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Citation: Hanson, T. (2016). How Should We Adapt Complex Social Research Questionnaires for Mobile Devices? Evidence from UK Surveys and Experiments. Paper presented at the 2016 International Conference on Questionnaire Design, Development, Evaluation, and Testing (QDET2), 9-13 Nov 2016, Miami, USA.

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How should we adapt complex social research questionnaires for mobile devices?

Evidence from UK surveys and experiments

Tim Hanson

QDET2, November 12th 2016

Agenda

- UK context
- Evidence from UK social surveys
- Usability testing, key issues and principles
- Grids experiment
- Conclusions

Growth in ownership and use of smartphones for online activity

7 in 10 UK adults (71%) owned a smartphone in Q1 of 2016 – up from 39% in 2012

2016 study showed that UK adults spent an average of 93 minutes per day on their smartphones

Importance of smartphones also grows – 36% now cite their smartphone as most important internet enabled device; higher level than for any other device



Expectation that surveys should be accessible by smartphones

Smartphones especially important for younger people

Levels of smartphone ownership particularly high among younger people – 9 in 10 aged 16-24 and 25-34 owned a smartphone

More than half of 16-24 and 25-34 year olds cite a smartphone as their most important device (56%)

Same study showed that 16-24 year olds spent 287 minutes per day on their smartphones

Survey response rates usually lowest among 16-24 year olds



Ongoing challenge of representing young people in surveys – important to remove barriers to participation

Evidence from UK social surveys

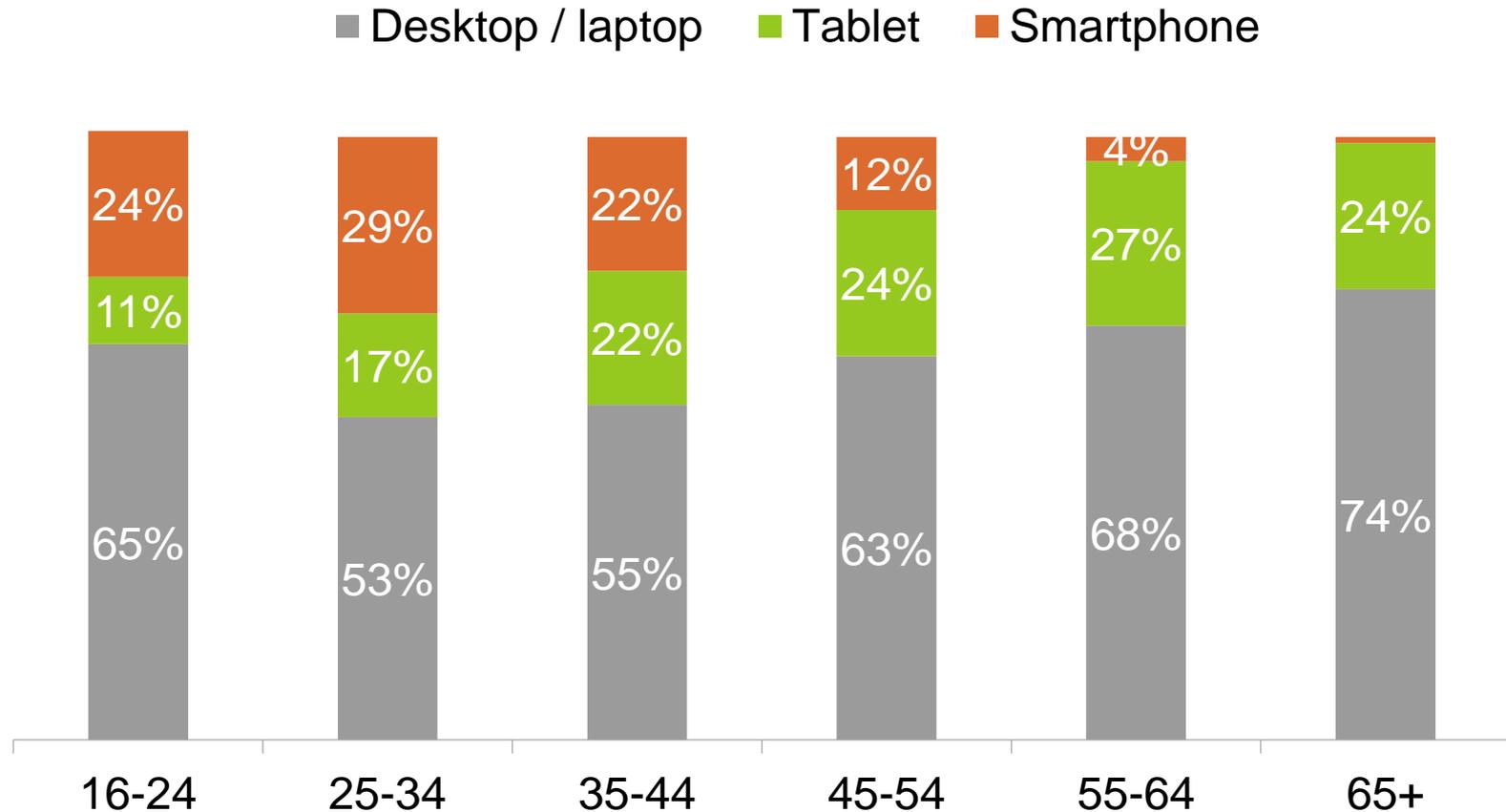
Where we are...

