
Increasing Cognitive Response Sensitivity

Brian Wansink, Michael L. Ray and Rajeev Batra

Traditional cognitive response elicitation procedures may not be sensitive enough to elicit the stylized and subtle thoughts that are generated during exposure to certain types of ads. When these types of thoughts are the focus of an advertising researcher's work, it is critical that he or she develop a procedure that has the sensitivity to draw them forth without being reactive. A laboratory study examines two different procedures to do this: pre-exposure exercises and directed post-exposure instructions. The results suggest that each procedure raises measurement sensitivity, but that there is no advantage in combining them. General guidelines are then presented for developing stylized cognitive response elicitation procedures.

Brian Wansink (Ph.D., Stanford University) is assistant professor at the Amos Tuck School of Business at Dartmouth College. He is currently visiting associate professor at the Frije Universiteit and at the Tinbergen Institute in Amsterdam.

Michael L. Ray (Ph. D., Northwestern University) is the John G. McCoy Professor of Creativity and Innovation in Marketing at Stanford University.

Rajeev Batra (Ph. D., Stanford University) is associate professor of marketing at the University of Michigan.

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Researchers in consumer behavior often borrow measures and measurement procedures from other fields (primarily psychology) without considering any unique measurement needs that advertising might have. As a result, both advertising scholars and industry professionals have criticized traditional copy-testing methods for not developing measures that are more sensitive, more effective, or more relevant (Marketing Science Institute 1983). Such missed opportunities result in a less sophisticated understanding of advertising effects and processes than would be the case if some minimal measure development pre-studies were done before each major research effort.

A researcher is greatly aided in exploratory work and in model building by knowing what subjects think when viewing an advertisement. For researchers studying specific types of thoughts, traditional thought elicitation procedures may actually discourage accurate communication, thus, yielding inconclusive findings (Russo, Johnson, and Stevens 1989). Such inconclusive findings can handicap theory development and delay the generation of any related insights.

After noting the drawbacks with traditional cognitive response elicitation procedures, we review two sets of procedures: pre-exposure elicitation exercises (such as practice trials and exposure to examples), and directed post-exposure instructions. Predictions are made as to their relative effectiveness, and a study is presented that compares the sensitivity and reactivity of these procedures with traditional ones. Based on our discussion of these findings, we suggest a basic method that researchers can use for developing an appropriate cognitive response elicitation procedure that will be most helpful for their particular program of study.

Background

The initial research with cognitive responses (or verbal protocols) was pioneered by Greenwald (1968) and then introduced into advertising by Wright (1973). Such work indicated that cognitive responses can mirror the actual thoughts that occur to people as they evaluate a persuasive message. The subsequent consensus of empirical work was that the procedure was nonreactive. Payne, Braunstein, and Carroll (1978), for instance, concluded that "the verbal protocol procedure slows down the process slightly but does not change it fundamentally" (p. 36). Although the use of cognitive responses has detractors (Nisbett and Wilson 1977), their value and perceived

nonreactivity of this approach allow wide use in consumer research. In turn, this approach has had a pronounced impact on theory development (see Wright 1980 for a review) and on our understanding of decision making (Schweiger 1983).

Cognitive responses are typically elicited with instructions such as, "Write down any thoughts that went through your mind while reading the ad." The written thoughts are typically coded as either counterarguments, support arguments, or source derogations (Smead, Wilcox, and Wilkes 1981; Wright 1973). Many researchers still tend to examine only these three types of responses (Petty and Cacioppo 1981), despite growing interest in more specific types of responses.

Advertising research programs that focus on very specific and stylized types of consumer thoughts include those which examine affective responses to advertising (Batra and Ray 1986), neutral and irrelevant thoughts (Cacioppo and Petty 1979), ad-execution responses (Lutz and Mackenzie 1982), brand-related memories cued by advertising (Keller 1987), and usage-related thoughts (Wansink and Ray 1993). Effective examination of these issues by researchers requires a valid, reliable cognitive response elicitation procedure that allows related thoughts to be freely communicated.

Problems with Current Elicitation procedures

Although a multitude of thoughts may be generated as one views an advertisement, sometimes only a small percentage of them will actually be communicated (Wright and Rip 1980). This is particularly evident when we compare the number of responses obtained when a subject speaks into a tape recorder to the reduced number that are instead obtained when the subject has to expend more effort and write them down (Kidder 1980). Even verbalizing thoughts into a tape recorder eventually results in a subject's recording fewer and fewer thoughts as they fatigue (Stemple and Weatley 1981).

