Understanding Society
THE UK HOUSEHOLD LONGITUDINAL STUDY

Targeted Survey Procedures: a Cost-Effective Design Paradigm?

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An initiative by the Economic and Social Research Council, with scientific leadership by the Institute for Social and Economic Research, University of Essex, and survey delivery by NatCen Social Research and TNS BMRB

Standardised Survey Design

- Standardisation is central concept to quantitative *measurement*
- All aspects of measurement should be consistent (identical) across all study subjects:
  - Contextual environment
  - Question wording
  - Question presentation
  - Response options
  - Prompts and probes
  - Interviewer neutrality

  etc.
- Relates to concepts of reliability, consistency, accuracy

Standardised Survey Design

- But standardisation is typically extended to all *other* parts of the survey process by default, e.g.:
  - Respondent communications
  - Respondent incentives
  - Contacting procedures
  - Call schedule algorithms
  - Field period
  - Persuasion methods
  - Data management and editing

  etc.

- Particularly with regard to survey procedures intended to secure *respondent participation*, it is less clear (than with *measurement*) that:
  - a standardised stimulus should produce a standardised reaction;
  - a standardised reaction is desirable
- We do not aim to *measure* the participation propensities of respondents; we aim to *maximise* them

Securing Participation

- Large body of research into effects of design features on participation propensity
- Outcomes are typically contact rates, co-operation rates, response rates
- Studied features include:
  - form, value and conditionality of incentives
  - content and design of advance letters
  - postage class and envelope design (for mail surveys)
  - ostensible survey sponsorship

  etc. etc.

- Common feature of most of these studies is that effects are found to be heterogeneous across sample subgroups:
  - effect of incentives depends on income
  - effect of persuasion messages depends on level of education
  - effect of interviewer gender depends on respondent gender

  etc.
- Standard stimulus does not produce standard response, when it comes to participation propensity
- Targeted stimuli may be more effective

Precedents & Analogies

- ‘Conversational interviewing’
  (Suchman and Jordan 1990; Schober and Conrad 1997):
  - showed promise, but with demanding constraints
  - not adopted by any major surveys
- ‘Tailored interviewer introductions’
  (Groves, Cialdini and Couper 1992; Morton-Williams 1993)
  - now widely adopted
- ‘Selective (or significance) editing’
  (de Waal 2013; Granquist and Kovar 1997)
  - adopted by some NSIs. elsewhere?

Targeted Design Features

- Simpler and easier to implement than adaptive or responsive designs
- No need to delay or extend field period
- May be at least equally effective

Targeted Design Features

- A design feature is varied between subgroups of sample members
- It is possible to vary more than one feature simultaneously
- Aim is to beneficially affect the relationship between survey costs and survey errors
- Variation(s) in design feature(s) are identified and planned in advance of data collection
- No adaptations are made during field work (static design)
- Requires advance knowledge of relevant subgroup membership (informative sampling frame; longitudinal surveys)

Aims

As implemented on surveys to date, aim is usually to achieve one of the following:

- Reduce one or more components of nonresponse error;
- Reduce one or more components of measurement error;
- Reduce survey costs