- Now allow smartphones for most online surveys – though often still advise respondents to complete using a larger device
- Most software supports mobile optimisation – but different levels and types of optimisation
- ‘Mobile first’ approach for some new surveys; limited adaptation of existing survey content to date
- Usability testing across different devices increasingly common
- Ongoing experimental work to investigate a range of design issues; ongoing analysis of survey data across different devices to investigate impact on survey response and data quality
- Proportion who choose to complete on smartphones increasing...

Proportions completing UK surveys on smartphones

Survey	Year	% using smartphone	Base	Contact method	Approx. interview length	Notes
Community Life	2014-15	3%	2,325	Letter	30 mins	Cross-sectional survey, address based sampling
Understanding Society Innovation Panel W8	2015	5%	776	Email/letter	45 mins	Longitudinal
Understanding Society Innovation Panel W9	2016	9%	1,103	Email/letter	45 mins	Longitudinal
Understanding Society W8	2016	14%	5,699	Email/letter	45 mins	Longitudinal, Interim data
Longitudinal Study of Young People in England 2 (Wave 4)	2016	22%	2,851	Email/letter	25 mins	Longitudinal, Interim data; 16-17 year olds
Wellcome Trust Science Education Tracker	2016	25%	4,081	Letter	25 mins	Cross-sectional, 14-18 year olds Named sample

Particularly high levels of smartphone completions in younger age groups (from Understanding Society Wave 8)



