

# **Emerging directions and challenges in survey methods**

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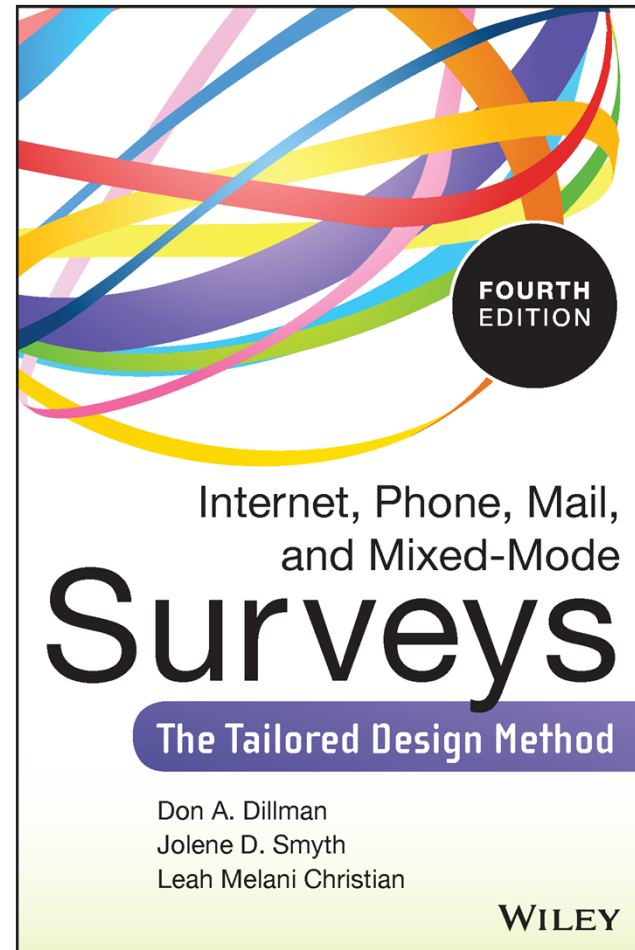


**New Next Month!!**

# **Internet, Phone, Mail, and Mixed Mode Surveys: The Tailored Design Method**

75% revision of the previous edition.

- Updated thoughts on social exchange theory and surveys.
- More holistic approach to thinking about survey design.
- More complete treatment of mixed-mode designs.
- Treatment of single-mode mail, internet, and telephone designs.
- 185 practical guidelines for questionnaire design, implementation, and pretesting.
- Companion website with pretesting and visual design resources, color figures, and example survey materials.



**Today's objective:**  
**To share some of the new ideas from this edition of the book and talk about growing survey issues that are of concern whether one is conducting a large national survey or a small survey as part of an evaluation.**



- Holistic design and interconnectivity among design features.
- The growing importance of trust for survey response.
- New design issues → mobile devices.

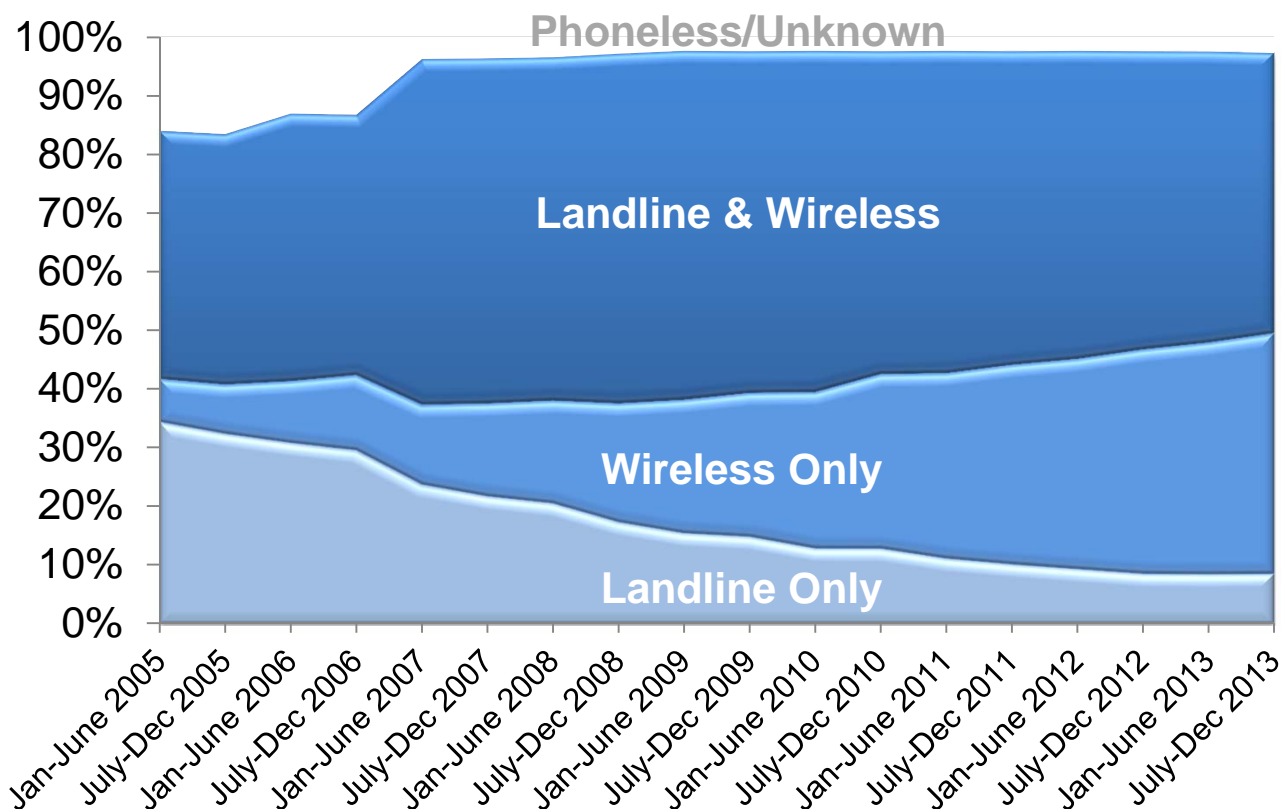


**We have more ways than ever  
of reaching people.**



# As of December 2013, 97% of U.S. households had telephone service.

Percent of U.S. Households With Telephone Service by Type: 2005-2013

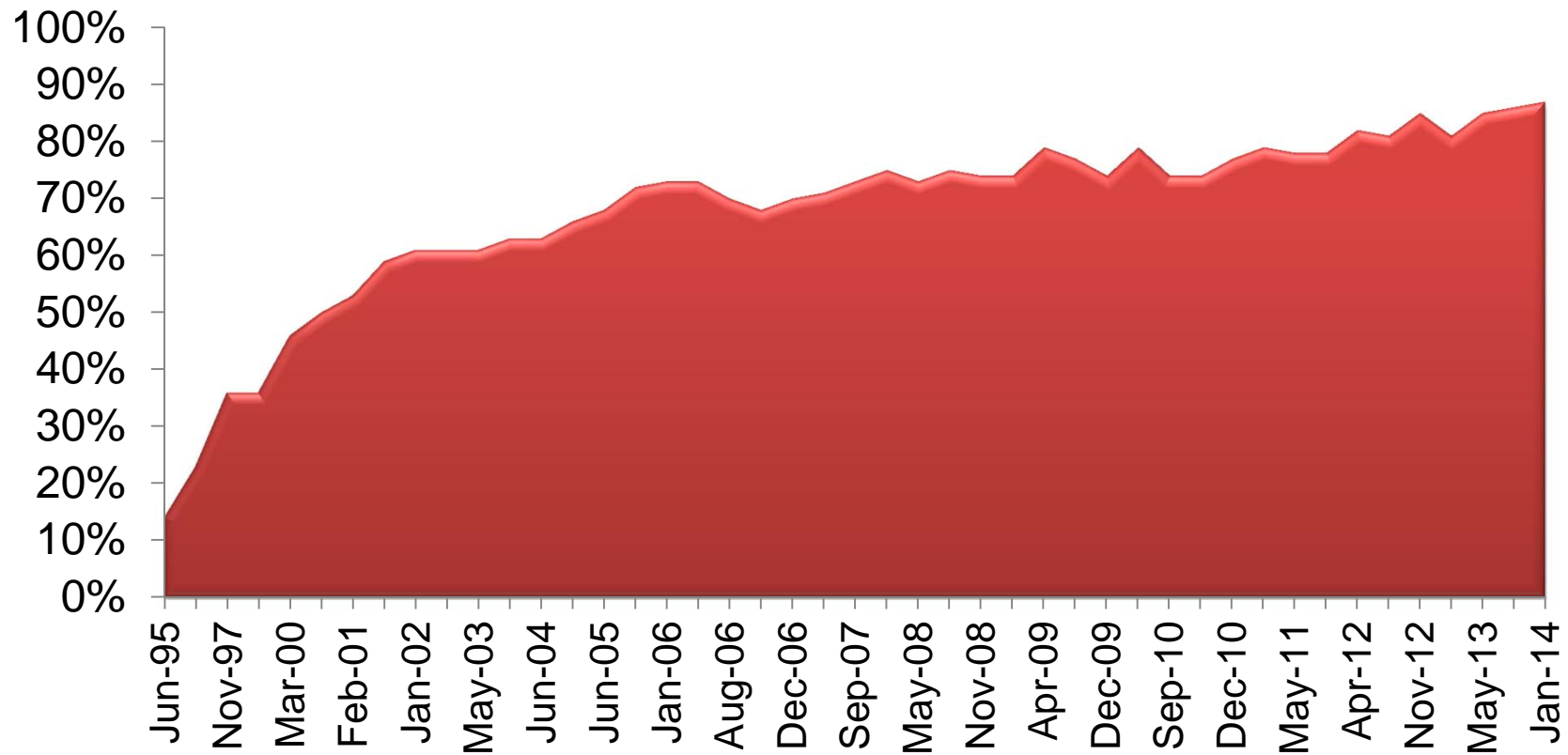


98% of U.S. adults have telephone service

Source: Blumberg, S.J. and Luke, J.V. (2014). Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, July-December 2012.



## As of January 2014, 87% of U.S. adults used the Internet.

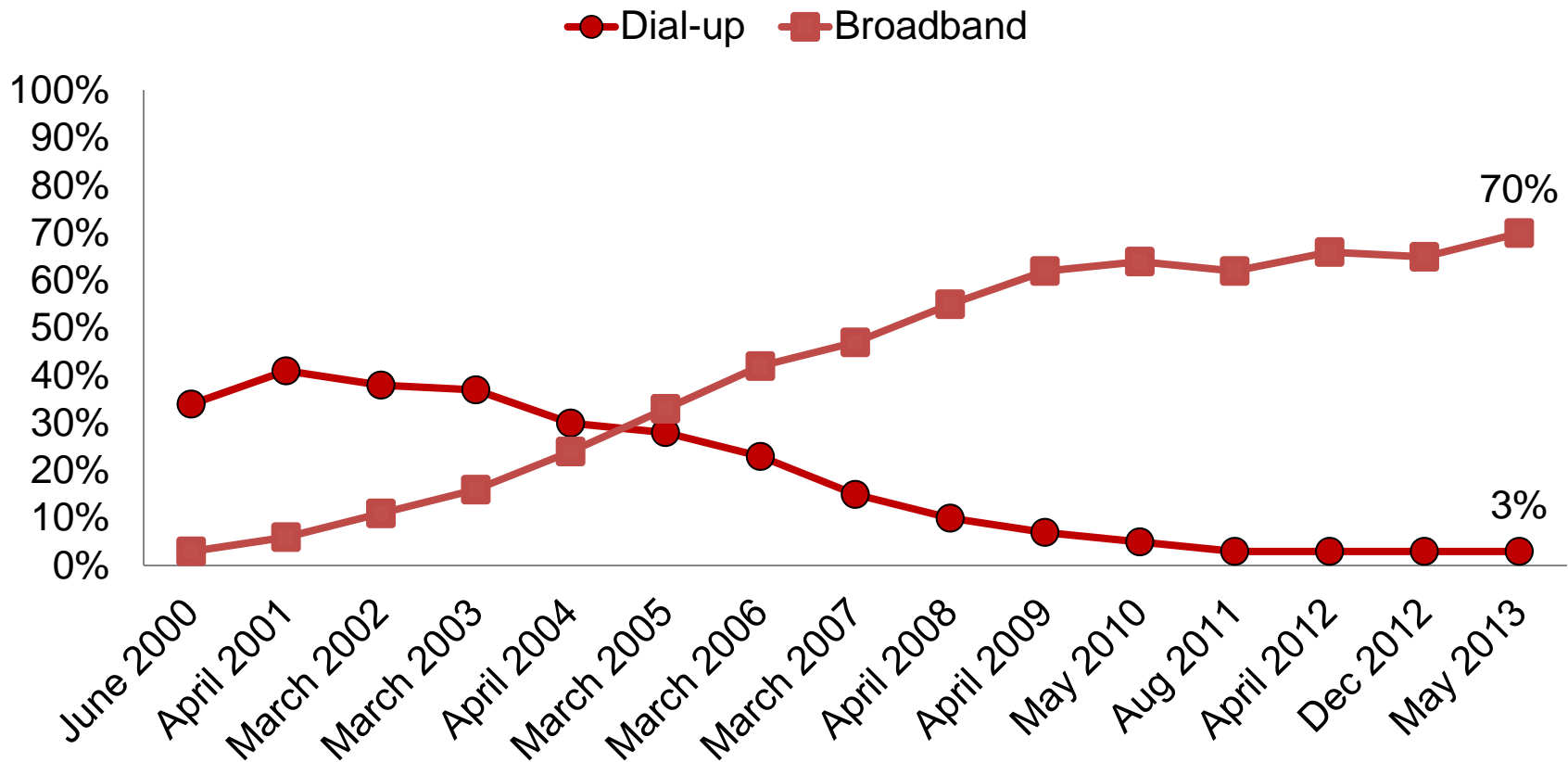


Source: Pew Internet & American Life Surveys,  
<http://www.pewinternet.org/data-trend/internet-use/internet-use-over-time/>



