

**Does “Yes or No” on the Telephone Mean the Same as
“Check-All-That-Apply” on the Web?¹**

By

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INTRODUCTION

It is common practice to ask multiple-response questions as a series of yes/no (forced-choice) items for telephone surveys, but to ask the same questions in a check-all-that-apply format in both mail and Internet surveys. However, a growing body of research indicates that the forced-choice question format tends to result in endorsement of significantly more response options than does the check-all question format (Rasinski, Mingay, and Bradburn 1994; Smyth, Dillman, Christian, and Stern, Forthcoming). One limitation, however, of most research on this issue to date is that the comparisons of these question formats have been conducted *within* as opposed to *across* survey modes. As a result, these studies give us a greater understanding of pure question format effects, but fall short of addressing the fundamental issue of whether or not converting between question formats to accommodate survey modes yields similar data of comparable quality. In other words, they cannot address the issue of interactions between question format and survey mode.

In this paper we extend previous research by experimentally examining the extent to which the check-all and forced-choice question formats produce comparable responses *across* telephone and web modes and we attempt to isolate question format effects from survey mode effects. Using data collected from a random sample of Washington State University (WSU) students in the Fall of 2004, we compare results from five questions administered in the check-all

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format via the web to those of the same five questions administered in the forced-choice format via the telephone. In order to examine mode differences independent of question format we also compare the results of six questions administered in the forced-choice format via both telephone and web survey modes.

BACKGROUND

Multiple-Answer Question Format Effects and Their Sources

Two previous studies have directly and experimentally addressed the comparability of responses between the forced-choice and check-all question formats. Rasinski et al. (1994) report that for all three experimental items in a paper questionnaire, the mean number of options endorsed per respondent was significantly greater when they were formatted as forced-choice questions than as check-all questions. The second study contained data from 16 experimental comparisons using eight different questions that were embedded in two web surveys and a paper survey comparison (Smyth et al. Forthcoming). Like Rasinski et al. (1994), Smyth et al. (Forthcoming) reported that in 15 of the 16 comparisons the forced-choice question format led to significantly more options being endorsed than did the check-all question format (the one “insignificant” difference approached significance with a p-value of .054). This study extended Rasinski and colleagues’ findings to web surveys and included questions lying along a continuum from fact and behavior based to opinion and attitude based questions.

According to Smyth et al. (Forthcoming) the root source of differences in responses between the forced-choice and the check-all question formats seems to lay in the fundamental difference in response task between these two question formats. While the forced-choice question format requires respondents to consider each option individually and decide whether it does or does not apply, the check-all format presents the options as a set of items from which the

respondent should choose those that apply (Sudman and Bradburn 1982). In other words, the check-all format does not demand the attention of the respondent for each independent response option in the same way that the forced-choice format does. As a result, the check-all question format allows for a weak satisficing response strategy (Rasinski et al. 1994) whereby respondents can quickly and easily satisfy the requirements of the question by choosing the first options they can reasonably justify and then move on without giving ample consideration to remaining response options (Krosnick 1991; 1999; Krosnick and Alwin 1987). In contrast, the options in the forced-choice format should be prone to deeper processing as this question format requires respondents to report a judgment about every response option in order to satisfy the requirements of the question (Sudman and Bradburn 1982). Thus, in the forced-choice format, respondents should process more of the list and process each individual option more deeply.

Smyth et al. (Forthcoming) find evidence in support of these assertions. They show that 1) overall, respondents spend significantly less time answering check-all questions; 2) the response patterns of those respondents who answer the questions in under the mean response time show evidence of primacy (i.e, higher likelihood of an item being endorsed when it is located in the top of the list), an effect that is consistent with the theory that check-all questions are prone to satisficing response behavior; and 3) those respondents who spend over the mean response time on check-all questions mark as many or more options as forced-choice respondents. Smyth et al. found that a substantial proportion (66%) of respondents answered check-all questions quickly, and therefore, may not have fully processed all of the response options. In contrast, they found that respondents spent significantly longer on the forced-choice formatted questions and that they marked the same number of response options regardless of

response time, suggesting that all respondents more deeply process the response options in this question format.

Both the Rasinski et al. (1994) and the Smyth et al. (Forthcoming) studies shed considerable light on forced-choice and check-all question format differences and the processes that may underlie such differences. Nevertheless, as mentioned above, both pieces are limited to comparisons of the forced-choice and check-all formats within paper and web modes, but few, if any, survey designers use these two question formats interchangeably in this way (i.e., within modes). Rather, the practical question at hand is do we get comparable data when we use these two question formats across modes as is customarily done? To answer this question we need to consider how survey mode might influence responses to multiple-answer questions.

Multiple-Answer Question Mode Effects

There are a number of mode-related factors that may influence responses to web and telephone multiple-answer questions. Since there are many sources of mode effects, many of which affect respondents differently, we expect some elements of each mode to encourage endorsement of options and other elements to discourage endorsement. To elaborate on the expected outcomes of the relevant mode factors we draw on de Leeuw's (1992; 2005) organizational classification of mode effects, using it to frame our discussion and the summary of expected mode effects presented in Figure 1. In order to organize the vast literature on mode effects, de Leeuw (1992; 2005) groups the various factors into three general classes: media-related factors (social conventions and customs related to the survey mode), information transmission factors, and interviewer impact factors.

Media-Related Factors. Media-related factors might include such things as familiarity with the mode being used, locus of control within the mode, and cultural characteristics of the mode.

With respect to familiarity, respondents are more likely to know how to conduct a conversation over the telephone than they are to know how to access the Internet to complete a survey simply because telephone technology has existed longer and most people conduct conversations everyday. Completing a survey via the Internet requires a special set of skills and tools/technology that not everyone currently possesses or can access. It is unclear, however, how such mode familiarity or lack of familiarity might affect responses to multiple-answer questions across modes.

