



Imagining the

Digital Future

Center

By Lee Rainie & Janna Anderson Imagining the Digital Future Center

ELON



### Key datapoints in this survey about AI and its impact on humans by 2035

**52%** of American adults said the expanded use of AI by 2035 will have "deep and meaningful" or "revolutionary" impact on human capacities and behaviors, while just **3%** said the impact will be inconsequential.

U.S. adults said they expect that the impact of humans' use of AI tools and systems will be **more negative than positive** in the next decade on these key ways of thinking, being and doing:

- By a six-to-one margin (55%-9%), people said the impact of AI on people's **social and emotional intelligence** will be more negative than positive.
- By a similar margin (49%-8%), they said the impact of AI on people's **empathy and moral judgment** will be more negative than positive.
- By a **53%-14%** margin, they said the impact of AI on people's **capacity and willingness to think deeply about complex subjects** will be more negative than positive.
- By a **49%-11%** margin, they said the impact of AI on people's **sense of individual agency** will be more negative than positive.
- By a 43%-17% margin, they said the impact of AI on people's confidence in their own native abilities will be more negative than positive.
- By a **42%-9%** margin, they said the impact of AI on people's **self-identity, meaning and purpose in life** will be more negative than positive.

Looking at the big picture, American adults said they expect by 2035 AI will have had a **mixed impact overall** on "the essence of being human": 41% said the changes will be for the better and for the worse in fairly equal measure, while 25% said the changes will mostly be for the worse and 9% said the changes will mostly be for the better.

Those with higher levels of formal education were more likely than others to express concern about the future effects of AI. These differences by education are at odds with the common pattern, in which those with more formal education tend to be considerably more enthusiastic than others about technological innovations.

#### The public is more worried than experts about the effect of AI on some key human capacities

U.S. adults in this survey were considerably more negative about the <u>likely impact of AI than a group of experts who were canvassed six months earlier</u> (in January 2025) by the Imagining the Digital Future Center. Compared with experts, people expect more negative change in human curiosity and capacity to learn, people's ability to exercise innovative thinking and creativity, decision-making and problem solving, and in their metacognition - the ability to think analytically about thinking. (Note: The public was more likely than the experts group to choose not to respond to some questions, because they were unsure and preferred not to guess.)

### **Survey basics**

These are among the key findings of a national survey of 1,005 U.S. adults. It was conducted July 17-20, 2025, and has a margin of error of +/- 3.5 percentage points. The earlier findings on experts' views emerged from a non-scientific canvassing conducted between Dec. 27, 2024, and Feb. 1, 2025, and published in April 2025 in the ITDF report "The Future of Being Human." There is no margin of error in those findings.



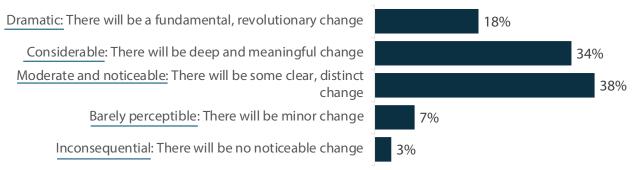
As artificial intelligence (AI) systems spread and become more capable, questions are being raised about the ways people's uses of AI might affect the very essence of being human – the key cognitive capacities and behaviors that humans have come to value. This July 2025 survey by the Imagining the Digital Future Center found that American adults expect the changes in many human capacities in the coming AI-influenced decade will be potent and mostly negative.

## Americans said the widespread adoption of AI systems will have significant impact overall on human capacities in the coming decade

About half (52%) of American adults surveyed said the impact AI will have on human capacities by the year 2035 will be revolutionary or deep and meaningful; 38% said the changes will be clear and distinct; and 7% said they expect that the changes will be barely perceptible. Just 3% said the impact will be inconsequential.