# 73% of U.S. adults have internet at home; 70% have broadband at home.

## Broadband and Dial-Up Adoption, 2000-2013



# Most people in the U.S. are reachable by postal mail.

- Over 95% of U.S. households are listed on the USPS Computerized Delivery Sequence file.
  - Made available in the early 1990s and widely adopted as a survey sample frame in the 2000s
  - Previously there was no good general population list of postal mail addresses.

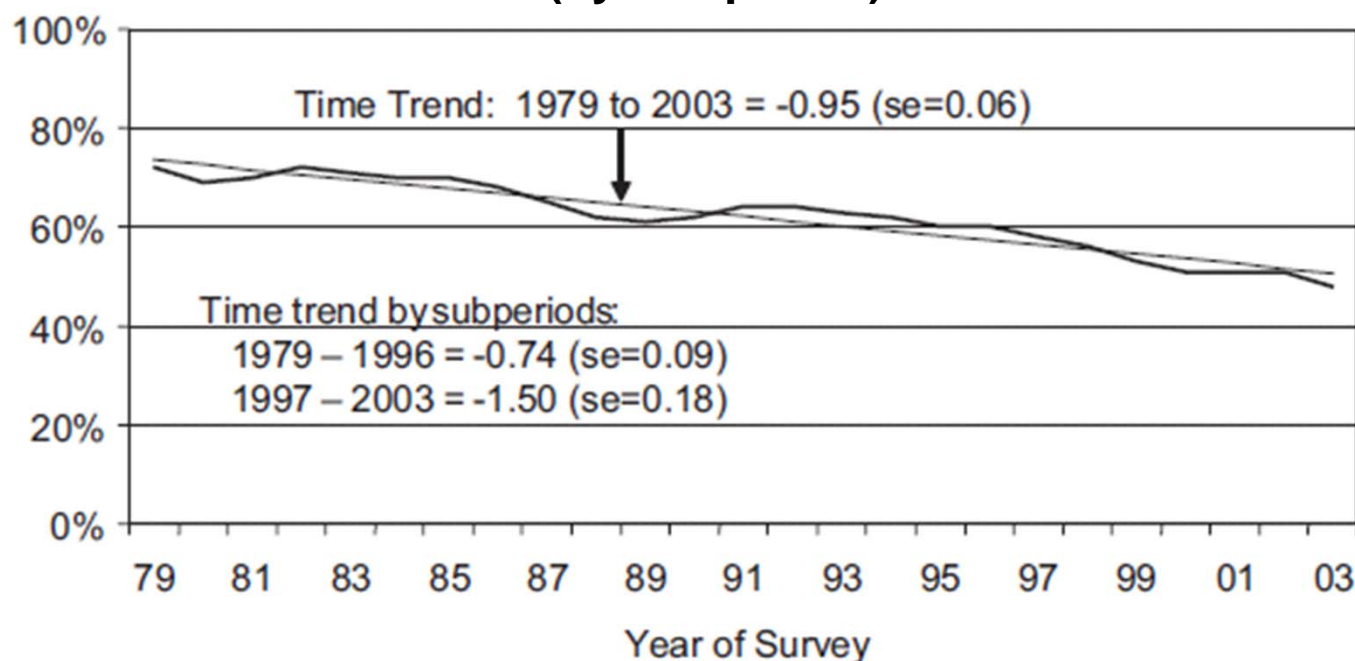


**We have more ways than ever  
of reaching people...BUT it is more difficult than ever  
to get people to respond to surveys.**



# Response rates to the Survey of Consumer Attitudes fell 33% from 1979 to 2003.

Response Rate by Year for the Survey of Consumer Attitudes (by Telephone): 1979-2003



## Average # of Calls/Complete

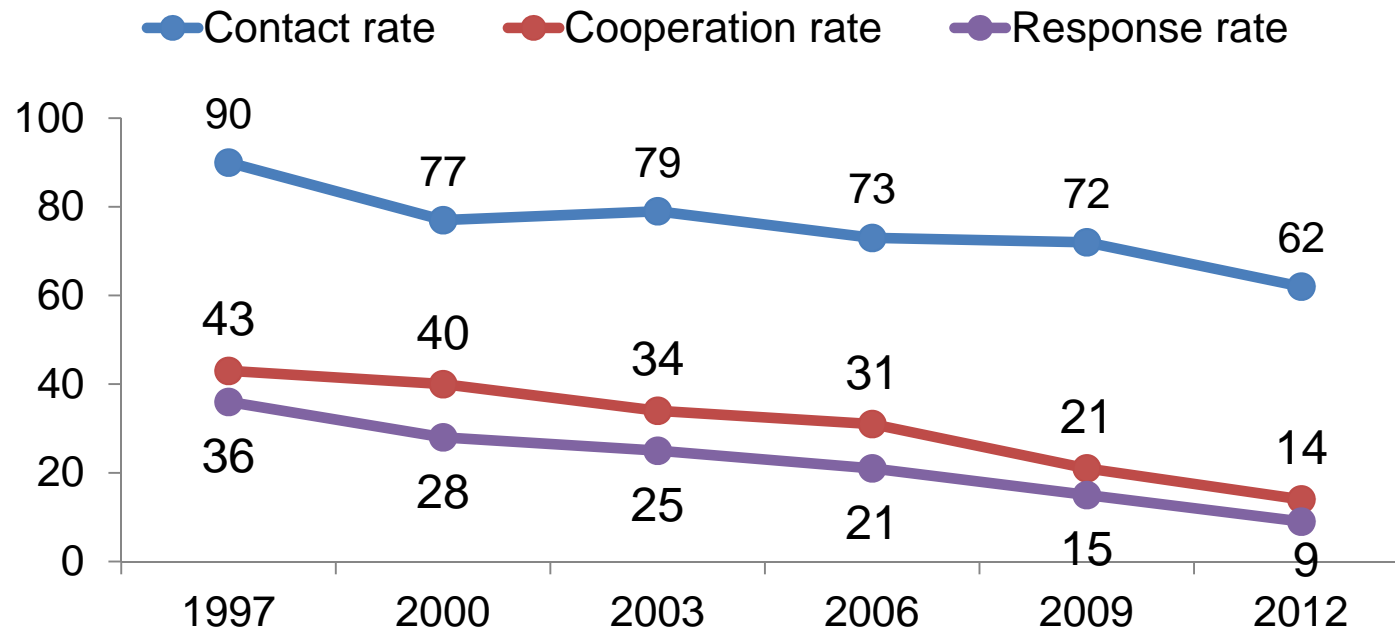
- 1979 – 3.9
- 1996 – 7.9

Source: Figure 1 from Curtin, Presser, & Singer. 2005. Changes in telephone survey nonresponse over the past quarter century. *Public Opinion Quarterly*. 69(1):87-98.



# Response rates to Pew Research Center telephone surveys have dropped 75% in recent years.

## Declining Telephone Contact, Cooperation, and Response rates in Pew Research Center Surveys

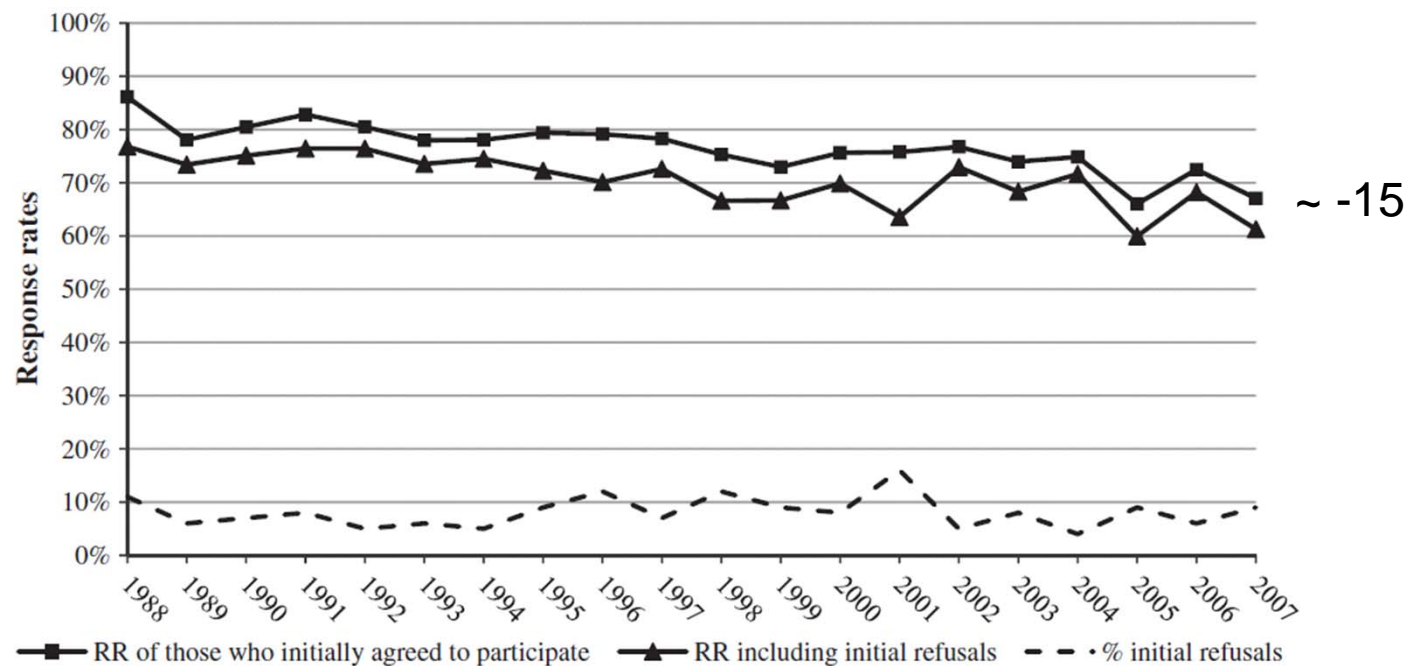


Source: Adapted from “Nonresponse and the Validity of Estimates From National Telephone Surveys,” by S. Keeter L. M. Christian, M. Dimock, and D. Gewurz, 2012. Paper presented at the annual conference of the American Association for Public Opinion Research.