For this study the most important media-related factor may be locus of control. The amount of control a respondent has over the survey process varies greatly across web and telephone surveys and can be expected to impact the motivation and ability of the respondent to process and answer questions in the survey. In telephone surveys the interviewer largely controls these factors. As a result, telephone surveys tend to be conducted at relatively fast paces (Krosnick and Alwin 1987), a factor encouraging the use of more pre-formed responses (Dillman, Sangster, Tarni, and Rockwood 1996; Schwarz et al. 1991) and likely shallower processing of options in multiple-answer questions. The relatively quick pace of telephone surveys may have especially large effects on responses to attitude/opinion-based questions as these questions require substantial processing by respondents. In contrast, respondents to web surveys have higher degrees of control over the interview process and especially the pace of the interview. When needed, they can slow down and devote more time to processing a particular question or response option. In addition, they oftentimes have the ability to skip ahead or backward through the survey to see what is coming next or to check or reconsider a previous answer. Given the opportunity to slow down and fully process response options, we might expect web respondents to endorse more of them.

However, although web respondents do not have interviewer-imposed time constraints, the Internet is an exceptionally dynamic mode (i.e., respondents can multitask while completing the survey) embedded in an environment marked by expectations of speed, convenience, and fun. These cultural characteristics of the Internet may result in respondents being impatient with and quickly bored by a web questionnaire. As a result, they may hurry through the survey, only shallowly processing items and relying more strongly on pre-formed responses. Telephone surveys are also couched in a cultural framework that may result in fewer options being endorsed. Telephones are increasingly becoming viewed as personal devices (i.e., individuals often have their own personal phones and cell phones) and unsolicited calls are seen as major inconveniences (e.g., so much so that national do not call registries have been developed and many people have rushed to get their names on them). Many respondents do not differentiate between legitimate telephone survey research and tele-marketing. Frustration with unsolicited phone calls may result in respondents attempting to hurry through the call, being unmotivated to cooperate or to expend effort to give optimal answers, and treating the interaction very superficially. In this case, we would expect only shallow processing of items, and therefore, fewer options endorsed on multiple-answer questions.

Information Transmission Factors. The means through which respondents receive questionnaire information can also affect their ability to process and respond to survey items. Surveys are presented to respondents through either aural or visual communication channels (Schwarz et al. 1991). Web survey respondents generally receive relevant information through visual channels. These visual channels tend to leave paper trails, or at least virtual paper trails that respondents can reference and re-reference throughout the survey process to minimize the amount of memory and cognitive energy devoted to responding. Visually based communication

channels should, therefore, facilitate more comprehensive consideration of survey items and higher endorsement. In contrast, because they receive information aurally, telephone respondents are left with only “mental trails,” the defining characteristic of which is their tendency to quickly dissipate. Therefore, telephone respondents must devote considerable mental energy to managing the question and response options and formulating judgments. Additionally, once they have moved beyond a response option, it is more difficult for them to return to it for additional consideration than it is for web respondents (who can check the virtual paper trail) (Schwarz et al. 1991).

Interviewer Impact Factors. The final class of mode effects is interviewer impacts. In telephone surveys, the interviewer presence brings into play social norms that are not as relevant or salient in self-administered surveys and that can affect responses. Phenomenon such as social desirability, acquiescence and general norms about participation all become increasingly salient when interviewers are present. The effects of these different forces on responses to multiple-answer questions vary. The expected effects of social desirability are somewhat unclear because they are highly context dependent. If the question is about socially undesirable behavior, we should see fewer items endorsed in telephone surveys than in web surveys. If, on the other hand, the question is about socially desirable behavior we would expect higher endorsement of options in the telephone than the web mode. The effects of acquiescence are easier to predict as we expect respondents to be more agreeable, and therefore more likely to endorse options, when an interviewer is present. Finally, the presence of an interviewer in telephone surveys has the latent effect of strengthening the obligation of the respondent to answer individual items and complete the survey after initially agreeing to participate. In contrast, web respondents may feel very little accountability for honoring their [unspoken] agreement to participate because their participation

and progress is not being directly monitored by a person they have to interact with.

Consequently, we might expect higher item nonresponse for items administered over the Internet than for those administered over the telephone.

Although these three classes of mode effects are presented separately for organizational and analytical purposes, in reality they share substantial overlap. As a case in point, telephone surveys tend to progress at relatively rapid paces *because* interactional and conversational norms are triggered by the interviewer's presence. In general, long moments of empty silence in conversations (esp. between participants who are not well acquainted) are considered awkward and to be avoided. When participating in a telephone survey conversation we lack the ability to use nonverbal communication (i.e., body language) to show that although we are silent we are still engaged in the conversation (i.e., thinking and processing) (Schwarz et al. 1991). Therefore, anything beyond a brief silence may get interpreted as "empty" silence which then prompts the interviewer and/or the respondent to continue. In web surveys, there is no conversation in the literal sense of the word so respondents do not have to worry about hurrying to avoid awkward silences or about inconveniencing interviewers by taking their time on an item.

Format and Mode Interaction Effects

As Figure 1 shows, it is not uncommon for the expected effects of question format and survey mode to directly contradict each other, nor is it uncommon for different types of mode effects to be contradictory. For example, while the endorsement of options is expected to increase in the forced-choice question format it is expected to decrease as a result of a number of telephone mode factors such as: lack of control over the survey pace, cultural tendencies to feel inconvenienced by unsolicited calls, and reliance on aural communication (and thus limited memory capacity). In contrast, the endorsement of options over the telephone mode is expected

to increase due to acquiescence triggered by social interaction with the telephone interviewer. Similarly, the check-all question format is expected to reduce the number of options endorsed, but having control of the survey pace and having visual access to information on web surveys is expected to increase the number of options marked. At the same time, a cultural tendency to move quickly and stay entertained when using the Internet as well as privacy to disclose should reduce the number of options marked.

As a result of these oftentimes contradictory expectations, it is difficult to predict what the combined effects of question format and survey mode will be and, to date, we are not aware of any research that has been able to disentangle the effects. In fact, we know of only one article in which the check-all format administered in a visual mode and the forced-choice format administered in an aural mode have been compared. In a comprehensive effort to explore mode effects between telephone and face-to-face surveys Jordan, Marcus, and Reeder (1980) compared the results of responses to three checklists presented in the forced-choice format to telephone respondents and in the check-all format on show cards to the face-to-face interview respondents. In all three comparisons they found that the telephone forced-choice respondents endorsed more options. The authors offered two alternative explanations for these findings: acquiescence among the telephone sample or more clear communication of the question's intent in the face-to-face interviews. However, as is common among mode comparison studies, the effects that Jordan et al. (1980) called mode effects may have been confounded by question format effects (Biemer 1988; Schwarz et al. 1991).