Usability testing, key issues and principles

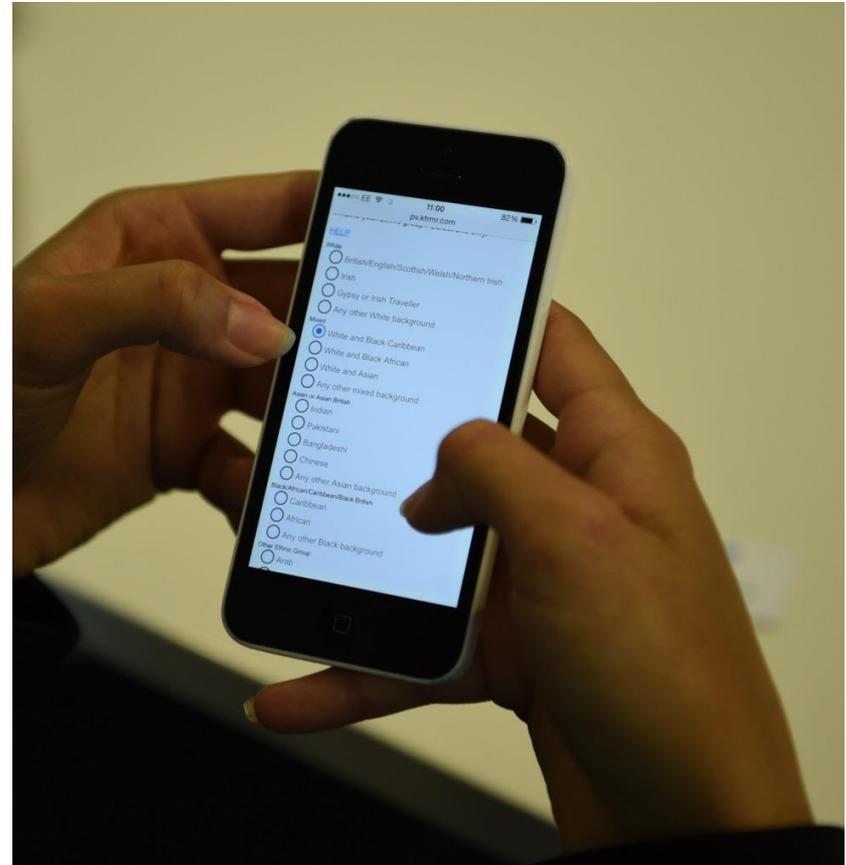
Approach to usability testing

Conducted several rounds of usability testing of Understanding Society questionnaire, as well as for other surveys

Recruit respondents who use their smartphones for online activity on a daily basis

Respondents complete a version of the survey on their smartphone

Asked to flag issues with the survey as they go through; researchers observe and probe around issues



Key issues and principles – from usability testing and analysis to date

Most completed surveys with few issues – importance of device self-selection

Should carefully consider length of questions and response lists – but not just an issue for smartphones!



There are various models of smartphones these days. Is yours an Android, iPhone, Windows or some other type of phone?

- Android
- iPhone
- Windows
- Other type



Key issues and principles – from usability testing and analysis to date

Most completed surveys with few issues – importance of device self-selection

Should carefully consider length of questions and response lists – but not just an issue for smartphones!

Important to make sure font size is large enough and consistent throughout; balance between text size and need to scroll / zoom

Response buttons and help buttons should be well spaced out (and easy to select – e.g. have used larger buttons for some surveys)

May be less detail provided at open questions – keep to a minimum?

Drop-down lists can render differently on different devices; also need to check other non-standard formats (e.g. trigrams, slider scales)

More likely to complete on move (though most still complete from home) – need to consider level of detail we ask for

Some demand for progress bars, or explicit option to save responses and complete later

Issues with traditional grids – ‘dynamic’ grids seem to work better but further testing/analysis needed

Grids experiment

Method

Four different formats compared:

- 'Traditional' grids
- 'Dynamic' grids
- Item by item paging
- Item by item scrolling

Two sets of questions asked – first on leisure and cultural activity; second on attitudes to courts and justice

Allocation to format unchanged between sets

Experiment run on Kantar TNS online omnibus – sample drawn from access panel – impacts on extent to which results can be generalised

Sample size of c. 1,200 per cell; 200-250 per cell using a smartphone or small tablet

Analysis ongoing – initial results presented today

Traditional grid



How often do you...

Please pick one option only for statement

	Never	Once or twice a year	More frequently than that	Don't know
Go to the cinema, theatre, concerts or other performances	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Go to exhibitions, libraries or other cultural or historical sites	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Attend a live sporting event	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Eat or drink out at a restaurant	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>



Dynamic grid



How often do you...