# Response rates to mail surveys have also declined over time although not as steeply.

**Average Yearly Response Rates to Mail-Back Surveys of Visitors to US National Parks from 1988 - 2007**

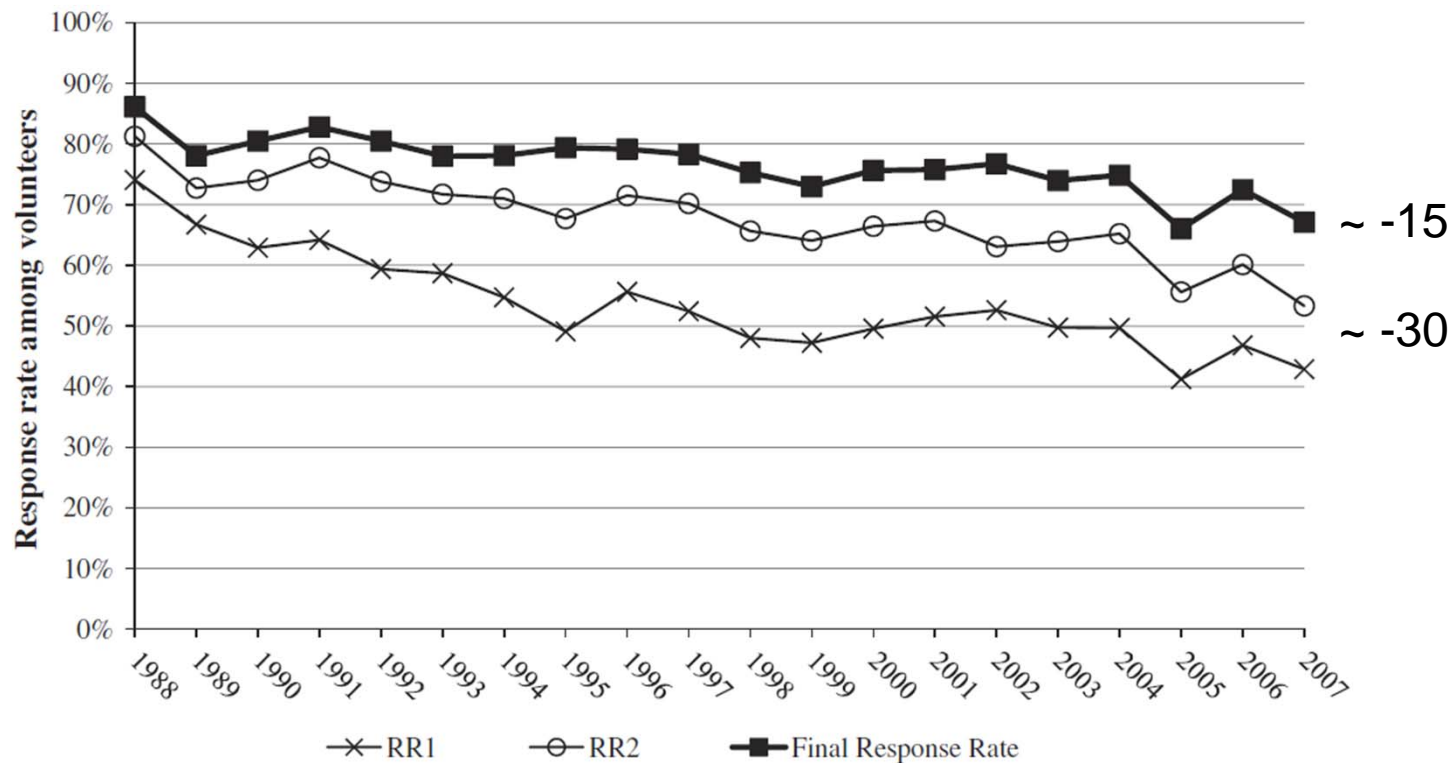


Source: Figure 1 from Rookey, Le, Littlejohn, and Dillman. 2012. Understanding the resilience of mail-back survey methods: An analysis of 20 years of change in response rates to national park surveys. Social Science Research. 41:1404-1414.



# Adding reminders has slowed the reduction in mail response rates somewhat.

Mean Response Rates to US National Park Surveys Prior to First Replacement (RR1), Prior to Second Replacement (RR2), and Final.



## **In this environment, we have to step up our game.**

- We can no longer afford to think in terms of single features that might increase our response rates.
- We have to think about holistic designs in which we combine multiple features that reinforce and build on one another.



# **I generally work from a social exchange perspective.**

- The social exchange perspective on human behavior assumes that people are more likely to comply with a request if they trust that the benefits of doing so will outweigh the costs.
  - The costs and benefits are not just economic. Social and psychological costs and benefits also matter.
  - People can be driven by a self-orientation, an other-orientation, or both.



**Working from the social exchange framework, the goal is to add features to our survey design that will maximize trust and benefits and minimize costs.**



# Trust seems particularly important right now.

- When lives are constrained by geography we can learn who to trust and who to distrust through personal interaction and accumulated experience. Reputations are built and are slow to change. Information travels slowly.
- Modern technology frees us from the constraints of geography and speeds information sharing.
  - Requests can come from unknown entities, both near and far, and both scrupulous and unscrupulous.
  - More requests can be made.
  - Information can be made immediately accessible and can be shared quickly.
- In this context, we have to make decisions quickly and a lot rides on those decisions. Protection of personal information becomes increasingly important.
  - It pays to be skeptical and suspicious and the safest response is no response to unknown requestors.

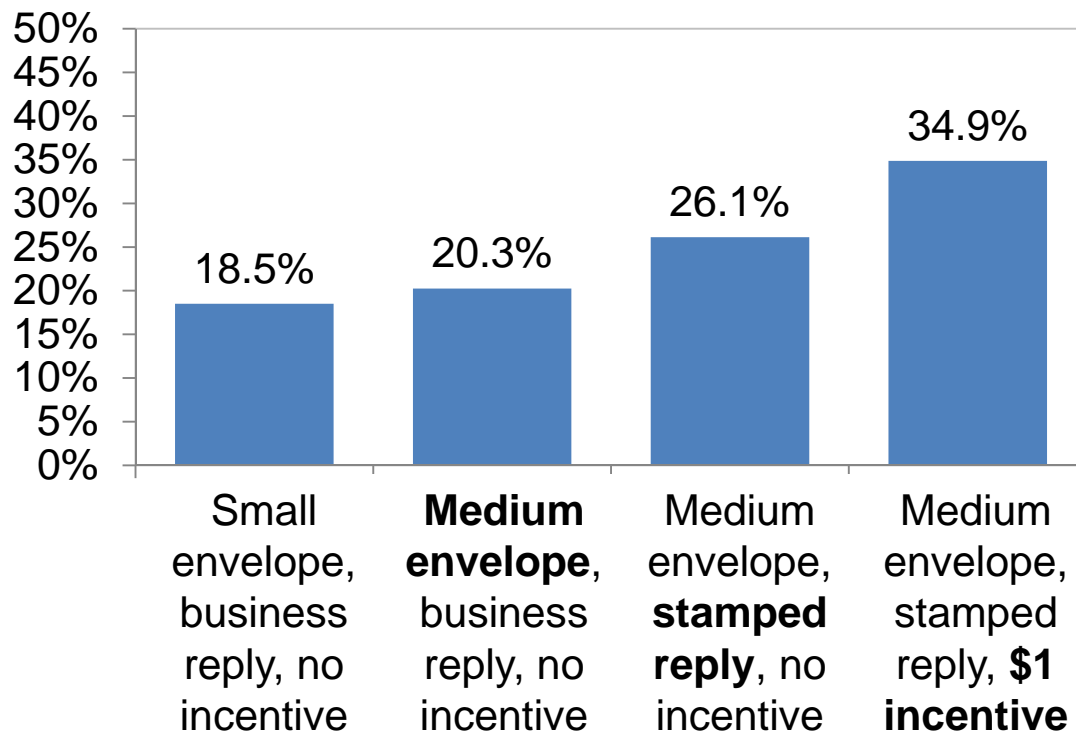


# Research shows that many features have additive effects on response rates.

1. Token cash incentives sent with request
  2. Multiple contacts
  3. Personalization
  4. Timing
  5. Larger outgoing envelopes
  6. Stamped reply envelopes
  7. Respondent-friendly questionnaire
  8. Salient questionnaire topic
  9. Short questionnaire
  10. Different delivery mode (e.g., federal express)
- We tend to think of these as isolated features of our design that work independently of one another.



## Effects of Outgoing Envelope Size, Reply Envelope Type, and Incentive on Response Rates



Address based sample of major metropolitan area

12 page booklet  
questionnaire about the community

No prenotice, but all treatments received a reminder postcard and a replacement questionnaire with a web option.

Source: Tarnai, Schultz, Pfingst, & Solet. 2012. Response rate effects in an ABS survey for stamped vs. business reply envelopes, with and without incentives, and medium vs. standard sized outgoing envelopes. Paper presented at the annual meeting of the American Association of Public Opinion Research, Orlando, FL.



**But it is also possible that the effect of certain features depends on the presence of other features (i.e., they are not independent of each other).**

- For example, in a mail survey:
  - We attempt to increase benefits in our communications by...
    - Telling how the results will be used
    - Asking for help or advice
    - Asking interesting questions
    - Stressing that opportunities to respond are limited
    - Conveying that others have responded
  - We attempt to decrease costs by...
    - Keeping the questionnaire short and simple
    - Providing a return envelope
    - Minimizing requests for personal information
  - These are good strategies, but they will not work if sample members do not open the envelope in the first place.
  - How do we get sample members to open the envelope?
    - Use a larger, more professional envelope
    - Highlight a trusted and respected sponsor on the envelope
    - Keep the envelope design professional, not “markety”



## Another example

- Many surveyors spend considerable time agonizing over whether or not to include an incentive and how much to give, and then throw together quickly written letters.
- We hope the incentive inspires reciprocity.
- But it probably also increases the likelihood that the letter gets read.
- If we do not consider this interconnection (and write a good letter!) we are not taking full advantage of the incentive.



## **Mixing modes can provide even more opportunities to take advantage of interconnections between design features.**

- Imagine we want to do a web survey of students at a university. We have their postal and email addresses.
- We could contact students by mail, but they might not be willing to transfer the URL from the letter to their browser (i.e., increased costs).
- We could contact them by email, but it is difficult to send an incentive by email (i.e., reduced benefits) and many students will be unwilling to click on the link we send them (i.e., low trust and high potential costs).
- What if we use both?



## An experiment has looked at mixing modes of contact in this type of student survey.

- Sample members were asked to respond to a web survey.
- Three different contact strategies (i.e., experimental treatments) were used.

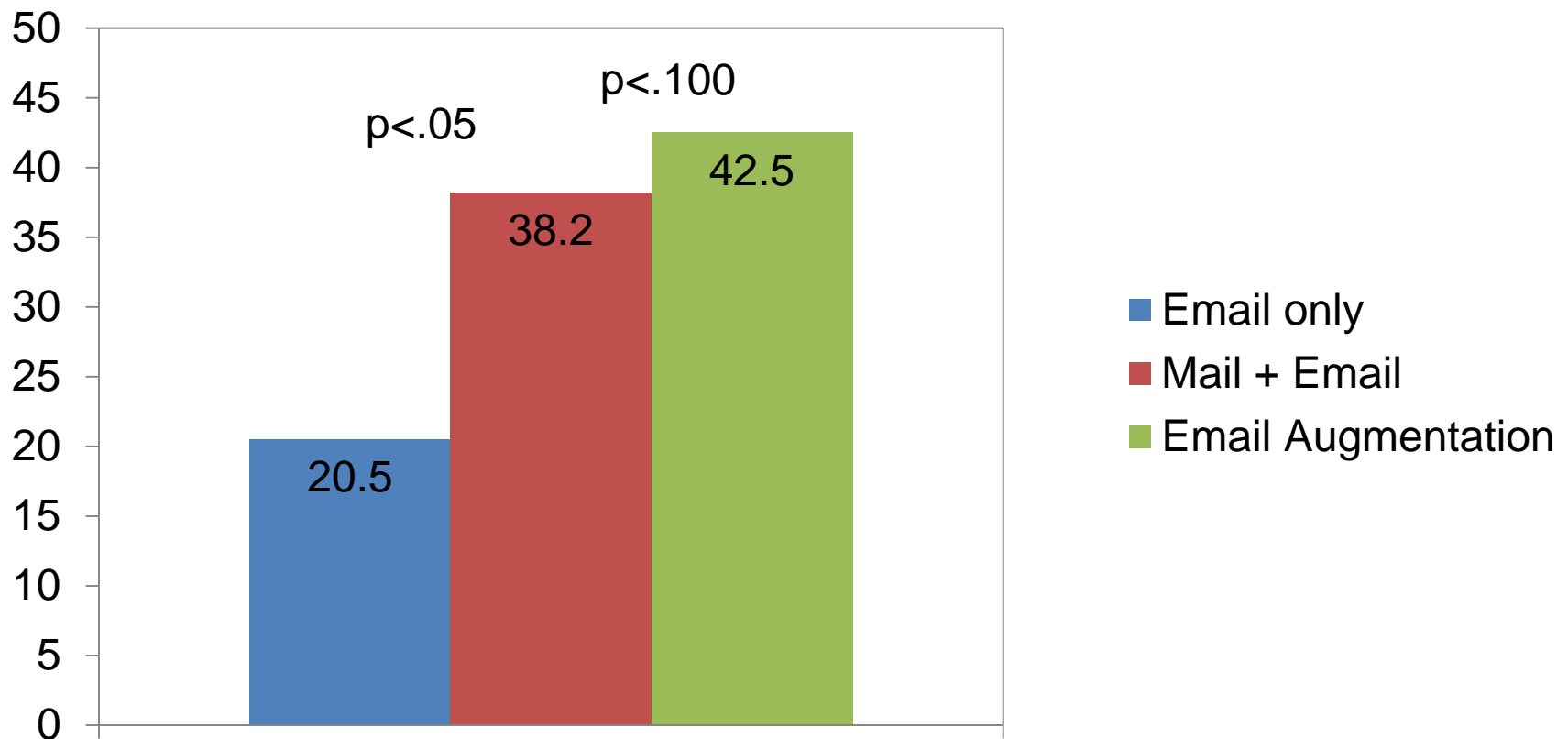
	Initial Invitation	Reminder 1	Reminder 2	Reminder 3	Reminder 4
Email-Only	E-mail	E-mail	E-mail	E-mail	E-mail
Mail+Email	Letter \$	E-mail	E-mail	E-mail	E-mail
Email Augmentation	Letter \$	E-mail	Letter	Letter	E-mail

Source: Millar, Morgan M. and Don A. Dillman. 2011. "Improving response to web and mixed-mode surveys." *Public Opinion Quarterly*. 75(2):249-269.