The goal of this paper is to address the extent to which data collected using the forced-choice question format and administered via telephone surveys is comparable to data collected

using the check-all format via web surveys and to attempt to parse any differences into those attributable to mode effects and those attributable to question format effects.

PROCEDURES AND ANALYTIC STRATEGY

The data used in this paper were collected in the Fall 2004 via simultaneous telephone and web surveys of a random sample of Washington State University undergraduates registered for classes on the Pullman campus. Overall, 3,408 students were sampled and randomly assigned to one of six questionnaire versions (three web and three telephone). The telephone survey received a 59 percent response rate (945/1,608) and the web survey received a 60 percent response rate (1,082/1,800).

All respondents were initially contacted via postal mail and received a \$2 incentive. To ensure that only sampled students completed the survey and to avoid duplicate cases, web respondents were also provided with a personal identification number required to access the survey instrument. In addition to the initial postal contact, all web respondents for whom we had e-mail addresses (about 2/3 of them) were sent an e-mail including both their personal identification code and a link to the web survey. Throughout the field period, web non-respondents were sent additional postal and e-mail reminders requesting their participation. After receiving the initial contact via postal mail, telephone respondents were contacted by the WSU Social and Economic Science Research Center's telephone lab to complete the questionnaire. Up to ten call-back attempts were made to try to reach sampled respondents.

The telephone and the web versions of the questionnaires all contained the same 25 survey questions about the student experience at WSU and the questions appeared in the same order in every version. The web survey was designed using a page-by-page design with questions appearing in black text on a colored background and answer spaces appearing in white

so as to provide contrast. To standardize the visual stimulus across various hardware and software configurations, the pages were designed with HTML tables using proportional widths and with cascading style sheets to adjust for font size and style.

In the analyses that follow, we look at both the mean number of items endorsed in each format/mode and the percent of individual response options marked more or less often across all questions presented in a specific format. To ground our research in previous literature, we start by comparing responses from the forced-choice and check-all question formats *within the web survey mode*. This comparison allows us to examine question format effects and to determine whether or not the current data replicate the finding that the forced-choice question format produces significantly more items endorsed than does the check-all question format. We then compare the check-all format on the web to the forced-choice format on the telephone to examine the effects of question format on responses *across modes*. This comparison addresses the fundamental question of this paper: does the telephone forced-choice format yield the same results as the web check-all format? Finally, in order to examine mode effects independently of question format effects, we compare telephone and web results from the forced-choice format. Our primary statistical test throughout the analyses is a difference of means t-test. However, where appropriate we also employ a chi-squared significance test.

While we cannot simultaneously model question format and mode effects, these three layers of analysis allow us to independently address each type of effect and to look at them in concert to help shed light on how these effects may work. Additionally, since the survey design consisted of three experimental versions of each of the web and telephone mode surveys, we are able to examine the same four questions (#11, #13, #20, #22) across all three layers of the analysis. The telephone and web versions of these four questions as well as additional questions

analyzed in this paper can be seen in Figure 3. Note that in all figures and tables the questions being analyzed are listed in order from the most to the least concrete question topics, not in the order in which they appeared in the survey. This presentation order is intentional as it highlights how format and mode effects may differ by question type.

FINDINGS

Table 1 shows the results of within web comparisons of the forced-choice and the check-all question formats. These results largely confirm the findings of both Rasinski et al. (1994) and Smyth et al. (Forthcoming); in every comparison the forced-choice question format yields higher endorsement of options than the check-all format. Overall, the forced-choice format yielded an average of 4.72 options endorsed and the check-all format yielded an average of 4.17 ($t = 5.19$, $p \leq .000$). Individually the differences are significant in two of the four questions. Among the two questions that are not significant, one reaches significance at the .10 level ($p \leq .099$) and the other approaches this mark ($p \leq .107$). Additionally, inspection of the 46 individual response options in all of the questions shown in Table 1 indicates that 80 percent of them were marked more often in the forced-choice format, 37 percent significantly so.² None were marked significantly more often in the check-all format (see the far left pie chart in Figure 2). These results, taken together with the results of the two previous studies, indicate fairly strongly that there is a consistent question format effect between the forced-choice and the check-all question formats.

Table 2 compares the mean number of options endorsed in the forced-choice format on the telephone and the check-all format on the web. Here again, the forced-choice format consistently yields higher endorsement of options than does the check-all format with three of the five comparisons reaching significance. Overall, the telephone forced-choice format yielded

² Analysis not shown, but available upon request from the authors.

an average of 4.44 options endorsed while the web check-all format only yielded an average of 3.85 options endorsed ($t = 7.83, p \leq .000$). Individually, 80 percent of the 54 options were marked more often in the telephone forced-choice format, 39 percent significantly so. Again, none were marked significantly more often in the web check-all format (see the middle pie chart in Figure 2). These findings confirm the show-card check-all versus telephone forced-choice results of Jordan et al. (1980). However, despite the fact that they look strikingly similar to those presented in Table 1 (looking at question format effects only), we cannot yet determine the extent to which this difference is due to either mode or question format effects.

Table 3 addresses the extent to which the forced-choice question format is prone to mode effects by comparing this format across the telephone and web modes. On average, the telephone forced-choice questions yielded an average of 5.54 options marked. The web forced-choice questions yielded a comparable 5.42 options marked ($t = 1.58, p \leq .113$). In eight of nine comparisons there is no significant difference in the mean number of options endorsed across these two modes. Additionally, while 49 percent of the 75 individual response options were marked more often in the web mode (4% were significantly different), a very comparable 52 percent were marked more often in the telephone mode (6% were significantly different) (see the far right pie chart in Figure 2). These results indicate that the forced choice question format performs similarly across web and telephone survey modes. As such, they suggest that the differences found between the web check-all format and the telephone forced-choice format likely trace back to question format effects.

