



Examination of Panel Conditioning Effects in a Web-Based 2008 Election Study

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What is panel conditioning?

“The experience of repeatedly taking surveys may lead to some respondents experiencing changes in attitudes or even behaviors as a consequence of survey participation. For example, completing a series of surveys about electoral politics might cause a respondent to pay closer attention to news stories on the topic, to become better informed and even to express different attitudes on subsequent surveys.... This type of change in respondent behavior or attitudes due to repeated survey completion is known as *panel conditioning*.”

AAPOR Report on Online Panels, March 2010



Hypothetical of a Panel Effect

A web panel organization conducts over 50 studies over a three year period on foreign policy issues.

Now the research organization does another survey on the topic. 20% of the respondents had completed 4 or more panel foreign policy surveys; another 50% had completed 1 to 3 such surveys before. These are “exposed” panelists that potentially are “conditioned.”

The survey is done and the results are widely reported in the media. A “majority” is reported to oppose the President.

One problem: The “exposed” panelists were much more likely to oppose the President. The results are never re-stated.



Measuring Panel Conditioning

- **Not easy to measure conditioning: confounded with attrition**
- **Best measured by comparing survey estimates from simultaneously fielded longitudinal and cross-sectional samples**
 - **Compare exposed to non-exposed sample**
 - **Second best:**
 - **Post hoc regression of exposure measures on responses**
 - **Post hoc cross-tabs of exposure measures by response**
- **Exposure measures**
 - **N prior surveys completed on a particular topic or total**
 - **Panel tenure**

A Suspected Panel Effect: 2002 Survey

Table 3a: “In the effort to fight terrorism, do you think that in the future, compared with what it has been doing, the Bush administration:” (n = 802)

	Number of FP Surveys Completed		
	None (n=275)	1 or 2 (n=309)	3 or more (n=219)
Should put more emphasis on military methods	32.0%	21.7%	30.7%
Should put more emphasis on diplomatic and economic methods	63.3%	71.2%	64.2%
Refused	4.7%	7.1%	5.0%

A Panel Effect?



Observations about Conditioning

Conditioning not always found when expected

Two consistent findings:

- Being on an election panel increases chances of voting
- Knowledge questions are more sensitive to conditioning than attitudes and opinions

KnowledgePanel Conditioning Studies

Ref	Data Collection Year	Survey Questions Topic	Exposure Measure	Stat Test	Sample Size	N Stat Tests	N Sig. p<0.05
a	2001	Opinion on selected non-alcoholic drinks; awareness of selected distilled spirits; attitudes towards new products; attitudes and knowledge of HIV	N prior surveys completed on topic; Panel tenure	Chi-square	5,700 or more	44	1
b	2003-2006	Foreign policy attitudes	N prior surveys completed on topic; Panel tenure	Regression of exposures measure on responses	1,057	7	1
c	2004	Health policy attitudes	N prior surveys completed on topic	Chi-square	1,267	5	0

KnowledgePanel Conditioning Studies

Ref	Data Collection Year	Survey Questions Topic	Exposure Measure	Stat Test	Sample Size	N Stat Tests	N Sig. p<0.05
d	2007-2008	Policy attitudes and candidate preferences	Comparison of exposed longitudinal sample and non-exposed cross-sectional sample	Logistic regression comparing responses from each sample	Various: approx 600 to 2000	14	3
e	2009	Online and traditional media behavior	Comparison of exposed longitudinal sample and non-exposed cross-sectional sample	Chi-square	212	41	3
f	2010-2011	Interest in certain popular entertainment and viewing behavior	N prior surveys on topic	Chi-square	10,779	3	0

8 out 114 stat tests positive for panel conditioning (7%)



References

- a. Dennis, J. M. 2001. Are Internet Panels Creating Professional Respondents? A Study of Panel Effects. Marketing Research Summer:34-38.
- b. Nukulkiy, Poom, Joe Hadfield, Stefan Subias, and Evan Lewis. 2007. An Investigation of Panel Conditioning with Attitudes Toward U.S. Foreign Policy. Paper presented at the 2007 Conference of the American Association for Public Opinion Research.
- c. Confidential analysis by J.M. Dennis for KN client



References

- d. Kruse, Yelena, Mario Callegaro, J. Michael Dennis, Stefan Subias, Mike Lawrence, Charles DiSogra, and Trevor Tompson. 2009. [Panel Conditioning and Attrition in the AP-Yahoo! News Election Panel Study](#). Presented at the 2009 Annual Conference of the American Association for Public Opinion Research.
- e. Dennis, J. Michael, and Charles A. DiSogra. 2010. [Does Providing Internet Access to Non-Internet Households Affect Reported Media Behavior for Latinos and Non-Latinos?: Results from a Six-Month Longitudinal Survey](#). Presented at the 2010 Annual Conference of the American Association for Public Opinion Research.
- f. Confidential analysis conducted by J.M. Dennis for KN client.

Case Study: AP-Yahoo News Election Study

Field period: Nov. 2007 to Dec. 2008 - 11 waves

Wave1 baseline obtained 2,735 surveys for a completion rate of 77%

Waves	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11
Samples											
Longitudinal	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX	XX
Cross-sect.			X			X			X		

1,086 respondents completed all 11 waves

Conditioning Analysis: Comparing Longitudinal vs. Cross-Sectional Samples

Dependent Variables (0=No;1=Yes)	W3	W6	W9
Certainty to vote in the presidential election	-	-	-
Voting early in the presidential election	-	-	-
Correct answer for Obama' religion	-	0.72	-
Feeling excited about the presidential election	-	-	-
Feeling interested in the presidential election	-	-	-
Feeling hopeful about the presidential election	0.83	-	-
Feeling bored with the presidential election	-	-	0.44
Feeling frustrated with the presidential election	-	-	-

Red font: Significant odds ratios for the dichotomous (0 – 1) variable longitudinal/cross sectional sample. A significant odds ratio indicates a difference between the two samples on the item in questions. The model is controlling for the following variables: demographics, party ID, religion and number of previous KN surveys taken.



Conclusion

“Thus, an important practical implication of my analysis is that panel surveys should routinely include parallel fresh cross-section components, to provide a solid basis for assessing and, if necessary, adjusting for biases arising from panel attrition and panel conditioning.”

Larry Bartels, “Panel Effects in the American National Election Studies,” *Political Analysis*, 8:1.

We should remain vigilant, but the available evidence indicates that periodic inclusions of fresh sample are sufficient and that post hoc tests can be done more routinely and cost effectively.