# Half of U.S. adults said the magnitude of change in key human capacities in the next decade will be 'deep and meaningful' or 'revolutionary'

% of U.S. adults who said artificial intelligence and related technologies are likely to **change the essence of being human** in these directions by 2035



Source: Elon University Imagining the Digital Future Center survey July 17-20, 2025

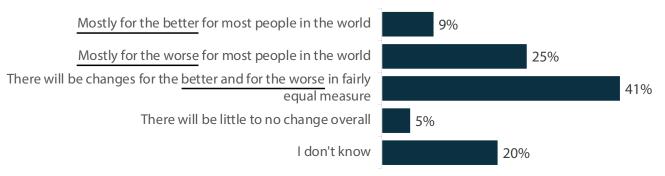


### The deepening impact of the broader use of AI, for worse and for better

Some 41% of American adults said the changes in essential human traits due to the co-evolution of humans and AI will be for the better and the worse in fairly equal measures, while 25% said it will be mostly for the worse and 9% said they expect that it will be mostly for the better; 20% said they don't know what the impact will be and just 5% said there will be little or no change.

## Americans said advancing AI will have a mixed impact in the coming decade on the essence of being human

% of U.S. adults who said uses of artificial intelligence and related technologies are likely to **change the essence of being human** in these directions by 2035



Source: Elon University Imagining the Digital Future Center survey July 17-20, 2025

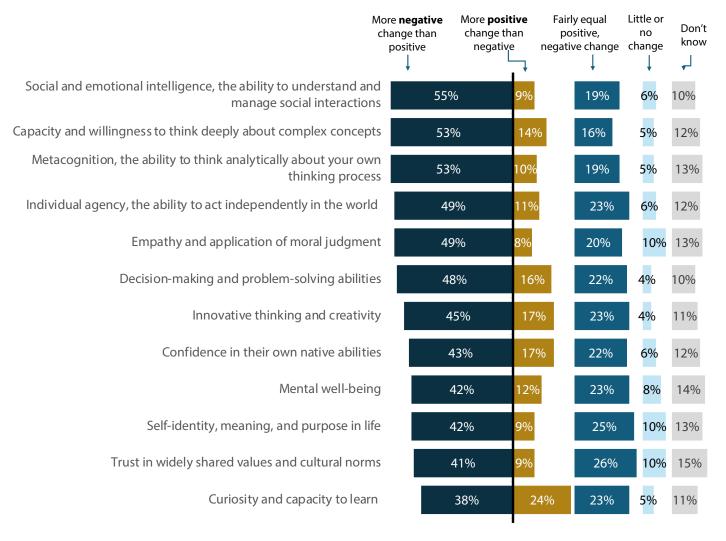
## Widespread fears that humans' co-evolution with AI will diminish key human capacities and behaviors - valued aspects of how people think, act and do things

Asked about the effects the broadening use and application of AI systems is likely to have on valued human traits in the coming decade, the public has far more negative than positive views in regard to the future of people's social intelligence, metacognition, capacity and willingness to think deeply about complex concepts, human agency (the ability to act independently in the world), self-identity and purpose, and their trust in widely shared values and cultural norms.



## The public is much more negative than positive about Als' impact on key human cognitive and social traits in the coming decade

% of U.S. adults who said the co-evolution of humans and AI is likely to affect these key aspects of humans' capacities and behaviors by 2035 in the following ways



Source: Elon University Imagining the Digital Future Center survey July 17-20, 2025



## The general public is more likely than experts to worry about the way AI systems might affect some key human capacities and behaviors

The questions Imagining the Digital Future asked in this public opinion survey are identical to those asked in a detailed canvassing of experts six months earlier, the result of which are contained in the April 2025 report, "The Future of Being Human." That allows us to compare expert and public opinion. This July 2025 survey found that most people in the general population are more negative than experts were in January 2025 about the impacts AI systems are likely to have on some key human traits by 2035 – specifically the impact of human and AI co-evolution on people's metacognition, their skills in decision-making and problem solving, their capacity to think creatively and their curiosity.

The experts were somewhat more likely than the general public to worry about the impact of AI systems on people's willingness to trust in widely shared values and cultural norms. Still, there were a number of areas in which experts and the general public generally expressed similar levels of concern about the impact of the use of AI, including the following:

- People's social and emotional intelligence
- Their confidence in their native abilities
- Their empathy, capacity to think deeply about complex concepts, their self-identity and purpose in life
- Their mental well-being and human agency.

