Methodology for comparing 2017 and 2021 U.S. surveys on the meaning of life

For this analysis, we conducted nationally representative surveys of 4,867 U.S. adults from Sept. 14 to 28, 2017, and 2,596 U.S. adults from Feb. 1 to 7, 2021. Everyone who took part in both surveys is a member of the Center's American Trends Panel (ATP), an online survey panel that is recruited through national, random sampling of residential addresses. This way nearly all adults have a chance of selection. The surveys were weighted to be representative of the U.S. adult population by gender, race, ethnicity, partisan affiliation, education and other categories.

Number of respondents and responses, by survey wave

	Number of respondents	Number of coded responses
ATP Wave 29 (2017)	4,867	4,492
ATP Wave 82 (2021)	2,596	2,112

Note: Coded responses include those that contain any text. The number of coded responses is equivalent to the number of respondents minus those who did not provide a response. Some of these responses were later reclassified as a nonresponse during coding (e.g., "I have no comment").
Source: Spring 2021 Global Attitudes Survey. Q36.

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In both surveys, respondents were asked to answer the following open-ended question: "We're interested in exploring what it means to live a satisfying life. Please take a moment to reflect on your life and what makes it feel worthwhile – then answer the question below as thoughtfully as you can. What about your life do you currently find meaningful, fulfilling or satisfying? What keeps you going and why?"

Coding responses

Researchers inductively developed a codebook for the main sources of meaning by examining samples of these survey responses and those collected in 16 other publics in 2021. The codebook was iteratively improved via practice coding and calculations of intercoder reliability until a final selection of 20 codes was formally adopted, consisting of 17 main sources of meaning, plus whether respondents mentioned something negative, something generally positive or the COVID-19 pandemic (read Appendix C of the full report).

To apply the codebook to the full collection of U.S. responses, a team of Pew Research Center coders were trained, were evaluated for consistency and accuracy on random samples of responses, and were asked to independently code responses only after reaching an acceptable threshold for intercoder reliability. After achieving sufficient reliability, each coder coded between 594 and 2,638 of the 4,419 English responses from 2017. Weighted proportionally by their

contribution to the total, the coders achieved an overall effective intercoder reliability (as measured by MASI-distance Krippendorf's alpha) of 0.78. Their collective reliability (measured by standard binary Krippendorf's alphas) was also above 0.7 for each code independently.

All responses from 2021, as well as the remaining 73 Spanish responses from 2017, were coded separately as part of a broader research project in which the same survey question about sources of meaning in life was also asked over the phone among adults in Canada, Belgium, France, Germany, Greece, Italy, the Netherlands, Spain, Sweden, the United Kingdom, Australia, Japan, New Zealand, Singapore, South Korea and Taiwan. For comparability purposes, this analysis includes some of the findings from this larger project. More information on how the 2021 U.S. responses and international responses were coded can be found in Appendix C of the main report.

Intercoder reliability scores, by code

Krippendorf's alpha (standard binary measure)

Topic	In-house effective reliability, all native English responses, ATP wave 29 (*n=4,419*)
General positive	0.84
Don't know/refused	0.87
Family and children	0.99
Spouses or romantic partners	0.95
Friends, community and other relationships	0.97
Service and civic engagement	0.88
Society, places and institutions	0.89
Material well-being, stability and quality of life	0.86
Retirement	0.93
Freedom and independence	0.84
Occupation and career	0.93
Education and learning	0.81
Nature and the outdoors	0.94
Pets	1.0
Spirituality, faith and religion	0.97
Physical and mental health	0.94
Hobbies and recreation	0.90
Travel and new experiences	0.95
Difficulties or challenges	0.76
COVID-19	0.90

Note: Table contains Krippendorf's alpha for all 2017 U.S. English responses, calculated using standard binary measures based on a codebook of 20 codes. Intercoder reliability of Pew Research Center coders on native English responses was measured using coders' individual reliability scores (calculated against a benchmark sample of 150-200 responses) weighted by the proportion of responses they coded in the final sample. Spanish responses were coded separately by a professional translation firm.
Source: Spring 2021 Global Attitudes Survey. Q36.

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Controlling for item nonresponse and topic salience in demographic differences

Overall, the item nonresponse rate in 2021 was higher than in 2017 (23% vs. 13%). To allow for an international comparison between 2021 U.S. responses and those collected in other advanced economies, respondents who skipped the question are included in the denominators for both the 2017 and 2021 U.S. survey results. All else equal, survey estimates for 2021 are therefore lower than those from 2017. To account for this, all of the changes reported in this analysis have been verified using regression models that control for the different item nonresponse rates between the two surveys. While the over-time changes in the estimates reported in this analysis may be somewhat under- or overstated relative to estimates computed using a dataset reweighted to be representative of the population excluding nonresponses, the differences they represent are still statistically significant ($p<=0.5$). As described in the methodology for the international comparative analysis, the regression models also controlled potential differences in topics' overall salience (using logged word count for this analysis).