me, 10 = most people try to be fair	2002-2018 (but varies by country)	418880	0.01	0.00008	100
19	European Social Survey	Most of the time people helpful or mostly looking out for themselves	0 = people mostly look out for themselves, 10 = people mostly try to be helpful	2002-2018 (but varies by country)	92774	0.04	0.0008	100
20	European Social Survey	All rounds: How safe do you - or would you - feel walking alone in this area after dark?	1 = all or most of the time, 2 = some of the time, 3 = just occasionally, 4 = never	2002-2018 (but varies by country)	418124	-0.03	0.002	100
21	European Social Survey	How often, if at all, do you worry about your home being burgled?	1 = all or most of the time, 2 = some of the time, 3 = just occasionally, 4 = never	2002-2018 (but varies by country)	148663	-0.01	0.00004	100

22	European Social Survey	How often worry about becoming a victim of violent crime	1 = all or most of the time, 2 = some of the time, 3 = just occasionally, 4 = never	2002-2018 (but varies by country)	148112	-0.01	0.00002	100
23	European Social Survey	Now I will briefly describe some people. Please listen to each description and tell me how much each person is or is not like you. Use this card for your answer. She/he thinks it is important that every person in the world should be treated equally. She/he believes everyone should have equal opportunities in life.	1 = very much like me, 2 = like me, 3 = somewhat like me, 4 = a little like me, 5 = not like me, 6 = not like me at all	2002-2018 (but varies by country)	407185	-0.005	0.00006	100
24	European Social Survey	Now I will briefly describe some people. Please listen to each description and tell me how much each person is or is not like you. Use this card for your answer. It is important to her/him to listen to people who are different from her/him. Even when she/he disagrees with them, she/he still wants to understand them.	1 = very much like me, 2 = like me, 3 = somewhat like me, 4 = a little like me, 5 = not like me, 6 = not like me at all	2002-2018 (but varies by country)	406259	-0.02	0.0008	100
25	European Social Survey	Now I will briefly describe some people. Please listen to each description and tell me how much each person is or is not like you. Use this card for your answer. It's very important to her/him to help the people around her/him. She/he wants to care for their well-being.	1 = very much like me, 2 = like me, 3 = somewhat like me, 4 = a little like me, 5 = not like me, 6 = not like me at all	2002-2018 (but varies by country)	407386	-0.04	0.003	100

26	European Social Survey	Using this card, please tell me to what extent... ..you feel that people in your local area help one another?	0 (not at all) - 6 (a great deal)	2002-2018 (but varies by country)	407185	0.05	0.001	100
27	European Social Survey	Using this card, please tell me to what extent... ..you feel that people treat you with respect?	0 (not at all) - 6 (a great deal)	2002-2018 (but varies by country)	93558	-0.02	0.00004	100
28	European Values Survey	Here is a list of qualities which children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five. Tolerance and respect for other people	[participants could choose the quality from the list or not]	1981-2017 (but varies by country)	180972	0.004	0.006	100
29	European Values Survey	Here is a list of qualities which children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five. Unselfishness	[participants could choose the quality from the list or not]	1981-2017 (but varies by country)	179125	0.003	0.003	100
30	European Values Survey	Please look carefully at the following list of voluntary organisations and activities and say ... b) which, if any, are you currently doing unpaid voluntary work for? Social welfare services for elderly, handicapped or deprived people	[participants could indicate they currently do unpaid work, or not]	1981-2017 (but varies by country)	122756	-0.0002	0.00007	100

31	European Values Survey	Please look carefully at the following list of voluntary organisations and activities and say ... b) which, if any, are you currently doing unpaid voluntary work for? And do you currently do any unpaid work for any of them? Third world development or human rights	[participants could indicate they currently do unpaid work, or not]	1981-2017 (but varies by country)	122661	0.005	0.001	100
32	European Values Survey	Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?	Most people can be trusted (recoded as 1), can't be too careful (recoded as 0)	1981-2017 (but varies by country)	178714	0.002	0.001	100
33	European Values Survey	Here are some aspects of a job that people say are important. Please look at them and tell me which ones you personally think are important in a job? A useful job for society	[participants could choose the quality from the list or not]	1981-2017 (but varies by country)	163278	- 0.0002	0.00001	100

Additional Analyses in Study 5a

What explained participants' overall perception of moral decline: their theories about personal change and interpersonal replacement within their personal worlds, or without? To find out, we fit three linear models on subsets of participants depending on the amount of information that they provided. The results are shown in Table S5. For each subset of participants, both personal change and interpersonal replacement for people in general were strong predictors of how much overall moral decline they perceived. For those participants who experienced personal change in their personal world, that change was not related to their overall perception of moral decline. For those participants who experienced both personal change and interpersonal replacement in their personal world, personal change was related to their overall perception of moral decline.

