Understanding Society

Working Paper Series

No. 2021-09

November 2021

Understanding Society Innovation Panel Wave 13:

Results from Methodological Experiments

Tarek Al Baghal (ed.)

Contributors: Michaela Benzeval[1], Jonathan Burton[1], Mick P. Couper[2], Annette Jäckle[1], Brienna Perelli-Harris[3], Kelly Reeve[1] , Jim Vine[1]

[1]Institute for Social and Economic Research, University of Essex, [2] University of Michigan, [3]University of Southampton

Non-technical summary

The *Understanding Society* survey includes what is known as an 'Innovation Panel' sample (IP). This sample of originally 1500 households is used to test different methods for conducting longitudinal surveys in order to produce the highest quality data. The results from the Innovation Panel provide evidence about the best way to conduct a longitudinal survey which is of relevance for all survey practitioners as well as influencing decisions made about how to conduct *Understanding Society*. This paper reports the experiments with the mixed- mode design and early results of the methodological tests carried out at wave 13 of the Innovation Panel in the spring and summer of 2020.

IP13 employed a web-first and telephone follow-up mixed-mode design, which differed from past waves but was necessitated due Covid-19. It also continued ongoing experiments on the impact of incentives, and as with prior waves, several other methodological experiments were included in the survey. Experiments were conducted on how to best collect contact information for use in an event triggered data collection study and on different ways to get respondents to participate in a longer survey. Novel survey questions were also included to collect information about respondents' partners in living apart together relationships. Finally, respondents were also asked to participate in a study to record their well-being in a downloaded app.

Understanding Society Innovation Panel Wave 13: Results from Methodological Experiments

Tarek Al Baghal (ed.)

Contributors: Michaela Benzeval[1], Jonathan Burton[1], Mick P. Couper[2], Annette Jäckle[1], Brienna Perelli-Harris[3], Kelly Reeve[1] , Jim Vine[1]

[1]Institute for Social and Economic Research, University of Essex, [2] University of Michigan, [3]University of Southampton

Abstract: This paper presents some preliminary findings from Wave 13 of the Innovation Panel (IP13) of *Understanding Society*: The UK Household Longitudinal Study. *Understanding Society* is a major panel survey in the UK. In May 2020, the thirteenth wave of the Innovation Panel went into the field. IP13 used a mixed-mode design, using on-line interviews and telephone interviews. This paper describes the design of IP13, the experiments carried and the preliminary findings from early analysis of the data.

Key words: longitudinal, survey methodology, experimental design, respondent incentives, questionnaire design.

JEL classification: C80, C81, C83

Contact: Tarek Al Baghal (talbag@essex.ac.uk) Institute for Social and Economic Research, University of Essex, Wivenhoe Park, Colchester, Essex, CO4 3SQ, UK.

Table of Contents

1. Introduction

This paper presents early findings from the thirteenth wave of the Innovation Panel (IP13) of *Understanding Society*: The UK Household Longitudinal Study (UKHLS). *Understanding Society* is a major panel survey for the UK. The first eleven waves of data collection on the main sample have been completed, and twelfth and thirteenth waves are currently in the field. The data from the first ten waves of the main samples are available from the UK Data Archive, and the eleventh will be available towards the end of 2021. Data from a nurse visit to collect bio-markers from the general population sample and the British Household Panel Survey (BHPS) are also available. Data for all completed waves of the Innovation Panel are available from the UK Data Service[1].

One of the features of *Understanding Society*, alongside the large sample size (40,000 households at Wave 1) and the ethnic minority boost sample and the collection of bio-markers, is the desire to be innovative. This has been a key element of the design of *Understanding Society* since it was first proposed. Part of this drive for innovation is embodied within the Innovation Panel (IP). This panel of almost 1500 households was first interviewed in the early months of 2008. The design in terms of the questionnaire content and sample following rules are modelled on *Understanding Society*. The IP is used for methodological testing and experimentation that would not be feasible on the main sample. The IP is used to test different fieldwork designs, new questions and new ways of asking existing questions.

The second wave of the Innovation Panel (IP2) was carried out in April-June 2009, the third wave (IP3) in April-June 2010 and the fourth wave in March-July 2011. The fourth wave of the Innovation Panel (IP4) included a refreshment sample of 465 responding households. In March 2012, IP5 was fielded, with part of the samples conducting the survey via the internet, while others continued in an interviewer-administered survey. Fieldwork for IP6 started in March 2013, repeating the design where some were first asked to complete the survey via the

[1] http://discover.ukdataservice.ac.uk/series/?sn=2000053

web option while others were approached by an interviewer only. The IP6 also included a mop-up follow-up phase with anyone not responding with contacts attempted by CATI or CAWI at the end of the fieldwork. IP7 started fieldwork in June 2015 and added 488 responding households as a refreshment sample. IP8 fieldwork started in summer 2015, and IP9 in May 2016. IP10 and IP11 both added another refreshment sample. IP10 added 339 completing households, and was conducted beginning May 2017, while IP11 added 575 households and began in May 2018. IP12 was different from other waves of the IP as it included a biomarker collection and a nurse interviewer component, and began in July 2019.

Working Papers which cover the experimentation carried out in all previous Innovation Panels are available from the *Understanding Society* website.[2] The data from these surveys are held at the UK Data Service. This paper describes the design of IP13, the studies carried and some preliminary findings from early analysis of the data. Section 2 outlines the main design features of *Understanding Society*. Section 3 describes the design and conduct of IP13. Section 4 then reports on the experiments carried at IP13.

