

The General Social Survey



Public Comfort and Concern with Artificial Intelligence: Cross-National Views from the International Social Survey Programme (ISSP)

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SUMMARY

New data from the 2024 International Social Survey Programme (ISSP) Digital Societies module reveal that public reactions to Artificial Intelligence (AI) are use-specific rather than uniform. Across 29 countries, roughly six in ten adults worry that AI will take over many jobs now done by humans, 57 percent are uncomfortable riding in a driverless car, and about half are uncomfortable having a medical operation performed by a robot. The United States illustrates the complexity of these views: Americans express above-average concern about job displacement and driverless cars yet sit close to the international average on robotic surgery. Meanwhile, Japan and South Korea appear consistently more comfortable with driverless cars and robotic surgery, and the Philippines registers the highest concern across all three measures of attitudes toward AI. Initial statistical analysis suggests that country context matters, but it does not determine opinion. Across-country difference account for only about 5 to 7 percent of the variation in attitudes, while more than 93 percent of the differences occur among individuals living within the same country. These ISSP harmonized cross-national data, which include U.S. estimates contributed by the General Social Survey (GSS), are now available through the GESIS data service. The present report introduces initial findings and encourages researchers, educators, survey practitioners, and journalists to use the data for comparative research, teaching, and informed public discussion.

INTRODUCTION

Artificial intelligence (AI) has moved quickly from a technical subject to a public conversation, appearing in newsrooms, classrooms, workplaces, hospitals, and vehicles. Much of current public discussion focuses on only one specific aspect of AI at a given time, from image generators to text transformers to large language models, while ignoring other technical developments, specialist innovations, or enhancements to existing technological usage. Public discussion often treats these developments as one broad trend, and survey questions sometimes do the same by asking whether people have a favorable or unfavorable view of AI generally. That approach can miss an important part of public opinion, as people do not consider 'AI' containing the same uses. Someone may welcome software that assists medical doctors in surgeries and still refuse to ride in a driverless car. Another person may use AI at work while worrying that employers will use it to eliminate jobs. General attitudes matter, but they do not tell the whole story.

The 2024 ISSP Digital Societies module, the first ISSP module devoted to digital life, addresses this gap by asking about specific applications, framed as "digital technologies", including artificial intelligence, computer programs, and robots. This report focuses on three of them: AI as job replacement, driverless cars, and robotic surgery. The purpose is to summarize the main patterns shown in Figures 1 through 3 below and explain how the estimates were produced. These data are available for research through the GESIS data service.¹ By providing harmonized measures across diverse national contexts, the module enables users to investigate not simply whether publics support AI, but in what settings and to what degree.

¹ <https://www.gesis.org/en/issp/data-and-documentation/digital-societies>

DATA AND METHODS

The [International Social Survey Programme](#) is a long-running global collaboration of research institutions, including NORC at the University of Chicago. Participating researchers field a common module using generally acceptable survey methods suited to their countries, then contribute the data to a harmonized international file. The common questions support comparison through standardized language, sequencing, and required demographics, while the national organizations bring local knowledge about sampling, translation, fieldwork, and the social context in which respondents answer. In the case of the United States, the ISSP modules are fielded as part of the General Social Survey.

The second international data release from the 2024 Digital Societies module includes Australia, Austria, Canada, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, India, Israel, Italy, Japan, South Korea, Lithuania, the Netherlands, the Philippines, Poland, Slovakia, Slovenia, South Africa, Spain, Sweden, Switzerland, Taiwan, and the United States. Fieldwork dates, survey modes, and national designs vary, but data were collected between late 2022 and early 2026; in the case of the United States, the work was conducted in 2024. Given the rapid evolution of AI technologies and the growing visibility and public discourse surrounding them, these findings should be interpreted as a snapshot of public attitudes at the time of data collection. Continued assessment will be crucial to understanding how perceptions may shift as AI systems become increasingly sophisticated and integrated into everyday life.

We limit our analyses to adults aged 18 and older. While some country data files include younger respondents, restricting the analyses to adults creates a more comparable population and avoids combining adolescents with adults whose schooling, work experience, and legal status may differ. The univariate samples include roughly 41,500 to 42,000 respondents, depending on the variable analyzed. Country estimates use the combined ISSP survey weight (WEIGHT_COM).

