

Designing Questions for Web Surveys: Effects of Check-List, Check-All, and Stand-Alone Response Formats on Survey Reports and Data Quality

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Current research question

- How do alternative response formats for presenting “multiple-answer” questions (lists) affect outcomes in a web survey?
 - Response formats: Check-list, check-all, stand-alone
 - Build on research comparing check-list and check-all formats in web surveys (Smyth et al. 2006, 2008; Thomas & Randall 2006) by adding stand-alone format

Check-list response format

Now I have a few questions about whether you spent any time reading, watching or listening to the news yesterday.

Yesterday, did you:

	Yes	No
Listen to news on the radio?	<input type="radio"/>	<input type="radio"/>
Watch news on TV?	<input type="radio"/>	<input type="radio"/>
Receive news on your cell phone?	<input type="radio"/>	<input type="radio"/>
Read news on the Internet?	<input type="radio"/>	<input type="radio"/>
Listen to a news podcast?	<input type="radio"/>	<input type="radio"/>
Read a print-version of a daily newspaper?	<input type="radio"/>	<input type="radio"/>

Check-all response format

Now I have a few questions about whether you spent any time reading, watching or listening to the news yesterday. Check all the activities that you did.

Yesterday, did you:

- Listen to news on the radio
- Read a print-version of a daily newspaper
- Receive news on your cell phone
- Read news on the Internet
- Listen to a news podcast
- Watch news on TV

- I did not do any of these activities yesterday

Stand-alone response format

Now I have a few questions about whether you spent any time reading, watching or listening to the news yesterday.

Yesterday, did you read news on the Internet?

- Yes
- No

Yesterday, did you watch news on TV?

- Yes
- No

Yesterday, did you listen to news on the radio?

- Yes
- No

Yesterday, did you read a print-version of a daily newspaper?

- Yes
- No

Yesterday, did you receive news on your cell phone?

- Yes
- No

Yesterday, did you listen to a news podcast?

- Yes
- No

Methods: Study design

- Web survey of students' media use and engagement in social activities
- Sample members
 - 12,005 randomly selected students at the University of Wisconsin-Madison
 - Recruited via an email invitation containing a URL link
 - Nonresponders received 2-3 email reminders
- 18.3% response rate (RR1)
 - Did not vary by experimental groups

Methods: Experiment

- Respondents randomly assigned to response format

Check-list	(711 completes)
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Check-all	(766 completes)
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Stand-alone	(772 completes)
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- 4 question series containing a total of 22 items

Methods for consuming news	(6 items)
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Local publications viewed	(5 items)
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Activities engaged in with parents	(7 items)
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Other activities	(4 items)
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- Question ordering

- Each question series appeared in a fixed order
- Items were randomized within a series