Implementation

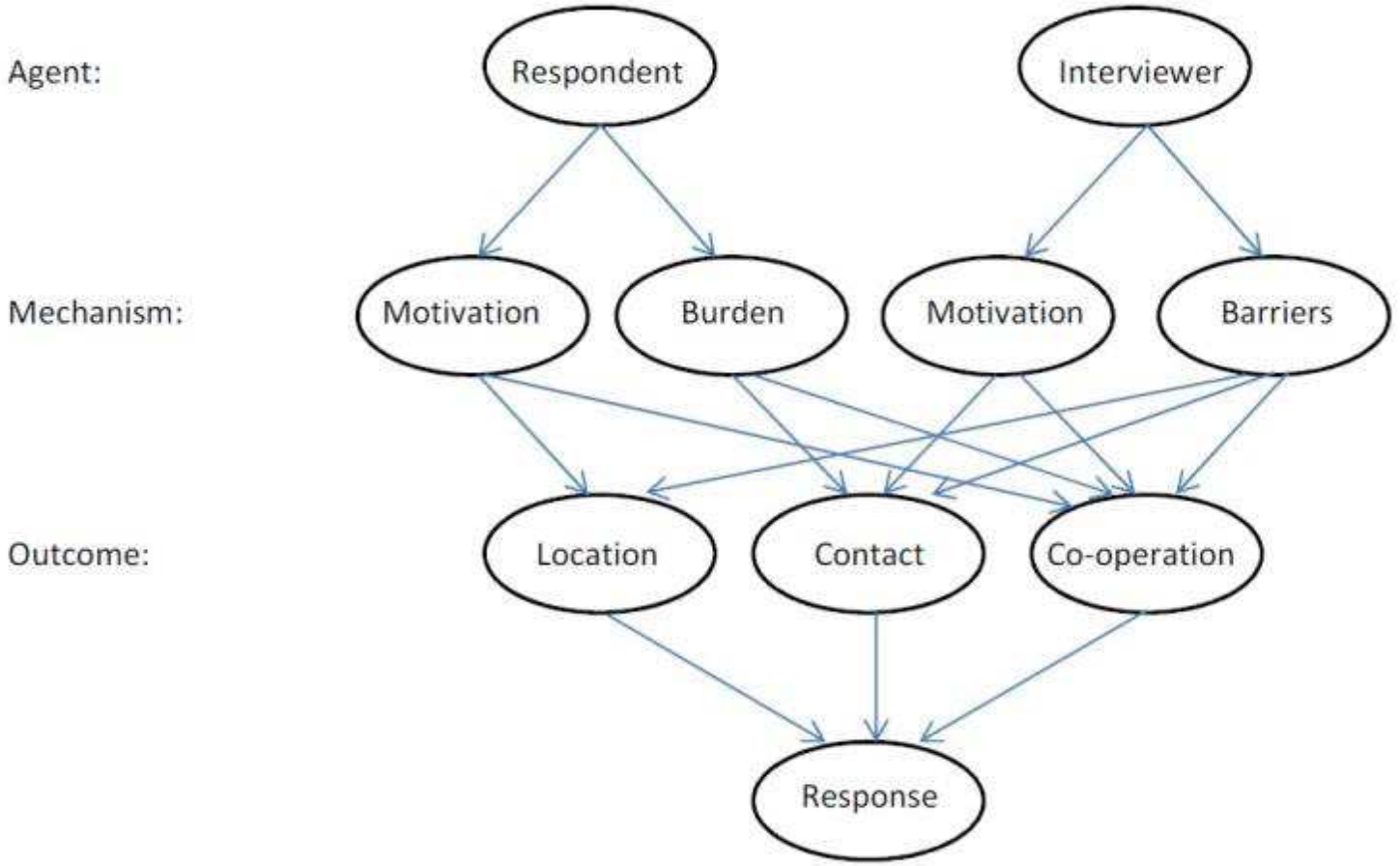
- Identify subgroups to treat differently
- Identify treatments for each subgroup
- Implement!
- Criteria for subgroups:
  - Manageable number of groups
  - Each group should have defining characteristics that lend themselves to targeted treatment
  - Groups should vary in terms of the cost of treatment and/or contribution to error (e.g. response propensities)

Treatments

When the aim relates to nonresponse error, treatments (design variations) can include:

- Differential incentives, monetary or otherwise;
- Differential field time (i.e. prioritising certain types of cases) or call scheduling;
- Differential modes / mode combinations / mode prioritisation
- Differential methods to encourage keeping in touch / notifying changes of address/phone/email;
- Differential communications (advance letters, information brochures, between-wave mailings, etc).