Clearly, the more general the elicitation instructions, the greater the opportunity for irrelevant responses (Ericsson and Simon 1984). It is important that any cognitive response elicitation procedure uncover those thoughts most related to the issue under examination, while minimizing the "irrelevant responses a subject verbalizes. Batra and Ray (1986), for instance, were interested in examining people's affective responses to viewing ads. To accomplish this,

they specifically asked subjects not to "replay what happened in the ad." By minimizing "ad playback," the researchers claim to have obtained more of the rich, affective responses which might have been neglected or "lost" if the subject had spent time simply restating ad content.

Before subjects see an ad, it is common to tell them that they will be asked questions about the ad after viewing it. At the appropriate time, they are then typically asked to write down the thoughts they had when viewing it. These instructions are general, and a portion of the 'noise' that results could be minimized if subjects had a better idea of what is expected of them (Ericsson and Simon 1984). In short, when a researcher is focusing on special types of thoughts, the conventional procedure of simply asking for general reactions may not be as useful as more directed, less ambiguous procedures.

Pre-Exposure Elicitation Exercises and Directed Post-Exposure Instructions

A person viewing an ad may generate many thoughts, but not all of them will be communicated because of time constraints or cognitive capacity constraints (Ericsson and Simon 1984). Researchers have used either pre-exposure elicitation exercises or directed post-exposure instructions to uncover these thoughts about a particular target issue.

A subject given no instructions prior to an ad exposure is free to think of any issues that come to mind. Pre-exposure elicitation exercises (such as practice tests or examples) frame a subject's processing by suggesting a range of issues which one might consider. In doing so, such exercises intensify one's thinking about the target issue while processing the ad. It is thus possible to elicit clear thoughts about the target issue, and the resulting cognitive responses can be used for exploratory research or for model development. These exercises encourage a greater sensitivity to that area being examined by framing or intensifying one's processing of an ad. One way to accomplish this is to provide subjects with a hypothetical example or illustration of what another subject might have written when he or she viewed a related ad (Keller 1987). A second method is to provide subjects with a practice trial followed with standardized feedback. The feedback, for instance, can be presented in the form of a pre-written checklist instructing them to reread their responses to insure they are not simply writing down a replay of the ad (Batra and Ray 1986).

Providing subjects with pre-exposure elicitation ex-

ercises intensifies their **processing** of these target issues during exposure. In **contrast**, giving **directed post-exposure instructions** to subjects after they view an ad encourages them to cognitively edit their less relevant thoughts before writing them down. This editing, in turn, leaves more time and cognitive capacity for recording the thoughts that may be of greater interest to the researcher. One way this can be **accomplished** is by instructing subjects to address specific issues of **interest** (Wright 1980). For instance, a researcher can ask **subjects** how they feel about using the product, if they agree or disagree with the ad, or if it reminds them of any past experiences with the product (Wright and Rip 1980). A second way in which post-exposure instructions can be used is by giving subjects quantitative scales such as Likert-type scales or semantic differential scales that summarize relevant response classifications. We do not discuss such scales further, and it should be noted that some experimentation with **these** scales has shown them to be **less** discriminating than previously mentioned techniques (Batra 1984).

Hypotheses

Elicitation Effectiveness

Numerous researchers have experimented with different procedures to better elicit the particular types of cognitive responses they were investigating. Batra (1984), for instance, found that both examples and practice trials are pre-exposure elicitation exercises that have been shown to **affect** the thoughts a subject chooses to disclose. Russo, Johnson, and Stephens (1989) concurred that there was value in **experimenting** with different elicitation procedures on a **case-by-case basis**. Although case-by-case experimentation is valuable, generalizations can still be made about the general elicitation effectiveness of both **pre-exposure** elicitation exercises and directed post-exposure instructions.

H₁: When pre-exposure elicitation exercises are used, subjects will communicate more thoughts about the target issue than when no pre-exposure elicitation exercise is used.

H₂: When directed post-exposure instructions are given, **subjects** will communicate more thoughts about the target issue than when general instructions are given.

If thoughts about this target issue **are** generated but not communicated, any procedure that succeeds in underscoring their relevance will help encourage their communication. As a result, it will be **unnecessary** to combine both a **pre-exposure** elicitation exercise with directed post-exposure instructions. Using either procedure singly should be equally as effective as using the two in combination.