2. *Understanding Society*: the UKHLS

Understanding Society is an initiative of the Economic and Social Research Council (ESRC) and is one of the major investments in social science in the UK. The study is managed by the Executive Team (ET), based at ISER at the University of Essex and includes topical experts from a number of institutions. The fieldwork and delivery of the survey data for the first five waves of the main samples were undertaken by NatCen Social Research (NatCen). Since Waves 6, Kantar Public has been the lead contractor. *Understanding Society* aims to be the largest survey of its kind in the world. The sample covers the whole of the UK, including Northern Ireland and the Highlands and Islands of Scotland. *Understanding Society* provides high quality, longitudinal survey data for academic and policy research across different disciplines. The use of geo-coded linked data enables greater research on neighbourhood and

[2] https://www.understandingsociety.ac.uk/research/publications/working-papers

area effects, whilst the introduction of bio-markers and physical measurements (Waves 2 and 3) opens up the survey to health analysts.

The design of the main-stage of *Understanding Society* is similar to that of the British Household Panel Survey (BHPS) and other national panels around the world. In the first wave of data collection, a sample of addresses was issued. Up to three dwelling units at each address were randomly selected, and then up to three households within each dwelling unit were randomly selected. Sample households were then contacted by NatCen interviewers and the membership of the household enumerated. Those aged 16 or over were eligible for a full adult interview, whilst those aged 10-15 were eligible for a youth self-completion. The adult interviews were conducted using computer-assisted personal interviewing (CAPI) using laptops running the questionnaire in Blaise software. Adults who participated in *Understanding Society* were also asked to complete a self-completion questionnaire, in which questions thought to be more sensitive were placed. The adult self-completions at Waves 1 and 2, and the youth self-completions, were paper questionnaires. From Wave 3 onwards the adult self-completion instrument was integrated into the interviewing instrument and the respondent used the interviewer's lap-top to complete that portion of the questionnaire themselves (Computer-Assisted Self-Interviewing, CASI). For the first seven waves, surveys of continuing sample members were interviewer-administered. Before Wave 7 was issued, a random 20% of households were designated as ring-fenced face-to-face and would only be issued to CAPI first. Except for this ring-fenced sample, households that had not responded at Wave 6 were issued at Wave 7 to a sequential mixed mode design in which adults in those households were initially invited to participate online, and then those who did not take part online were issued to interviewers ("WEB"). At Wave 8, the proportion of households that were issued web-first increased to 40%; this included households that had not participated at Wave 7, as well as those households who were predicted to be most likely to complete online – except for those who were in the ring-fenced sample. The remaining 60% of households were issued to interviewers, with non-respondents at the reissue stage invited to complete online ("F2F"). At Wave 9, the proportion of households issued web-first increased to 60%, and from Wave 10 increased again to 70%.

In between each wave of data collection, sample members are sent short reports of early findings from the survey, and a change-of-address card, to allow them to inform ISER of any change in their address and contact details. Before each sample month is issued to field for a new wave, each adult is sent a letter which informs them about the new wave of a survey, includes a token of appreciation in the form of a gift voucher and also includes a change-of-address card. Interviewers then attempt to contact households and enumerate them, getting information of any new entrants into the household and the location of anyone who has moved from the household. New entrants are eligible for inclusion in the household. Those who move, within the UK, are traced and interviewed at their new address. Those people living with the sample member are also temporarily eligible for interview. More information about the sampling design of *Understanding Society* is available in Lynn (2009).[3] From Wave 2, the BHPS sample has been incorporated into the *Understanding Society* sample. The BHPS sample is interviewed in the first half of each wave.

3. Innovation Panel Wave 13: Design

IP13 was comprised of five samples: the original sample from IP1, and refreshment samples taken at IP4, IP7 IP10, and IP11. Starting at IP5, the modes which were mixed were on-line (CAWI) and face-to-face (CAPI) interviewing. In IP5, a random selection of two-thirds of households was allocated to the mixed-mode design with the remaining third of households allocated directly to face-to-face interviewers. This sample allocation has been maintained at each wave. However, starting at IP8 subgroup of households with a very low propensity to respond via the web in in the CAWI condition was assigned to CAPI to begin fieldwork. Very low web propensity was determined by modelling web-completion using previous IP data. Unlike previous refreshment samples, the IP11 refreshment sampled households were allocated to either face-to-face or web-first recruitment. In England and Wales, face-to-face interviewing assignments were evenly split between Kantar (the lead contractor) and NatCen. Kantar conducted all the face-to-face interviewing assignments in Scotland.

[3]https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2009-01.pdf

At Wave 12, fieldwork was split between Kantar Public and NatCen Social Research. IP12 had a focus on health, and for comparisons of biomarkers collected in interview, three types of interviews were conducted: by nurse face-to-face first, or interviewer face-to-face first and web first sequential mixed-mode designs similar to past waves. Households were reallocated to one of these three modes. Nurse fieldwork was undertaken by NatCen. Interviewer fieldwork in England and Wales was split between Kantar and NatCen, and Kantar undertook all interviewer fieldwork in Scotland.

Initially, IP13 was planned to return to the mixed-mode design used at IP11 and waves previous , with households allocated to face-to-face first or web-first designs. However, due to Covid-19, all households were issued to web-first at IP13. Fieldwork took place between 14th July and 11th November 2020. Households were initially invited to take part online only for the first five weeks of fieldwork. At the end of these five weeks, any households and individuals that had not completed online were issued to an interviewer for contact via the telephone, although the web survey remained open for respondents to complete. At the end of this eight week period (13th October), the 'mop up' phase began for the remainder of fieldwork, with interviews conducted via the telephone. Both Kantar Public and NatCen Social Research conducted telephone interviews during all fieldwork periods.