Table S5: Regression Coefficients for Each of the Four Models Fit in Study 5a

		Personal change for people in general	Interpersonal replacement for people in general	Personal change for people in personal world	Interpersonal replacement for people in personal world
Subset	N				
Did not experience personal change or interpersonal replacement in personal world	27	$b = 0.49$ $t(24) = 4.10$ $p < .001$	$b = 0.42$ $t(24) = 3.75$ $p < .001$	--	--
Experienced personal change in personal world	256	$b = 0.50$ $t(252) = 10.04$ $p < .001$	$b = 0.31$ $t(252) = 8.72$ $p < .001$	$b = 0.06$ $t(252) = 1.15$ $p = .25$	--
Experienced both personal change and interpersonal replacement in personal world	141	$b = 0.44$ $t(136) = 6.64$ $p < .001$	$b = 0.30$ $t(136) = 5.46$ $p < .001$	$b = 0.15$ $t(136) = 1.88$ $p = .061$	$b = 0.08$ $t(136) = 1.02$ $p = .31$

Note: Four participants provided an interpersonal replacement score for their personal world but not a personal change score. All tests are two-sided. No adjustments for multiple comparisons were applied because each model uses independent data.

Table S6: Demographics Questions Used in Studies 2a-c, 3, and 5a-b

Variable	Question	Response options
Age	What is your age? <i>(Please enter a whole number.)</i>	[Participants entered a whole number]
Gender	What is your gender?	Male, female, other
Race	What is your race/ethnicity?	American Indian or Alaska Native Asian Black or African-American Hispanic or Latino Origin Hawaiian or Pacific Islander White Other More than 1 of the above
Education	What is the highest level of education you have completed?	Did not complete high school High school diploma Some college Associate's degree Four-year college degree Some graduate school Graduate school
Number of children	How many children do you have?	0, 1, 2, 3, 4+
Political ideology	How would you describe yourself politically?	Very liberal Somewhat liberal Neither liberal nor conservative Somewhat conservative Very conservative

SECTION 2: ADDITIONAL STUDIES NOT APPEARING IN MAIN TEXT

Study S1: Pre-registered Replication of Study 2a

Study S1 was a pre-registered replication of Study 2a. The preregistration is available at <https://osf.io/hr7we>.

Method

Participants. In November, 2022, we recruited a nationally representative sample of American adults using Prolific, an online sample provider. This sample was constructed to represent the American adult population in terms of gender, race, and age. We intended to recruit 1,000 participants, but Prolific ultimately provided us with 997 (512 female, 477 male, 8 “other”, $M_{\text{age}} = 45.42$, 76% white, 13% Black, 6% Asian, 4% Hispanic, 1% American Indian or Alaska Native, 1% “more than 1 of the above”). All participants were paid \$0.75 each for their participation.

Procedure. Participants completed the same procedure as in Study 2a.

Results

Exclusions. One hundred and forty-three participants failed the attention check embedded in the demographics questions. An additional 113 participants failed the consistency check. As in Study 2a, and is specified in our preregistration plan, these participants were excluded from all analyses. As in Study 2a, these exclusions did not meaningfully affect any of the results.

Main analysis. As in Study 2a, we fit a mixed linear effects model with perceived morality as the outcome and a fixed effect of year and with random intercepts for each participant. We then conducted pairwise comparisons between each of the three years using a Holm-Bonferroni correction for multiple comparisons. The results of Study 2a were replicated:

Participants rated people as less moral in 2022 ($M = 4.25$) than in both 2012 ($M = 4.81$, $b = -0.56$, $t(1480) = -15.25$, 95% CI = [-0.65, -0.48]) and 2002 ($M = 5.06$, $b = -0.82$, $t(1480) = -22.03$, 95% CI = [-0.90, -0.73]). Participants also rated people as less moral in 2012 than in 2002 ($b = -0.25$, $t(1480) = -6.79$, 95% CI = [-0.34, -0.16]).

Study S2: Replication of Study 2a with Participants from MTurk

Study 2a was run with participants recruited on the Prolific platform. Prolific provides nationally representative samples but is expensive and has a relatively small pool. In Study S2, we used the same method used in Study 2a with participants recruited on the MTurk platform, which is less expensive and has a larger pool. We reasoned that if the two platforms provided the same results, we could safely use the MTurk platform in subsequent studies.