H₃: **Combining pre-exposure** elicitation exercises with directed instructions **will not result** in subjects being able to **communicate** any more thoughts about the **target** issue than if either were used independently.

Testing for Reactivity and Method Bias

Pre-exposure elicitation exercises and directed post-exposure instructions both share risks of potential reactivity. The primary concern is that these procedures may 'force a subject to generate thoughts about a particular target issue that otherwise would never have occurred to them' (Turner 1988; Nisbett and Wilson 1977). As a result, such thoughts would be invalid and would bias outcome measures such as beliefs, attitudes, or intentions.

One way a researcher can test for such reactivity was alluded to in **H₃**. If it is believed that thoughts about **target** issues are being generated by subjects but simply not communicated, either pre-exposure elicitation exercises or **directed** instructions should be independently as effective' in eliciting these thoughts as when used together in combination. **If** the combination generates an increase in the number of thoughts that are communicated, a researcher should be concerned that these thoughts are possibly being formed on a post hoc basis. That **is**, if they had naturally occurred, they should have been elicited under less heavy-handed circumstances. In effect, if **H₃** is **not** supported, a researcher should be particularly concerned with the possibility of reactivity.

A more direct way of testing for reactivity is by measuring the impact these different procedures have on critical outcome variables (Russo, Johnson, and Stephens 1989). If the procedures are nonreactive, they should have a similar impact on the ratings of any outcome variables when compared with the ratings that are instead generated from a control group. In testing for methodological reactivity, a researcher should examine a hypothesis similar to the following

H₁: There will be no difference in the ratings of **A_{brand}**, Ad, and usage intentions between **subjects** who are given pre-exposure **elicitation** exercises, directed post-exposure instructions, or neither.

There are methodological and statistical concerns with testing a null hypothesis. While rejection of this hypothesis indicates the procedures are reactive, **acceptance** of it **suggests nonreactivity**.

Method

Background and Objectives

Both industry professionals and academics have criticized traditional copy **-testing** methods for their inability to capture the **richness of advertising-related** responses, such as responses related to one's usage of the product (Marketing Science Institute 1983). Because of this **shortcoming** with traditional copy-testing measures, one objective of this study is to determine whether **pre-exposure** elicitation exercises **or** directed post-exposure instructions can improve measurement sensitivity about usage-related thoughts without generating reactivity.

Our approach uses ads (in the form of **storyboards**) that encourage the use of four target brands in unfamiliar situations (Quaker **Oats** Oatmeal for lunch, Ocean Spray **Cranberry** Sauce with sandwiches, Jell-O Brand Gelatin for a snack, and Campbell's Soup for breakfast). We are interested in thoughts related to the usage or consumption of each brand (Wansink and Ray 1992). The ideal elicitation procedure would be one that prompts a maximum number of **usage-related** responses and brand-related responses while minimizing unrelated cognitive responses (such as those that only **restate** ad content) **and** avoiding any inappropriate impact on outcome **measures**.

Design and Procedure

Both examples and practice trials are pre-exposure elicitation exercises that have been shown **to affect** the thoughts a subject chooses to disclose. Figure 1 illustrates how this study combined these two exercises (along with a control condition) with either a directed post-exposure instruction or with a general instruction **to** test the hypotheses. One-third of the subjects saw an example of a hypothetical set of cognitive responses before they saw the ad; one-third of the subjects participated in a practice trial (along

with receiving standardized feedback); and the **last** third served as a control condition, involved **in no pre-exposure elicitation** exercise. Each subject then saw ads for each of four brands (with order of exposure rotated). In summary, the design was a 3 x 2 x 4 mixed-design. This included three levels of the pre-exposure condition (practice, feedback, and **control**), two levels of the post-exposure condition (**general and directed**), and four different brands (Quaker **Oats**, Ocean Spray **Cranberry** Sauce, Jell-O Brand Gelatin, and Campbell's Soup). The **pre-exposure** and **post-exposure** manipulations are between-subject **factors** while each of the four brands serves as a replication.

The basic procedure was as follows: subjects in the "prior example" condition were shown a hypothetical example of what another subject wrote about an ad for a product that was unrelated to this study (Keller 1987). Subjects in the "trial ad condition" were shown the same ad and were asked to write down any thoughts that went through their minds while reading the ad. After doing this, they were given standardized feedback that **instructed** them **to** reread **their** responses **to** be sure they were not **simply** writing down a replay of the ad (Batra and Ray 1986). Subjects in the control condition were involved in no **pre-exposure** elicitation exercise.