# Mixing postal and email contacts produced the highest response rate.

Response Rates by Contact Treatment



# Why did mixing modes work this way?

## Postal mail

- Increased the chances of delivery
  - No spam filters
  - Parents are very likely to pass university mail to students.
- Allowed the incentive to be used
  - Provided a benefit → reciprocity
  - Increased chances of the letter being read and considered.
  - Increased general trust
- Allowed for the use of sponsor's formal envelope and letterhead
  - Communicated the importance/legitimacy of the survey (i.e., trust)
  - Increased the likelihood that subsequent emails would be opened
  - Increased the likelihood that the survey link would be followed.

## E-mail contacts

- Provided a convenient link to the questionnaire (i.e., reduced costs).
  - Does not work without postal mail to set the stage.
- Showed positive regard – effort to make the survey more convenient (i.e., increased trust).



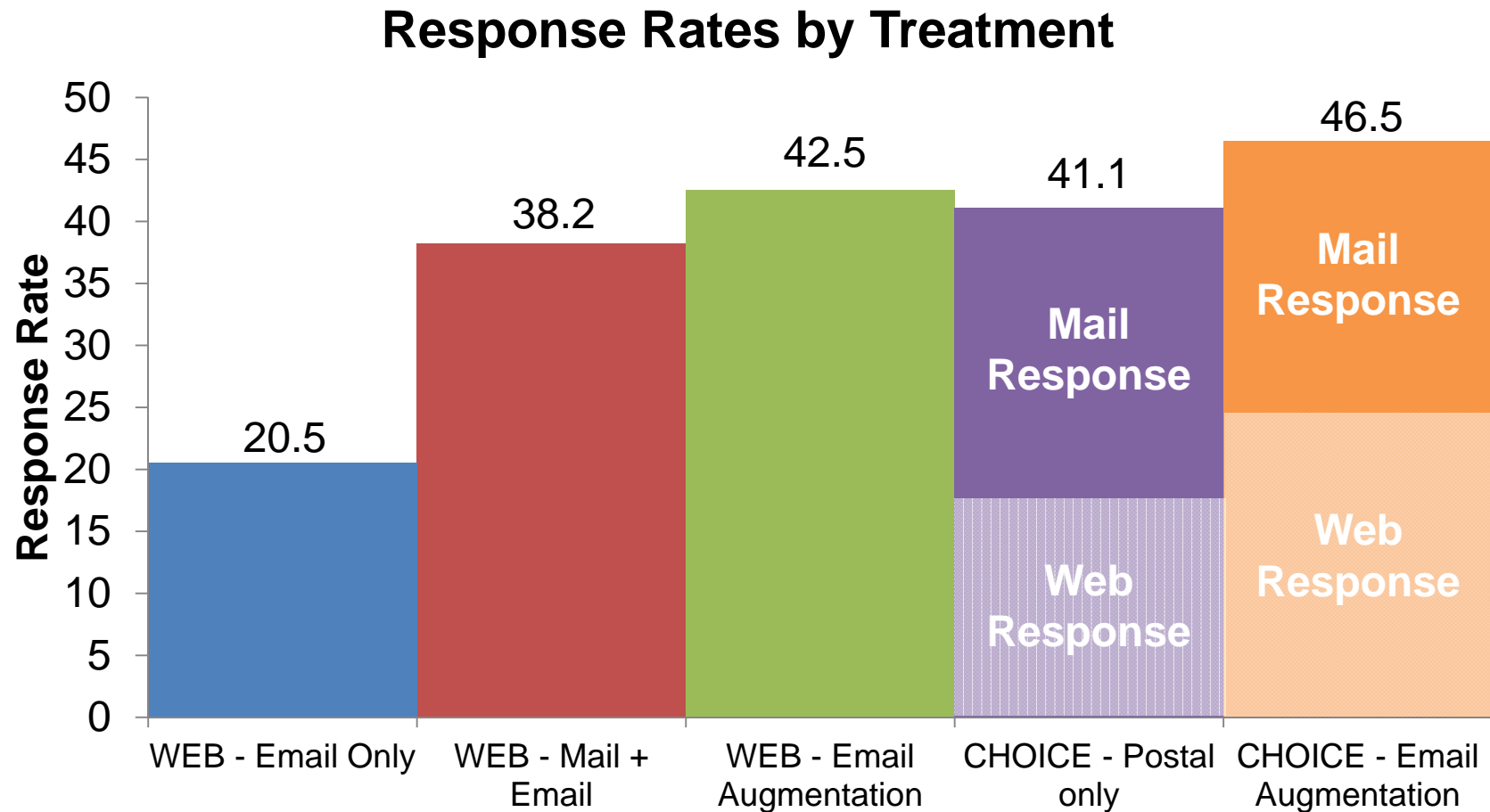
## Two additional treatments looked at what happens when respondents are given a choice of response mode.

- Sample members could choose to answer by mail or web.

	Initial Invitation	Reminder 1	Reminder 2	Reminder 3	Reminder 4
Mail Only	Letter \$	Postcard	Letter	Letter	Postcard
Email Augmentation	Letter \$	E-mail	Letter	Letter	E-mail

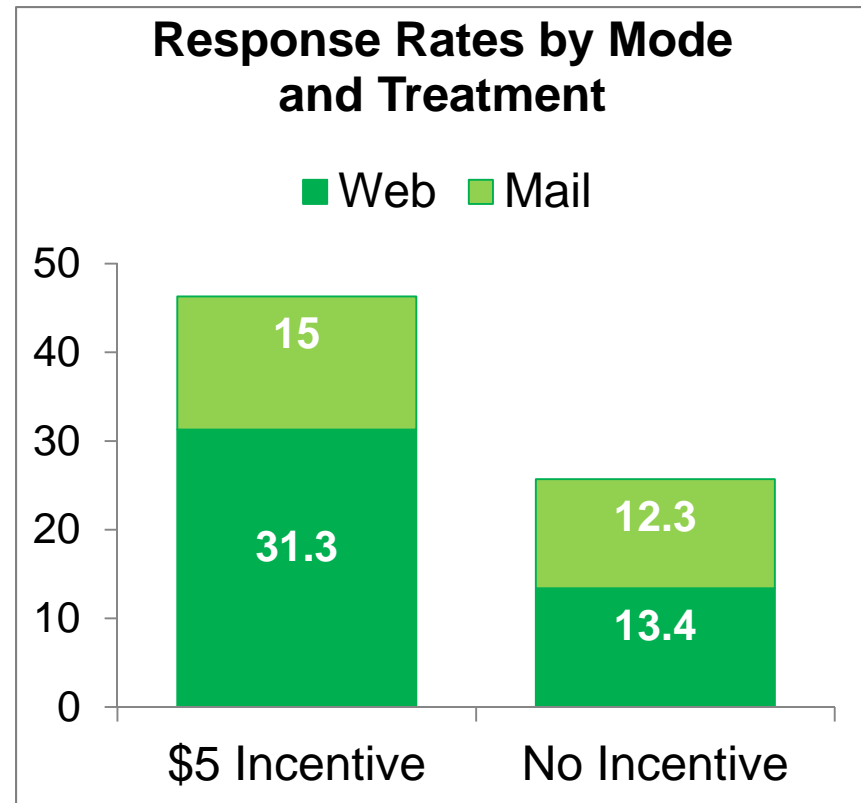


**Mixing contact modes increased response rates in the choice condition primarily by increasing people's willingness to complete the web survey.**



# Using trust-inducing features is key to getting web response: Incentive Example.

- 2008 Washington Community Survey
  - DSF sample of WA residents.
  - All contacts by postal mail.
  - Sequential mixed mode design - starts by offering web mode of response; later offers mail mode of response.
  - Trying to push people to the web
  - \$5 incentive vs. no incentive

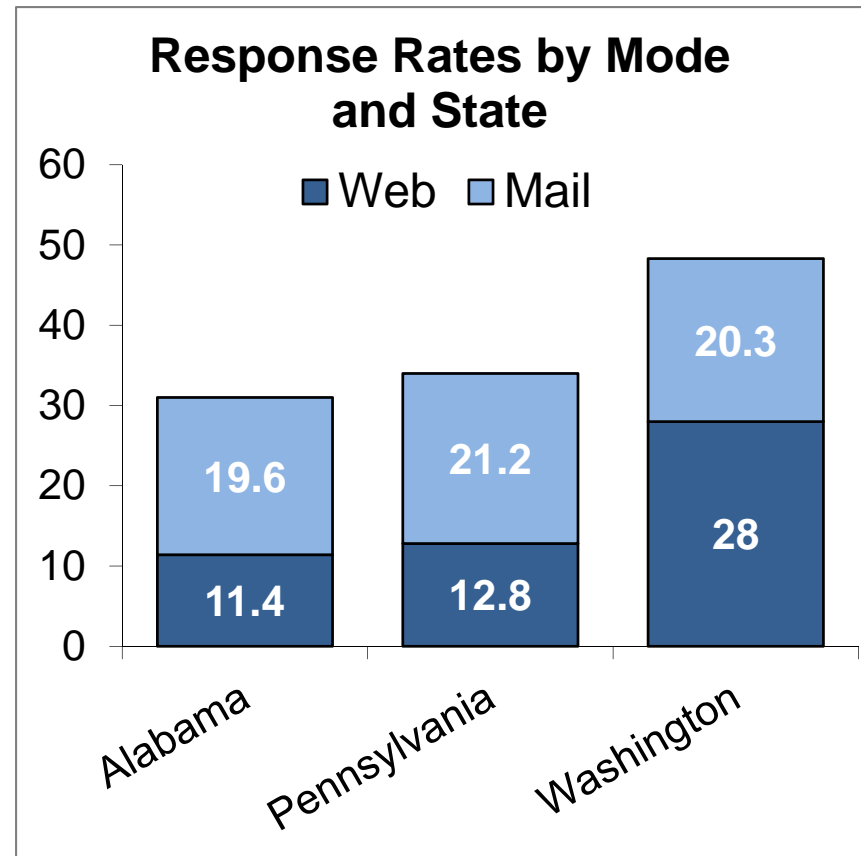


Source: Messer, Benjamin L. and Don A. Dillman. 2011. "Surveying the General Public Over the Internet Using Address-Based Sampling and Mail Contact Procedures. *Public Opinion Quarterly*. 75(3):429-457.



# Using trust-inducing features is key to getting web response: Proximity Example.

- 2011 Electricity Study
  - Sponsored by Washington State University
  - DSF samples from
    - Alabama
    - Pennsylvania
    - Washington
  - Sequential mixed mode design to push people to the web



Source: Messer, Benjamin L. 2012. "Pushing households to the web: Results from Web+mail experiments using address based samples of the general public and mail contact procedures." Ph.D. Dissertation. Washington State University, Pullman.