Method

Participants. In January, 2020, 302 people responded to an advertisement for a study posted on Amazon Mechanical Turk. Respondents first took a three-item test of English language and American culture that required them to know that children in kindergarten are three or four years old, that an American ZIP code is a series of five digits, and that eating turkey is not an activity associated with Halloween. One hundred and two respondents failed to answer one or more of the questions correctly and were not allowed to participate. The remaining 200 respondents became participants in the study in exchange for \$0.75 (68 female, 131 male, 1 “other”, $M_{\text{age}} = 37.45$ years, 60% White, 28% Black, 6% Hispanic, 4% Asian, 1% “more than one of the above”).

Procedure. Participants completed the same procedure as in Studies 2a and S1 with one additional question: After rating people in general today, “ten years ago,” and “twenty years ago,” they also rated people in general “thirty years ago.”

Results

Exclusions. Thirteen participants failed the attention check embedded in the demographics and were excluded from all analyses. Another participant reported that they are 300 years old and was excluded from all analyses. Finally, 53 participants gave answers to the consistency check question that were inconsistent with their previous answers; they were also excluded. This left 134 participants in all analyses (45 female, 88 male, 1 “other”, $M_{\text{age}} = 38.09$, 70% White, 19% Black, 5% Hispanic, 4% Asian, 1% “more than one of the above”, 1% “other”). These exclusions do not meaningfully affect the results.

Main results. Using the same analysis as in Studies 2a and S1, participants rated people in 2020 ($M = 4.75$) as less kind, honest, nice, and good compared to all previous years (2010: $b = -0.26$, 95% CI = $[-0.51, -0.009]$, $t(399) = -2.75$, $p = .02$; 2000: $b = -0.57$, 95% CI = $[-0.83, -0.32]$, $t(399) = -6.05$, $p < .001$; ,1990: $b = -0.50$, 95% CI = $[-0.75, -0.25]$, $t(399) = -5.27$; $p < .001$). Participants rated people in 2010 ($M = 5.01$) as less kind, honest, nice, and good compared to all previous years (2000: $b = 0.31$, 95% CI = $[-0.57, -0.06]$, $t(399) = -3.30$, $p = .004$; 1990: $b = -0.24$, 95% CI = $[-0.49, 0.013]$, $t(399) = -2.51$, $p = .02$). The difference in ratings for 2000 ($M = 5.33$) and 1990 ($M = 5.25$) was not significant, $b = 0.07$, 95% CI = $[-0.18, 0.33]$, $t(399) = 0.79$, $p = .43$.

Study S3: Estimated Rates of Cooperation in Prisoner’s Dilemma Games (1956-2017)

A recent meta-analysis by Yuan et al (2022)¹ found that between 1956 and 2017, cooperation rates in economic games—specifically, in prisoners’ dilemmas and public goods

games—increased by 9% to 10% (depending on model specifications). In Study S3 (run in September, 2022), we described to participants a representative version of one of these games (based on Yi & Rachlin, 2004², one of the studies included in the meta-analysis) and asked them to estimate whether and how cooperation rates might have changed over that time period.

Method

Participants. We recruited a sample of American adults using Prolific, an online sample provider. One hundred and forty-nine people (87 female, 60 male, 2 “other”, $M_{\text{age}} = 35.19$ years, 73% White, 7% Black, 6% Hispanic, 5% Asian, 1% Hawaiian or Pacific Islander, 3% other, 5% “more than one of the above”) were paid \$1.00 each for their participation.

Procedure. After providing informed consent, participants confirmed their Prolific ID, per the site’s usage policy. They then completed the same three-item test of English language and American culture used in our other studies. Prolific does not allow participants to be screened out once they have begun the study, so if participants failed any of these questions, they were excluded later rather than being deemed ineligible before responding.

Participants then read and signed a consent form and reported their birth year, which was later compared to their self-reported age as a consistency check. Participants then read the following instructions: “For decades, researchers have been measuring how kind, nice, honest, and good people are by asking them to play a ‘cooperation game.’ Today we will explain the game and then ask you to guess what people did. If you guess correctly, we will automatically enter you in a lottery to win \$20. Here is how one of the games worked. Two strangers reported to a laboratory and were put into separate rooms. They each sat at a computer and read the following instructions. Please read them closely because we’ll ask you about them later.”

Participants then read a generic description of the Prisoner's Dilemma game, based on Yi and Rachlin (2004)², which was one of the studies included in the meta-analysis by Yuan et al (2022)¹. "Today, you and the other person will each independently choose TO COOPERATE or NOT TO COOPERATE. If you choose TO COOPERATE, you will receive either \$0 or \$70. You will receive \$0 if the other person chooses NOT TO COOPERATE, and they will receive \$100. You will receive \$70 if the other person chooses TO COOPERATE, and they will also receive \$70. If you choose NOT TO COOPERATE, you will receive either \$30 or \$100. You will receive \$30 if the other person chooses NOT TO COOPERATE, and they will receive \$30. You will receive \$100 if the other person chooses TO COOPERATE, and they will receive \$0. So what would you like to do? Do you choose TO COOPERATE or NOT TO COOPERATE?"