After seeing the ad, half of each of these three groups of subjects were given general instructions about writing down their thoughts, and the other half were given directed **instructions**. The general instructions said, "Please write down any thoughts or feelings you might have had **toward the brand or toward** eating the brand as you looked **at** the storyboard. In contrast, the directed instructions said, "Please write down any thoughts or feelings you might have had toward the brand or toward eating the brand as you looked at the storyboard. Did you agree or disagree with the ad? Did it remind you of anything? This instruction has been used in other contexts (Batra 1984; Wright and Rip 1980) and is consistent with suggestions in a review article by Wright (1980). It is important to realize that a wide range of directed instructions could have been used.

Seventy-six PTA (Parent Teacher Association) members (74 percent female) from the western United States were recruited through local school districts and randomly assigned **to** one of the six different procedure sets. Each subject was shown one storyboard for each of four different brands in their respective usage situations. The order of storyboards was **rotated** across each brand. **After** seeing each storyboard, subjects were asked **to** write down their

Figure 1
Design and Analysis Plan

		PRE-EXPOSURE "ELICITATION EXERCISE"		CONTROL CONDITION
		Prior Exposure to an Example	Practice Trial With Feedback	(No Elicitation Exercise)
POST-EXPOSURE ELICITATION INSTRUCTIONS	General Instructions	Cell 1	Cell 2	Cell 3
	Directed Instructions	Cell 4	Cell 5	Cell 6

H₁ : Cells 1 & 2 > Cell 3 (on usage-related cognitive responses)

H₂ : Cell 3 < Cell 6 (on usage-related cognitive responses)

H₃: Cell 1 & 2 = Cell 4 & 5 (on usage-related cognitive responses), and

: Cells 4 & 5 = Cell 6 (on usage-related cognitive responses)

H₄ : Cells 1 & 2 = Cell 3 (on A_{brand}; A_{ad} Usage Intentions), and

: Cells 4 & 5 = Cell 6 (on A_{brand}; A_{ad} Usage Intentions)

thoughta. They were then **asked** a number of quantitative instructions about attribute beliefs, brand **attitudes**, and usage intentions. These **measures** were **taken to** determine if the different combinations of elicitation exercises had any unintended effects on the outcome measures. This procedure **was** repeated for each brand.

Each cognitive response was independently coded by three individuals (including one author) to determine whether it referred to 1) specific thoughta about using or consuming the product, 2) general thoughts about the brand or **its** attributes, or 3) unrelated thoughts about the brand **or to its** usage (ad playback, irrelevant associations). The three individuals agreed upon the coding of 86.3 percent of these thoughts. The remaining ones were discussed and consensus determined how they would be coded.

Results

Overview

Analysis of the 3 x 2 x 4 design was accomplished by using an ANOVA design that treated the four brands as within-subject **factors**. The **results** of a **series** of ANOVAS conducted on the key dependent variables **indicate** that there were mean-level differences between the four brands but no statistically significant interactions. Because the basic **patterns** of the data for each brand were similar, the analyses are generalized across all four brands as has been the convention in other studies (Keller 1987).

Elicitation Effectiveness Hypotheses ($H_{1,2}$)

H_1 states that a pre-exposure elicitation exercise will enable subjects to communicate more thoughts about the targeted behavior (brand usage or consumption) than if no **pre-exposure** elicitation exercise is used. As is seen in Table 1, this hypothesis was supported. This hypothesis was analyzed by examining only those subjects who had been given the general post-exposure instructions (cells 1 and 2 versus 3 in Figure 1). Those who had been given directed **post-exposure** instructions are not examined in this hypothesis since they were also involved in an **alternative** procedure and could potentially reduce the integrity of the test. This is a more statistically **conservative** test, and it should be noted that the pooled **results** indicate similar statistical conclusions.

To specifically test H_1 , a linear contrast of the pre-

exposure **elicitation** exercises (example and prior trial) with the control condition (no elicitation) **shows** that **pre-exposure** elicitation exercises gave a greater number of usage-related cognitive **responses** than the control condition. Subjects in the control condition **elicited** 0.3 cognitive responses, while those in the pre-exposure condition elicited an average of 2.1 (2.3 and 2.0). This difference is statistically **significant** ($F_{1,70} = 9.4; p < .01$), even when conservatively pooling the variance of the two **pre-elicitation conditions**. When compared separately to the control condition, **those subjects** seeing examples communicated more **usage-related** cognitive responses ($F_{1,70} = 11.0; p < .01$) than did those who were involved in a prior trial ($F_{1,70} = 10.2; p < .01$).

