

Careless Responding in Surveys: Can Traditional Techniques be Applied to Real World Settings?



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Abstract

Research on careless responding – responding to surveys with insufficient effort – has produced a number of methods for detection of careless response. Little work has been done in generalizing to organizational environments. This paper uses a large, multi-organizational dataset to test these methods of identifying careless respondents in an organizational context.



Purpose of Study

- **To test a number of the previous careless response detection findings of the literature in an organizational setting to examine their use as practical tools**
- **This paper discusses**
 - **Different methods of detection**
 - **Current limitations of the literature**
 - **The design of a study focused on addressing these limitations.**



Invalid Responding to Surveys

LK1

- A person who is actively altering their responses, such as the case of faking or social desirability, is responding invalidly through misrepresentation.
- A person who is passively responding to a question in a way unintended by the creator of the test, due to test factors such as unclear or confusing question language or format (Hardy & Ford, 2008), is responding invalidly through misunderstanding.
- A person who is responding with insufficient effort, due to low motivation or desire to finish (Huang, et al, under review) , is responding invalidly through careless responding.

Slide 4

LK1

I would probably cut this slide. We are focused on careless responding and provide a definition on the next slide. This information is good for the paper but not necessary for the poster.

Lindsey Kotrba, 4/1/2010



Careless Responding

- **“a response style in which self-report responses are provided without regard to survey instructions and/or item content” (Huang et al, under review).**
- **Participants who are responding carelessly choose responses to survey items without fully attempting to produce an answer consistent with the question asked.**



Careless Responding: A Number of Forms

- **Long-string:** individual responds with the same response choice to every item, or a clear majority of items (Goldberg, 1999)
- **Pure random:** individual responds to each item almost as if by flipping a coin or rolling a die (Graham, 1992)
- **Patterned random:** effectively random data tailored to be consistent with the scale (Huang et al, under review)



Detecting Careless Responding

- **There are a number of methods for detection**
- **This paper focused on methodologies that can be used post-hoc**
 - **Archival data are used**
 - **Also provides for non-invasive use in organizational settings.**



Response Time

- **The amount of time it takes for an individual to complete the survey**
- **It is assumed that below some threshold time value it is impossible for an individual to be responding validly.**



Psychometric Antonyms

- **Suggested by Goldberg (1999) and implemented by Johnson (2005) and Huang et al (under review).**
- **Scales should possess items which are and should be negatively correlated.**
 - **individuals should respond in different directions to the items.**
 - **Individuals are given a 'score' on this method by the correlation of these groups of items.**



Individual Reliability

- **First introduced and tested by Jackson (1977); tested in both Johnson (2005) and Huang et al (under review)**
- **Items on a scale measuring the same construct are likely to have similar responses from any given participant.**
- **Individuals' responses are split into odd and even numbered items and then split-halves are correlated**



One-response/Long-string

- **Used by Costa and McCrae (in press) & by Johnson (2005)**
- **Several methods for identifying**
 - **Our technique involved measuring the percentage of times individuals responded with each response option**



Current Limitations

- **While each of the methods proposed so far has been tested in academic settings, there is a lack of generalizability to organizational settings.**
- **Reports of proportions of careless responders in the total population has been mixed**
 - **Current study could help narrow down the proportion of careless responders in a real-world setting.**



Methodology

- **A sample of archival data - collected between 2001 and 2008 - from a Midwestern consulting company**
- **56,254 individuals**
- **Not all individuals completed all forms of demographics, of those that did**
 - **Even split on gender (55% male)**
 - **Majority were between the ages of 20 and 29**
 - **Predominately Caucasian (70%)**



Cut points – to categorize individuals as careless responders

- **Response time**
 - 5.25 seconds for each item (315 seconds for full survey)
- **Psychometric antonyms**
 - .03 or higher (Johnson, 2005)
- **Individual Reliability**
 - .30 or lower (Johnson, 2005)
- **Long-string**
 - 80% of items with identical response



Percent identified as careless respondents in current and previous work.

Method	Percent Identified		
	Current Study	Previous findings	Difference
Response Time	6.5	3.6*	+2.9
Psychometric Antonyms	21.1	17.9*	+3.2
Individual Reliability	50.5	6.0*	+44.5
Long-String	5.1 ^a (1.1 ^b)	3.5**	+1.6

* - Huang et al (under review)

** - Johnson (2005)

^a - with 80% cut score

^b - with 100% cut score



Conclusions

- **Response time, psychometric antonyms, and long-string**
 - Identified slightly higher proportions of individuals than previous research
- **Individual reliability**
 - Showed much higher levels of identification than previous research
- **Believed to be due to the nature of the survey - subscales are correlated to a lower degree than in previous work**
- **There are also many fewer items, as is more common in organizational, low-stakes testing**



Conclusions

- **All four methods seem appropriate for practical use, though previous cut scores may not be.**
- **Cut scores may need to be established empirically for different surveys.**
- **By using more than one method, practitioners can look for agreement between methods to ensure that both type I and type II error rates are kept in check.**
- **As all four methods can be used post data collection it is the recommendation that all four methods be used in conjunction.**