On the next page, participants read: "As we already mentioned, researchers have been measuring how kind, nice, honest, and good people are by asking them to play this "cooperation game" for decades, and we now know the percentage of people who chose to cooperate in every year from 1956 to 2017. Do you think the rate of cooperation changed in that 61-year period, and if so, how?"

Participants responded by indicating one of three alternatives: (a) "I think the percentage of people who chose to cooperate went up between 1956 and 2017"; (b) "I think the percentage of people who chose to cooperate stayed the same between 1956 and 2017"; or (c) "I think the percentage of people who chose to cooperate went down between 1956 and 2017".

Next, participants answered two questions by entering a number between 0 and 100 into a text box: (a) "In 1956, what percentage of people do you think chose to cooperate?" and (b) "In 2017, what percentage of people do you think chose to cooperate?"

Participants then completed two comprehension checks, which required them to demonstrate that they knew that (a) if one person chose to cooperate in the economic game and the other chose not to cooperate, the person who chose to cooperate got nothing, and (b) if both chose not to cooperate, they both got \$30.

Finally, participants completed a set of demographics questions, embedded in which was another attention check that required participants to select the option “other” and type the word “shoe.”

Results

Exclusions. Three participants failed the language and culture test. An additional 30 participants failed at least one of the two comprehension checks. Another 12 failed the attention check embedded in the demographics questions. Another three participants reported an age at the end of the study that was inconsistent with the birth year they reported at the beginning of the study. Finally, seven participants gave inconsistent answers on the categorical and continuous questions (for instance, reporting that cooperation rates had increased, then giving the same answer for both continuous questions). These participants were excluded from all analyses, leaving 94 participants in the data set (54 female, 39 male, 1 “other”, $M_{\text{age}} = 35.13$, 69% White, 9% Hispanic, 7% Black, 6% Asian, 2% “other”, 5% “more than one of the above”). These exclusions did not meaningfully affect the results.

Estimates of changes in cooperation rates. When asked whether cooperation rates had increased, stayed the same, or decreased between 1956 and 2017, 26% of participants correctly reported that they had increased—but more than twice as many, 63%, mistakenly reported that they had decreased. Twelve percent of participants reported that they had stayed the same. This distribution of responses differed significantly from a distribution of response in which

participants chose each option with equal frequency, $\chi^2(2, 94) = 39.34, p < .001$. In addition, on average, participants estimated that in 1956, 63% of people cooperated and that in 2017 only 52% of people cooperate. A two-tailed paired-samples t -test indicated this difference was significant, $t(93) = -5.01, 95\% \text{ CI} = [-15.02, -6.49], p < .001$.

SECTION 3: DISCUSSION OF RELATED LITERATURE

Other Demonstrations of the Perception of Moral Decline

The claim that people believe morality is declining is by no means new. Historians such as Arthur Herman³ and political scientists such as Andrew Murphy⁴ have traced the long history of belief in “moral declinism.” Psychologists Richard Eibach and Lisa Libby⁵ were (to our knowledge) the first to bring modern survey data to bear on this idea, describing a half dozen survey items on which people perceived moral decline to illustrate their suggestion that “Perceptions of moral decline are particularly common” and “often exaggerated.” In short, there is a long tradition of thought and a short tradition of research on the perception of moral decline and its potentially illusory status. However, to our knowledge, no one has ever *tested* the hypothesis that people perceive moral decline by analyzing the full corpus of survey data, as we did in Study 1. A recent study shows why testing the full corpus is imperative.

Mitchell and Tetlock⁶ asked participants (among other things) to guess how a variety of “social indicators” had changed over various time intervals. Most of these indicators had nothing to do with morality (e.g., dental health, hourly wages, educational attainment, etc.), but two were morally relevant: (a) the number of documented hate crimes committed on college campuses between 2015 and 2018 and (b) the percentage of youth in juvenile justice facilities who reported being sexually victimized between 2012 and 2018. Mitchell and Tetlock hypothesized that although the frequency of hate crimes and sexual victimization had decreased over the intervals and in the locations they specified, participants would mistakenly guess that these frequencies had increased. In other words, they expected participants to show an illusion of moral decline on these two items. Consistent with our results, that’s exactly what they found.