Nevertheless, as Table 4 shows, there appears to be significant forced-choice mode differences with respect to the rejection of response options for four of the nine comparisons made. These differences appear to be linked to significant mode differences in item

nonresponse. Seven of nine comparisons show significant differences at the .05 level in the mean number of options left blank across modes and the remaining two comparisons reach significance at the .10 level. In seven of the comparisons the differences are consistent with the expectations of higher item nonresponse on the web than on the telephone that is presented in Figure 1. The two cases in which the telephone produces higher item nonresponse are both for the question asking about descriptors of WSU (Q3).

The unexpected reversal of effect direction for the comparisons in this item stimulated additional exploration of missing data patterns first throughout all of the questions and then in this particular question. Similarly to Smyth et al. (Forthcoming) we find that very few respondents treated the forced-choice questions as check-all questions (i.e., marking only in the affirmative category and not in the negative). On average, only about 0.9 percent (range: 0.3% - 2.3%) of web respondents used this response tactic.

Table 5 shows the percent of forced-choice respondents leaving no options blank, one to three options blank, or over three options blank per question as well as the number leaving all options blank (excluding those treating the forced-choice questions as de facto check-all questions).³ Since Q3 is rather anomalous compared to the other questions, the mean percents in the table are calculated both with and without that data. When Q3 is excluded from the calculations the data reveal that on average across questions comparable percents of telephone and web respondents left one to three options blank (telephone – 1.3%; web – 1.9%), but web respondents were more likely to leave over three blank (telephone – 0.1%; web 2.0%). In fact, within the web mode an average of 1.8 percent of respondents left all of the options in a question blank compared to less than 0.1 percent of respondents in the telephone mode. This data

³ To simplify the table and facilitate mode comparisons (rather than question format comparisons) the multiple forced-choice versions of each question are aggregated at the question level in the table. Similar data split out by version is available from the authors upon request.

suggests that while telephone respondents may have occasionally been uncomfortable enough with an option to skip it, they did not have the same latitude to skip multiple options or even whole questions that web respondents seemed to have.

We now turn to specific analyses of question 3. The wording and response options for this question can be seen in Table 6. Table 5 shows that similar proportions of web respondents left options missing on this question as on the other four, but substantially more telephone respondents left options missing. Most of the increase in item nonresponse among telephone respondents occurred among those leaving one to three options blank per question (17.8% for Q3; 1.3% for the other four questions). This increased nonresponse among telephone respondents is reflected in the distributions shown in Table 6 where for all but one option the telephone produced higher nonresponse than the web. For five of these options the difference was statistically significant. Although we do not have conclusive evidence pertaining to the mechanism(s) behind this increase in nonresponse for telephone respondents, it seems likely that all respondents found this question and its attendant response options to be a bit sensitive, but telephone respondents were particularly uncomfortable with it because they had to report their responses to a live interviewer who they knew was associated with WSU.

Qualitative evidence from monitoring of the telephone interviews indicates that first year students felt especially ill-equipped to attribute descriptions to WSU when they had only just begun their studies there at the time they were surveyed. This evidence is confirmed in the substantive data in that 49.2 percent of the missing options in the telephone versions and 53.3 percent of those missing in the web versions of this question could be attributed to first-year students.⁴ However, since first year students accounted for less of the nonresponse in the

⁴ Responses to a question asking students to report the month and year they began their studies at WSU were used to determine each respondents' year in school.

telephone mode than in the web mode, the discomfort this particular group felt in attributing descriptions to WSU cannot explain the significantly higher nonresponse among telephone respondents. If anything it appears that the telephone mode may have increased the discomfort of those students in their second or higher year at WSU.

DISCUSSION AND CONCLUSIONS

One advantage of the tripartite design of the telephone and web surveys reported here is that it gives us the ability to examine question format, survey mode, and format/mode interaction effects independently and compare the results.⁵ Furthermore, we can follow the same four questions (#22, #13, #11, and #20) through all three major steps of the analysis. In doing so we see clear patterns suggesting that, in the case of multiple-answer questions, question format effects are independent of and much larger in magnitude than survey mode effects. As can be seen in Figure 2, comparing the forced-choice and the check-all format both within the web mode and across the web and telephone modes shows that the forced-choice format yields higher endorsement of items, a finding that is consistent with past research comparing these two question formats in various modes (Jordan et al. 1980; Rasinski et al. 1994; Smyth et al. Forthcoming; and Tipping and Nicholaas 2005). Moreover, the findings seem to follow a pattern whereby those questions referring to less concrete topics (attitude and opinion questions) are prone to larger question format effects than those referring to more concrete topics (behavior and fact questions).

Since there is virtually no evidence that survey mode significantly impacts the endorsement of items in the forced-choice question format (see Figure 2), it is likely that the differences found between web check-all and telephone forced-choice questions are the result of

⁵ Unfortunately, we are unable to model these three effects simultaneously because of the lack of ability to administer a check-all question in the telephone mode.

question format differences (i.e., forced-choice vs. check-all) more so than survey mode. These findings suggest that the differences that Jordan et al. (1980) attributed to survey mode effects in their study may, in fact, be the result of the change in question format that accompanied their mode comparison. In the case of multiple-answer questions, previous findings that the forced-choice format is subject to deeper processing and may discourage satisficing (Smyth et al. Forthcoming) combined with our finding here that this question format translates relatively well across visual and aural survey modes suggests that the forced-choice question format should be used instead of the check-all format in both single and multiple-mode surveys.

The larger implication of these findings is that changes made to accommodate mode limitations may significantly change the question stimulus such that results across modes are not comparable. The consequences of such unintended effects have been minimal in the past because most surveys were limited to one mode of administration. However, now that we are increasingly relying on mixed-mode data collection strategies we need to revisit parallel mode-specific measures (e.g., forced-choice and check-all; polar and fully labeled scales, etc.) to ensure that they are presenting the same stimulus to respondents in order to measure the same constructs (intermode question validity).