# Using trust-inducing features is key to getting web response: University Sponsorship Example.

- 2012 Water Management Survey
- Examined in- versus out-of-state sponsorship
  - SESRC at WSU; BOSR at UNL
- DSF Samples of WA and NE residents
- Sequential mixed-mode design

The image displays four survey posters arranged in a 2x2 grid. The left two posters are for 'Water in Nebraska' and the right two are for 'Water in Washington'. Each poster features a collage of water-related images: a glass of water, a water pump, a lake with a boat, a map of the state, a water faucet, a green hose, and a white crane. Below the collage, a red-bordered box contains the text: 'To be completed by the adult (age 19 and over) in your household who has had the most recent birthday.' Below this, a blue-bordered box contains the contact information for the research center. Arrows from the red-bordered boxes point to two larger boxes at the bottom of the slide.

**Water in Nebraska**  
A statewide study of people's opinions on water supplies and how they should be managed to meet resident concerns

**Water in Washington**  
A statewide study of people's opinions on water supplies and how they should be managed to meet resident concerns

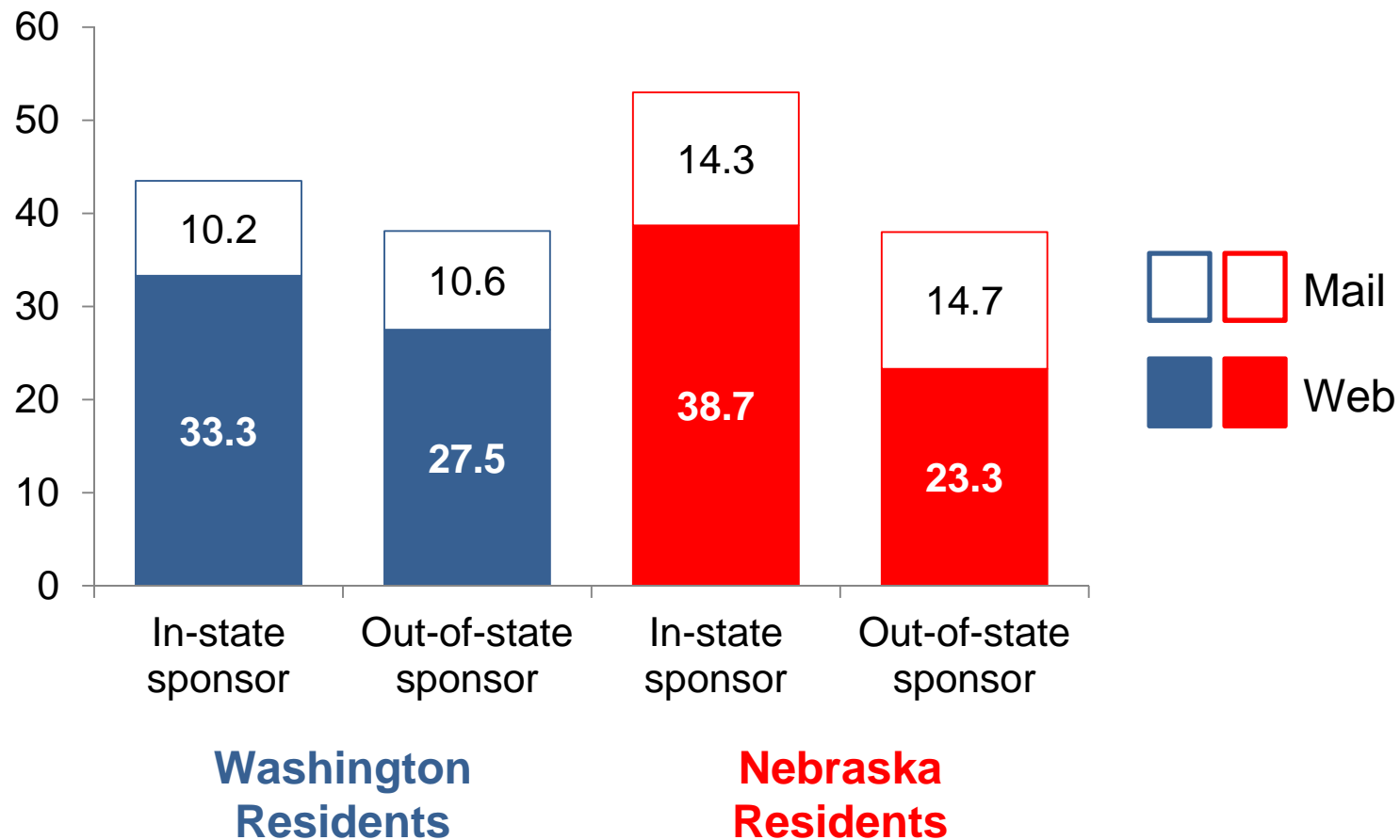
**Bureau of Sociological Research**  
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Nebraska, NE 68588  
1-800-833-0867

**Social and Economic Sciences Research Center**  
Washington State University  
Pullman, WA 99164  
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## Response Rates by State of Residency, Sponsorship, and Mode



Source: Edwards, Dillman, & Smyth. Forthcoming. An experimental test of the effects of survey sponsorship on internet and mail survey response. *Public Opinion Quarterly*.



- In today's challenging response environment, it is increasingly important to think about and take advantage of the interconnectedness of design features.
  - This requires a different way of thinking.
  - We need to produce a **holistic package of features** that support one another to encourage response.
  - We need to be especially careful to include trust-inducing features.



**The use of multiple-modes and multiple devices raises a host of new design challenges that can affect measurement.**



# Some of these have been researched

- Telephone consistently produces more extreme answers on ordinal scale questions than web and mail and is more prone to social desirability and acquiescence.
- There are few measurement differences across web and mail modes IF THEY ARE DESIGNED SIMILARLY (i.e., unified mode design).

## Mail

**Quality of Life in a Changing Nebraska**  
Taking a snapshot of issues affecting Nebraskans' quality of life.

**START HERE**

- On a scale from 1 to 11, where 1 is very dissatisfied and 11 is very satisfied, how satisfied are you with your work (job, school, or housework)?
- On a scale from 1 to 11, where 1 is very dissatisfied and 11 is very satisfied, how satisfied are you generally with the way you spend your leisure time?
- Please think about your relationship to your partner, spouse or date. On a scale from 1 to 11, where 1 is very dissatisfied and 11 is very satisfied, how satisfied are you currently with your relationship?
- On a scale from 1 to 11, where 1 is very dissatisfied and 11 is very satisfied, how satisfied are you currently with your life-as-a-whole?
- How many years have you lived in Nebraska?  
 Years lived in Nebraska
- How many years have you lived in your community?  
 Years lived in community

**Family**

- How many adults ages 19 and older are living in your household?  
 Number of adults living in household
- What is your marital status?  
☐ Married — Go to # 10  
☐ Never married  
☐ Widowed  
☐ Divorced  
☐ Separated
- Are you currently living with someone in a marriage-like relationship?  
☐ No  
☐ Yes
- Do you have any children aged 18 or younger at home?  
☐ No — Go to # 13  
☐ Yes
- If yes, do you think your children will stay in Nebraska when they grow up?  
☐ No  
☐ Yes — Go to # 12
- Do you want your children to stay in Nebraska when they grow up?  
☐ No  
☐ Yes
- Do you think that children today will be better off or worse off if they stay in Nebraska?  
☐ Better  
☐ Same  
☐ Worse

## Scrolling Web

**Quality of Life in a Changing Nebraska**  
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**START HERE**

- On a scale from 1 to 11, where 1 is very dissatisfied and 11 is very satisfied, how satisfied are you with your work (job, school, or housework)?
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- How many years have you lived in Nebraska?  
 Years lived in Nebraska
- How many years have you lived in your community?  
 Years lived in community

[Previous](#) [Next](#)

Contact us: Dr. Kristen Olson, 1-800-485-4545, E-mail: kholson@unl.edu  
URL: Bureau of Sociological Research, 110 Barton Hall, P.O. Box 530102, Lincoln, NE 68553-0102

## Mail

**Quality of Life in a Changing Nebraska**  
Taking a snapshot of issues affecting Nebraskans' quality of life.

**START HERE**

- Approximately how many years have you lived in the Lewiston-Clarkston area?  
 Years
- Overall, how satisfied are you with living in this area?  
☐ Very satisfied  
☐ Somewhat satisfied  
☐ Neutral  
☐ Somewhat dissatisfied  
☐ Very dissatisfied  
☐ Not sure
- How attached do you feel to the Lewiston-Clarkston area?  
☐ Very attached  
☐ Somewhat attached  
☐ Slightly attached  
☐ Not at all attached  
☐ Not sure
- During the past five years, how much better or worse do you think Lewiston-Clarkston has become as a place to live?  
☐ A lot better  
☐ Somewhat better  
☐ No change  
☐ Somewhat worse  
☐ A lot worse  
☐ Not sure
- How much better or worse do you think the local economy has become in the past five years?  
☐ A lot better  
☐ Somewhat better  
☐ No change  
☐ Somewhat worse  
☐ A lot worse  
☐ Not sure
- How much better or worse do you think the area's natural environment has become in the past five years?  
☐ A lot better  
☐ Somewhat better  
☐ No change  
☐ Somewhat worse  
☐ A lot worse  
☐ Not sure

## Paging Web

**Quality of Life Survey**

Question 1 of 51  
Approximately how many years have you lived in the Lewiston-Clarkston area?  
 Years [Next](#)

Question 2 of 51  
Overall, how satisfied are you with living in this area?  
☐ Very satisfied  
☐ Somewhat satisfied  
☐ Neutral  
☐ Somewhat dissatisfied  
☐ Very dissatisfied  
☐ Not sure [Next](#)

Question 3 of 51  
How attached do you feel to the Lewiston-Clarkston area?  
☐ Very attached  
☐ Somewhat attached  
☐ Slightly attached  
☐ Not at all attached  
☐ Not sure [Next](#)

Question 4 of 51  
During the past five years, how much better or worse do you think Lewiston-Clarkston has become as a place to live?  
☐ A lot better  
☐ Somewhat better  
☐ No change  
☐ Somewhat worse  
☐ A lot worse  
☐ Not sure [Next](#)

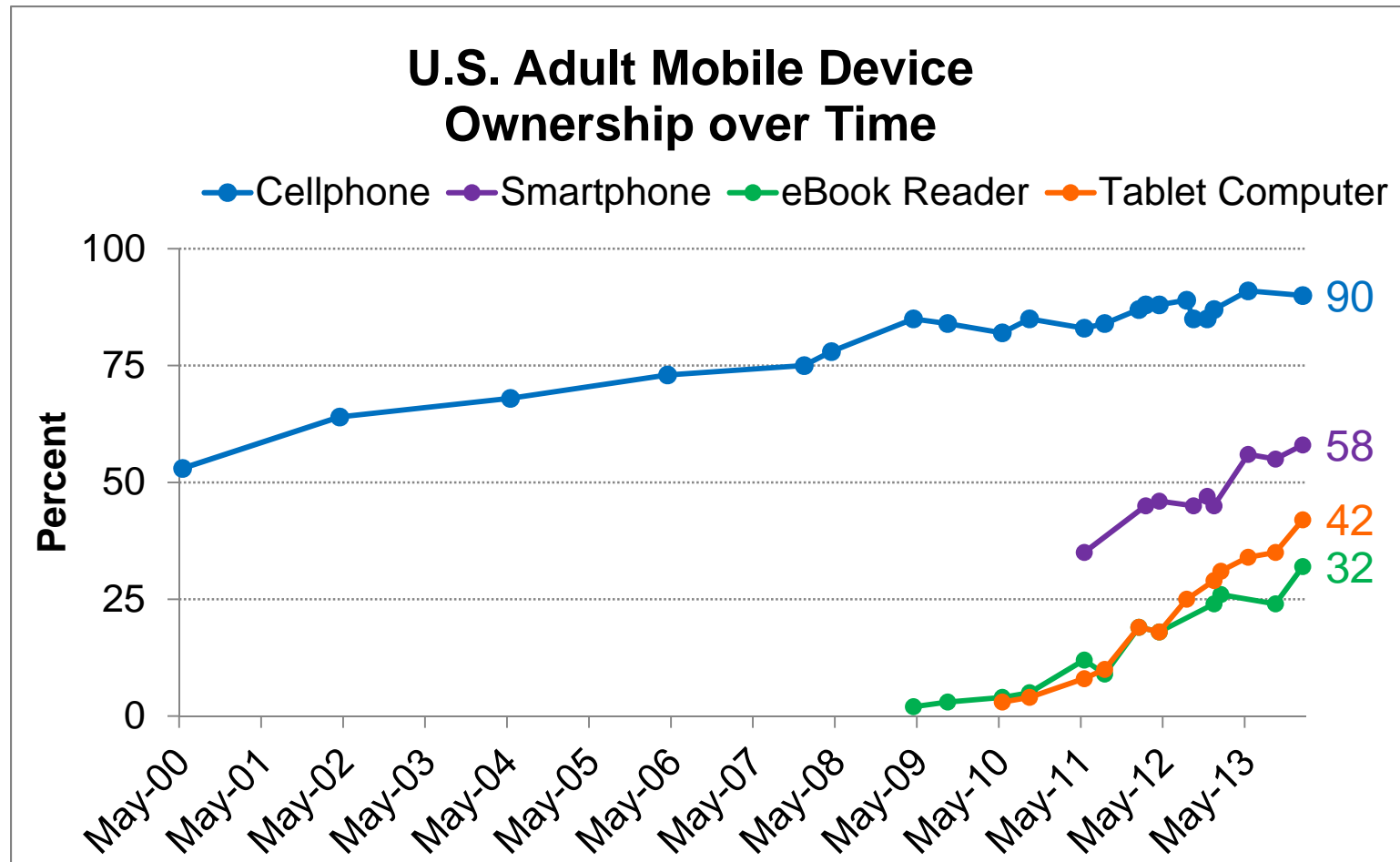


# Other, newer design issues have not yet been well researched.

- How do we design for consistent measurement across the wide variety of devices people use to connect to the internet?