Although this evidence may have been satisfactory for Mitchell and Tetlock's purposes, it does not provide satisfactory evidence of the illusion of moral decline because when researchers select just a few specific items for analysis (rather than analyzing the entire corpus of items), they can demonstrate anything they wish. For example, Mitchell and Tetlock asked participants to estimate the frequency of hate crimes that had occurred *between 2015 and 2018* and *on college campuses*. Figure S5 shows the original data on which Mitchell and Tetlock report having based their question. Note first that across the full interval (from 2010 to 2019), there is no meaningful linear trend: The correlation between year and frequency of hate crimes on college campuses in these data is $r = .1$. From these data that show no linear trend over 10 years, Mitchell and Tetlock selected a specific 3-year interval (2015 to 2018) in which hate crimes on college campuses happen to have decreased by 3%.

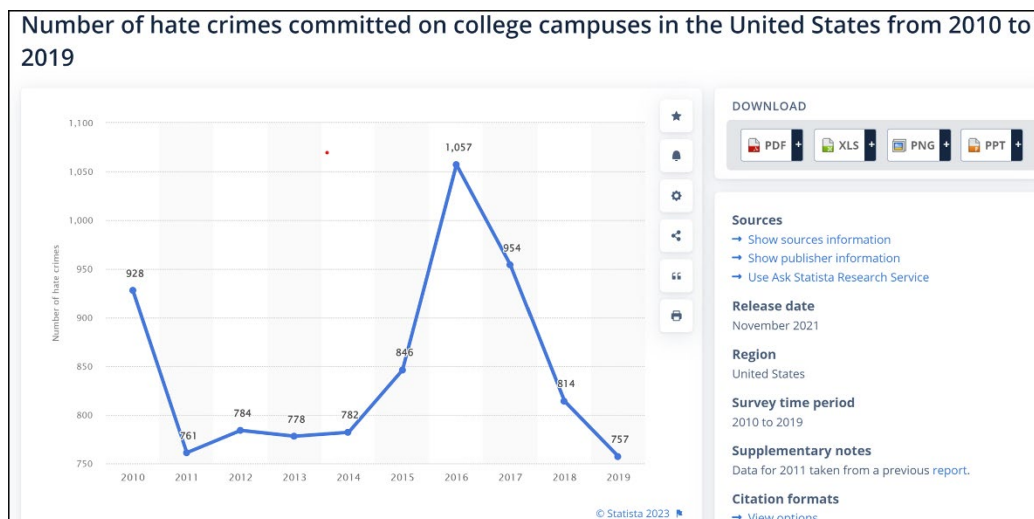


Figure S5. Data on which Mitchell and Tetlock (2022) based their question about the frequency of hate crimes on college campuses between 2013 and 2016.

Mitchell and Tetlock chose a special interval and also a special location: college campuses. Figure S6 shows the frequency of hate crimes in the U.S. in the previous decade according to the FBI's Uniform Crime Reporting Hate Crime Statistics Program (available at <https://bjs.ojp.gov/library/publications/hate-crime-recorded-law-enforcement-2010-2019>).

Although the rate of hate crimes that occurred *on college campuses* decreased by 3% between 2015 and 2018, the rate of hate crimes that *occurred in the U.S.* increased by 22% in that same interval. In other words, Mitchell and Tetlock selected a specific interval and a special location in which there was a slight decrease in hate crimes, in contrast with the more general trend. A participant who was (correctly) aware that the frequency of U.S hate crimes had increased in general might naturally (but incorrectly) have guessed that it also increased in this specific location during this specific interval.