The statistical analysis proceeds in two stages. The first stage describes cross-national variation in attitudes toward artificial intelligence. Weighted country estimates and 95 percent confidence intervals are presented using forest plots. The vertical reference line in each figure represents the average across the 29 participating countries; it serves as a descriptive benchmark rather than a world population estimate. The second stage examines null multilevel logistic regression models to calculate intraclass correlation coefficients (ICCs), which helps to quantify the proportion of total variation attributable to between-country differences.

Measures of interest

The report focuses on three survey questions that capture public reactions to Artificial Intelligence in different settings.

1. AI and jobs: *How worried are you that in the next 10 years machines, computer programmes, and Artificial Intelligence (AI) will take over many of the jobs done by humans?* (5 point scale)
2. Driverless cars: *How comfortable would you be being transported in a driverless car?* (11 point scale)
3. Robotic surgery: *How comfortable would you be having a medical operation performed by a robot?* (11 point scale)²

These questions describe different applications of AI and different types of risk. The jobs question is likely eliciting responses on employment and possibly economic security. The driverless car question is likely measuring concern on transportation, safety, and the willingness to give up control in an everyday setting. The robotic surgery question taps on technology with personal health, medical risk, and confidence in health-care systems. The latter two

² See Appendix 1 for actual survey question wording.

questions also contain elements of access to the specified technologies. Examining all three outcomes helps distinguish broad reactions to AI from reactions to specific uses of AI.

Data preparation

The original survey questions use different response scales. For descriptive analysis in this report, responses were grouped into broader categories to simplify presentation and maintain consistency across figures. These groupings are intended to make the main patterns easier to see. More concretely,

For the (1) jobs question:

- Worried combines “very worried” and “somewhat worried”
- Neutral corresponds to “neither worried nor unworried”
- Not worried combines “not very worried” and “not at all worried”

For (2) driverless cars and (3) robotic surgery:

- Uncomfortable = responses from 0 to 3
- Middle = responses from 4 to 6
- Comfortable = responses from 7 to 10

In the forest plots, each dot represents the percentage of adults who are worried about AI replacing jobs or uncomfortable with driverless cars or robotic surgery.

KEY FINDINGS

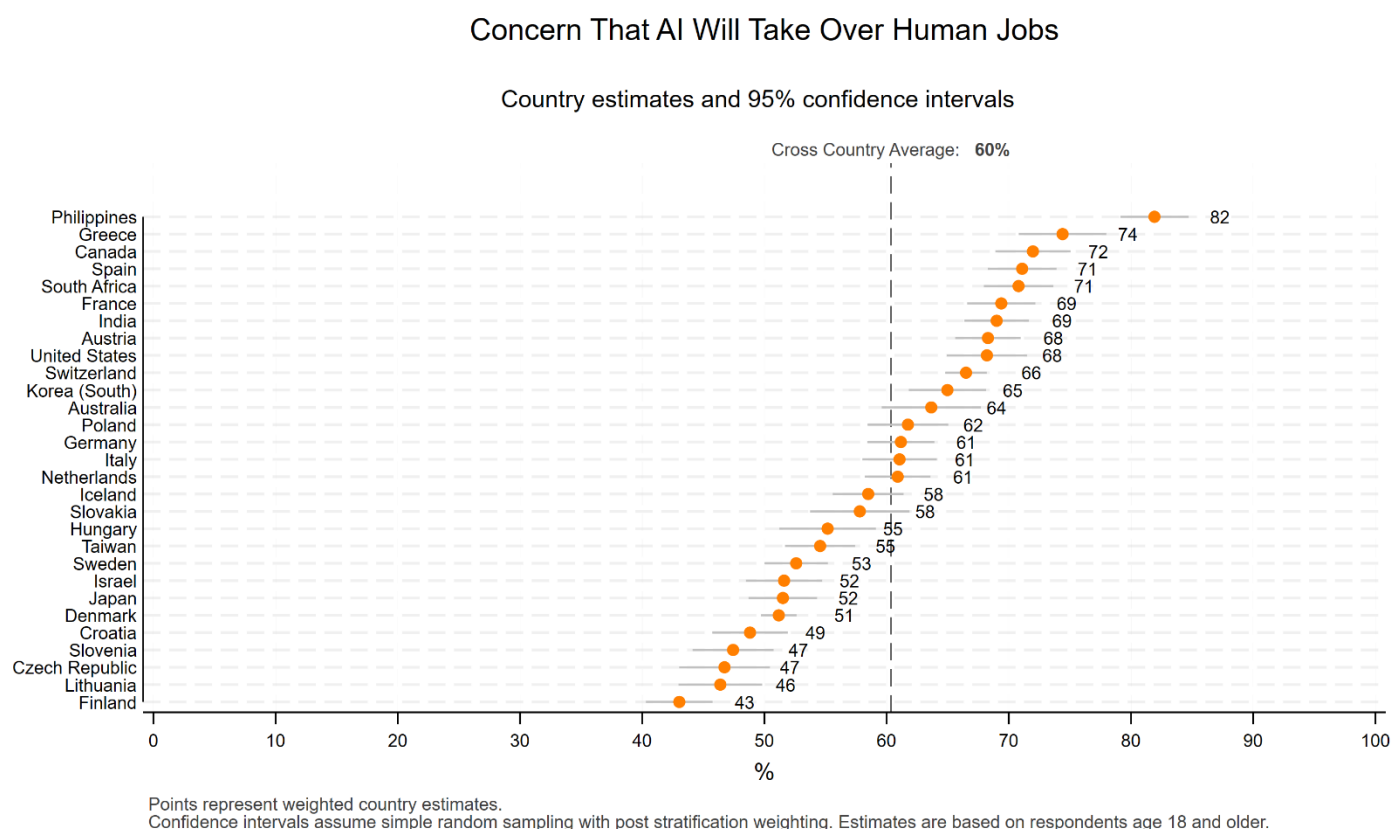
Concern about jobs is widespread.