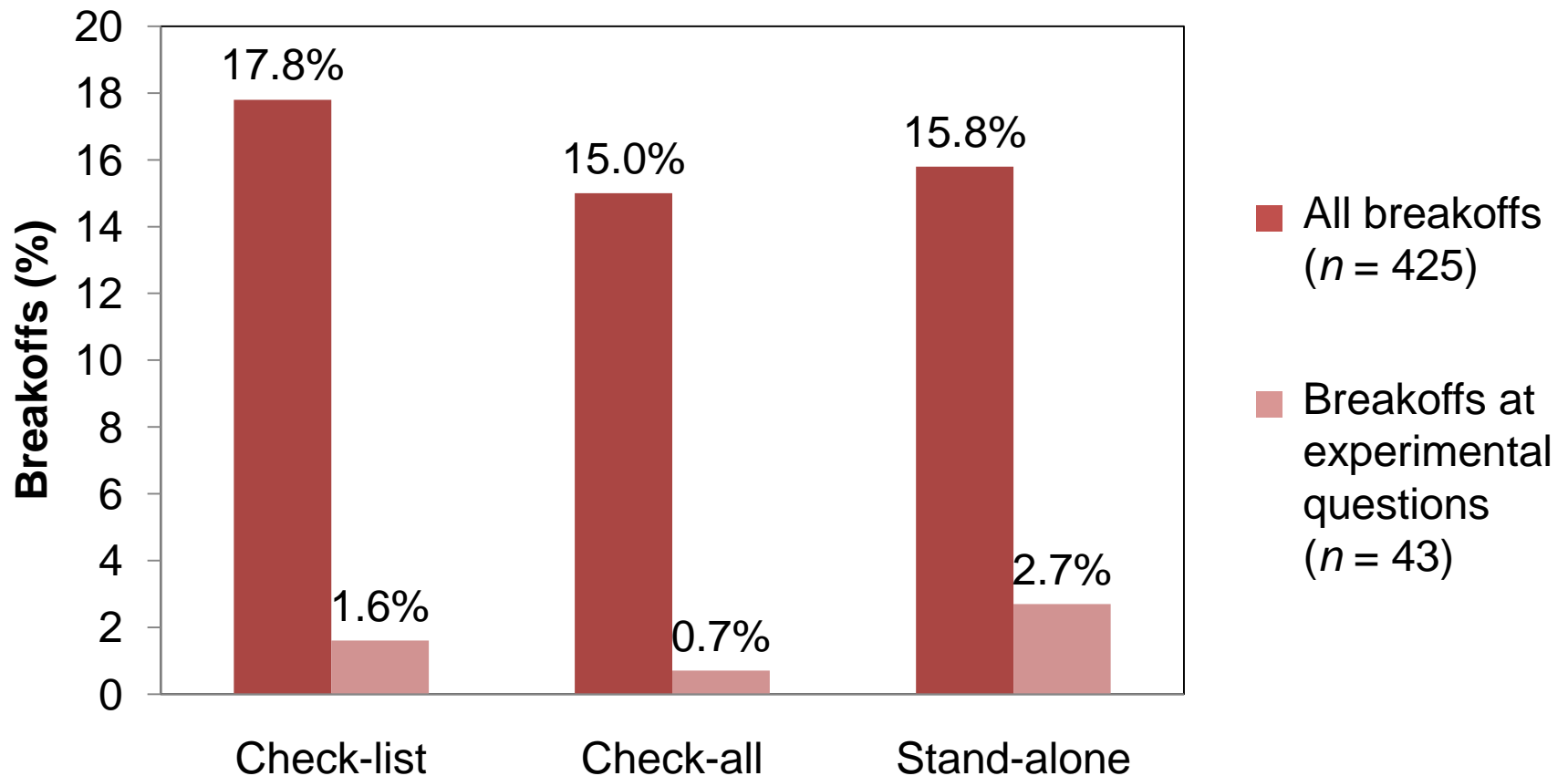
Outcomes

- Breakoffs
- Item-missing data
- Frequency of item endorsement (“yes” responses)
- Completion times
- Primacy effects
- Criterion validity