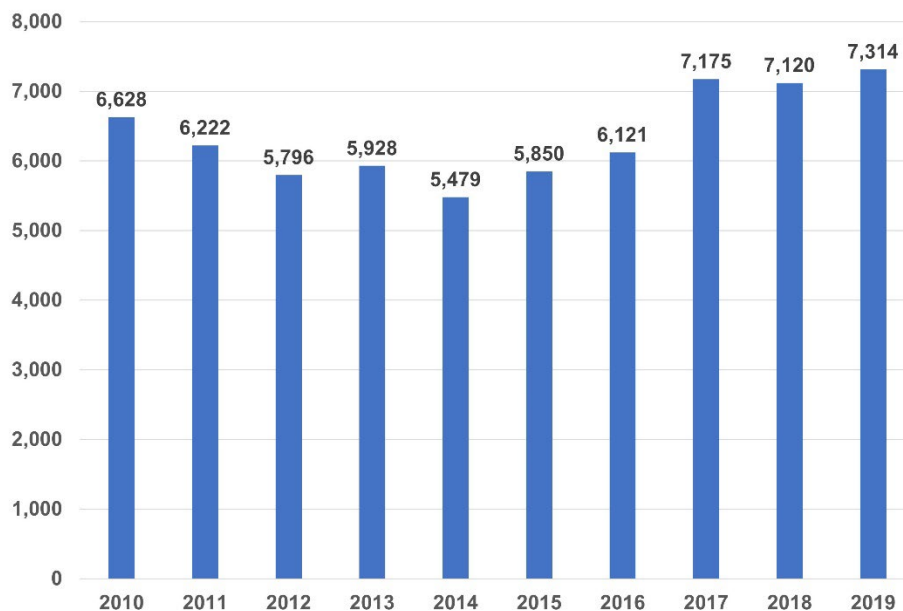


Figure S6. Frequency of hate crimes in the US between 2010 and 2019.

The point here is that producing an illusion of moral decline, an illusion of moral improvement, or no illusion at all, is not difficult when researchers design or select a small number of items to analyze, which is why previous analyses of a small number of handpicked items do not provide a meaningful test of the hypothesis that the perception of moral decline is “common” and “exaggerated.” Our Studies 1 and 4, in contrast, examine all the relevant indicators we could find from all the major survey providers in all the relevant time intervals over three quarters of a century, and as such, they are (to our knowledge) the first to test this hypothesis.

Potential Causes of the Perception of Moral Decline

Previous research has identified several phenomena that could play a role in producing the illusion of moral decline.

- Eibach and colleagues^{5,7-9} have shown that ordinary life transitions—such as the transition to parenthood—can make people more aware of external threats, and that people may then mistake the changes in their levels of subjective concern for changes in the levels of objective threat. For example, because people start to worry more about dangers in the world after having children, parents may mistakenly conclude that the world itself has become more worrisome. It should be clear how this important phenomenon can lead to an illusion of moral decline. However, as far as we can tell, it does not play a consistent role in the illusion of moral decline documented by our studies. In Study 5a, parents perceived *less* moral decline than non-parents when all other demographic factors were accounted for. In Study 3, parents perceived *more* moral decline than non-parents. (These exploratory models also accounted for race, gender, age, education, and political orientation.) In the rest of our

studies, parental status did not predict the perception of moral decline. The effect described by Eibach and colleagues is intuitively compelling, but we could not find consistent evidence that it played a role in our studies. The absence of evidence is not, of course, evidence of absence, and it is possible that the effects of parental status are specific to perceiving increases in danger rather than perceiving decreases in general morality, or that the effects were simply “swamped” by the noise created by the heterogeneity of the items we analyzed.

- Protzko and Schooler^{10,11} have shown that older people tend to derogate younger people in part because older people mistakenly remember being “better youngsters” than the ones they see around them. The “kids these days” effect may help explain why participants in Study 3 attributed some portion of moral decline to “interpersonal replacement” (which is the belief that newer generations are less moral than older generations). Of course, participants in Study 3 also attributed some portion of moral decline to “personal change” (which is the belief that individuals become less moral as they move through time), which suggests that while the “kids these days” effect is an important source of the illusion of moral decline documented in our studies, it is not the sole source. It is also worth noting that even the youngest participants in our studies perceived moral decline, and that the amount of moral decline perceived by participants in Studies 2c and 5b was unrelated to their ages once we controlled for the amount of time about which participants were being asked to make judgments.
- Stavrova and Ehlebracht have shown that people tend to equate cynicism with cognitive ability¹², which suggests that people’s reports of moral decline could simply be attempts to impress others with their intelligence and perspicacity. Although cynicism may well be a winning impression-management strategy in many instances, we do not believe it plays a

significant role in the illusion of moral decline documented by our studies. First, participants in our original studies responded anonymously to questions on an online survey, so there was no “other person” whose impressions they might manage. Anonymous responding was likely the case for many if not most of the archival surveys we analyzed in Study 1. Second, participants in both the archival studies and our original studies were willing to report increases in morality on certain dimensions (e.g., the treatment of African Americans, people with physical disabilities, and gay people) and among certain populations (e.g., people in their personal worlds), which is not what one would expect of people who were attempting to appear cynical. Third, when we gave participants a financial incentive to accurately predict the direction of change in rates of cooperation in the prisoner’s dilemma game over 61-years (see Study S3 in Section 3), a substantial majority mistakenly estimated that the rate had declined when, in fact, it has increased. Although it is always difficult to know whether people’s responses to survey questions were influenced by their concerns with other people’s impressions of them, we see little reason to suspect that such concerns played a role in the illusion of moral decline documented by our studies.

We would note also that the BEAM mechanism made specific predictions (i.e., that people believe that moral decline began about the time they were born and do not believe it occurred among people in their personal worlds) that were confirmed in Studies 5a and 5b, and that none of the foregoing phenomena easily explain.