# Most U.S. adults now have mobile devices.



Source: Pew Research Center <http://www.pewinternet.org/data-trend/mobile/device-ownership/>



# Many use their mobile devices to access the web.

- 63% of cell phone owners go online on their phones to browse or get email.
  - This is 57% of all Americans.
- 93% of smartphone owners use their phones to go online.
- 21% of cell phone owners go online mostly on their phone, not on another device.
  - This is about 19% of all Americans
- Nonwhites, young adults, the highly educated, high income, and urban people are more likely than their counterparts to use their cell phone to go online.
- Nonwhites, young adults, and those with low education and income are more likely than their counterparts to use their cellphone as their primary device for going online.

Source: Pew Research Internet Project. Cell Internet Use 2013.  
<http://www.pewinternet.org/2013/09/16/cell-internet-use-2013/>



# How many people answer web surveys on their phone?

- In most surveys, less than 10%
- But it can range up to 50% depending on the topic and survey population.
- Will likely continue to increase.
- Breakoff rates are much higher for those answering on mobile devices (~85% vs.~15%) and they give much shorter open-ended responses.



# Questions that are displayed well on a computer screen are severely truncated on a smartphone screen.

Quality of Life in a Changing Nebraska - Mozilla Firefox

Quality of Life in a Changing Nebraska

unl.edu | https://bosssurvey.unl.edu/UNLSurveyScience/index.php

Facebook UNL Soc SRAM UNL Libraries Home Blackboard UNL | NUgrant UNL Firefly Inlu3.unl.edu U.S. Bank Citi Bank AAPOR

**Quality of Life in a Changing Nebraska**  
Taking a snapshot of issues affecting Nebraskans' quality of life

1. For this question, we would like you to use a scale from 1 to 11, where 1 is very dissatisfied and 11 is very satisfied. How satisfied are you with your work? In addition to your job or paid employment, please include school, volunteer, or housework.

2. For this question, we would like you to use a scale from 1 to 11, where 1 is very dissatisfied and 11 is very satisfied. How satisfied are you with the way you spend your leisure time?

<< Previous Next >>

Contact us: Dr. Jolene Smyth, 402-472-7774, E-mail: NElife@soo.unl.edu  
University of Nebraska-Lincoln, Survey Research and Methodology Program, 201 North 19th Street, P.O. Box 800241, Lincoln, NE 68589-0241

AT&T 9:54 AM

iPhone 3G/4G & iPod Touch tester

https://bosssurvey.unl.edu/UNLSurveySci

**Quality of Life in**  
Taking a snapshot of is

1. For this question, we would like  
satisfied. How satisfied are you  
school, volunteer, or housewo

2. For this question, we would like

AT&T 9:54 AM

iPhone 3G/4G & iPod Touch tester

https://bosssurvey.unl.edu/UNLSurveyScience/index.php?sid=49281&l

**Quality of Life in a Changing Nebr**  
Taking a snapshot of issues affecting Nebras

1. For this question, we would like you to use a scale from  
satisfied. How satisfied are you with your work? In add



# The display of items in a grid is especially problematic for smartphones.

Quality of Life in a Changing Nebraska - Mozilla Firefox

UNL Survey Science

Quality of Life in a Changing Nebraska

16. Please indicate how satisfied or dissatisfied you are with the availability of each of the following in your community.

	Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied
Parks	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bicycle paths	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outdoor areas to hunt, fish, or hike	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sporting events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restaurants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fine arts (museums and theatres)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cell phone service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Libraries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

<< Previous   Next >>

Contact us: Dr. Jolene Smyth, 402-472-7774, E-mail: NElife@soc.unl.edu  
University of Nebraska-Lincoln, Survey Research and Methodology Program, 201 North 13th Street, P.O. Box 880241, Lincoln, NE 68588-0241

AT&T 9:54 AM

iPhone 3G/4G & iPod Touch tester

https://boisr survey.unl.edu/UNLSurveyScience/index.php?sid=49281&l

16. Please indicate how satisfied or dissatisfied you are w  
community.

Very Satisfied

Parks

Bicycle paths

AT&T 9:54 AM

iPhone 3G/4G & iPod Touch tester

https://boisr survey.unl.edu/UNLSurveyScience/index.php?sid=49281&l

Very Satisfied Satisfied

Parks

Bicycle paths

Outdoor areas to hunt, fish, or hike

Sporting events

Restaurants

AT&T 9:54 AM

iPhone 3G/4G & iPod Touch tester

https://boisr survey.unl.edu/UNLSurveyScience/index.php?sid=49281&l

Restaurants

Fine arts (museums and theatres)

Cell phone service

Internet access

Libraries

Next >>



# Many web survey programs will “optimize” for mobile devices to overcome these problems.

- This works well for some questions.

## Select One – Multiple Choice Question

How often do you conduct surveys?

- ☒ Weekly  
☐ Monthly  
☐ Quarterly  
☐ Annually  
☐ Other

## Select Many – Multiple Choice Question

What types of credit cards do you have (Select all that apply)?

- ☐ Visa  
☐ Mastercard  
☐ American Express  
☐ Discover  
☐ Diners Club  
☐ Other

The image shows a mobile survey interface on a smartphone screen. At the top, the status bar shows 'Sprint' and '1:58 PM'. The browser address bar shows 'questionpro.com'. Below the address bar, there is a blue header with the text 'Survey Title: Standard Question types.' and a progress bar at 100%. A blue link 'Exit Survey' with a right arrow is visible. The main content area displays the question 'How often do you conduct surveys?' with radio button options: Weekly (selected), Monthly, Quarterly, Annually, and Other (with an adjacent text input field). Below this, the text 'Select Many - Multiple Choice' is partially visible.

The image shows a mobile survey interface on a smartphone screen. At the top, the status bar shows 'Sprint' and '1:58 PM'. The browser address bar shows 'questionpro.com'. Below the address bar, there is a white header with the text 'Select Many - Multiple Choice Question'. The main content area displays the question 'What types of credit cards do you have (Select all that apply)?' with checkbox options: Visa, Mastercard, American Express, Discover, Diners Club, and Other (with an adjacent text input field). Below this, the text 'Drop Down Menu - Multiple' is partially visible.

- For others, small differences may or may not impact results.

**Drop Down Menu - Multiple Choice Question**

How often do you conduct surveys?

-- Select --

**Scrolling Select list - Multiple Choice Question**

What types of credit cards do you have (Select all that apply)?

Visa  
Mastercard  
American Express  
Discover

Continue

Response options are visually grouped with question stem

**Drop Down Menu - Multiple Choice Question**

How often do you conduct surveys?

-- Select --

**Scrolling Select list - Multiple Choice Question**

What types of credit cards do you have (Select all that apply)?

Visa  
Mastercard  
American Express  
Discover

Continue

Please contact

Response options are visually distinct from question stem



- For still others, big differences are likely to impact results.

How satisfied are you with the following?

	Poor	Average	Good
Product	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sales	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Items appearing in a grid are more likely to be compared to one another.

Items are more isolated and so less likely to be compared to one another.

Sprint 1:55 PM questionpro.com

**Examples for Matrix Table Type Questions**

**Multi-Point Scales Matrix Question**

How satisfied are you with the following?

Product  
Poor

Sales  
-- Select --

Service  
-- Select --

Checkbox / Multi-Select

Sprint 1:56 PM questionpro.com

**How satisfied are you with the following?**

Product  
Poor

Sales  
-- Select --

Service  
-- Select --

Done

-- Select --

Poor

Average

Good



## Example for Image / Multimedia Type Questions

Please select your primary card



Amex



Discover



Visa

Please select your favorite



Facebook



Twitter



Google+

YouTube

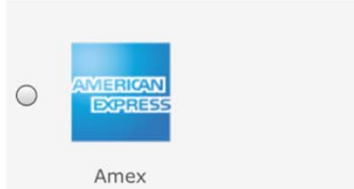
All response options are visible at once.

Some response options are not visible without scrolling.

Sprint 2:05 PM questionpro.com

## Example for Image / Multimedia Type Questions

Please select your primary card



Amex



Discover

Sprint 2:05 PM questionpro.com

Please select your favorite social networking website:



Facebook



Twitter



How satisfied are you with the following:

Like 0 100 Dislike

Website

Service

Overall

Long scales with verbal and numeric endpoint labels.

Much shorter scales with no endpoint labels.

Sprint 2:04 PM questionpro.com

**Numeric and Categorical Slider Type Questions**

**Numeric Slider Question**

How satisfied are you with the following:

Website

Service

Overall

**Categorical (text) Slider Question**

How satisfied are you with the



How satisfied are you with the following:

	Unsatisfied	Neutral	Satisfied
Website	<input type="range"/>		
Service	<input type="range"/>		
Overall	<input type="range"/>		

Slider scale with 3 drop points spreads the response options out quite wide.

Drop-down question format with entirely different visual design.

Sprint 2:04 PM questionpro.com

**Question**

How satisfied are you with the following:

Website  
-- Select --

Service  
-- Select --

Overall  
-- Select --

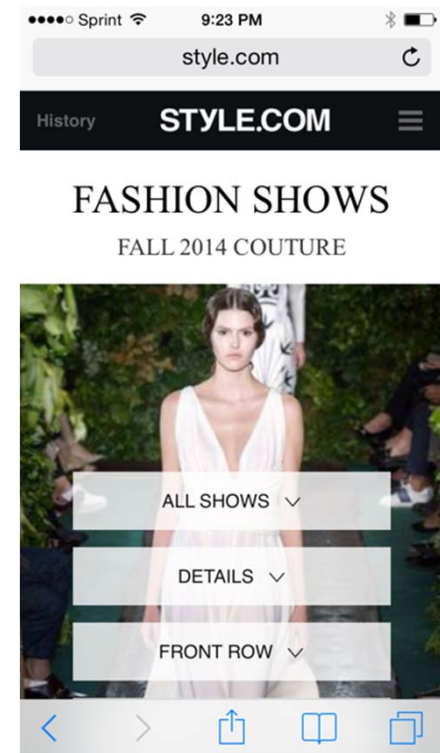
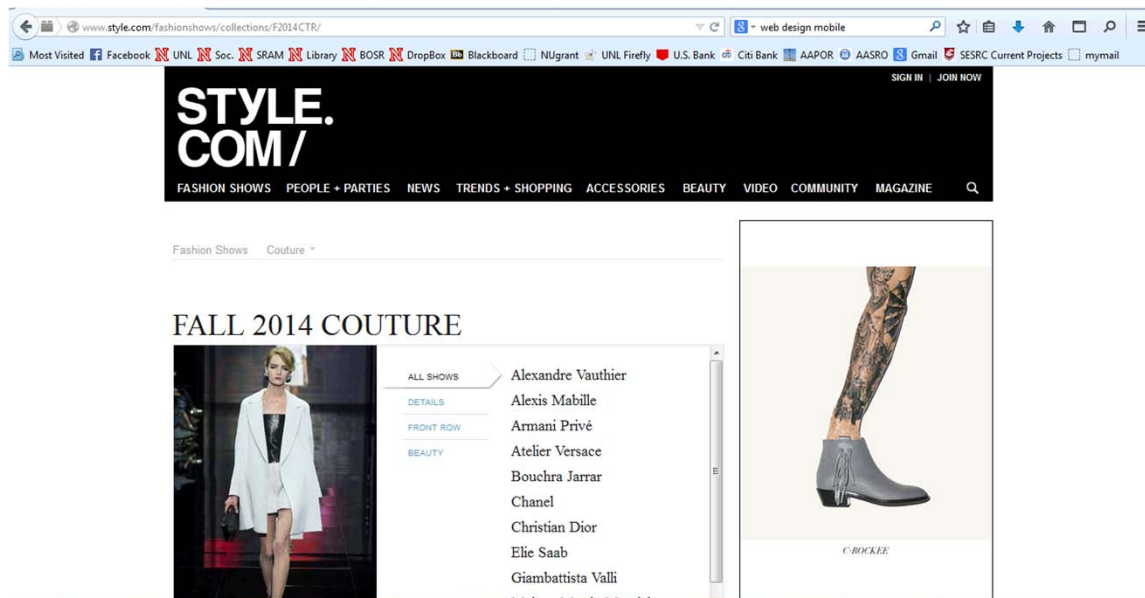
< > Done