All eligible sample members aged 16 or over were sent a letter on the first day of web fieldwork asking them to complete the survey online and providing the web address and their login details for doing so. The letter also explained that if they were unable to complete the survey online an interviewer would contact them as usual. Adults were sent four reminder emails (if an email address was available) and two reminder letters if they had not completed online by the time these reminder mailings were being prepared. These reminders were sent during the initial five week web-only fieldwork period before households were issued to an interviewer

a. Call for experiments

IP13 was the tenth time the Innovation Panel was open for researchers outside the scientific team of *Understanding Society* to propose experiments. A public call for proposals was made and seven proposal were received with one being accepted. The initial proposals were reviewed by a panel which included two ISER-based members of the *Understanding Society* executive team, and two members of the Methodology Advisory Committee to *Understanding Society*

who were external to ISER. In addition to the one accepted experiment, four additional experiments were included by the executive team in order to develop methodology for the main *Understanding Society* survey. Two further experiments were planned to continue from past waves, which are core to the fieldwork design of the study. These core experiments are the mixed-mode design (which was not carried due to Covid-19) and the main incentives experiment, which is discussed below in section 3.e.

b. Sample

There were five samples issued at IP13: the original sample from IP1 and refreshment samples issued at IP4, IP7, IP10, and IP11. Samples were comprised of those households who had responded at IP12, plus some households which had not responded at IP12. Households which had adamantly refused or were deemed to be mentally or physically incapable of giving an interview were withdrawn from the sample. There were 674 original sample households, 317 IP4 refreshment sample households, 402 IP7 refreshment sample households, 318 IP10 refreshment sample households, and 539 IP11 refreshment sample households issued. There were 2250 total sample households issued at IP13. All of the households were originally selected from the Postcode Address File (PAF) using the same methods.[4] As noted above all households were allocated to a web-first, telephone follow-up design in response to Covid-19 restrictions.

c. Questionnaire design

The questionnaire at IP13 followed the standard format used in the previous Innovation Panels as well as the main-stage of *Understanding Society*. The questionnaires used at IP13 are available from the *Understanding Society* website.[5] The interview included the following sections with the corresponding target times for each:

- Household roster and household questionnaire: 15 minutes per household

[4] See Lynn, P. (2009). Sample Design for Understanding Society *Understanding Society Working Paper Series No. 2009 – 01* at https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2009-01

[5] https://www.understandingsociety.ac.uk/documentation/innovation-panel/questionnaires

- Individual questionnaire: average 31 minutes for each person aged 16 or over
- Adult self-completion: around 9 minutes, computer self-administered interview (CASI)
- Youth self-completion: 10 minutes for each child aged 10-15 years
- Proxy questionnaire: 10 minutes for adults ages 16 or over who are not able to be interviewed.

There were some changes made to the questionnaire to enable participants to complete it on-line at IP5 when the web design was first introduced, and can be described more in-depth in the working paper containing results from the experiments in IP5.[6] Briefly, the changes made to the questionnaire are as follows. Questions were reworded as needed to include interviewer instructions that may clarify the definition of the question. Text was altered to be more participant-focused rather than interviewer-focused. The first person in the household to log in to the web survey would be asked to complete the household enumeration. A question about who was responsible for paying household bills was included; the person or people indicated as responsible were routed first to the household questionnaire and then to the individual questionnaire.

If a participant had started to answer their questionnaire and left the computer for 10 minutes, they were automatically logged out. The participant was able to log back in using the same process as they had originally logged in, and they would be taken to the place that they had left the interview. This also applies to those who had closed down the browser mid-interview. A 'partial interview' marker was put into place about two-thirds of the way through the interview, after the benefits section. If a participant reached this stage, the interview was considered to be a 'partial interview'. They could log back in and complete if they wanted, but otherwise they were not contacted by an interviewer. If the participant had not reached this marker before closing down the browser, they were sent an email overnight which thanked them for their work so far and encouraged them to complete the survey, giving them the URL to click through to the survey. Again, they would start at the point where they had left off. In addition, those who had

[6]https://www.understandingsociety.ac.uk/research/publications/working-paper/understanding-society/2013-06

started but not reached the partial interview marker were, after the initial five weeks, issued to interviewers who would be able to finish the survey with them, from where they had left off.

d. Response rates

This section sets out the response rates for IP13 as a whole The issued sample at the thirteenth wave consisted of 2025 households. Of these 1383 were productive at IP12 and 642 were not. All households belonged to the same fieldwork design, i.e. web-first mixed-mode, and so Table 1 displays only the household-level response at IP13 for the continuing samples and the overall total response. The lower panel displays the individual response rate conditional on household response for continuing samples and overall. For each cell, the percent is reported above the number of units the percent represents, in italics. The total number of eligible sampled units is in the Total rows, in bold.

There were 1431 interviewed households from the continuing samples, for a 63.6% overall household response rate. Within these households, 2252 people were interviewed, for a conditional individual response rate of 77.7%.

Table 1. Household and Individual Response Outcomes for Continuing Samples, IP13

	Original	IP4 Refreshment	IP7 Refreshment	IP10 Refreshment	IP11 Refreshment	**Total**
Household RR						
Complete HH	52.2%	45.1%	42.5%	34.6%	34.9%	42.8%
	352	*143*	*171*	*110*	*188*	*964*
Partial HH	20.5%	21.8%	20.7%	21.4%	20.2%	20.8%
	138	*69*	*83*	*68*	*109*	*467*
Total Responding HH	72.7%	66.9%	63.2%	56.0%	55.1%	63.6%
	490	*212*	*254*	*178*	*297*	*1431*
Nonresponding HH	27.3%	33.1 %	36.8%	44.0%	44.9%	36.4%
	184	*105*	*148*	*140*	*242*	*819*
Total HH	**674**	**317**	**402**	**318**	**539**	**2250**
Conditional Individual RR						
Responding individuals	81.7%	80.9%	77.3%	71.9%	72.1%	77.7%
	825	*359*	*395*	*259*	*414*	*2252*
Nonresponding individuals	18.3%	19.1%	22.7%	28.1%	27.9%	22.3%
	185	*85*	*116*	*101*	*160*	*611*
Total Ind.	**1010**	**444**	**511**	**360**	**574**	**2899**

The mixed-mode design meant that while most respondents were interviewed via the web, others were interviewed by a telephone interview. The mop-up period added more opportunity for response via telephone. Table 2 shows the mode of completion for individuals by mode at IP13 including the mop-up phase. The lower panel of this table breaks down web respondents by the type of device used to answer the online self-completion interview.