Results: Breakoffs

Predict

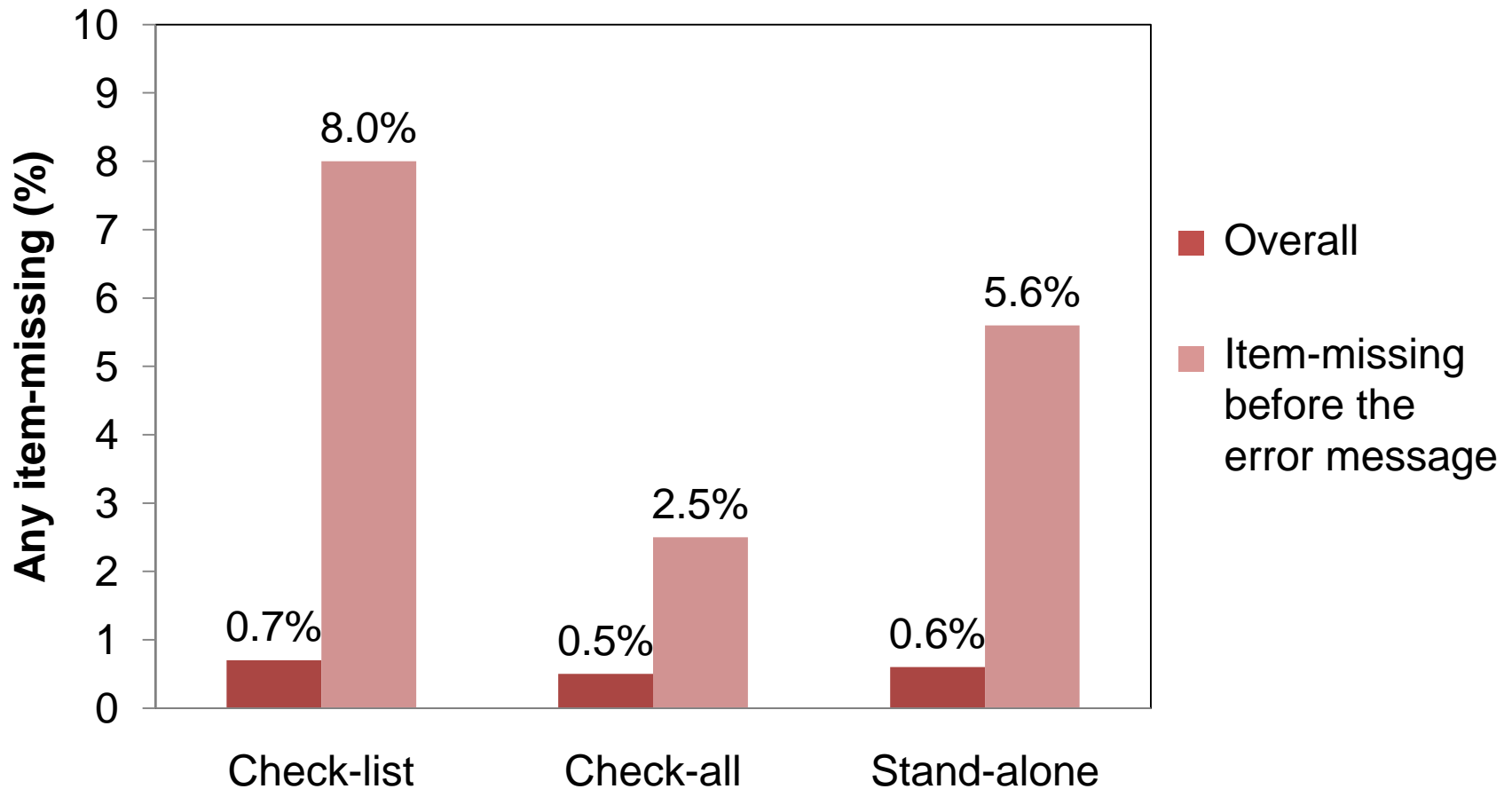
Because they impose more burden, levels of breakoffs will be higher for check-list and stand-alone formats than check-all formats



Results: Item-missing data

Predict

Levels of missing data will be higher for check-lists because some Rs will treat them like check-all formats and only mark “yes” responses