-- Select --

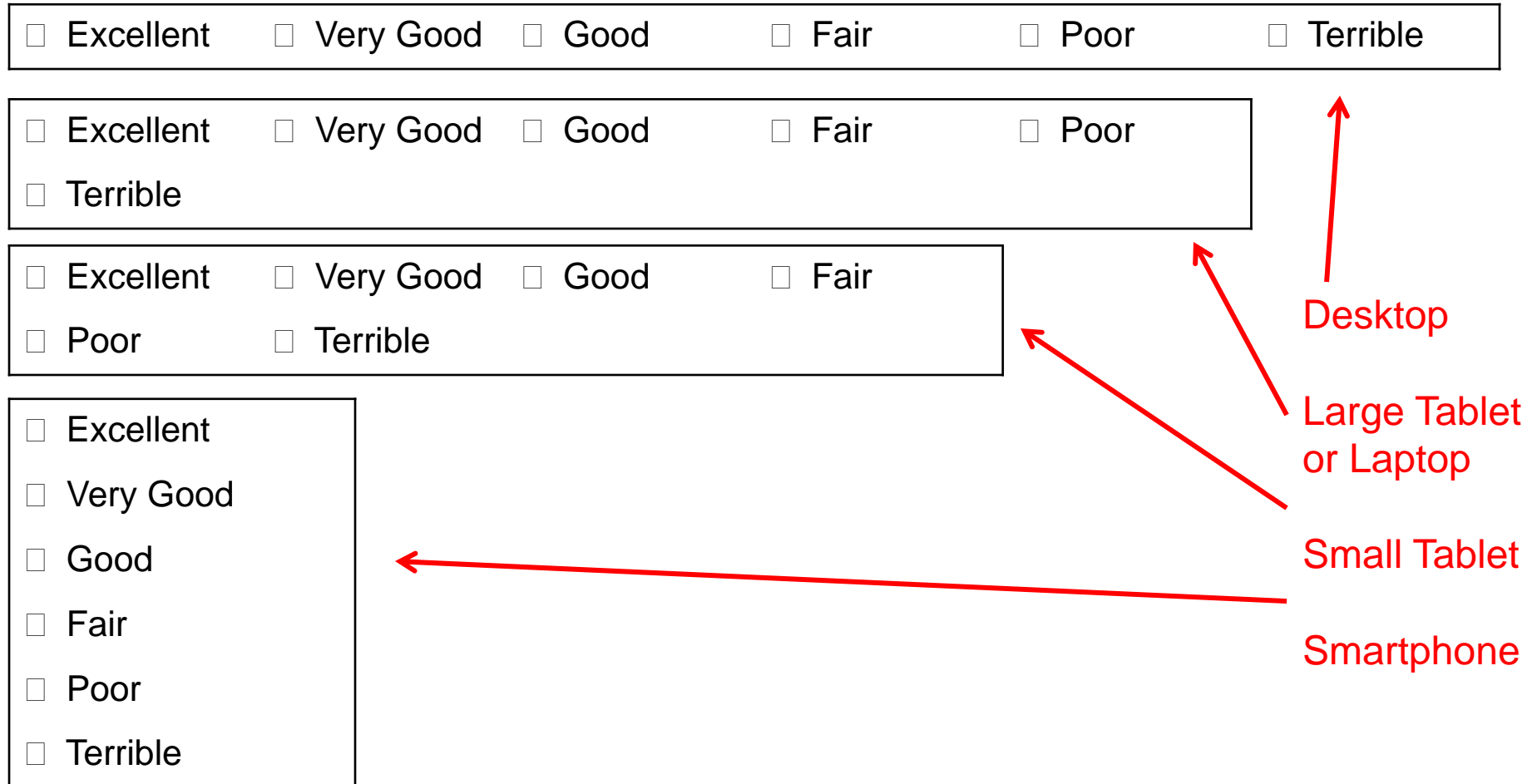
Unsatisfied  
Neutral  
Satisfied



**“Adaptive design” is big among website programmers right now, but may be problematic for surveyors.**



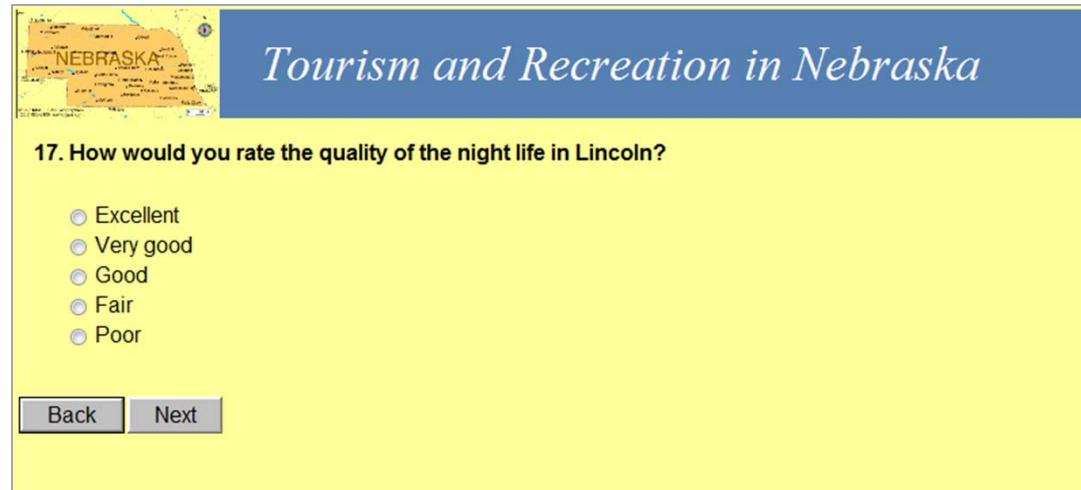
**In an adaptive design, a horizontal scale would wrap as the screen or window size is reduced.**



# Research in web surveys has examined vertical vs. horizontal alignment of response options.

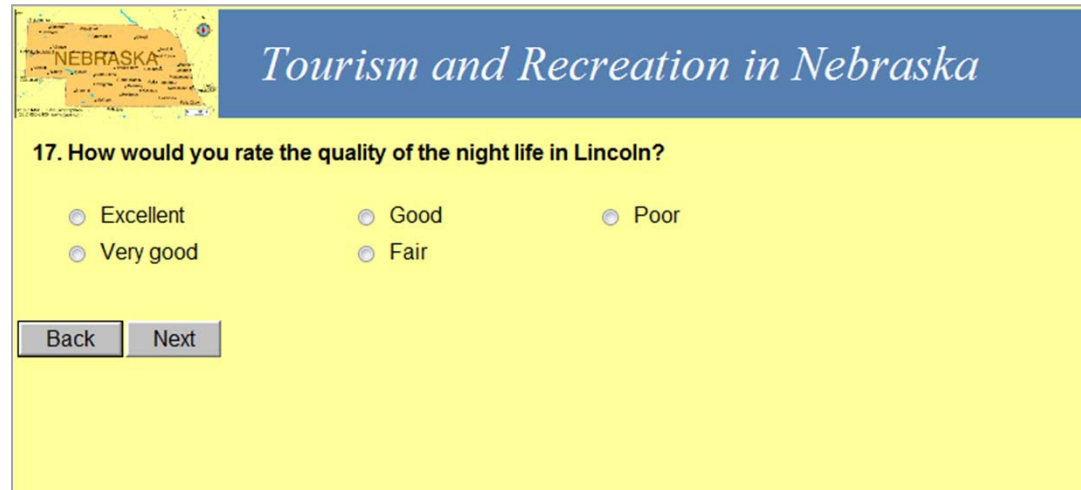
## Question 17

- Linear



The screenshot shows a web survey interface for "Tourism and Recreation in Nebraska". It features a map of Nebraska in the top left corner. The question is "17. How would you rate the quality of the night life in Lincoln?". The response options are listed vertically: "Excellent", "Very good", "Good", "Fair", and "Poor", each with a radio button. At the bottom, there are "Back" and "Next" buttons.

- Non-linear




The screenshot shows a web survey interface for "Tourism and Recreation in Nebraska". It features a map of Nebraska in the top left corner. The question is "17. How would you rate the quality of the night life in Lincoln?". The response options are arranged in two rows: "Excellent", "Good", and "Poor" in the first row, and "Very good", "Fair", and an empty space in the second row. Each option has a radio button. At the bottom, there are "Back" and "Next" buttons.

Source: Zhou, Quan, Jolene D. Smyth, and Kristen Olson. 2013. The Effect of Graphic Layout of Question Stem and rating Scales on Respondents' Behavior. Paper presented at the Midwest Association for Public Opinion Research, Chicago, IL.

## Question 30

- Linear




### *Tourism and Recreation in Nebraska*

30. How would you rate the quality of the park system in Lincoln? This includes regional, community, and neighborhood parks.

- ☐ Excellent
- ☐ Very good
- ☐ Good
- ☐ Fair
- ☐ Poor

- Non-linear



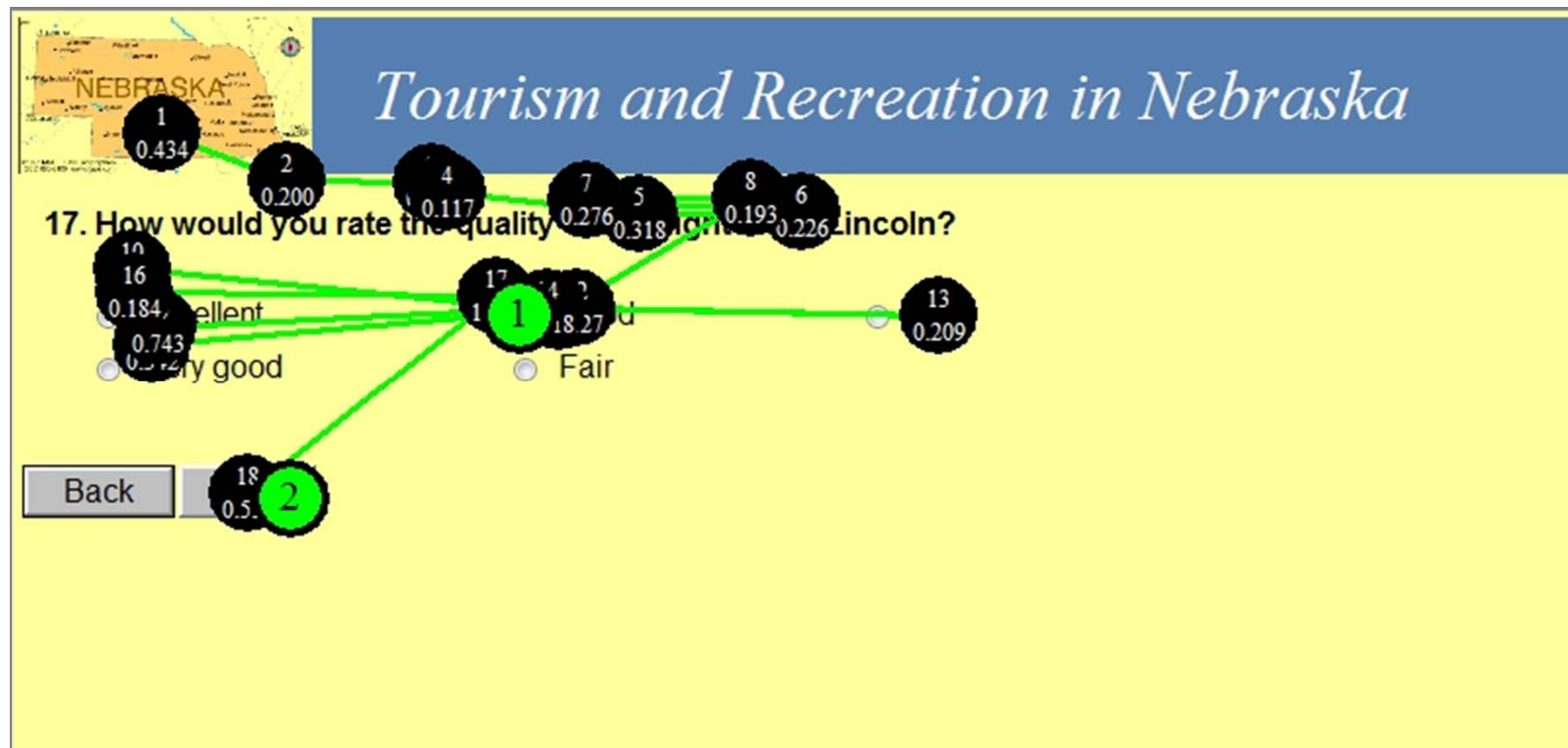
### *Tourism and Recreation in Nebraska*

30. How would you rate the quality of the park system in Lincoln? This includes regional, community, and neighborhood parks.