Table 2. Mode of Response and Device Used, IP13

	Respondents
Responding Mode	
Telephone	18.8% *423*
Web	81.2% *1829*
Total Respondents	**2252**
Web Device Used	
PC/Laptop	56.5% *1033*
Large Tablet	9.0% *164*
Small/Medium Tablet	15.5% *302*
Smartphone	18.0% *330*
Total Web Respondents	**1829**

e. The Impact of Incentives

Households received the same incentive at IP13 as they had done at IP12. All members of the household received the same incentive. There are four experimental groups, as in past waves: £10 unconditional, £20 unconditional, £30 unconditional, and £10 plus a £20 conditional on

participation online. Table 3 total household response rates (including complete and partial response) by incentive type. Consistent with previous findings, larger incentives are related to higher response rates. However, the incentive structure is not independent of the timing the household was selected. For example, all IP11 refreshment sample households were given a £10 unconditional incentive. Time in sample may have an effect beyond the incentive analysis presented here.

Table 3. Household Response Rate by Incentive Type, IP13

Continuing Samples	HH Response
£10 Unconditional	59.7% *930*
£20 Unconditional	63.2% *86*
£30 Unconditional	75.0% *345*
£10 Unconditional +£20 for individual	73.7% *70*

f. Longitudinal Response Outcomes

The individual re-interview rate is an important outcome in a longitudinal survey, since analyses require pairs of observations to measure change. Re-interview rates are calculated as the percentage of eligible units responding at later waves who were also surveyed at the initial wave. For those in the original sample, the percentage is predicated on response at IP1, while the fourth wave is the initial wave for the IP4 refreshment sample, the seventh wave was the first for the IP7 refreshment sample, the tenth wave was the first for the IP10 refreshment sample, and the eleventh was the first for the IP11 refreshment sample.

Table 3 presents the longitudinal individual re-interview rates for the original sample (for IP2-IP13), the IP4 refreshment sample (for IP5-IP13), IP7 (for IP8-IP13), IP10 (IP11-IP13) and IP11 (IP12-IP13). For each cell, the percent is reported above the number of individuals the percent represents, in italics.

Table 3. Longitudinal re-interview rates

	IP2	IP3	IP4	IP5	IP6	IP7	IP8	IP9	IP10	IP11	IP12	IP13
Original Sample	69.3% *1654*	60.6% *1442*	54.7% *1270*	45.9% *1095*	45.9% *1100*	38.4% *917*	36.2% *867*	35.8% *814*	31.2% *746*	28.9% *691*	25.1% *600*	25.4% *609*
IP4 Refreshment				82.0% *586*	76.8% *554*	62.1% *447*	58.8% *423*	58.7% *396*	48.4% *350*	44.5% *321*	35.8% *258*	37.6% *272*
IP7 Refreshment							79.2% *520*	82.7% *487*	61.8% *404*	56.9% *371*	47.3% *309*	45.5% *299*
IP10 Refreshment										59.8% *297*	43.7% *216*	44.7% *222*
IP11 Refreshment											48.9% *371*	46.7% *346*

4. Experimentation in IP13

There were a number of experiments carried on IP13, including on fieldwork procedures, measurement in the questionnaire and requests to take part in additional data collection. This section outlines the studies carried at IP13; briefly explaining the reasons for carrying them, describing the design of the experiment and giving an indication as to the initial results from early analysis of the data. The analyses in this working paper were based on a preliminary data-set which contained all cases but did not have weights or derived variables. The authors and proposers of the experiment of each sub-section below are given in the heading.

a. Fieldwork Compression (Jonathan Burton)

Fieldwork for a wave of data collection on the main stage of *Understanding Society* currently takes over two years. The sample is issued as 24 monthly batches, from January in one year to the December of the following year. Each sample month is in the field for around 5 and a half months. This means that a wave of data collection that starts in January 2020 will complete fieldwork in mid-May 2022. Before fieldwork starts, we have around a year of consultation on the questionnaire content, specification, scripting, and testing of the questionnaire. Once fieldwork finishes, the data are cleaned and checked by the fieldwork agency, delivered to ISER, and are then processed, cleaned, checked, and re-structured. Weighting and imputation take place, the data are documented, and the User Guide written, before the dataset is deposited with the UK Data Archive. Thus, the Wave 12 data released in November 2022 will have started its journey four years earlier, in November 2018 with initial consultation over the content.

To reduce the gap between the questionnaire content being finalised and the data being available, ISER will be releasing annual 'year' datasets, which include the second year of one wave and the first year of the next – for example, the 2020 data-set will include the second year of Wave 11 and the first year of Wave 12. Another option which is being considered is to compress the fieldwork period by issuing the sample over 12 months instead of 24 months. Under this design, Wave 12 would have been issued from January 2020 to December 2020, and fieldwork finish in mid-May 2021 for release in November 2021, one year earlier than under the current design.

One issue with this 'fieldwork compression' is that half of the sample will miss the rotating content from a particular wave. For example, if the fieldwork for Wave 17 were to be compressed and issued during 2025, instead of 2025-6, the Year 2 part of the sample would not have received the rotating content from Wave 16 (see Table 4 below).