When compared with the earlier expert respondents, a notably higher share of the public said they were not sure how to answer some of the survey questions. It is important to note that rapid advances in AI systems, their adoption and the spread of news about them, even over just a six-month span in 2025, might account for some of the differences between the earlier expert views and the general public opinion that is reported here.



## How public opinion and experts' views compare as they assess the impact of AI on key human capacities and traits

% of U.S. adults and experts who said that the integration of AI with human activities will be more negative than positive by the year 2035

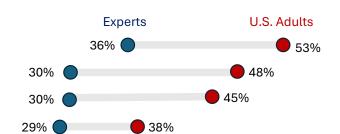
#### Where the public is more pessimistic than experts about Als' impact on human traits

Metacognition, the ability to think analytically about thinking

Decision-making and problem-solving abilities

Innovative thinking and creativity

Curiosity and capacity to learn



#### Where the public and experts see Als' impact somewhat similarly

Social and emotional intelligence, the ability to understand and manage social interactions

Capacity and willingness to think deeply about complex concepts

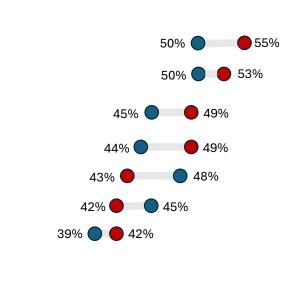
Empathy and application of moral judgment

Individual agency, the ability to act independently in the world

Confidence in their own native abilities

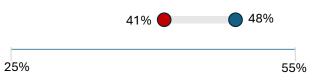
Mental well-being

Self-identity, meaning, and purpose in life



Where experts are more pessimistic than the public about Als' impact on human traits

Trust in widely shared values and cultural norms



Source: Elon University Imagining the Digital Future Center survey July 17-20, 2025

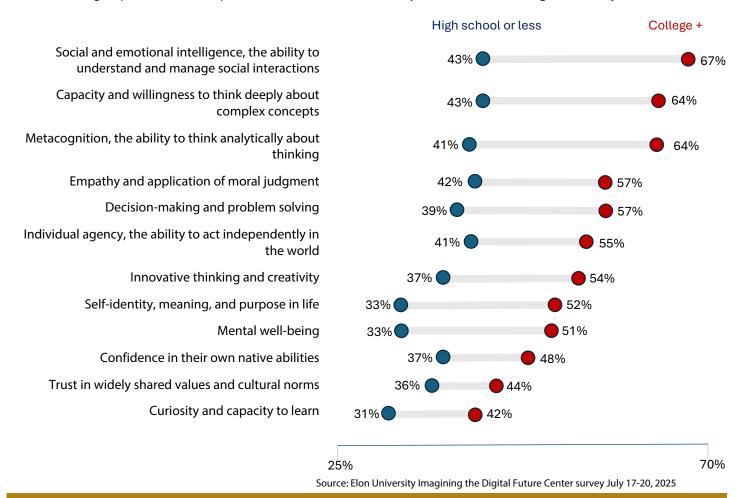


## Those with higher levels of education were more likely than others to fear the negative impact of AI systems on key human capacities

Certain groups of the Americans surveyed were more likely than others to worry about the negative effects of AI systems on human capacities and behaviors than others. For instance, those with more formal education were more likely to say that AIs will have a more negative than positive effect. The findings are striking because they do not follow common survey measurements of attitudes about technological innovations. Typically, those with higher levels of education are more positive about the future impact of innovation than those with lower levels of education.

## Those with higher levels of education are more worried about the effects of AI on human capacities

% in each group who said the impact of AI on these human traits by 2035 will be more negative than positive





## **About the Imagining the Digital Future Center**

The Imagining the Digital Future Center is a non-partisan, public-good research initiative at Elon University. It was established in 2000 as Imagining the Internet and renamed with an expanded research agenda in 2024. It is funded and operated by Elon University, a nationally ranked private university in central North Carolina

The Center focuses on the digital revolution's impact and what may lie ahead. Its mission is to discover and broadly share a diverse range of opinions and ideas about the potential future impact of digital change, informing important conversations and policy formation and helping to promote a positive future for humanity. The center draws on insights gathered through canvassings of thoughtful and far-sighted experts in a wide range of fields. Those qualitative contributions are complemented by a range of methodologies, including public opinion polling, computational analysis and other data-driven research.