Three Dimensions of a Targeted Design Feature



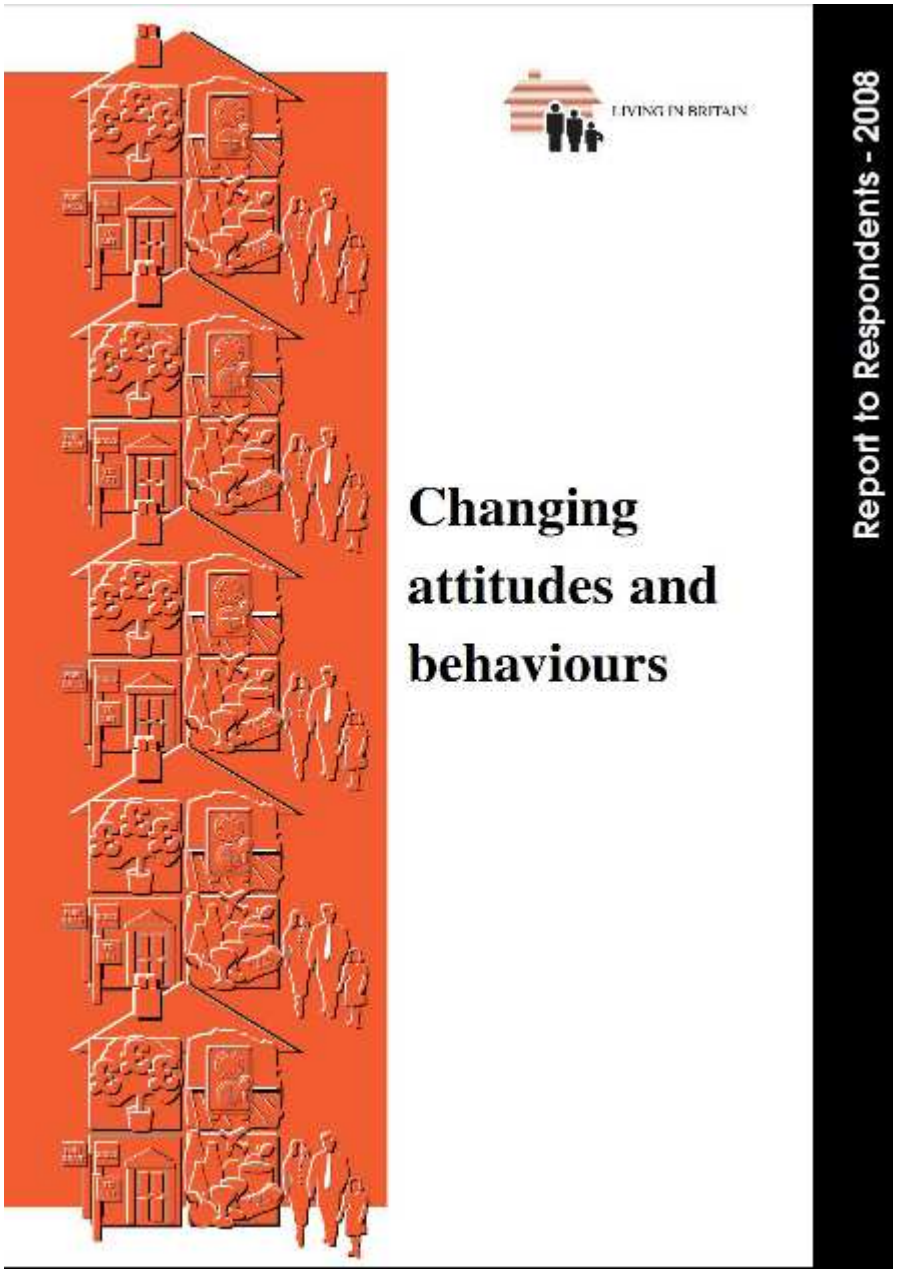
Example I

Fumagalli L, Laurie H, Lynn P (2012) Experiments with methods to reduce attrition in longitudinal surveys, *Journal of the Royal Statistical Society A*, 176(2): 499-519

BHPS: A report of findings is mailed to sample members between waves in the hope of emphasising the saliency and interest of the survey and hence providing motivation to co-operate at the next wave