SECTION 4: MATHEMATICAL MODEL OF THE BEAM MECHANISM

We suggest that biased exposure (i.e., people encounter and attend to more negative moral information than positive moral information) and biased memory (i.e., the impact of the

negative moral information in memory diminishes more quickly than does the impact of the positive moral information in memory) can together produce the illusion of moral decline. We refer to this “Biaised Exposure And Memory” as the “BEAM mechanism.” To show how the mechanism works, we offer a mathematical model:

$$M = \min[n_n(A_n + t*r_n), 0] + \max[n_p(A_p - t*r_p), 0]$$

...where M is the observer’s perception of the morality of “people in general” at a given point in time t (expressed in years, for convenience); n_n is the number of units of negative moral information the observer encountered at that time t ; n_p is the number of units of positive moral information the observer encountered at that time t ; A_n is the average negativity of the negative information encountered at that time t expressed as a negative number; A_p is the average positivity of the positive information encountered at that time t expressed as a positive number; r_p is the rate at which the impact of the positive information decreases in memory over time; and r_n is the rate at which the impact of negative information decreases in memory over time. The *max* and *min* functions and the trailing zeroes merely prevent the overall amount of negativity or positivity from crossing zero. This is because the impact of positive and negative information may decrease to zero, but positive information does not tend to become negative nor does negative information tend to become positive, on average. This model is simply a formal statement of the claim that an observer’s perception of the morality of people in general at a particular time is a function of the information to which the observer was exposed at that time and the emotional impact that information currently has on the observer.

What does the model predict when both exposure and memory are biased in the ways that previous research suggests they actually are? To model the effects of biased exposure, we let $n_p < n_n$, and to model the effects of biased memory, we let $r_p < r_n$. For example, we can let $n_p = 5$

and $n_n = 15$, which means that the observer encounters three times as much negative moral information as positive moral information. We can also let $r_p = 0.1$ and $r_n = 0.2$, which means that with each passing year, the positive moral information loses .1 units of impact and the negative moral information loses .2 units of impact. Finally, we can let $A_p = 5$ and $A_n = -5$, which means that the positivity of the positive moral information is equivalent to the negativity of the negative moral information.

The left panel of Figure ED2 shows the predictions of the model under these assumptions. Perceived morality is plotted on the y-axis and time is plotted on the x-axis such that $T = 0$ is the present, and $T - x$ is x years in the past. The black circles show the observer's perception of current morality, which is the perception of morality at each value of T by an observer who is also at that value of T . The grey circles show the perception of past morality, which is the perception of morality at each value of T by an observer who is at $T = 0$. As the figure shows, under the assumptions of the model, observers will perceive a low and equally low level of “current morality” at all time points (because of biased exposure) but will remember “past morality” as high—and higher with each additional year that separates the present and the past (because of biased memory). In other words, if we assume that both exposure and memory are biased in the ways that previous research suggests they actually are, the BEAM mechanism predicts that observers will experience an illusion of moral decline.

The BEAM mechanism also predicts that when people are exposed to a disproportionate amount of *positive* information about morality rather than a disproportionate amount of negative information (as they are with their family, friends, and close associates), they should perceive moral improvement rather than moral decline, which is what we found in Study 5a. Specifically, let us assume that at every point in time an observer is exposed to more positive moral

information than negative moral information (i.e., let $n_p = 15$ and $n_n = 5$) and let us retain all previous assumptions. If we do this, then (as the center panel of Figure ED2 shows) the model predicts that the observer will perceive a high and equally high level of “current morality” at all time points (because of biased exposure) but will remember “past morality” as low—and lower with each additional year that separates the present and the past (because of biased memory).

Additionally, as the right panel of Figure ED2 shows, the BEAM mechanism predicts that people should not perceive moral decline in periods for which they have no information in memory, which is to say that biased exposure by itself cannot account for the perception of moral decline.