Concern that AI will take over human jobs is the most common reaction across the three domains measured. Figure 1 shows the reference average across the participating countries is about 60 percent for jobs concerns. Finland sits near the low end at roughly 43 percent, while the Philippines sits near at high end at roughly 82 percent. Even the low end represents a large share of the public.

The United States stands at about 68 percent, eight points above the reference average. Greece and the Philippines also appear near the high end. Finland and Lithuania appear toward the low end. Many countries cluster near the middle, where small differences should not be treated as a precise ranking.

The U.S. result places job displacement firmly in the mainstream of American concern. It does not mean that Americans reject AI or expect every job to disappear. It does show that reports about productivity and innovation may coexist with anxiety about wages, job security, retraining, and who benefits from workplace change. This near-universality of labor-market worry suggests that economic security remains a central lens through which publics interpret AI, and it underscores why workforce transitions command attention in so many different national contexts.

Figure 1. Concern that AI will replace many jobs currently done by humans



Source: International Social Survey Programme: Digital Societies I - ISSP 2024 (ZA10020; Version 2.0.0)

Driverless cars produce the sharpest U.S. contrast.

The analysis suggests that the United States is at about 64 percent, seven points above the 57 percent reference average (Figure 2); that is, on the more uncomfortable end of the distribution regarding driverless cars. Discomfort with driverless cars ranges from about 29 percent in South Korea and 30 percent in Japan to about 85 percent in the Philippines.