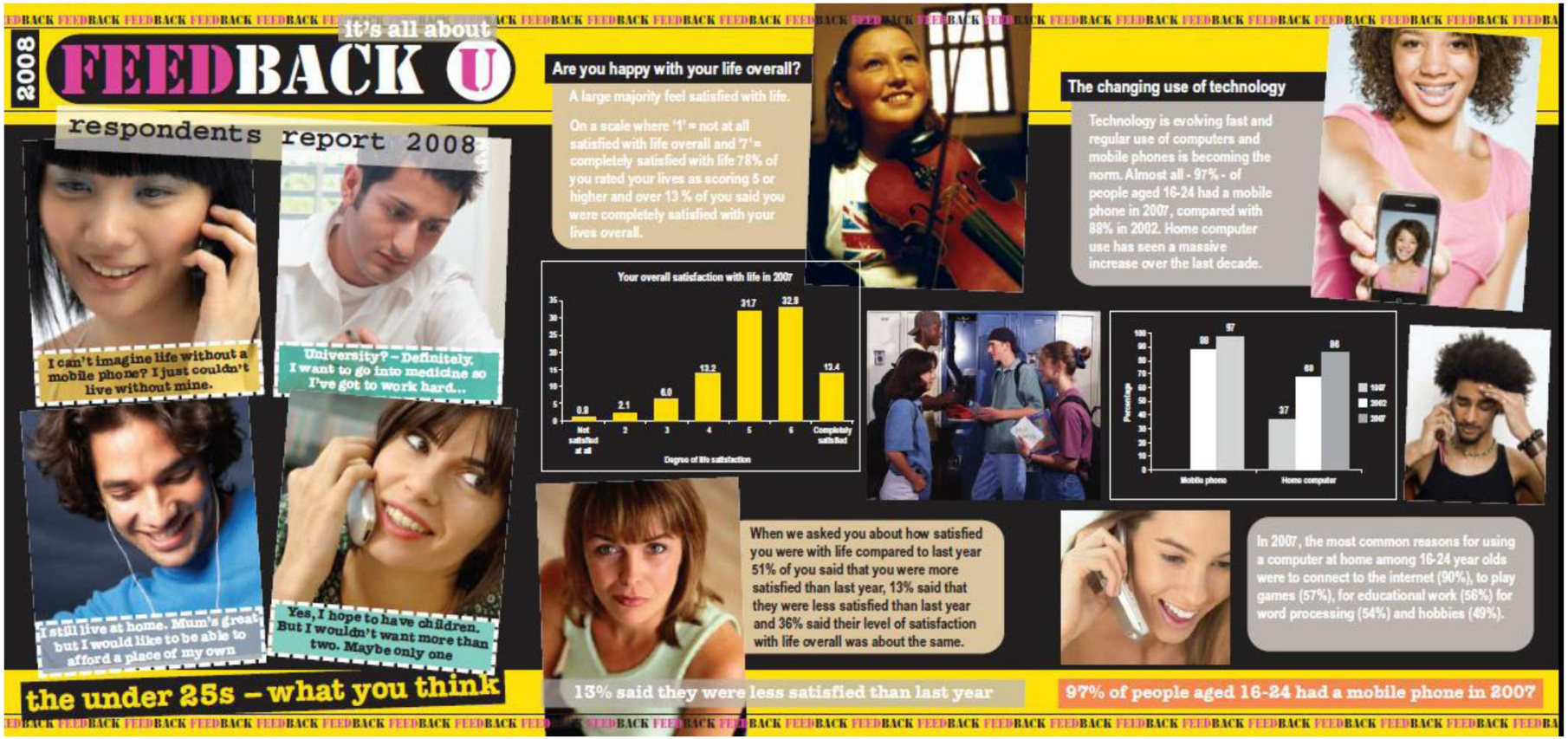
Two randomised treatments:

- "Standard" report of findings to all sample members;
- Targeted report:
  - Version 1 ("Young") if aged < 25
  - Version 2 ("Busy") if self-employed, long work hours or long commute
  - Version 3 ("Standard") otherwise