Table 4: Timing of waves under the current design and fieldwork compression

		2024	2025	2026	2027
Current design	Wave 15	Year 2			
	Wave 16	Year 1	Year 2		
	Wave 17		Year 1	Year 2	
	Wave 18			Year 1	Year 2
Fieldwork compression	Wave 15	Year 2			
	Wave 16	Year 1			
	Wave 17		Year 1 & 2		
	Wave 18			Year 1 & 2	

To avoid researchers losing this content, at IP13 we experimented with different ways to collect an additional set of modules, so that the interview would be longer. In terms of how the longer interview was presented, there were two treatment groups and a control group:

A. A continuous, longer interview. The advance letter noted that the interview will be longer than usual. The letter stated that because the interview would be longer, the unconditional incentive was increased by £5.

B. A potential 'break-off' point. For participants in this group, there was no information in the advance letter, but there was a request, towards the end of the standard IP13 interview, to complete an extra set of questions. Participants were told "Thanks for taking part in this survey. The information you have given us is very useful. We do have X minutes of questions that we would like to ask you. Like the rest of the survey, these are completely voluntary and you do not have to answer them. If you would like to take part in this additional set of questions, we will give you an additional £5 incentive to thank you for your extra effort. Would you like to proceed with the extra questions?"

C. A control group, who receive the standard IP13 questionnaire and no additional incentive.

The allocation to group was randomised at the level of the household. This experiment also includes the use of additional incentives. The incentive treatment differed across groups, but not within groups. This means that we are not looking at the effect of incentives independent of the main treatment but looking at the differences between the separate designs as a whole.

In addition, for those in groups A and B, there was a separate experiment which related to the length of the additional questions. Participants were told that the interview would either be (i) 15 to 25 minutes, or (ii) 10 minutes longer. Therefore, there are five experimental groups, each of which containing one-fifth of the sample. The sample allocation is identified by the feed-forward variable **ff_compressionw13**:

1 = Continuous longer interview, full set of rotating modules

2 = Potential break-off request, full set of rotating modules

3 = Continuous longer interview, reduced set of rotating modules

4 = Potential break-off request, reduced set of rotating modules

5 = Control

We wanted to answer two main research questions:

RQ1: How does the method of informing the sample member about the longer interview affect (i) response to the survey, and (ii) take-up of the additional content?

RQ2: Does the length of the additional content affect (i) response to the survey, and (ii) take-up of the additional content?

We would not expect to see a difference in response between the control group, and groups 2 and 4. For all these groups, there is no information in advance about the longer interview, and so we would expect a similar proportion of sample members start the survey. The response in groups 1 and 3 may be different to the control group for two reasons. First, the longer interview may put people off from participating, leading to a lower response rate. Secondly, the additional unconditional incentive may motivate sample members to participate, resulting in a higher response rate.

Table 5, below, shows the individual response rate by treatment group. This is based on all issued, eligible adults. The first result to note is that those who are told in the advance letter that the interview will be longer than usual (groups 1 and 3) have a higher response rate than those in the break-off group who are not told in the letter (groups 2 and 4; $p<0.001$). This might suggest that the additional incentive has compensated for the longer interview.

We expect no differences between the control (group 5) and the break-off groups (groups 2 and 4) since they received the same letter, however we do find a marginally statistically significant difference ($p=0.056$) with those in the control group having a higher response than those in the break-off groups. The finding that there is no difference between the control group (group 5) and those who are told in the letter (groups 1 and 3; $p=0.657$) suggests that either the control group over-performed compared to the break-off groups, or the break-off groups under-performed compared to the control group. If we compare those told in the letter (groups 1 and 3) with those who were not told in the letter including the control group (groups 2, 4, and 5) the difference is statistically significant. Those told in the letter have a higher response rate (60.6%) than those not told in the letter (55.3%; $p=0.004$). This suggests that the control group over-performed and that the extra incentive in the continuous group led to a higher response.

Secondly, although the effect of the length of the additional content is in the expected direction these differences are not statistically significant; those who are told in advance that the interview will be 10 minutes longer (groups 1 and 3) are not significantly more likely to respond than those who are told it would be 15-25 minutes (groups 2 and 4).

Table 5: Individual-level response by treatment group

	1: Continuous – long	2: Break-point – long	3: Continuous – short	4: Break-point – short	5: Control	*n*
Response	59.7%	52.1%	61.6%	55.0%	58.7%	*2252*
Refusal	21.5%	24.0%	18.6%	22.5%	21.4%	*846*
Other non-interview	18.7%	23.9%	19.9%	22.5%	19.8%	*820*
n	*827*	*754*	*781*	*795*	*761*	*3918*

Turning to the take-up of the additional content, conditional on starting the interview we would expect those in groups 1 and 3 to complete the additional content at a higher rate than those in groups 2 and 4. The former two groups know when they start the interview that it will be longer than usual and there is no break-off point, whereas the latter two groups only find this out during the interview, and so we expect some participants to drop out at this point. Furthermore, we expect the effect to be greater for the longer interview – that is, the response to the survey will be lower in group 1 compared to group 3, and the take-up rate of the additional content will be lower in group 2 compared to group 4.

Table @ below shows the proportion who agreed to answer the additional content when they were asked about it during the interview. Neither the control group nor those who were told about the longer interview in the advance letter are included here because there was no offered break-off point for these groups.

Table 6: Take-up of the additional content at the point-of-interview

	15-25 extra minutes	10 extra minutes	Total
Yes	76.3%	83.1%	79.9%
No	23.75	16.9%	20.1%
n	*392*	*433*	*825*

During the interview, four-fifths of those who were asked if they would be willing to complete a longer interview agreed. This proportion was significantly higher for those who were told it was 10 minutes than those who were told it was 15-25 minutes longer (p=0.026).

We want to look at the effect of the experiment on overall take-up of the additional content. To do this we look at the proportion of eligible, issued adults who respond to the additional content. This takes into account both non-response to the survey and, for those invited within the interview, those who do not agree to answer the additional content and so break-off.