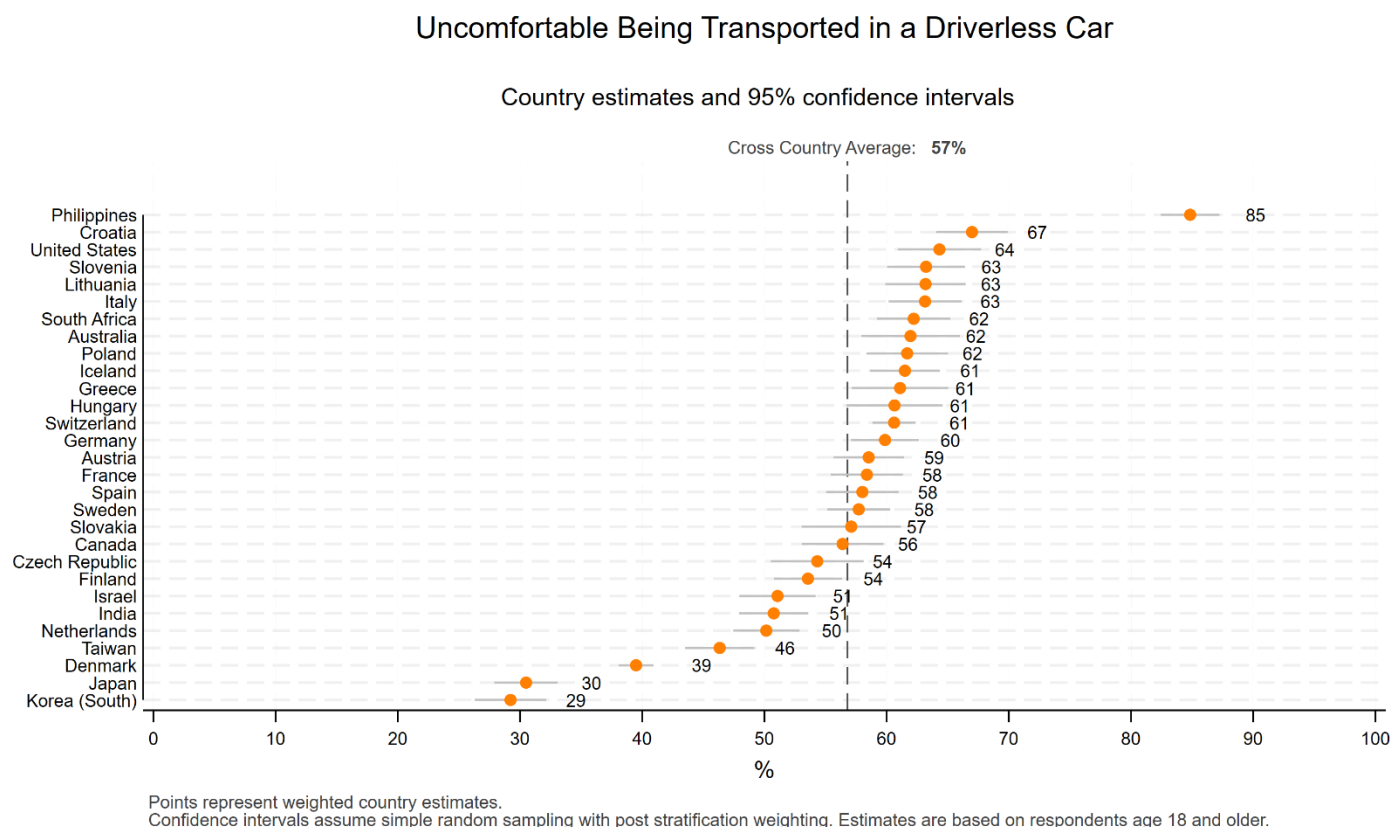
The U.S. position is notable for a country closely associated with automobile culture, software development, and commercial testing of autonomous vehicles. Public familiarity has not produced broad comfort. Safety, accountability, loss of control, and limited direct experience are all plausible explanations; however, the survey does not distinguish among them.

Japan and South Korea demonstrate a contrast as more accepting publics. Their nationals report far less discomfort with this application even though concern about jobs does not place both countries at the same extreme; attitudes towards jobs do not seem to dictate discomfort with robotic applications of AI. Croatia and the Philippines appear at the high discomfort end. A broad group of countries falls close to the average.

The contrasts uncovered by the data suggest that reactions to AI may be filtered through institutional trust, infrastructure, and everyday experience. The degree of familiarity with and direct exposure to driverless vehicles may also shape public comfort, making this an important area for continued measurement as this AI application becomes available in more settings. A country with extensive familiarity with automation or dense urban transit

systems may process the idea of a driverless vehicle differently than one without that background. The demands of an aging population and falling birth rates may also alter relationships with new technologies intended to replace human labor. For policymakers and industry leaders, the implication is that adoption of autonomous transport depends partly on public readiness, which varies substantially across national contexts.

Figure 2. Discomfort riding in a driverless car



Source: International Social Survey Programme: Digital Societies I - ISSP 2024 (ZA10020; Version 2.0.0)