As de Leeuw (2005) points out, achieving the same stimulus across modes (i.e., universal mode design) may not require presenting the same exact question format and wording in both modes. It may, in fact, be necessary to make adjustments to accommodate the distinctive characteristics and demands of each mode. However, researchers should carefully consider and research such mode-specific changes rather than developing surveys under the assumption that mode-specific question formats developed during a time when single mode surveys predominated are appropriate in this time of mixed-mode surveys. The findings in this and other

recent papers indicate that the check-all and forced-choice question formats do not present the same stimulus to respondents within or across survey modes, but that the forced-choice format performs well both within and across web and telephone modes. As such, we recommend using it instead of the check-all question format.

Table 1: Mean Number of Options Endorsed in the Web Check-All and Forced-Choice Formats

Questions Listed from Most Concrete Topic to Least Concrete Topic	Forced-Choice	Check-All	Diff.	One-Sided T-Test	
				t	p
Q22: Possessions (13)	6.60	6.36	0.24	1.29	.099
Q13: Use of WSU resources (9)	5.12	4.88	0.24	1.96	.025
Q11: WSU services purchased (9)	2.54	2.39	0.15	1.24	.107
Q20: Cougar varsity sports fan (15)	4.63	3.03	1.60	6.16	.000
Overall Means	4.72	4.17	0.55	5.19	.000

Note: Parentheses contain the number of response options accompanying the question.

Table 2: Mean Number of Options Endorsed in the Telephone Forced-Choice Format Compared to the Web Check-All Format

Questions Listed from Most Concrete Topic to Least Concrete Topic	Mean: Telephone Forced-Choice	Mean: Web/Check-All	Difference	One-Sided T-Test	
				t	p
Q22: Possessions (13)	6.51	6.36	0.15	0.80	.212
Q13: Use of WSU resources (9)	5.01	4.88	0.13	1.08	.140
Q11: WSU Services purchased (9)	2.66	2.39	0.27	2.12	.017
Q12: Financial resources while attending WSU (8)	3.03	2.58	0.45	4.22	.000
Q20: Cougar varsity sports fan (15)	5.01	3.02	1.99	7.83	.000
Overall Mean	4.44	3.85	0.59	6.56	.000

Note: Parentheses contain the number of response options accompanying the question.

Table 3: Mean Number of Options Endorsed in the Telephone and Web Forced-Choice Formats

Questions Listed from Most Concrete Topic to Least Concrete Topic	Tele.	Web	Two-Sided T-Test		
			Diff.	t	p
Q22: Possessions (have or not vs. possess or not) (13)	6.51	6.60	-0.09	-0.53	.595
Q22: Possessions (possess or not vs. possess or not)	6.51	6.67	-0.16	-0.88	.376
Q22: Possessions (have or not vs. have or not)	6.71	6.60	0.11	0.61	.545
Q13: Use of WSU resources (Original Order) (9)	5.01	5.12	-0.11	-0.95	.343
Q13: Use of WSU resources (Reverse Order)	5.13	4.93	0.20	1.54	.123
Q11: WSU Services purchased (9)	2.66	2.54	0.12	0.89	.373
Q20: Cougar varsity sports fan (15)	5.01	4.63	0.38	1.23	.220
Q3: Descriptions of WSU (Original Order) (10)	6.42	6.32	0.10	0.75	.451
Q3: Descriptions of WSU (Reverse Order)	6.78	6.43	0.35	2.57	.010
Overall Means	5.54	5.42	0.12	1.58	.113

Note: Parentheses contain the number of response options accompanying the question. When versions are included in multiple comparisons (as in Q22) they are only counted in the overall means once.

Table 4: Mean Number of Options Dismissed or Left Blank in the Telephone and Web Forced-Choice Questions

Questions Listed from Most Concrete Topic to Least Concrete Topic	Mean Number of Options Marked No			Mean Number of Options Left Blank		
	Telephone	Web	p	Telephone	Web	p
Q22: Possessions (have or not vs. possess or not) (13)	6.45	6.21	.177	0.04	0.19	.090
Q22: Possessions (possess or not vs. possess or not)	6.45	5.86	.001	0.04	0.47	.001
Q22: Possessions (have or not vs. have or not)	6.28	6.21	.669	0.01	0.19	.018
Q13: Use of WSU resources (Original Order) (9)	3.99	3.72	.025	0.00	0.15	.007
Q13: Use of WSU resources (Reverse Order)	3.86	3.82	.786	0.01	0.25	.002
Q11: WSU Services purchased (9)	6.28	6.27	.949	0.07	0.19	.059
Q20: Cougar varsity sports fan (15)	9.95	9.80	.645	0.04	0.56	.000
Q3: Descriptions of WSU (Original Order) (10)	3.18	3.57	.006	0.39	0.11	.000
Q3: Descriptions of WSU (Reverse Order)	2.86	3.40	.000	0.35	0.17	.017
Overall Means	5.36	5.30	.473	0.11	0.26	.000

Note: Parentheses contain the number of response options accompanying the question. When versions are included in multiple comparisons (as in Q22) they are only counted in the overall means once. * Two-sided t-test of means

Table 5: Percent of Telephone and Web Respondents Leaving 1 to 3 or 4+ Items Blank by Question

	PERCENT WITHOUT Q3			PERCENT WITH Q3		
	Q22***	Q13**	Q11***	Q20*	Mean Percent	Q3***
PHONE						
No Items Blank	99.6	99.5	95.7	99.4	98.6	81.7
1 to 3 Items Blank	0.3	0.5	4.2	0.3	1.3	17.8
4 or More Items Blank	0.1	0.0	0.1	0.3	0.1	0.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
All Items Blank	0.1	0.0	0.0	0.0	0.0	0.0
WEB						
No Items Blank	95.6	97.7	96.3	94.9	96.1	96.7
1 to 3 Items Blank	2.1	0.5	1.9	3.1	1.9	1.9
4 or More Items Blank	2.3	1.8	1.8	2.0	2.0	1.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
All Items Blank	2.1	1.8	1.6	1.7	1.8	0.7

* One version of this question was included; ** Two versions of this question were included; *** Three versions of this question were included.