Table 7 below gives information about the number of issued, eligible adults in each group. The measure used is the number and proportion who answer the first question in the environmental behaviour module (**envhabit1**). This question is chosen because it is part of the additional content, it is asked of those who are answering the 10-minute version and those answering the

15-25 minute version, and it is not part of a self-completion section. People who are interviewed by an interviewer using CAPI are asked to complete portions of the survey themselves, using CASI. At that point, some participants may refuse to use the lap-top to answer questions themselves. We therefore use a question which is not in CASI as the marker for participation in the additional content.

Table 7: Take-up of the additional content for all issued, eligible adults

	1:Continuous – long	2:Break-point – long	3:Continuous – short	4:Break-point – short	*n*
Response to additional content	58.5%	39.1%	61.1%	45.0%	*1614*
Dropped out before additional content	1.2%	13.0%	0.5%	9.9%	*191*
No response to interview	40.3%	47.9%	38.4%	45.0%	*1352*
n	*827*	*754*	*781*	*795*	*3157*

Those told about the longer interview in the letter ("continuous") were significantly more likely to complete the additional content than those who were only informed during the interview ($p<0.001$). There was no difference if the additional length stated in the advance letter was 10 minutes or 15-25 minutes ($p=0.297$). For those who were invited to take part in the additional content during the interview, there was a significant difference in take-up by the stated response. Those who were told it was 10 minutes were more likely to respond to the additional content that those who were told it was 15-25 minutes ($p=0.019$).

To return to the research questions.

RQ1 We found that informing sample members in the advance letter and giving them a larger incentive positively affected response rate compared to the groups who were not told about the longer interview, or given the higher incentive in the letter (the break-off groups plus the control group). Given that those who were not told about the longer interview in the advance letter had a lower response rate, and that about one-fifth of those who responded to the survey opted out of completing the additional content, the overall take-up of the additional content was highest for the group who were told in advance of the longer interview.

RQ2 The length of the additional content did not affect response to the survey, and it only affected take-up of the additional content for those who were told about the longer interview during the survey.

The results of this experiment suggest that if we were to add a set of rotating modules to the end of the standard annual interview, to collect information that would otherwise not be asked due to fieldwork compression, we would do best to tell the sample member in advance. If we acknowledge their extra effort by increasing the incentive, the length of the additional content appears not to affect take-up.

b. Couples living apart together: seeking contact details of 'significant other' (Kelly Reeve, Michaela Benzeval)

Introduction

About 9% of adults report living apart from their romantic partner. As Understanding Society is a household study, this means that such significant others are not part of the study sample, but are a source of valuable information about existing sample members' lives. In IP13 therefore we investigated asking sample members for their non-coresident partner's contact details with a view to inviting the partner to participate in Understanding Society in future. We wished to assess willingness to provide contact details and test whether mode affects this. The results of this experiment will inform potential changes to the main survey for couples living apart and inform approaching significant others in families who live apart.

Design

The self-completion module of the IP13 questionnaire asks all participants over 16 who do not live with a spouse or partner if they have a partner outside of the household. If the participant confirms they are in a steady relationship with someone they do not live with they are asked a number of annual questions about this relationship. After these questions we added a request for contact details of the participant's non-resident partner, including their name and title, email address, postal address and telephone number:

Understanding important relationships people have is very important to us. We would be interested in contacting your partner as part of this study, as we may like to ask them to take part in Understanding Society in the future. We would not pass on any information that you tell us to your partner, but would only tell them that they are invited because you are part of this study.

In giving these details you are not committing your partner to take part. All participation is entirely voluntary and they could choose whether or not to participate.

If you are happy to do so, could you please provide your partner's contact details.

We also asked about the likelihood of their partner taking part on a 5 category scale (very likely to very unlikely).

Results

Of the 175 participants who were in a non-coresident relationship:

- 35% provided their partner's name;
- 25% provided useable contact details i.e. name and either a full postal address, email address or telephone number;
- Overall 59% said their partner was unlikely to respond, 22% said their partner was likely to respond, with 18% not sure.
- Of those providing useable contact details, 70% said their partner was likely to respond, with 9% not sure.
- Participants aged 16-30 and 71+ were more likely to share contact details of their partner compared with those aged 31-70.
- There were was no pattern between gender, education or household composition and willingness to provide details.

The most common form of contact details we received were postal addresses (22%), followed by telephone number (17%) then email address (16%).

83% completed the survey using CAWI and 17% CATI. There were no discernible differences in the mode and willingness to provide details.

Next steps

Only a quarter of participants shared useable contact details, and the majority indicated that their partner was unlikely to respond to invitations to the study. Since this was raised with them for the first time during the interview, they had no opportunity to discuss with their partner first or seek their consent before sharing their details. We have therefore added an experiment to IP14 (2021). For half of the sample of LATS, who hadn't previously provided contact details, we trialled new wording and a new order to ask for contact details, leading with postal address, then email and telephone. For those who do not provide any of these three, we have an open text question asking for reasons why. For the other half of the sample we will send an inter-wave letter to the participant explaining that we would like to involve their partner in a study and provide further details.

Future work

Late in 2021 we will field a 15-20 minute web survey to participants from IP13 and IP14 in a non-coresident relationship and those partners for whom we received contact details.

The aims of the survey are to:

1. Trial approaching 'significant others' to participate in data collection;
2. Gather comprehensive information about couples LAT to enhance information collected on existing sample members' lives;
3. Test new content for LAT relationships to inform future waves.

The Innovation Panel offers a valuable opportunity to test approaching significant others both to enrich the data collected about existing sample members' lives and offer unique research opportunities into the relational aspect of non-coresident partnerships.

c. Event Triggered Data Collection (Annette Jäckle, Jonathan Burton, Mick P. Couper, Jim Vine)

Motivation

In each annual interview, *Understanding Society* collects data about life events such as partnership formation and dissolution, births, moving into or out of employment, job changes, and the onset of health problems. While the study collects complete histories for some of these domains, the amount and type of information that can be collected retrospectively is limited. The reporting of factual information, such as the date or duration of an event, may be affected by memory decay. There are also other aspects related to these life events which cannot be accurately collected after a period of time has passed, such as attitudes, expectations and subjective wellbeing. These measures are not usually collected retrospectively and can really only be collected close in time to the event.