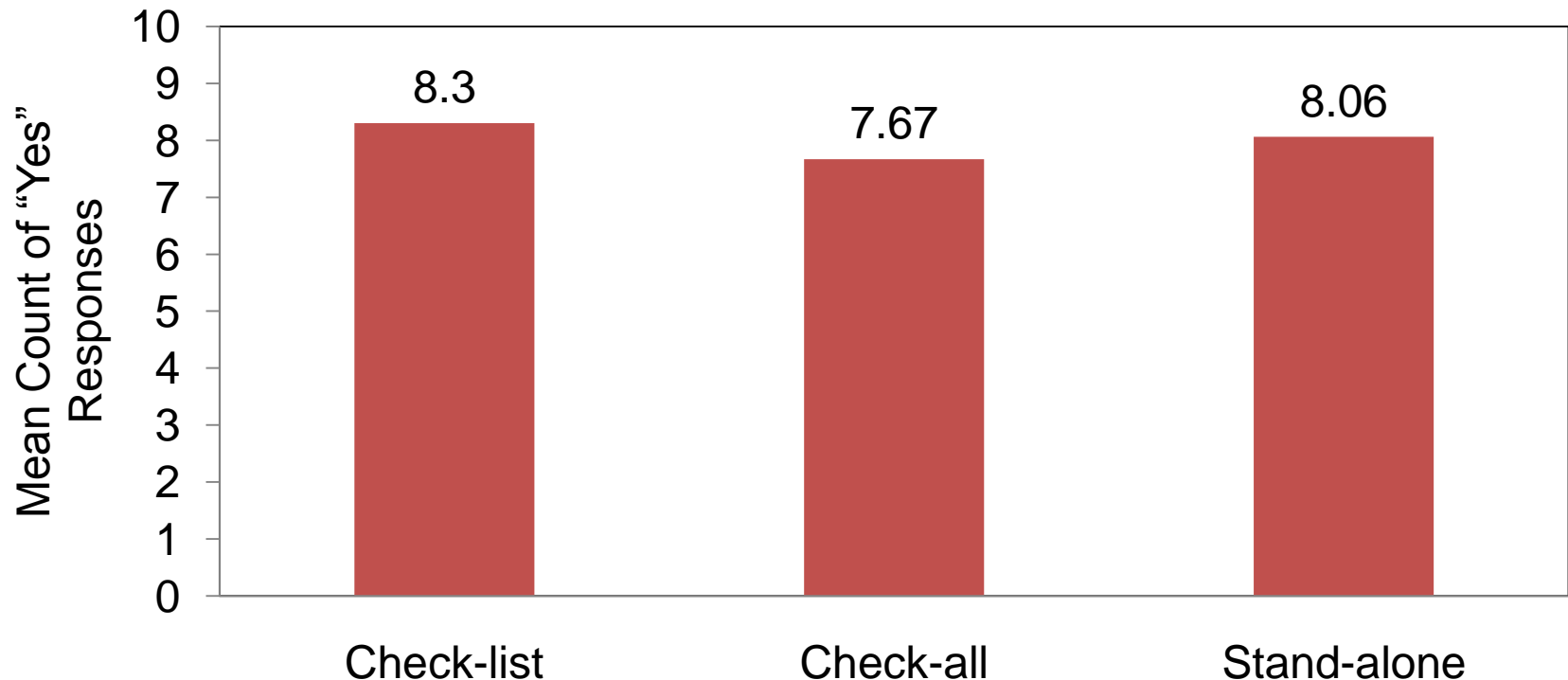


Results: Counts of “yes” responses across all 22 items

Predict

Levels of “yes” responses will be

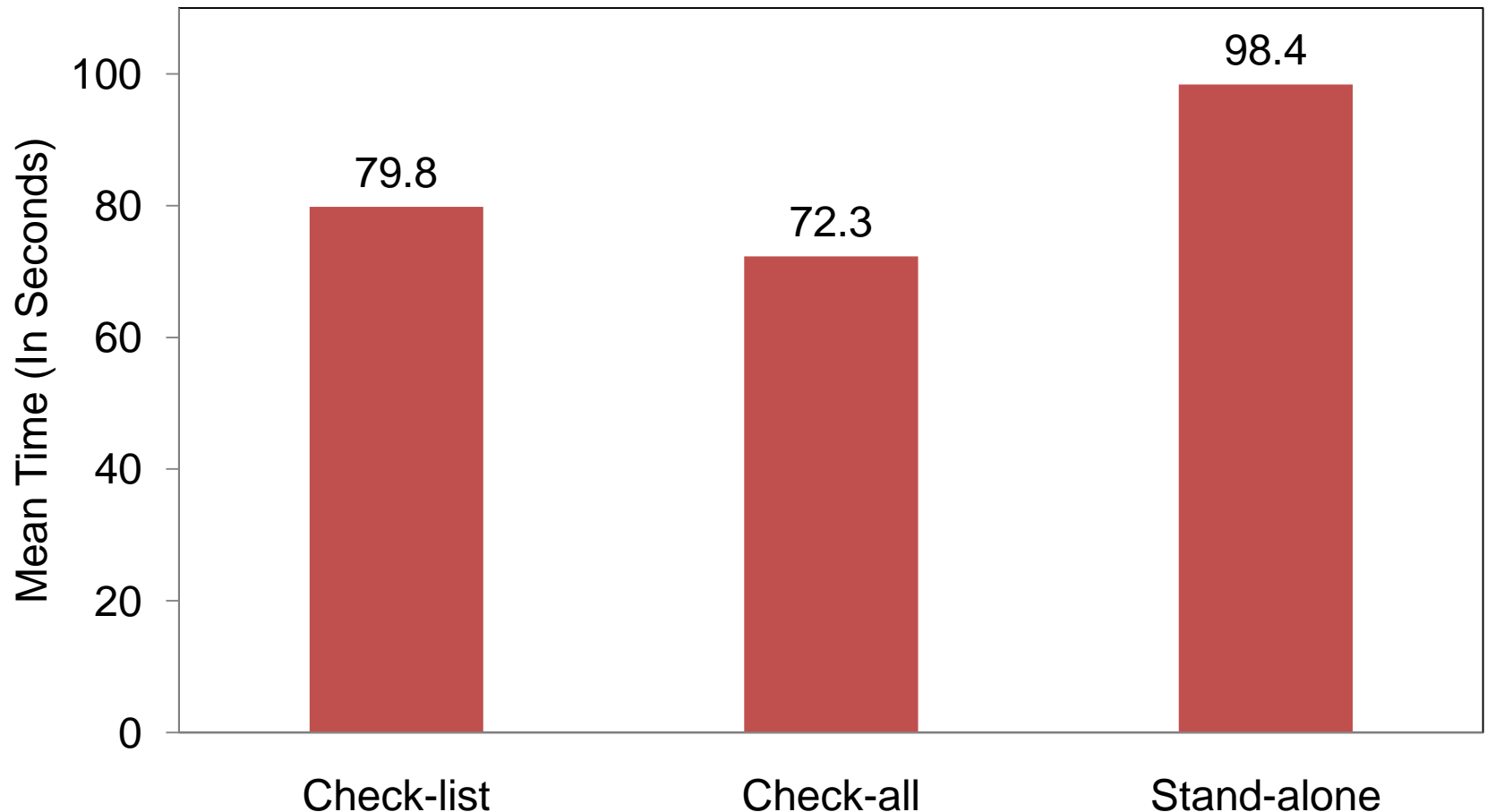
- lowest in the check-all format because it promotes superficial processing
- highest in the stand-alone format because it promotes deeper processing



Results: Completion times across all 22 items

Predict

Completion times will be highest for the stand-alone format followed by the check-list then check-all format



Stand-alone vs check-list response format

Stem question

Now I have a few questions about whether you spent any time reading, watching or listening to the news yesterday.

Yesterday, did you read news on the Internet?

Yes
 No

Yesterday, did you watch news on TV?

Yes
 No

Yesterday, did you listen to news on the radio?