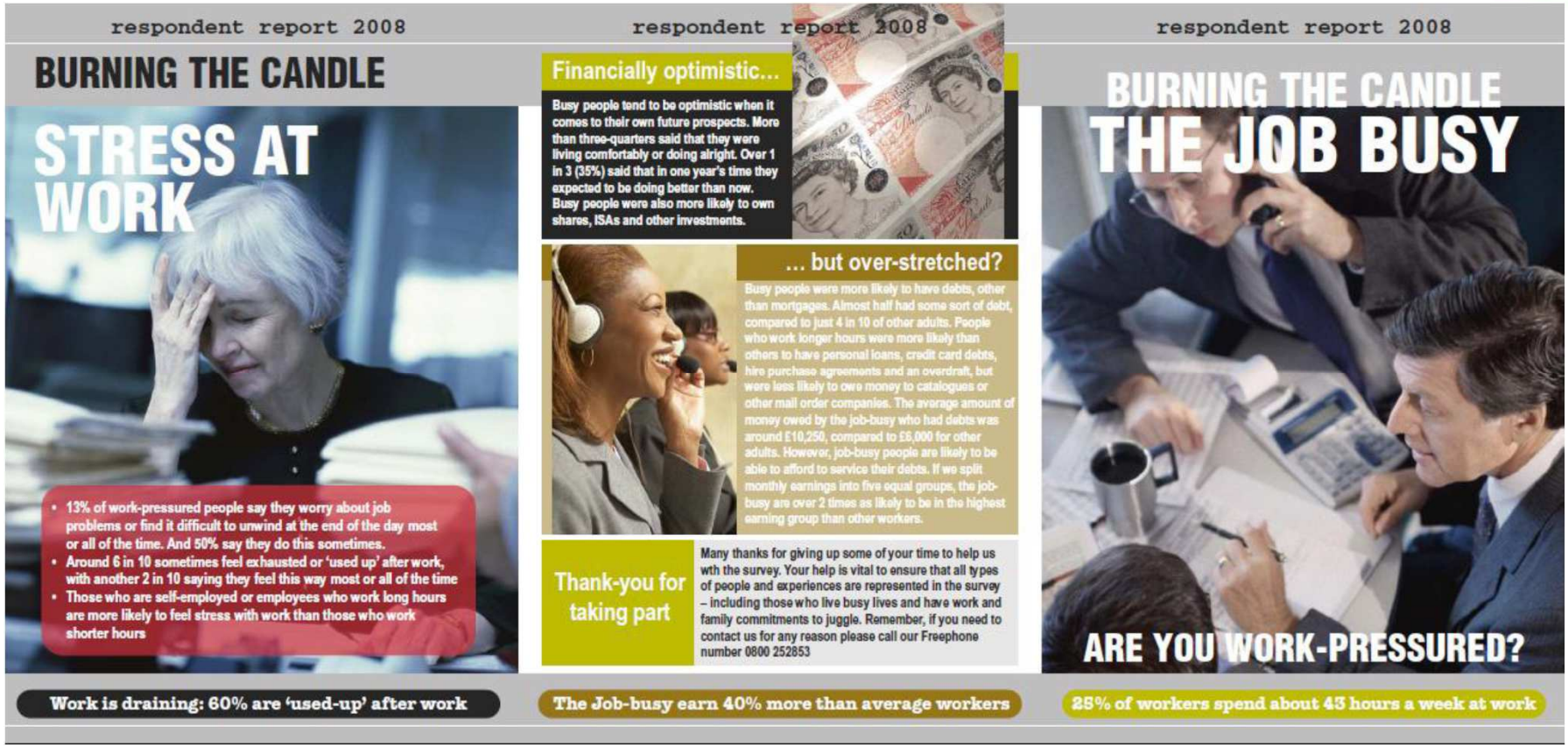


Standard Report

Targeted report (young)



Targeted report (employment busy)



Response Rates: Young People

	Targeted (%)	Standard (%)
Full face-to-face interview	93.2	91.6*
Shorter phone interview	0.9	2.6*
No interview	5.9	5.8
n	*843*	*856*

Response Rates: Busy People

	Targeted (%)	Standard (%)
Full face-to-face interview	90.3	90.1
Shorter phone interview	7.2	6.4*
No interview	2.5	3.5*
n	*1205*	*1157*