<input type="radio"/> Excellent	<input type="radio"/> Good	<input type="radio"/> Poor
<input type="radio"/> Very good	<input type="radio"/> Fair	

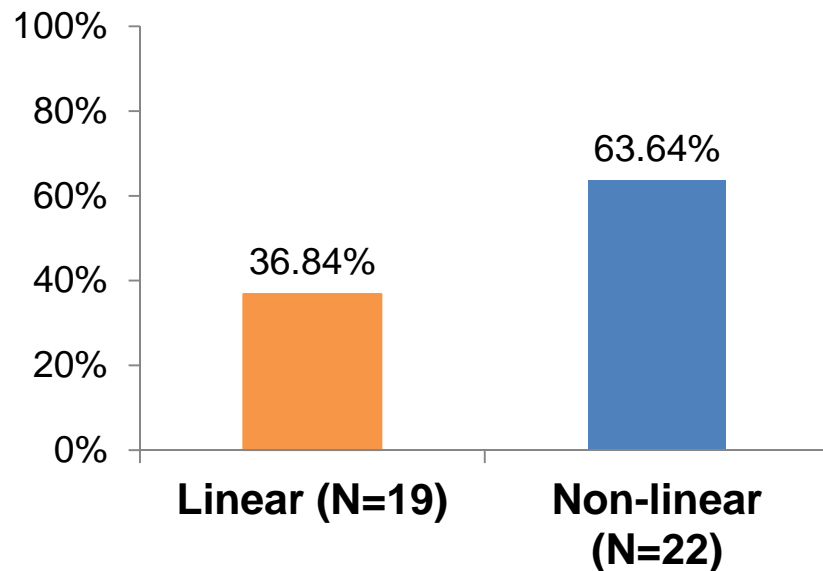


All respondents to the linear version read the response options in order; ~25% of those in the non-linear version read them out of order as illustrated here.



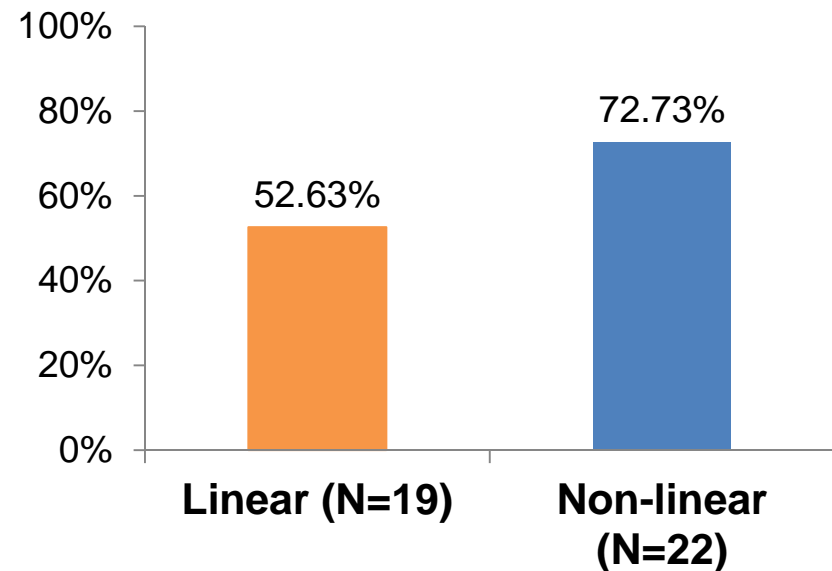
# More respondents chose “good” on the non-linear version

Percent choosing "Good" for Q17



$P = 0.087$

Percent choosing "Good" for Q30

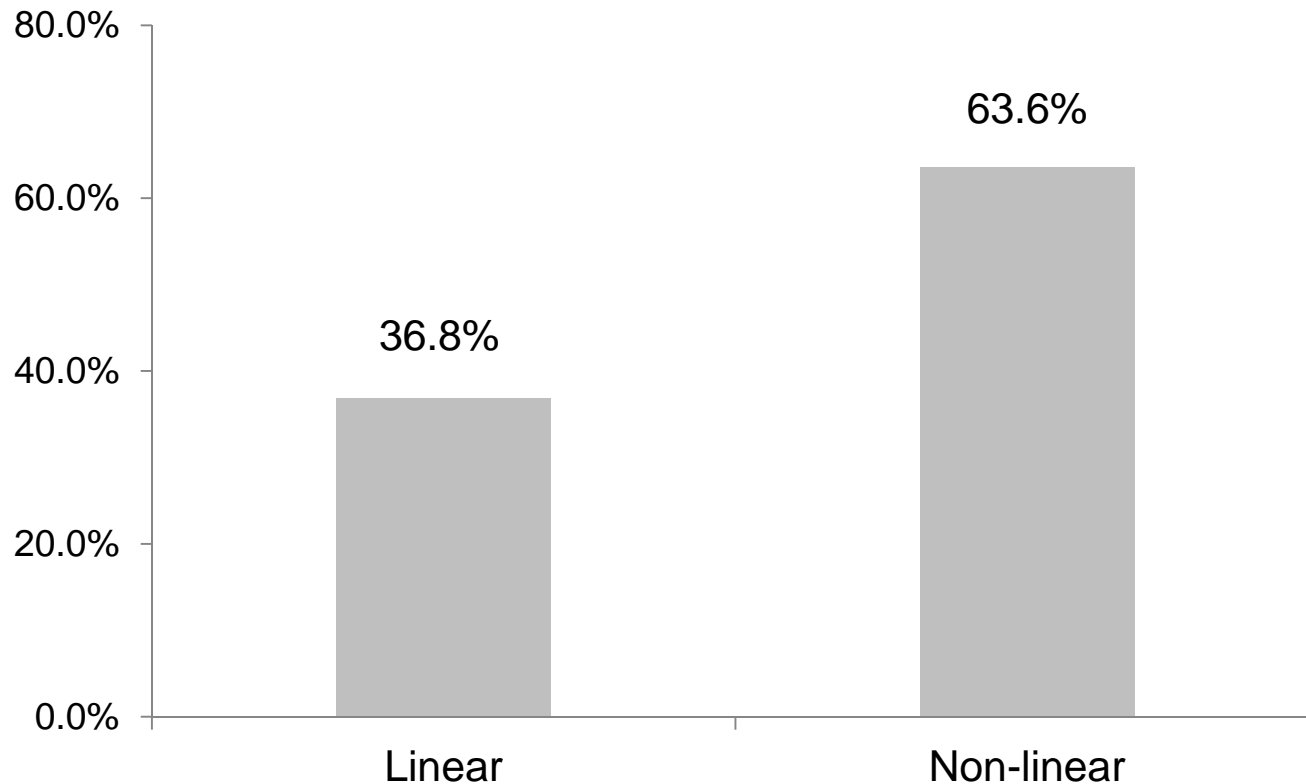


$P = 0.183$



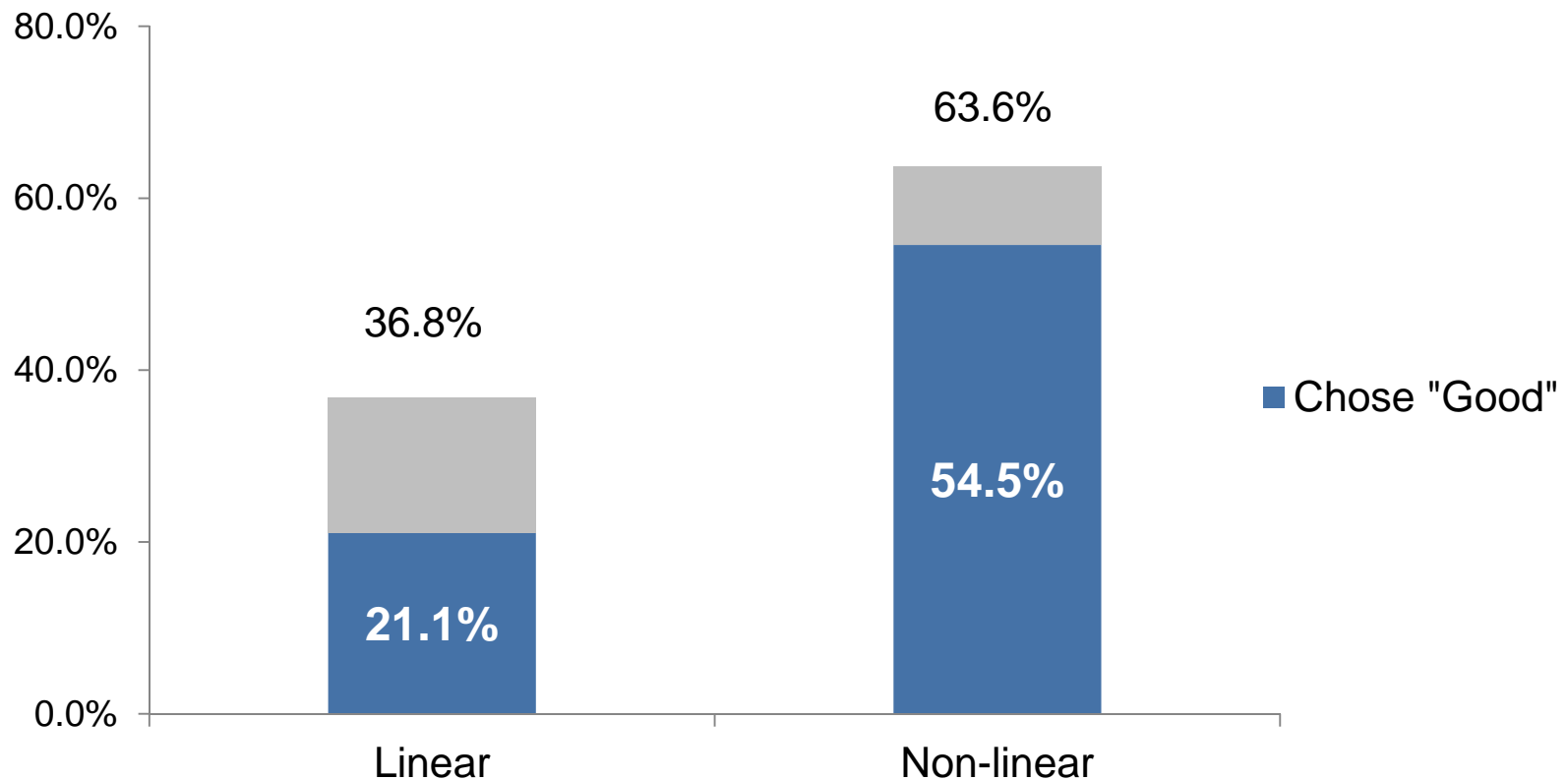
# More respondents chose the same answers for both questions on the non-linear version

Percent of respondents who chose the same answer for both questions



# More respondents chose the same answers for both questions on the non-linear version

Percent of respondents who chose the same answer for both questions



**Surveyors have to be careful with adaptive design! It introduces consequential visual design differences.**



- We came away from writing the new edition of the book excited about the potential for overcoming response rate challenges by building interconnected designs and especially mixing modes.
- And also frustrated that research has not kept up with technology.
  - We have a lot of work to do!



- Thank you for listening to these ideas.
- I hope they are helpful to you as you conduct your own surveys.