Please pick one option only for statement

Go to the cinema, theatre, concerts or other performances

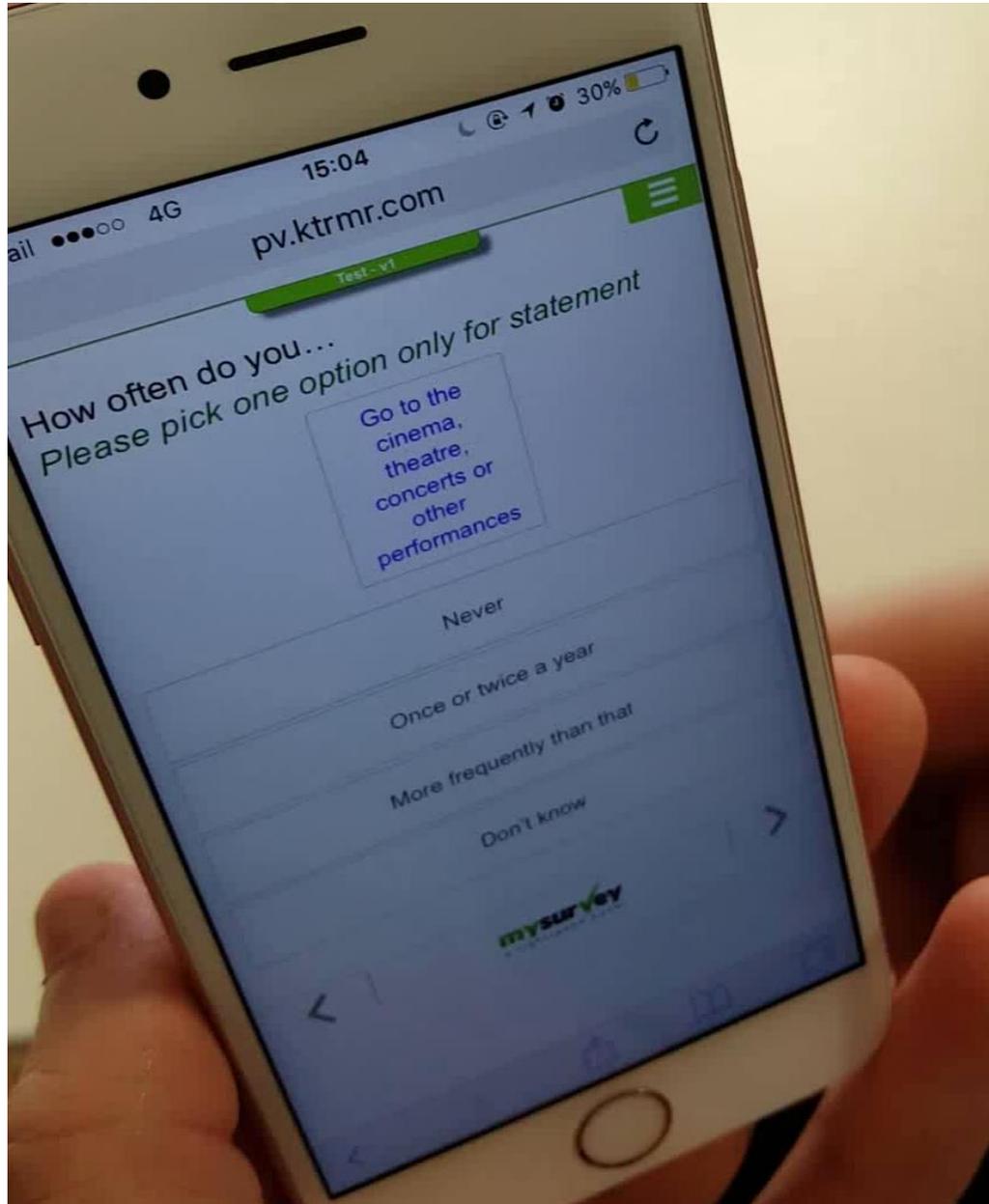
Never

Once or twice a year

More frequently than that

Don't know





Item by item paging



How often do you go to the cinema, theatre, concerts or other performances?

Please select one option only

- Never
- Once or twice a year
- More frequently than that
- Don't know



Item by item scrolling



How often do you...

Go to the cinema, theatre, concerts or other performances

- | | | | |
|-----------------------|-----------------------|---------------------------|-----------------------|
| Never | Once or twice a year | More frequently than that | Don't know |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Go to exhibitions, libraries or other cultural or historical sites

- | | | | |
|-----------------------|-----------------------|---------------------------|-----------------------|
| Never | Once or twice a year | More frequently than that | Don't know |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Attend a live sporting event