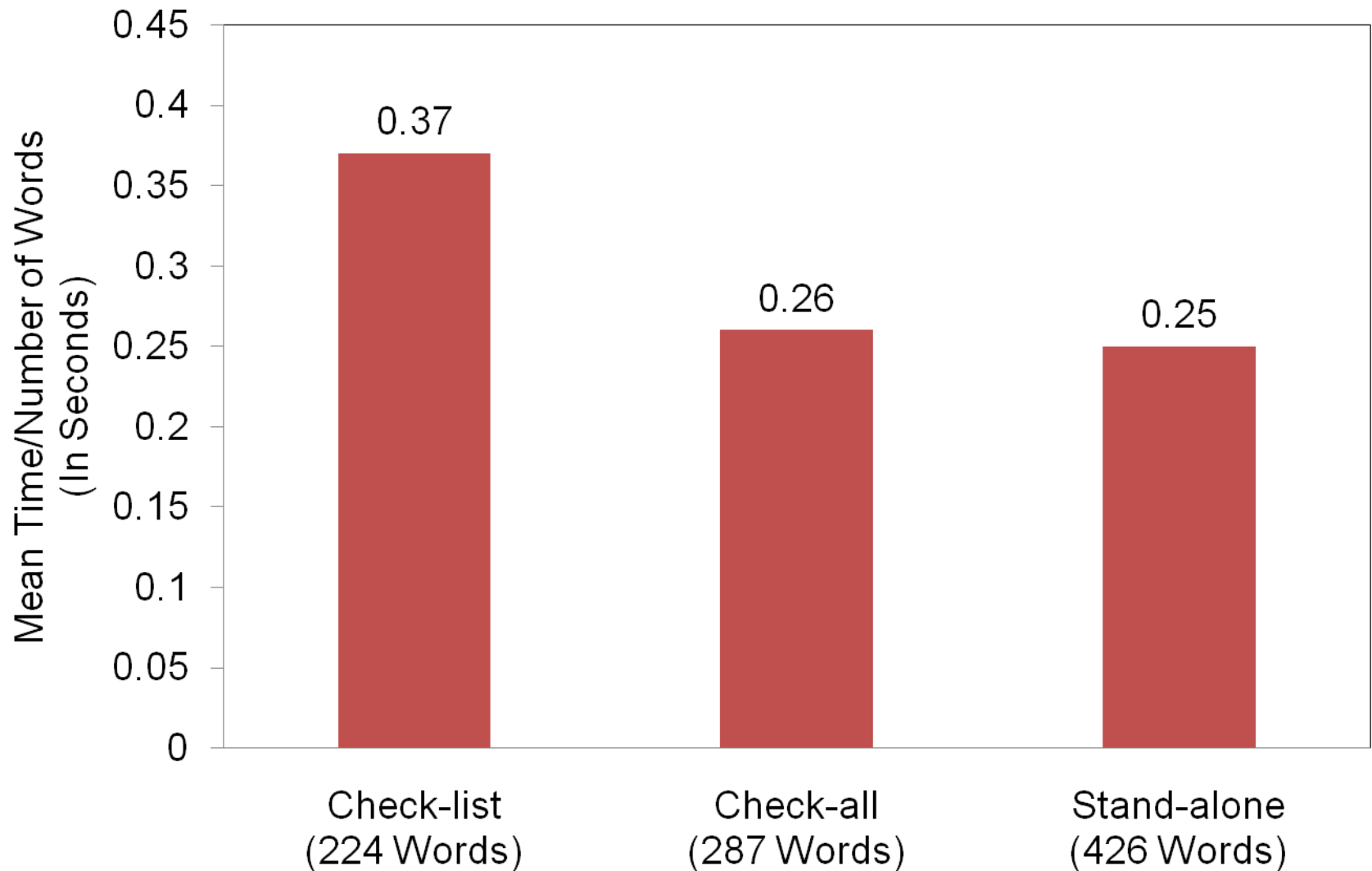
Placement and repetition of reference period

Now I have a few questions about whether you spent any time reading, watching or listening to the news yesterday.

Yesterday, did you:

	Yes	No
Listen to news on the radio?	<input type="radio"/>	<input type="radio"/>
Watch news on TV?	<input type="radio"/>	<input type="radio"/>
Receive news on your cell phone?	<input type="radio"/>	<input type="radio"/>