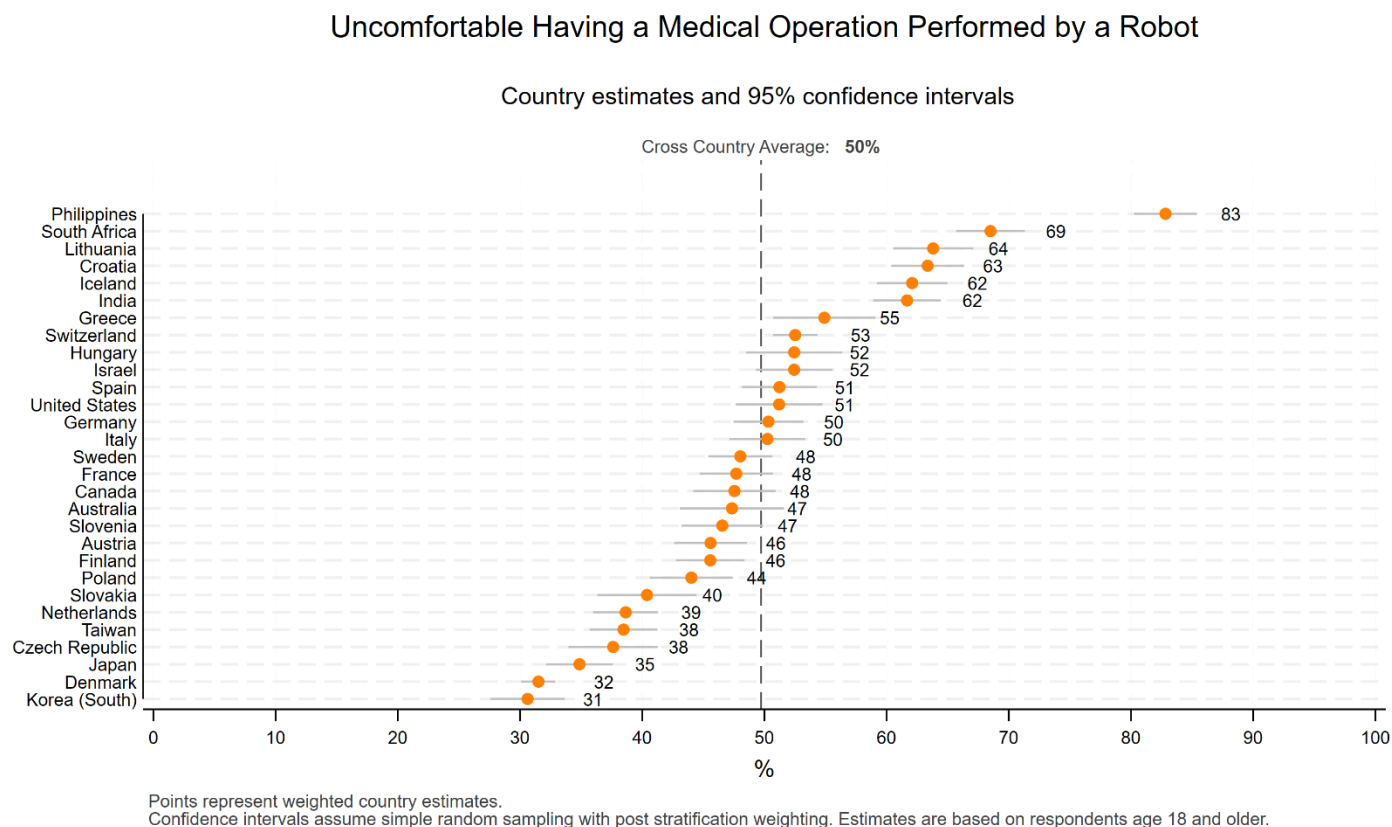
Robotic surgery places the United States near the middle.

Robotic surgery produces a different map. Discomfort ranges from about 31 percent in South Korea to about 83 percent in the Philippines. South Africa also appears near the high end, while Denmark appears toward the low end. The average across participating countries is about 50 percent.

The United States is almost exactly at that average, at roughly 51 percent (Figure 3). This middle position contrasts with its higher concern about jobs and driverless cars. One possibility is that those in the U.S. respond differently when technology operates inside a professional medical setting and a clinician remains responsible for care. That is a useful idea for later analysis, not a conclusion from the initial data exploration alone.

The movement of countries across the three figures deserves attention. Japan and South Korea are relatively comfortable with driverless cars and robotic surgery, but neither pattern fully describes their views of job displacement. The Philippines remains at the high concern end across all three questions. Nordic countries often appear on the lower concern side, but they do not move as one block.

Figure 3. Discomfort with having a medical operation performed by a robot



Source: International Social Survey Programme: Digital Societies I - ISSP 2024 (ZA10020; Version 2.0.0)

Country context and individual differences.

We estimated null multilevel models as a way of obtaining intraclass correlation coefficients, or ICCs. ICC estimates put those differences in context. It estimates the share of unexplained variation associated with country. In our exploration, country accounts for 4.8 percent of the variation in concern about jobs, 5.8 percent of the variation in discomfort with driverless cars, and 6.7 percent of the variation in discomfort with robotic surgery. Put differently, more than 93 percent of the variation observed in the data occurs among individuals within the same country. Country context is most consequential for attitudes toward robotic surgery, although individual differences account for most of the variation in all three outcomes.

In any case, the ICC values indicate that country context contributes to public opinion about AI, even though most variation occurs within countries. Differences in labor markets, regulation, health care systems, media coverage, and institutional trust may influence the country patterns visible in the forest plots.