Table 6: Percent of Respondents Leaving Each Option Blank on the Descriptors Question*

	Q3: Do you feel that each of the following descriptions does or does not describe Washington State University?										Overall		
	Phone					Web					Overall	Chi-Square	p
	Version 1 Yes/No (Original)	Version 2 Yes/No (Reversed)	Version 3 Yes/No (Random)	Overall	Version 1 Yes/No (Original)	Version 2 Yes/No (Reversed)	Version 3 Yes/No (Random)	Overall					
Farm or Agriculture School	4.61	3.31	2.19	3.49	0.57	1.32	1.16	1.39	9.67	.002			
Party School	1.97	2.65	1.56	2.01	0.57	1.32	1.45	1.39	1.19	.275			
Electronic or "Wired" University	4.61	1.99	1.88	2.86	0.57	1.32	0.87	1.11	8.17	.004			
Competitive in Pac 10 Sports	3.29	1.32	0.94	1.80	0.86	1.58	1.16	1.76	0.01	.942			
Conservative University	7.89	7.62	3.44	7.09	1.43	2.11	1.73	2.22	27.92	.000			
Politically Charged/Socially Conscious	5.26	1.66	2.19	3.07	0.86	2.11	1.73	2.03	2.21	.138			
Religious	2.96	3.64	2.19	4.02	1.15	1.58	0.58	1.66	10.44	.001			
Outdoors Oriented	2.30	5.30	2.50	3.70	1.43	1.58	1.45	2.03	5.15	.023			
World Class University	2.63	3.31	1.88	2.65	1.15	2.11	1.45	1.76	1.88	.170			
Diverse	0.66	0.99	0.63	0.74	0.57	1.58	1.45	1.57	2.97	.085			
% of missing items from 1 st yr. students	49.1	48.4	50.0	49.2	62.5	50.8	46.7	53.3					
% of missing items from 2+ yr. students	50.9	51.6	50.0	50.8	37.5	49.2	53.3	46.7					
N	304	302	320	945	349	379	346	1,082					

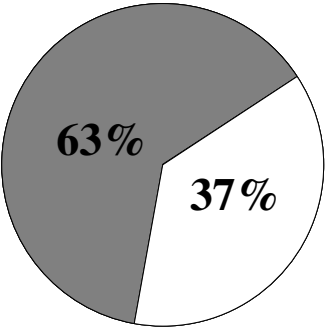
* Excluding those who treated the forced-choice question format as a de facto check-all format.

Figure 1: Expected Format and Mode Effects for Multiple-Answer Questions

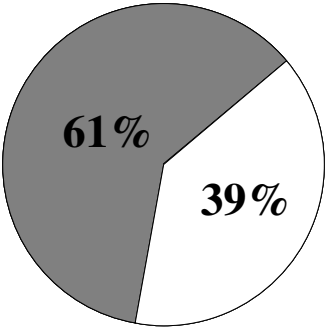
		FORCED-CHOICE	CHECK-ALL
	Response Task	<p>Respondents must record a position for every option, leading to deeper processing.</p> <p>Outcome: More options endorsed.</p>	<p>Respondents don't have to record a position for every option, allowing them to superficially process some items.</p> <p>Outcome: Fewer options endorsed.</p>
		TELEPHONE	WEB
Media-Related Factors	Locus of Control	<p>Respondent has little control over pace. Rapid pace means little processing time.</p> <p>Expectation: Fewer options endorsed.</p>	<p>Respondent controls survey pace. Can slow down when needed.</p> <p>Expectation: More options endorsed.</p>
	Cultural Characteristics of Mode	<p>Telephones are personal devices and unsolicited calls are inconveniences. May lead to reduced motivation, superficial interactions, and satisficing strategies.</p> <p>Expectation: Fewer options endorsed.</p>	<p>The Internet is dynamic, interactive, and expected to be quick, convenient, and fun. These characteristics may promote superficial processing of items.</p> <p>Expectation: Fewer options endorsed.</p>
Information Transmission	Visual vs. Aural	<p>Reliance on aural communication makes respondents rely on memory a lot. It's difficult to return to an item or skip ahead.</p> <p>Expectation: Fewer options endorsed.</p>	<p>Visual communication channels allow respondents to repeatedly reference information, reducing mental burden.</p> <p>Expectation: More options endorsed.</p>
Interviewer Impact Factors	Social Desirability	<p>Interviewer presence increases social desirability pressures.</p> <p>Expectation: More desirable and fewer undesirable responses.</p>	<p>Reduced social desirability pressures and increased privacy of disclosure.</p> <p>Expectation: Fewer desirable and more undesirable responses.</p>
	Acquiescence	<p>Interviewer presence increases the tendency of respondents to be agreeable.</p> <p>Expectation: More options endorsed.</p>	<p>Anonymity and privacy of disclosure reduces agreeing response bias.</p> <p>Expectation: Fewer options endorsed.</p>
	Participation Expectations	<p>Increased accountability for skipping items or breaking off b/c of interviewer presence.</p> <p>Expectation: Lower item nonresponse.</p>	<p>Reduced feelings of accountability for skipping items or breaking off participation.</p> <p>Expectation: Higher item nonresponse.</p>

Figure 2: Individual Response Option Endorsement Patterns

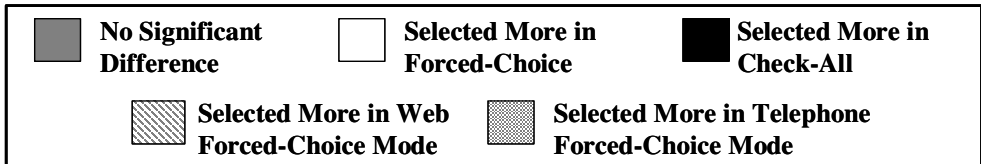
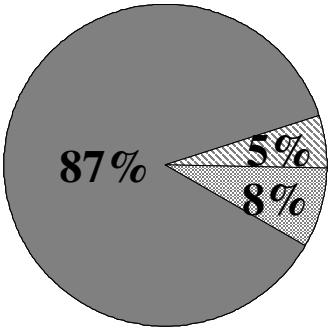
Web Check-All vs. Web Forced-Choice
(n = 46)



Web Check-All vs. Telephone Forced-Choice
(n = 54)