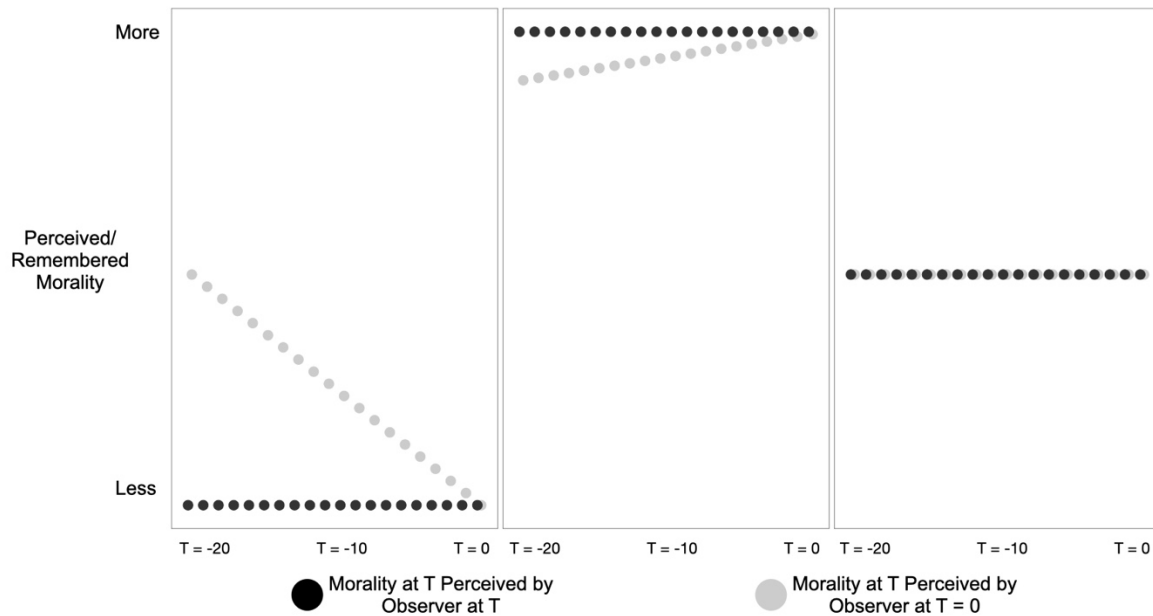


Figure S1. Data generated using the BEAM model. Left panel: Simulated data generated by setting $n_p = 5$, $n_n = 15$, $A_p = 5$, $A_n = -5$, $r_p = 0.1$, and $r_n = 0.2$. Center panel: Simulated data generated by setting $N_p = 15$, $N_n = 5$, $A_p = 5$, $A_n = -5$, $r_p = 0.1$, and $r_n = 0.2$. Right panel: Simulated data generated by setting $N_p = 0$, $N_n = 0$, $A_p = 0$, $A_n = 0$, $r_p = 0.1$, and $r_n = 0.2$. Points are dodged slightly to show all data.

SECTION 5: REFERENCES IN SUPPLEMENTAL INFORMATION SECTION

1. Yuan, M. *et al.* Did cooperation among strangers decline in the United States? A cross-temporal meta-analysis of social dilemmas (1956–2017). *Psychol. Bull.* **148**, 129–157 (2022).
2. Yi, R. & Rachlin, H. Contingencies of reinforcement in a five-person prisoner's dilemma. *Journal of the Experimental Analysis of Behavior* vol. 82 161–176 (2004).
3. Herman, A. *The idea of decline in western history*. (Free Press, 1997).
4. Murphy, A. R. Augustine and the Rhetoric of Roman Decline. *Hist. Polit. Thought* **26**, 586–606 (2005).
5. Eibach, R. P. & Libby, L. K. Ideology of the good old days: Exaggerated perceptions of moral decline and conservative politics. in *Social and psychological bases of ideology and system justification* (Oxford University Press, 2009).
6. Mitchell, G. & Tetlock, P. E. Are progressives in denial about progress? Yes, but so is almost everyone else. *Clin. Psychol. Sci.* 21677026221114316 (2022)
doi:10.1177/21677026221114315.
7. Eibach, R. P., Libby, L. K. & Ehrlinger, J. Unrecognized changes in the self contribute to exaggerated judgments of external decline. *Basic Appl. Soc. Psych.* **34**, 193–203 (2012).
8. Eibach, R. P. & Mock, S. E. The vigilant parent: Parental role salience affects parents' risk perceptions, risk-aversion, and trust in strangers. *J. Exp. Soc. Psychol.* **47**, 694–697 (2011).
9. Eibach, R. P., Libby, L. K. & Gilovich, T. D. When change in the self is mistaken for change in the world. *J. Pers. Soc. Psychol.* **84**, 917–931 (2003).
10. Protzko, J. & Schooler, J. W. Who denigrates today's youth?: The role of age, implicit theories, and sharing the same negative trait. *Frontiers in Psychology* vol. 13 (2022).
11. Protzko, J. & Schooler, J. W. Kids these days: Why the youth of today seem lacking. *Sci. Adv.* **5**, eaav5916 (2022).
12. Stavrova, O. & Ehlebracht, D. The cynical genius illusion: Exploring and debunking lay beliefs about cynicism and competence. *Personal. Soc. Psychol. Bull.* **45**, 254–269 (2018).