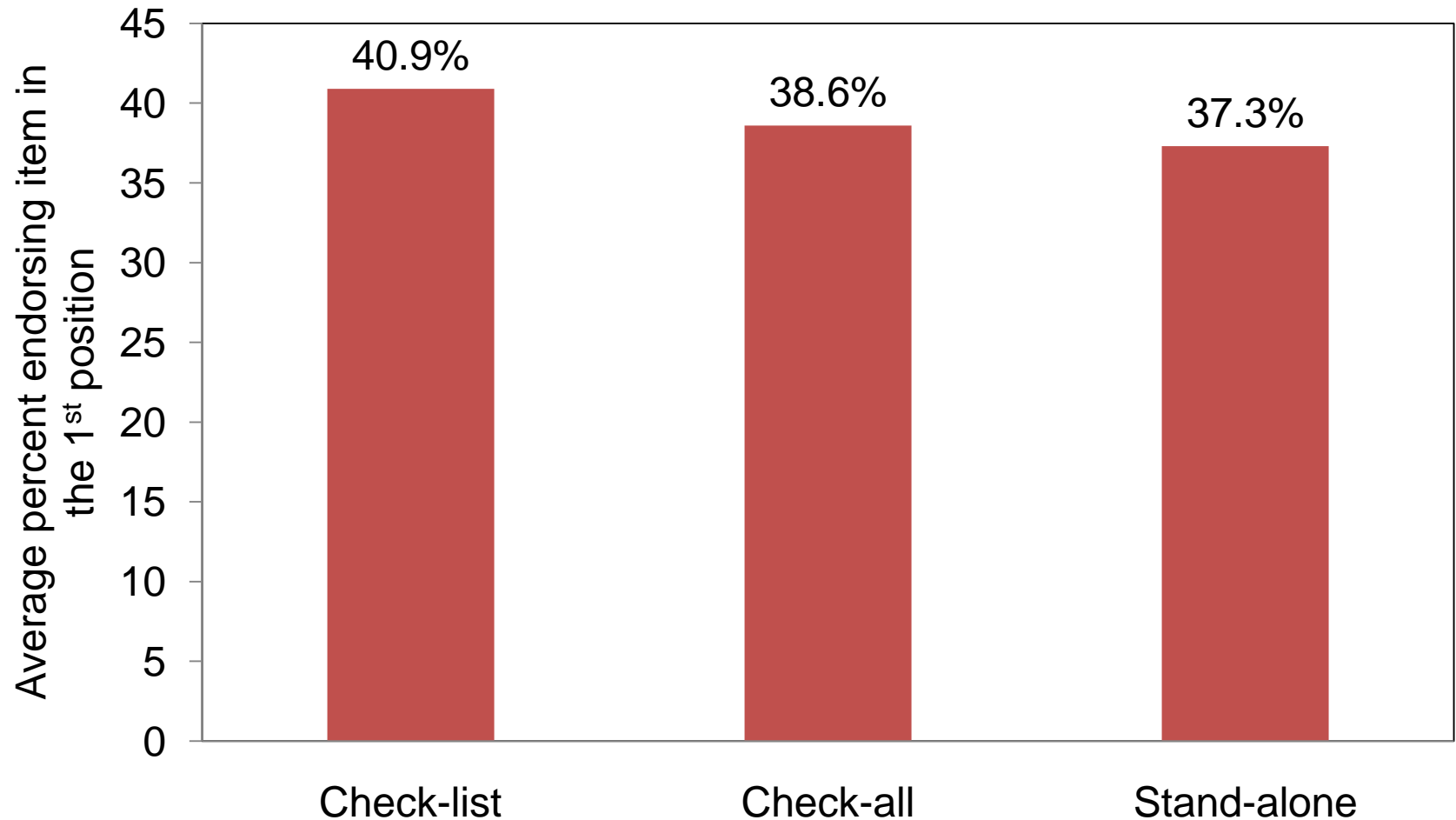
Results: Completion times across all 22 items



Results: Primacy effects

Predict

Primacy effects will be lower for the stand-alone format followed by the check-list then check-all format



Results: Criterion validity

- Criterion
 - “how often have you followed current events in the news?”
 - “how often have you participated in social activities?”
- Predict
 - If a response format predicts a stronger association between the criterion and an index, then the response format has higher criterion validity
- Statistical tests
 - Regressed the criterion on an index created for a question series controlling for response format and including interaction terms for index*response format
- **No differences across response formats**

Conclusions, limitations, and future directions

- Overall – “There’s no free lunch” (Singer, AAPOR 2011)
 - Breakoffs were less likely with the check-all format
 - Item missing data was rare but would have been more likely with check-list and stand-alone without checks
 - Higher levels of “yes” responses and longer completion times with the check-list
 - Stand-alone format reduced primacy effects
 - None of the formats was more valid
- Limitations
 - All Rs were college students
 - Behaviors asked about were neutral or socially desirable
 - Future research should examine sensitive behaviors
 - Attempted to examine validity

Thank You!

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