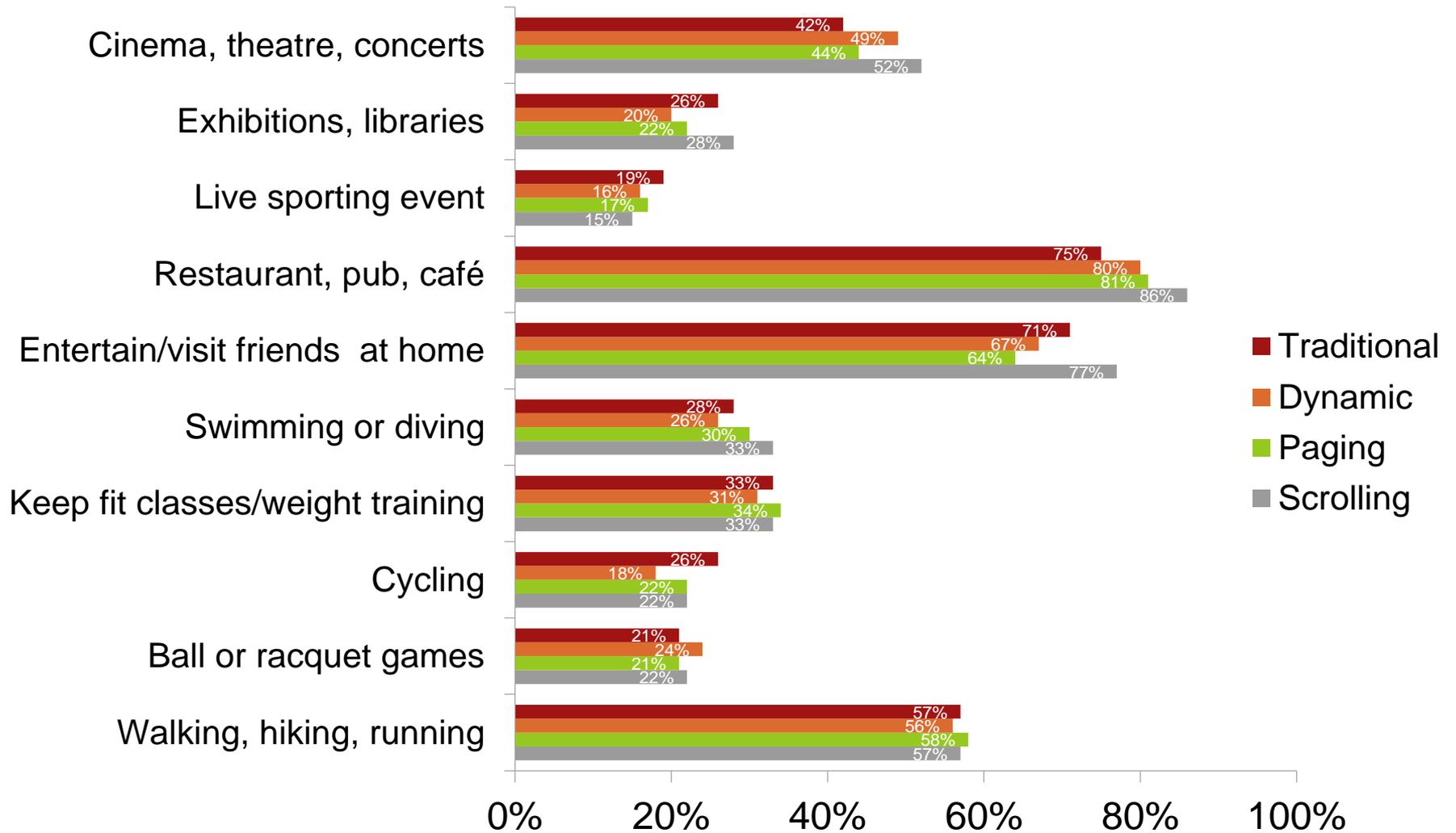
- | | | | |
|-----------------------|-----------------------|---------------------------|-----------------------|
| Never | Once or twice a year | More frequently than that | Don't know |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Eat or drink out at a restaurant, pub or café