Example II

Lynn P (2016) Targeted appeals for participation in letters to panel survey members, *Public Opinion Quarterly*, 80(3): 771-782

Experiment with initial letters sent to sample members on a wave of a panel survey

Prime purpose of the letters is to motivate co-operation

Experiment incorporates randomisation not only of the targeting treatment but also (orthogonally) of two other design features that are potential moderators of the effect(s)

Study design

- *Understanding Society* Innovation Panel, wave 6 (2013);
- N = 2,733 adults (16+) issued to field for wave 6
- Nationally-representative probability sample (Great Britain)
- Randomly allocated to two groups:
  - Standard letter (same for all sample members);
  - Targeted letter (wording varies between subgroups)
- Orthogonal experimental treatments:
  - Mode: CAPI single-mode *vs*. Web-CAPI seq. mixed mode;
  - Time in sample: 6th wave *vs*. 3rd wave

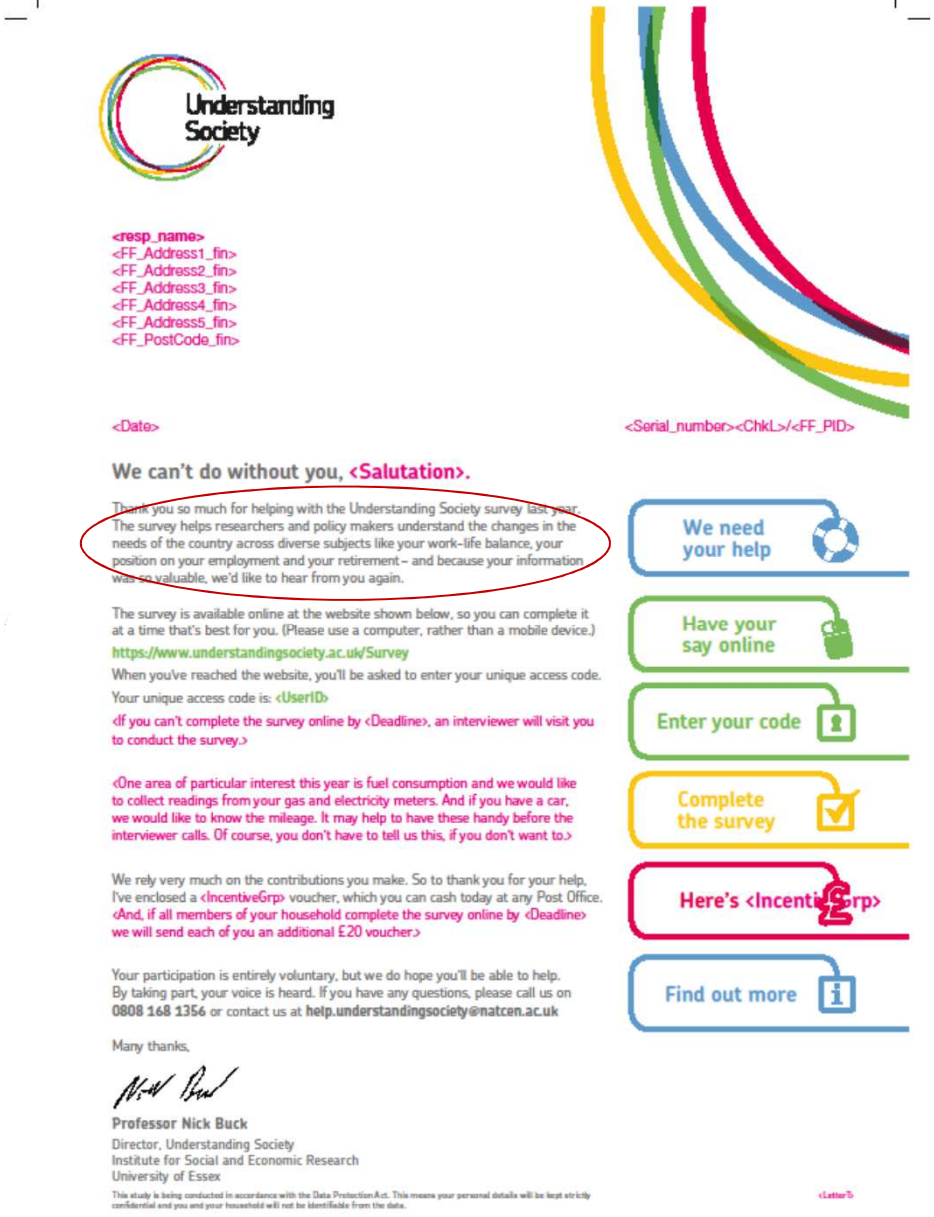
Targeted Subgroups

Group	Definition	Frequency	Percentage
Employment-busy	Employed for at least 39 hours/week, or employed 30 to 38 hours with a commute of least 60 minutes	425	15.6
With children	Responsible for at least one child under 15 in the same household at the time of most recent interview	339	12.4
Young	Aged 16 to 29 at the time of wave 5	323	11.8
London	Resident in London or south east England at the time of most recent interview	358	13.1
Pensionable	Of pensionable age at the time of wave 5 (60 or over for women; 65 or over for men)	464	17.0
Remainder	None of the above	824	30.1

Variants of the Initial Letter

First paragraph of the letter (for previous-wave respondents):	Thank you so much for helping with the *Understanding Society* survey last year. The survey helps researchers and policy makers understand the changes in the needs of the country across diverse subjects like <text> – and because your information was so valuable, we'd like to hear from you again.
Letter version	**<text>**
Employment-busy	your work-life balance, your position in your employment and your retirement
With children	the provision of child care, schooling and education
Young	the impact of the economic climate on employment prospects and the influence of mobile technology on life
London	the cost of living and the provision of schools, housing and public transport
Pensionable	the provision of social care and the cost of energy and fuel