Web Forced-Choice vs. Telephone Forced-Choice
(n = 75)



p = .05

Figure 3: Web and Telephone Experimental Treatment Summaries

	WEB	TELEPHONE*																																																												
Q22:	<p>Do you have or not have each of the following items in your possession here in Pullman?</p> <table border="1"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td>Bicycle</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Motorcycle</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Car/Truck</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Cell Phone</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Laptop Computer</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Desktop Computer</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Television</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Stereo</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>DVD Player</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>MP3 Player</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>VCR</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Microwave</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Palm Pilot</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> </tbody> </table> <p>For the following items, please indicate whether you possess or do not possess each here in Pullman.</p> <table border="1"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td>Bicycle</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Motorcycle</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> </tbody> </table> <p>Please check each of the following items that you have in your possession here in Pullman.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Bicycle <input type="checkbox"/> Motorcycle <input type="checkbox"/> Car/Truck <input type="checkbox"/> Cell Phone <input type="checkbox"/> Laptop Computer <input type="checkbox"/> Desktop Computer <input type="checkbox"/> Television <input type="checkbox"/> Stereo <input type="checkbox"/> DVD Player <input type="checkbox"/> MP3 Player <input type="checkbox"/> VCR <input type="checkbox"/> Microwave <input type="checkbox"/> Palm Pilot 		Yes	No	Bicycle	<input type="radio"/>	<input type="radio"/>	Motorcycle	<input type="radio"/>	<input type="radio"/>	Car/Truck	<input type="radio"/>	<input type="radio"/>	Cell Phone	<input type="radio"/>	<input type="radio"/>	Laptop Computer	<input type="radio"/>	<input type="radio"/>	Desktop Computer	<input type="radio"/>	<input type="radio"/>	Television	<input type="radio"/>	<input type="radio"/>	Stereo	<input type="radio"/>	<input type="radio"/>	DVD Player	<input type="radio"/>	<input type="radio"/>	MP3 Player	<input type="radio"/>	<input type="radio"/>	VCR	<input type="radio"/>	<input type="radio"/>	Microwave	<input type="radio"/>	<input type="radio"/>	Palm Pilot	<input type="radio"/>	<input type="radio"/>		Yes	No	Bicycle	<input type="radio"/>	<input type="radio"/>	Motorcycle	<input type="radio"/>	<input type="radio"/>	<p>Do you have or not have each of the following items in your possession here in Pullman?</p> <p>I am going to read a list of items. Please indicate whether you possess or do not possess each item here in Pullman by saying yes or no.</p>									
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Q13:	<p>Have you used or not used each of the following resources offered at WSU?</p> <table border="1"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td>Libraries</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Computer Labs</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Student Health Center</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Academic Advising</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Student Recreation Center</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Internet/E-mail Access</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Career Services</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Campus Sponsored Tutoring</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Counseling Services</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> </tbody> </table> <p>Have you used or not used each of the following resources offered at WSU?</p> <table border="1"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td>Counseling Services</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Campus Sponsored Tutoring</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Career Services</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Internet/E-mail Access</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Student Recreation Center</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Academic Advising</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Student Health Center</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Computer Labs</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Libraries</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> </tbody> </table> <p>Which of the following resources have you used at WSU? Please check all that apply.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Libraries <input type="checkbox"/> Computer Labs <input type="checkbox"/> Student Health Center <input type="checkbox"/> Academic Advising <input type="checkbox"/> Student Recreation Center <input type="checkbox"/> Internet/E-mail Access <input type="checkbox"/> Career Services <input type="checkbox"/> Campus Sponsored Tutoring <input type="checkbox"/> Counseling Services 		Yes	No	Libraries	<input type="radio"/>	<input type="radio"/>	Computer Labs	<input type="radio"/>	<input type="radio"/>	Student Health Center	<input type="radio"/>	<input type="radio"/>	Academic Advising	<input type="radio"/>	<input type="radio"/>	Student Recreation Center	<input type="radio"/>	<input type="radio"/>	Internet/E-mail Access	<input type="radio"/>	<input type="radio"/>	Career Services	<input type="radio"/>	<input type="radio"/>	Campus Sponsored Tutoring	<input type="radio"/>	<input type="radio"/>	Counseling Services	<input type="radio"/>	<input type="radio"/>		Yes	No	Counseling Services	<input type="radio"/>	<input type="radio"/>	Campus Sponsored Tutoring	<input type="radio"/>	<input type="radio"/>	Career Services	<input type="radio"/>	<input type="radio"/>	Internet/E-mail Access	<input type="radio"/>	<input type="radio"/>	Student Recreation Center	<input type="radio"/>	<input type="radio"/>	Academic Advising	<input type="radio"/>	<input type="radio"/>	Student Health Center	<input type="radio"/>	<input type="radio"/>	Computer Labs	<input type="radio"/>	<input type="radio"/>	Libraries	<input type="radio"/>	<input type="radio"/>	<p>I am going to read a list of campus resources. Please indicate whether you have or have not used each resource at WSU by saying yes or no.</p> <p>I am going to read a list of campus resources. Please indicate whether you have or have not used each resource at WSU by saying yes or no.</p>
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Q11:	<p>Have you purchased or not purchased each of the following services from WSU this semester?</p> <table border="1"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr><td>Parking Pass</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Sports Pass</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Computer Lab Pass</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>WSU Residence Hall Housing</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>WSU Apartments</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>WSU Meal Plan</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Cougar Cash</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Chinook (yearbook)</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> <tr><td>Optional Medical Insurance</td><td><input type="radio"/></td><td><input type="radio"/></td></tr> </tbody> </table> <p>Which of the following services have you purchased from WSU this semester? Please check all that apply.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Parking Pass <input type="checkbox"/> Sports Pass <input type="checkbox"/> Computer Lab Pass <input type="checkbox"/> WSU Residence Hall Housing <input type="checkbox"/> WSU Apartments <input type="checkbox"/> WSU Meal Plan <input type="checkbox"/> Cougar Cash <input type="checkbox"/> Chinook (yearbook) <input type="checkbox"/> Optional Medical Insurance 		Yes	No	Parking Pass	<input type="radio"/>	<input type="radio"/>	Sports Pass	<input type="radio"/>	<input type="radio"/>	Computer Lab Pass	<input type="radio"/>	<input type="radio"/>	WSU Residence Hall Housing	<input type="radio"/>	<input type="radio"/>	WSU Apartments	<input type="radio"/>	<input type="radio"/>	WSU Meal Plan	<input type="radio"/>	<input type="radio"/>	Cougar Cash	<input type="radio"/>	<input type="radio"/>	Chinook (yearbook)	<input type="radio"/>	<input type="radio"/>	Optional Medical Insurance	<input type="radio"/>	<input type="radio"/>	<p>I am going to read a list of optional services provided by WSU. Please indicate whether you have purchased or not purchased each service from WSU this semester by saying yes or no.</p> <p>I am going to read a list of optional services provided by WSU. Please indicate whether you have purchased or not purchased each service from WSU this semester by saying yes or no.</p> <p style="text-align: center;"><i>Options read in inverse order.</i></p>																														
	Yes	No																																																												
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* Response options were read in the order seen at left unless otherwise noted.