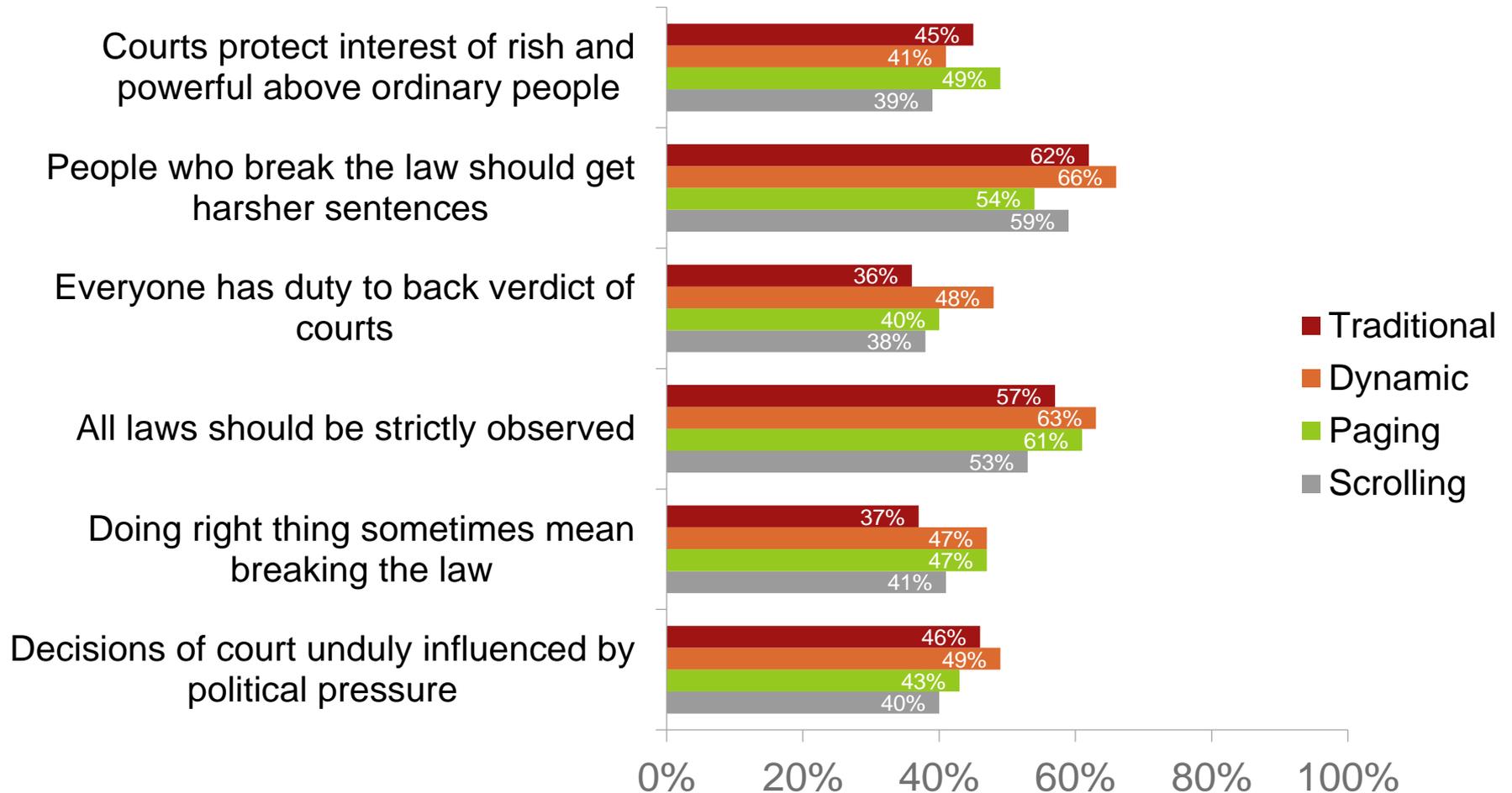
- | | | | |
|-----------------------|-----------------------|---------------------------|-----------------------|
| Never | Once or twice a year | More frequently than that | Don't know |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |



Q1 – proportions doing activities at least twice a year



Q2 – agreement with statements on courts and justice



Summary of emerging findings

Measure	Findings
Questionnaire length	<p>Item by item paging has longest completion times – difference greater for set 1</p> <p>Longer completion times for all formats on smartphones – bigger difference for traditional than dynamic grids</p>
'Don't know' rates	<p>For smartphones, rates a little higher for item by item paging, lower for dynamic grids – but differences not significant</p> <p>Typically higher DK rates for smartphones – dynamic grids for set 1 only exception</p>
Missing answers	<p>Low levels attempt to move on without selecting all answers for all formats; for smartphones, lower for dynamic grids versus traditional grids and item by item scrolling (difference significant)</p>
Flatlining	<p>Fairly low levels selecting same response to all items; for smartphone users slightly lower for dynamic and higher for traditional grids but differences not significant</p>

Conclusions

Conclusions

1

Growing demand to complete surveys by smartphone – all online surveys should now be designed with smartphones in mind

2

Work to date is encouraging – respondents can complete lengthy surveys on smartphones with few problems; issues to resolve not insurmountable

3

But – need for further analysis (data quality indicators, paradata) and experimentation (short vs. long questions, impact of device guidance)

4

Device usability testing valuable – recommend its inclusion as part of the development process for any new online survey

5

Different levels of ‘mobile optimisation’ – need to be clear what we mean when we describe ‘optimised’ surveys

6

Many issues discussed don’t just relate to smartphones – need to design clear, concise and well presented questions across devices and modes

Thank you

tim.hanson@kantarpublic.com

[@timhanson123](#)