For this reason, we are developing and testing methods for "event-triggered data collection", whereby we collect additional data at a point in time close to when an event has occurred. The idea is that we get in touch with our sample members once a month between annual interviews and ask them whether or not they have experienced certain life events during the previous calendar month. If yes, we ask them a set of questions about those events that cannot reliably and accurately be asked in the annual interviews.

In the first stage of this development work Kantar conducted qualitative research to examine what respondents would be willing to do for the study and under what conditions (Horsley et al., 2019). We also conducted some initial experiments with ways of wording questions about life events. The findings from these initial studies are reported in Jäckle, Burton and Couper (2019).

In the second stage we tested a monthly "Life Events" survey on the Innovation Panel sample. This involved monthly web surveys starting in February 2020 and going until January 2021, that were implemented by Ipsos MORI. At the beginning of each month, sample members were sent an invitation by email and/or SMS (text message), inviting them to a web survey containing a single question about whether they had experienced any of a list of life events in the previous calendar month (see Figure 1):

Figure 1: Wording of monthly single question on life events

Text: *Did you experience* ***any*** *of the following during {last calendar month} {year of last calendar month}? Please only report events experienced during {last calendar month}. {IF {last calendar month} {year of last calendar month} not December 2020: We will be asking you about any events since then in the next survey.}*

- *Diagnosed with a new health condition or entered hospital/clinic as an in- or outpatient*
- *Had a pregnancy confirmed / partner had a pregnancy confirmed*
- *Changed jobs, started or stopped working*
- *Moved home*
- *Stopped or started living with a partner*

1. *Yes*
2. *No*

If yes, they were asked a series of follow-up questions about each event reported. The data collected in these monthly surveys will be deposited separately with the UK Data Service and can be linked with the IP data using the individual identifier "pidp".

Experimental design

IP13 involved two experiments related to event-triggered data collection. The first was a test of whether the invitation to the monthly Life Events survey had any negative effects on participation in the annual interviews. For this purpose we invited a random subset of households to the monthly survey and kept a control group back who were not invited. The second was a test of asking for consent to send survey questions by text message (SMS). Since the proportion of sample members who have a mobile phone is larger than the proportion who regularly use the internet, sending a monthly Life Event question as a text message would reach a larger share of the sample than implementing it as a web survey.

The allocation for the Life Events experiment was done at the household level, so that all individuals within a household were treated in the same way. The eligible sample for this experiment consisted of IP11 respondent households where at least one household member used the internet at least several times a week. Of the eligible cases, a random 70% of

households were allocated to the monthly Life Events survey, the remaining 30% of households were not invited and served as the control group.

The allocation for the consent to send SMS questions experiment was done at the individual level. All respondents were asked the same consent question, but half the sample were asked early in the survey (after questions about mobile device use) and half were asked at the end (in the contact details module). The purpose of this experiment was to test whether the position of the request affected consent rates. The consent question was (see Figure 2):

Figure 2. Consent question to send monthly questions

Universe: *ASK if mobuse = 1 // Has a mobile phone*

Help text: *By occasional, we mean around once a month.*

Text: *May we send you an occasional text message which contains a quick question?*

1 Yes

2 No

Results

Inviting sample members to the monthly Life Events survey from February 2020 onwards had no effect on attrition in the annual IP interviews that ran from July to November 2020. Among sample members eligible for the Life Events study, that is, including sample members in respondent and non-respondent households, the IP13 response rate was 64% for those invited to the Life Events study and 65% for those not invited (n.s.).

Overall, 67% of respondents gave consent to us sending survey questions by SMS. The placement of the consent question earlier in the interview or at the end had no effect on consent rates.

For respondents aged under 60 internet coverage is very high, at 99%. Sending survey questions by SMS as an alternative to a web survey would therefore not increase sample coverage for this group. Among sample members over 60 the rate of internet usage is 87%,

decreasing with age. Among this group sending survey questions by SMS could in theory increase coverage. However, in practice only 4% of this age group have a mobile and consented to SMS questions. This means that sending survey questions by SMS would not help increase coverage by much. We are nonetheless considering this option as a way of increasing response to the monthly Life Events question, although the follow-up questions about reported events would have to be administered in another mode. We are also considering survey questions by SMS as a method for sending out single questions about national events, such as General elections, elections to the Scottish Parliament or Welsh Assembly, or future referenda.

Outlook

At the start of the IP13 fieldwork period, sample members had been invited to the monthly Life Events study six times. The Life Events study however continued beyond the fieldwork for IP13. We will therefore also test for any effects on participation in the IP14 annual interview.

The Life Events study included two experiments that will be reported in a separate *Understanding Society* Working Paper. The first is an incentive experiment: half of sample members were offered £1 for completing the monthly survey, half were offered £1 for completing the event question plus £2 if they reported any events. The second experiment concerned the timing of the two reminders that were sent after the initial invitation to the survey: half of sample members were sent reminders daily, the other half were sent reminders every two days.

As a follow-up to the consent to SMS questions experiment in IP13, we intend to re-ask the question of non-consenters in IP15. To improve our understanding of respondents' concerns we will ask those who do not consent about their reasons for declining this request.

d. Invitation to the well-being mobile app (Annette Jäckle, Jonathan Burton, Mick P. Couper, Brienna Perelli-Harris)

The IP13 interview included an invitation to an additional study: respondents were invited to download a mobile application onto their smartphone and to use it every evening for 14 days, to report on emotion and self-regulation, external stressors, attachment, and interactions with loved ones that day. On the first day the questionnaire included some additional background

questions. On the 14th day it included a set of debrief questions about the study. Respondents were offered a reward of £1 for every day on which they completed the Well-Being App questionnaire. Following the invitation to this study in the annual interview, respondents were sent an email reminder with their login details for the app. The data collected in the app will be deposited with the UK Data Service and can be linked to data from the IP using the individual identifier "pidp".