* The second sentence of the standard version of the letter read simply, "The survey helps researchers and policy makers understand the changes in the needs of the country – and because your information was so valuable, we'd like to hear from you again."



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<resp_name>
<FF_Address1_fin>
<FF_Address2_fin>
<FF_Address3_fin>
<FF_Address4_fin>
<FF_Address5_fin>
<FF_PostCode_fin>

<Date>

<Serial_number><ChkL></FF_PID>

We can't do without you, <Salutation>.

Thank you so much for helping with the Understanding Society survey last year. The survey helps researchers and policy makers understand the changes in the needs of the country across diverse subjects like your work-life balance, your position on your employment and your retirement – and because your information was so valuable, we'd like to hear from you again.

The survey is available online at the website shown below, so you can complete it at a time that's best for you. (Please use a computer, rather than a mobile device.)

https://www.understandingsociety.ac.uk/Survey

When you've reached the website, you'll be asked to enter your unique access code.

Your unique access code is: <UserID>

<If you can't complete the survey online by <Deadline>, an interviewer will visit you to conduct the survey.>

<One area of particular interest this year is fuel consumption and we would like to collect readings from your gas and electricity meters. And if you have a car, we would like to know the mileage. It may help to have these handy before the interviewer calls. Of course, you don't have to tell us this, if you don't want to.>

We rely very much on the contributions you make. So to thank you for your help, I've enclosed a <IncentiveGrp> voucher, which you can cash today at any Post Office. <And, if all members of your household complete the survey online by <Deadline> we will send each of you an additional £20 voucher.>

Your participation is entirely voluntary, but we do hope you'll be able to help. By taking part, your voice is heard. If you have any questions, please call us on **0808 168 1356** or contact us at **help.understandingsociety@natcen.ac.uk**

Many thanks,

Professor Nick Buck
Director, Understanding Society
Institute for Social and Economic Research
University of Essex

This study is being conducted in accordance with the Data Protection Act. This means your personal details will be kept strictly confidential and you and your household will not be identifiable from the data.