#### **Contact information**

Director - Lee Rainie Irainie@elon.edu 100 Campus Drive Campus Box 2185 Elon, NC 27244

Website: imaginingthedigitalfuture.org

#### For general information and inquiries

imagine@elon.edu

Recommended Citation for this report: Lee Rainie. "Many Americans expect AI to have significant negative impact on human capacities and behaviors such as social and emotional intelligence, analytical thinking and agency by 2035." Elon University's Imagining the Digital Future Center. September 17, 2025

### Methodology and topline findings

#### Methodology overview

This study was conducted by SSRS on its Opinion Panel Omnibus platform. The SSRS Opinion Panel Omnibus is a national, twice-per-month, probability-based survey. Data collection was conducted from July 17 to July 20, 2025 among a sample of 1,005 respondents. The survey was conducted via web (n=975) and telephone (n=30) and administered in English. The margin of error for total respondents is +/-3.5 percentage points at the 95% confidence level. All SSRS Opinion Panel Omnibus data are weighted to represent the target population of U.S. adults ages 18 or older. More information about the SSRS Opinion Panel can be found at <a href="https://www.ssrs.com">www.ssrs.com</a> and a full methodology report on this survey can be found on the ITDF website.

#### Sample Design: SSRS Opinion Panel

The SSRS Opinion Panel Omnibus is conducted on the SSRS Opinion Panel. SSRS Opinion Panel members are recruited randomly based primarily on nationally representative ABS (Address Based Sample) design (including Hawaii and Alaska). ABS respondents are randomly sampled by Marketing Systems Group (MSG) through the U.S. Postal Service's Computerized Delivery Sequence File (CDS), a regularly-updated listing of all known addresses in the U.S. For the SSRS Opinion Panel, known business addresses are excluded from the sample frame. Additional panelists are recruited via random digit dial (RDD) telephone sample of cell phone numbers connected to a prepaid cell phone. This sample is selected by MSG from the cell phone RDD frame using a flag that identifies prepaid numbers. Prepaid cell numbers are associated with cell phones that are "pay as you go" and do not require a contract.

The SSRS Opinion Panel is a multi-mode panel (web and phone). Most panelists take self-administered web surveys; however, the option to take surveys conducted by a live telephone interviewer is available to those who do not use the internet as well as those who use the internet but are reluctant to take surveys online.

#### **Survey Sampling**

All sample drawn for this study were SSRS Opinion Panelists who are U.S. adults ages 18 or older. Sample was drawn using a probability proportional to size (PPS) methodology to ensure adequate representation of each demographic group while minimizing the variability of the final weights. The sample was additionally stratified by preferred survey language and mode to meet the sample size targets for each group.

#### **Data Collection**

#### **Web Contact Procedures**

A "soft launch" inviting a limited number of panelists to participate was conducted on July 17, 2025. After checking soft launch data to ensure that all questionnaire content and skip patterns were correct, an additional sample was released to ensure the final sample met the study goals. Web panelists were emailed an invitation to complete the survey online. The email for each respondent included a unique password-embedded link. All panelists who did not respond to the email invitation received up to three reminder emails, and panelists who had opted into receiving text messages from the SSRS Opinion Panel received up to three text message reminders.

In appreciation for their participation online, panelists received post-paid compensation in the form of an electronic gift card, sent via email immediately after completion of the survey. Panelists with less than a high school education were offered a larger compensation to encourage participation.

#### **Phone Contact Procedures**

Interviewers asked to speak with the person at that number who is a member of the SSRS Opinion Panel by name. Interviewers verified that the person was on the phone and in a safe place before administering the survey.