Experimental design

The implementation of the Well-Being study included three experimental tests of study protocols. The allocations to experimental treatments were done at the household level, so that all household members were treated in the same way. All allocations were stratified to ensure that the allocations for each experiment were balanced across the treatments to the other experiments.

Position of the invitation: this experiment varied when in the IP13 interview respondents were invited to the Well-Being App study. Adults in a random half of households were invited early in the IP13 interview (after the modules on COVID-19, demographics, and mobile device use), and half were invited at the end of the interview (which on average lasted about 40 minutes).

Length of the daily survey: this experiment varied the length of the daily questionnaire that respondents were asked to complete in the Well-Being App. For adults in a random half of households the daily questionnaire took about two minutes to complete, for the other half it took about ten minutes. Respondents were informed about the length of the daily questionnaire in the invitation to the app study.

Bonus reward for completing all 14 days of the study: this experiment varied whether and how respondents received additional bonus rewards, in addition to the £1 per day on which they completed the questionnaire. Adults in a random third of households were not offered a bonus; a third were offered a £10 bonus if they completed all 14 days; and a third were offered £2.50 on four randomly pre-selected days, if they completed the questionnaire on that day.

All IP13 respondents were invited to the Well-Being App study (n=2,214), including respondents who reported that they do not use a smartphone. The only restriction was that new

entrants, i.e. people who had moved into a sample household since the previous IP annual interview, were not eligible.

The wording of the invitation to the Well-Being App study mentioned the experimental treatments (see Figure 3).

Figure 3: Wording of the invitation to the Well-Being App study

Text: *As you know Understanding Society is all about understanding the lives of people in the UK. To broaden out the research that can be done with Understanding Society data, we would like you to participate in a study that collects data about relationships and emotional wellbeing. We would like you to download the Understanding Well-Being App and use it every evening for 14 days, to record how your day has been. Answering daily questions will take about 2 minutes {if ff_applengthw13 = 1} / 10 minutes {if ff_applengthw13 = 2} of your time each evening. As a thank you for participating in this study, you will receive £1 for each day on which you complete the questions. {if ff_appincentw13 = 1} / questions, plus an additional £10 if you complete the questions on each of the 14 days. {if ff_appincentw13 = 2} / questions, plus you will have a chance to receive additional rewards totalling £10 if you complete the questions on each of the 14 days. {if ff_appincentw13 = 3}*

Text (Web interview version): *We would like you to try this now. Please go to the App Store for Apple devices or the Google Play Store for Android devices and download the Understanding Well-Being App. Here is the Understanding Well-Being logo and your login details for the app. Please make a note of these:*

User Name: [ff_wellun]

Password: [ff_wellpw]

Text (Web interview version): *Please tell us whether you have managed to download the app?*

1 Successfully downloaded and logged into the app
2 Tried to download the app but did not succeed
3 Have not yet tried to download and log into the app
4 I do not want to download the app

Results

The outcome of interest for the three experiments is whether IP13 respondents participated in the Well-Being App study. There are different possible ways of measuring participation in the 14-day app study:

- Did they successfully download and log into the app during the IP13 interview?
- Did they complete the app questionnaire at least once?
- On how many days did they complete the app questionnaire?
- Did they complete all 14 days of the study?

The first outcome is based on the self-report during the IP13 interview (see Figure 3). The other outcomes are derived from the data collected with the mobile app. Here we report the results for the first two outcomes, the others will be reported in a separate *Understanding Society* Working Paper.

The position of the invitation to the Well-Being App study had a large effect: 44% of respondents invited to the app study early in the interview reported that they had successfully downloaded and logged into the app, compared to 33% of those invited to the app study at the end of the IP13 interview ($p<0.0001$). Looking at whether respondents went on to complete the mobile app questionnaire at least once, the difference between treatment groups is smaller (48% and 41%) but remains significant at the 10%-level.

The length of the daily survey also had an effect: 42% of respondents in the two-minute questionnaire group said they had downloaded the app, compared to 36% of those in the ten-minute group ($p=0.005$). Looking at whether they actually completed the questionnaire, the gap is again smaller (47% and 43%) but also remains significant at the 10%-level.

The bonus for completing all days of the app study also had an effect: 42% of respondents in the £10 bonus group reported downloading the app, compared to 37% in both the control (no bonus) and the £2.50 on four random days groups ($p=0.04$). This difference however disappears when looking at whether respondents actually completed the app questionnaire.

The results show that the reminder email sent out after the IP13 interview, with the respondent's login details for the app, increased participation in the app study: more respondents actually

completed the app questionnaire than reported downloading and logging into the app during the IP13 interview. The reminder email however made no reference to the experimental treatment groups, and so the treatment effects were somewhat watered down.

Outlook

Further analyses will examine the other outcomes listed above and effects of the experimental treatments on biases in what type of respondents participated in the Well-Being App study. We will also examine the reasons respondents reported for not downloading the app and feedback they gave about the study in the debrief questionnaire.

References

Horsley, A., Beninger, K., Day, N., Dhillon, G., Jäckle, A., Burton, J., and Couper, M.P. (2019) "The acceptability and feasibility of asking monthly "life-event" questions in between waves of a panel study", *Understanding Society Working Paper 2019-06*, Colchester: University of Essex

Jäckle, A., Burton, J. and Couper, M.P. (2019) "Event-triggered data collection", *Understanding Society Working Paper 2019-16*, Colchester: University of Essex