<LetterTo>

We need your help

Have your say online

Enter your code

Complete the survey

Here's <IncentiveGrp>

Find out more

Results: Response Rates

Sample subgroup	*n*	Response Rate		*P*
		Standard Letter %	Targeted Letter %	
Full sample	2,733	72.0	73.8	0.28
Previous wave respondents (RESP)	1,979	87.4	85.9	0.34
Previous wave non-respondents (NRESP)	754	32.4	41.4	0.01**
Time in sample: 6 waves (TIME6)	1,853	72.5	71.6	0.64
Time in sample: 3 waves (TIME3)	880	70.9	78.8	0.007**
Single-mode CAPI (CAPI)	946	71.4	71.1	0.92
Mixed mode web-CAPI (MMODE)	1,787	72.3	75.3	0.16
NRESP * CAPI	248	27.5	29.9	0.67
NRESP * MMODE	506	35.0	46.5	0.008**
TIME3 * CAPI	325	64.9	78.8	0.005**
TIME3 * MMODE	555	74.4	78.9	0.21

Notes: ** indicates P<0.01, * indicates 0.01<P<0.05

Findings / Discussion

- Response Rates increased for
  - Previous-wave non-respondents (in mixed mode)
  - Recent panel entrants (in CAPI mode)
- A targeted initial letter ***can*** increase response rates;
- Effects are uneven across survey design contexts and sample subgroups;
- Important difference: initial letter acts only as ***prenotification*** in CAPI mode, but as an ***invitation*** letter in mixed mode:
  - CAPI: no immediate action that sample member can take;
  - Mixed mode: can immediately go online and fill out the survey
- Positive effects on response rate are only observed for low-propensity subgroups, so sample composition may be improved

Other Examples

Reducing failures to locate by

- targeting an additional between-wave mailing at sample members predicted to be at greatest risk (Lynn 2012)
- targeting the form of requests for address updates based on risk of moving (Fumagalli et al 2013)

Reducing non-contacts by

- starting field work early for sample members predicted to have high noncontact propensities (Calderwood et al 2012)
- differential telephone call scheduling algorithms (Luiten & Schouten 2013)

Reducing variation in co-operation propensities by

- allocating most successful interviewers to respondents with lowest co-operation propensities and *vice versa* (Luiten & Schouten 2013)
- allocating lowest co-operation propensity respondent to CAPI and others to web (Al Baghal & Lynn forthcoming)
- offering differential interviewer payments depending on predicted co-operation propensity of respondent (Peytchev et al 2010; Calderwood et al 2013)

Future Prospects for Targeted Design Features

- Targeted procedures to become a routine part of survey production*?*
  (May require survey organisations to modify their systems)
- Treatments to become more sophisticated?
- Aims to become more sophisticated (e.g. multiple error sources/ components?

Conclusions

- Targeting looks like the new direction of travel, not just a passing fashion
- Reflects increasing awareness of the ineffectiveness / inefficiency of standardised procedures
- Consistent with efficiency / budget-cut agendas

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Annex: Innovation Panel

To test and develop new methods, including both data collection and measurement methods, in order to :

- Maximise the value of *Understanding Society* by informing decisions regarding methodology and design;
- Contribute to developments in the methodology of longitudinal survey research.

Key design aspects of UKHLS are replicated, as far as possible, to provide appropriate context

Approx. 1,500 responding households at wave 1 plus 500 new each 3 waves (wave 4, wave 7,…)

Innovation Panel II

At waves 1 and 2 the IP was designed by the *Understanding Society* team to serve the development and testing needs of the survey

From wave 3 an (annual) open competition was instigated to identify studies and tests to incorporate

Open to all: call made in March each year, with proposal deadline in early June

No cost of data collection to the proposer

Innovation Panel III

The inclusion of any design feature, test or experiment ('study') on the IP should meet the following criteria:

1. The issue addressed should be specific to the longitudinal research context or of particular importance to longitudinal surveys
2. Studies should draw strength from, or at least be relevant to, the household design
3. Studies should not unreasonably endanger the future of the panel

There is also guidance on priorities

More Information

www.understandingsociety.ac.uk

especially:

www.understandingsociety.ac.uk/documentation

www.understandingsociety.ac.uk/research/publications/working-papers