All telephone interviews were completed in English using the Forsta Plus (formerly known as Confirmit) CATI system. The CATI (Computer-Assisted Telephone Interviewing) system ensured that complete dispositions of all call attempts were recorded.

CATI interviewers received written materials about the survey instrument and received formal training for this particular project. The written materials were provided prior to commencement of data collection and included an annotated questionnaire that contained information about the goals of the study, detailed explanations about why questions were being asked, the meaning and pronunciation of key terms or names, potential obstacles to overcome in getting good answers to questions, and respondent problems that could be anticipated ahead of time, as well as strategies for addressing the potential problems.

All respondents who completed the survey via telephone were offered post-paid compensation via a mailed check.

#### **Weighting and Design Effects**

Data were weighted to represent adults 18+ in the United States. The data were weighted by first applying a base weight then balancing the demographic profile of the sample to target population parameters.

#### Base weight (BW)

The base weight for the SSRS Opinion Panel Omnibus accounts for the panelists' probability of selection into the current week's Omnibus sample using the following formula:

$$BW = W_{hi} \times (N_h/n_h)$$

...where  $W_{hi}$  is the panelist weight,  $N_h$  is the size of stratum h and  $n_h$  is the number of panelists selected from stratum h.

#### Raking

With the base weight applied, the data were weighted to balance the demographic profile of the sample to the target population parameters.

Data were weighted to distributions of: sex by age, sex by education, age by education, race/ethnicity, census region, home tenure, number of adults per household, civic engagement, population density, frequency of internet use, voter status, religious affiliation, and party ID. The following table shows the data sources used for calibration totals.

### **Topline findings**

Q2) By 2035, how will humans' interactions with LLMs change the essence of being human? By that we mean how individuals act and do not act, what they value, how they live and how they perceive themselves and the world.

Mostly for the better for most people in the world	9%
Mostly for the worse for most people in the world	25%
There will be changes for the better and for the worse in fairly equal measure	41%
There will be little to no change overall	5%
I don't know	20%

Q3) Think ahead to 2035, imagine how the deepening interactions between people and AIs might impact our ways of thinking, being and doing – our human operating system, our essence. How is the coming Humanity-Plus-AI future likely to affect the following key aspects of humans' capacity and behavior by 2035 as compared to when humans were not operating with advanced AI tools? Impact on humans ...

More Fairly equal	
More positive negative positive and Little to	no
change than change than negative change	e I don't
negative positive change overal	l know
Considerate and compatible to	
Curiosity and capacity to	
learn 24% 38% 23% 5%	11%
Individual agency, the ability	
to act independently in the	
world 11% 49% 23% 6%	12%
Mental well-being 12% 42% 23% 8%	14%
Confidence in their own	
native abilities 17% 43% 22% 6%	12%
Innovative thinking and	
creativity 17% 45% 23% 4%	11%
Decision-making and	
problem-solving abilities 16% 48% 22% 4%	10%
Capacity and willingness to	
think deeply about complex	
concepts 14% 53% 16% 5%	12%
Metacognition, the ability to	
think analytically about	
thinking 10% 53% 19% 5%	13%

<sup>11</sup> Elon University, Imagining the Digital Future Center

Social and emotional					
intelligence, the ability to					
understand and manage					
social interactions	9%	55%	19%	6%	10%
Empathy and application of					_
moral judgment	8%	49%	20%	10%	13%
Self-identity, meaning, and					_
purpose in life	9%	42%	25%	10%	13%
Trust in widely shared values					
and cultural norms	9%	41%	26%	10%	15%

Q4) What is likely to be the magnitude of overall change over the next decade in the capacities and behaviors of human individuals - in people's native operating systems and operations - as we more broadly adapt to and use advanced AIs by 2035? Select the one choice you consider to be most likely. Overall, the amount of change in being human for digitally connected people will be ...

Inconsequential: There will be no noticeable change	3%
Barely perceptible: There will be minor change	7%
Moderate and noticeable: There will be some clear, distinct change	38%
Considerable: There will be deep and meaningful change	34%
Dramatic: There will be a fundamental, revolutionary change	18%