The finding that most variation occurs within countries is important. Americans do not hold a single view, nor do Japanese, Finnish, or Filipino adults. National averages can describe a country, but they cannot capture the full diversity of views held by its people. Additionally, the ordering of the ICCs is suggestive. Robotic surgery shows the strongest country clustering, while job concern shows the weakest. It is possible that concern about jobs may travel more easily across borders through common news about automation and generative AI. These explanations require further statistical analysis.

Table 1. Country variance and intraclass correlation coefficients

Outcome	Analysis N	Country random intercept variance	ICC	ICC standard error	95% CI lower	95% CI upper
Uncomfortable with driverless cars	44,773	0.20138	0.05768	0.01457	0.03493	0.09381
Concern AI will take over human jobs	44,710	0.16717	0.04836	0.01236	0.02914	0.07920
Uncomfortable with robotic surgery	44,286	0.23712	0.06723	0.01673	0.04098	0.10840

Source: International Social Survey Programme: Digital Societies I - ISSP 2024 (ZA10020; Version 2.0.0)

DISCUSSION

The three questions produce a consistent lesson: the type of Artificial Intelligence application shapes public opinion response. Thus, AI is not one issue in the eyes of the public. Concern about job displacement is widespread, discomfort with driverless cars varies sharply by country and places the United States toward the uneasy end of the spectrum, and views on robotic surgery are more moderate. Countries do not line up neatly as supportive of AI or opposed to AI; their different levels of support across the three questions is itself a central finding. The United States illustrates this complexity, expressing above-average concern about jobs and driverless cars while remaining borderline on robotic surgery. Because the technologies and the public's exposure to them continue to change, these estimates provide a baseline for assessing how application-specific attitudes develop over time.

Multilevel models show that country accounts for only about 5 percent of the variation in job concern, 6 percent in discomfort with driverless cars, and 7 percent in discomfort with robotic surgery. More than 93 percent of the variation occurs among people living in the same country. While national debates may shape the setting, individual experiences and characteristics within each country account for most of the differences observed in the data.

The GSS research team plans to continue exploring these data through multivariate analyses that model the individual-level sources of these attitudes while accounting for national differences. Following a standard modeling sequence, we will examine how demographic characteristics (age, sex, and educational attainment) along with household resources, technology orientations, social and institutional trust, privacy and surveillance attitudes, and economic factors relate to comfort and concern across AI applications. Understanding those patterns will help explain why some individuals are more comfortable with AI than others, even when they live in the same country. The 2026 General Social Survey (GSS) in the United States will offer updated data on all three measures, allowing researchers to evaluate changes in public concern regarding AI-related job displacement, as well as attitudes toward driverless cars and robotic surgery, compared to the 2024 GSS. Such longitudinal comparisons will be particularly valuable in light of the rapid advancements and growing public awareness of AI technologies. We encourage other researchers, educators, students, and practitioners to use and build upon these data as well.

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Data for this report available in the first release of Digital Societies I – ISSP 2024:

ISSP Research Group (2026). International Social Survey Programme: Digital Societies I - ISSP 2024 (ZA10020; Version 2.0.0) [Data set]. GESIS, Cologne. <https://doi.org/10.4232/5.ZA10020.2.0.0>

APPENDIX

Appendix 1. Survey questions measured in the 2023 ISSP Digital Societies module

Artificial Intelligence and Robots

The next questions deal with robots and artificial intelligence. 'Artificial intelligence' is the ability of a robot or computer to perform tasks commonly associated with humans.

<DN> Basis: all respondents

Q35. Overall, how worried, if at all, are you that in the next 10 years machines, computer programmes, and Artificial Intelligence (AI) will take over many of the jobs done by humans?

PLEASE TICK **ONE** BOX ONLY

Very worried	1
Somewhat worried	2
Neither worried nor unworried	3
Not very worried	4
Not worried at all	5
Can't choose	-8

<DN> Basis: all respondents

Q36. Various human actions can be done by robots or Artificial Intelligence (AI). For each of the following, please indicate, using a scale from 0 to 10, how you would personally feel about it. On this scale, '0' means that you would feel "totally uncomfortable" and '10' means that you would feel "totally comfortable" with this situation.

PLEASE TICK **ONE** BOX ON EACH LINE

	Totally uncomfortable with this situation												Totally comfortable with this situation	Can't choose
a. Having a medical operation performed on you by a robot	0	1	2	3	4	5	6	7	8	9	10		-8	
b. Being driven in a driverless car	0	1	2	3	4	5	6	7	8	9	10		-8	