Figure 3: Web and Telephone Experimental Treatment Summaries (continued)

	WEB	TELEPHONE*																																																																		
Q12:	<p>What best describes the financial support you have received while attending WSU?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Stafford Loans <input type="checkbox"/> Other Loans <input type="checkbox"/> Scholarships <input type="checkbox"/> Work Study <input type="checkbox"/> Parents <input type="checkbox"/> Other Family <input type="checkbox"/> Full-Time Employment <input type="checkbox"/> Part-Time Employment 	<p>I am going to read a list of sources of financial support. Please indicate whether you have or have not received support from each source by saying yes or no.</p>																																																																		
Q20:	<p>Do you consider yourself to be a fan of each of the following Cougar varsity sports?</p> <table border="0" style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Yes</th> <th style="text-align: center;">No</th> </tr> </thead> <tbody> <tr><td>Men's Baseball</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Women's Basketball</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Men's Basketball</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Women's Cross-Country</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Men's Cross-Country</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Men's Football</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Women's Golf</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Men's Golf</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Women's Rowing</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Women's Soccer</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Women's Swimming</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Women's Tennis</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Women's Track and Field</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Men's Track and Field</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Women's Volleyball</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> </tbody> </table> <p>Which of the following Cougar varsity sports would you consider yourself to be a fan of? Please check all that apply.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Men's Baseball <input type="checkbox"/> Women's Basketball <input type="checkbox"/> Men's Basketball <input type="checkbox"/> Women's Cross-Country <input type="checkbox"/> Men's Cross-Country <input type="checkbox"/> Men's Football <input type="checkbox"/> Women's Golf <input type="checkbox"/> Men's Golf <input type="checkbox"/> Women's Rowing <input type="checkbox"/> Women's Soccer <input type="checkbox"/> Women's Swimming <input type="checkbox"/> Women's Tennis <input type="checkbox"/> Women's Track and Field <input type="checkbox"/> Men's Track and Field <input type="checkbox"/> Women's Volleyball 		Yes	No	Men's Baseball	●	●	Women's Basketball	●	●	Men's Basketball	●	●	Women's Cross-Country	●	●	Men's Cross-Country	●	●	Men's Football	●	●	Women's Golf	●	●	Men's Golf	●	●	Women's Rowing	●	●	Women's Soccer	●	●	Women's Swimming	●	●	Women's Tennis	●	●	Women's Track and Field	●	●	Men's Track and Field	●	●	Women's Volleyball	●	●	<p>I am going to read a list of Cougar varsity sports. Please indicate whether you are a fan or not a fan of each by saying yes or no.</p>																		
	Yes	No																																																																		
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Women's Cross-Country	●	●																																																																		
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Men's Football	●	●																																																																		
Women's Golf	●	●																																																																		
Men's Golf	●	●																																																																		
Women's Rowing	●	●																																																																		
Women's Soccer	●	●																																																																		
Women's Swimming	●	●																																																																		
Women's Tennis	●	●																																																																		
Women's Track and Field	●	●																																																																		
Men's Track and Field	●	●																																																																		
Women's Volleyball	●	●																																																																		
Q3:	<p>Question 3 of 25</p> <p>Do you feel that each of the following descriptions does or does not describe Washington State University?</p> <table border="0" style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Yes</th> <th style="text-align: center;">No</th> </tr> </thead> <tbody> <tr><td>Farm/Agriculture School</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Party School</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Electronic or "Wired" University</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Competitive in Pac 10 Sports</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Conservative University</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Politically Charged/Socially Conscious</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Religious</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Outdoors Oriented</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>World Class University</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Diverse</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> </tbody> </table> <p style="text-align: left; margin-left: 20px;">Next Question</p> <p>Do you feel that each of the following descriptions does or does not describe Washington State University?</p> <table border="0" style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Yes</th> <th style="text-align: center;">No</th> </tr> </thead> <tbody> <tr><td>Diverse</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>World Class University</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Outdoors Oriented</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Religious</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Politically Charged/Socially Conscious</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Conservative University</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Competitive in Pac 10 Sports</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Electronic or "Wired" University</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Party School</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> <tr><td>Farm/Agriculture School</td><td style="text-align: center;">●</td><td style="text-align: center;">●</td></tr> </tbody> </table>		Yes	No	Farm/Agriculture School	●	●	Party School	●	●	Electronic or "Wired" University	●	●	Competitive in Pac 10 Sports	●	●	Conservative University	●	●	Politically Charged/Socially Conscious	●	●	Religious	●	●	Outdoors Oriented	●	●	World Class University	●	●	Diverse	●	●		Yes	No	Diverse	●	●	World Class University	●	●	Outdoors Oriented	●	●	Religious	●	●	Politically Charged/Socially Conscious	●	●	Conservative University	●	●	Competitive in Pac 10 Sports	●	●	Electronic or "Wired" University	●	●	Party School	●	●	Farm/Agriculture School	●	●	<p>I'm going to read a list of descriptions. Please indicate whether you feel that each description does or does not describe Washington State University by saying yes or no.</p> <p>I'm going to read a list of descriptions. Please indicate whether you feel that each description does or does not describe Washington State University by saying yes or no.</p>
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* Response options were read in the order seen at left unless otherwise noted.

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