Similarly, H_2 **states** that asking a **directed post-exposure** instruction **will** enable subjects to communicate more thoughts about the targeted behavior (brand usage or consumption) than if only a general instruction is given. This hypothesis was also supported (cell 3 versus 6). Subjects who were given only general instructions communicated 0.3 usage-related thoughts while those who were given directed instructions communicated 1.1 ($F_{1,70} = 4.2; p < .05$).

H_3 argues that the sensitivity of the two elicitation procedures will not be significantly improved if used concurrently. This was also supported. Adding pre-exposure elicitation exercises to directed instructions did not increase the number of **usage-related** thoughts that were communicated, even when using an alpha of .20 to minimize the **possibility** of a Type II error (Cohen 1992). A **comparison** of cells 4 and 5 (1.5 and .08) to cell 6 (1.1) **shows no** significant difference ($F_{1,70} = 1.4; p < .20$). Similarly, it was **also** expected that **pre-exposure** elicitation **would** be at least as **effective** when followed by general **instructions** as when followed by directed instructions. A comparison of cells 1 and 2 (2.3 and 2.0) to cells 4 and 5 (1.5 and .8) shows that combining pre-exposure exercises with general instructions was even more effective than **using** directed instructions ($F_{1,70} = 4.2; p < .05$).

This key finding is illustrated in Figure 2. The **black** bars represent usage-related responses, which are the specific cognitive responses that were the focus of this study. Of the subjects who received a practice trial, those who were given general instructions communicated more usage-related thoughts than those given directed instructions ($F_{1,70} = 3.3; p < .05$). Similar results were found in the prior exposure condition, but they are not statistically **significant** ($F_{1,70} = 1.4; p < .20$). These differences between general instructions and directed instructions might be caused

Table 1:
The Impact of Elicitation Methods on Cognitive Responses and Attitudes
(Standard Errors in Parentheses)

Post-Exposure Instruction	Pre-Exposure Elicitation Exercise	Usage-Related Cognitive Responses	Product-Related Cognitive Responses	irrelevant Cognitive Responses	Total Number of Cognitive Responses	Brand 1="unfavorable" 7="favorable"	Att 1="dislike" 7="like"	Usage Intentions 1="unlikely" 7="likely"
General Instruction	Prior Exposure to Example (cell 1) ¹	2.3 (1.7)	1.8 (1.4)	.2 (.5)	4.3 (2.7)	4.3 (1.2)	5.1 (.9)	4.1 (1.7)
	Practice Trial with Feedback (cell 2)	2.0 (1.9)	1.6 (1.2)	.5 (.8)	4.1 (2.1)	4.5 (1.4)	5.4 (1.4)	4.0 (1.1)
	Control Condition (No Elicitation Exercise) (cell 3)	.3 (.6)	2.3 (1.6)	1.5 (1.3)	4.1 (2.3)	4.2 (1.1)	5.0 (1.2)	4.3 (2.0)
Directed Instruction	Prior Exposure to Example (Cell 4)	1.5 (1.3)	1.6 (1.3)	.5 (.8)	3.6 (2.4)-	4.0 (1.8)	5.5 (1.6)	4.2 (1.1)
	practice Trial with Feedback (Cell 5)	(.1)	1.1 (1.2)	1.1 (1.2)	3.0 (2.6)	4.2 (1.6)	4.9 (1.1)	4.7 (1.6)
	Control Condition (No Elicitation Exercise) (Cell 6)	1.1 (1.5)	1.4 (1.2)	1.3 (1.3)	3.8 (2.7)	4.4 (1.3)	5.2 (1.9)	4.1 (1.9)
Global ANOVA Results (F-Values)	Between Subjects							
	Post-Exposure (df=1,70)	3.1*	1.2	.6	2.7*	.8	.1	.0
	Pre-Exposure (df=1,70)	3.4*	1.8	4.1*	.6	.2	.0	.2
	Pm*Post (df=2,70)	1.4	1.3	1.0	1.3	.9	.3	.1
	Within Subjects							
	Brand (df=3,210)	2.1	2.3	5.7*	4.2*	4.2*	5.1*	6.9*
	Brand*Pre (df=6,210)	.3	.2	.5	.9	.3	.3	.6
Brand*Post (df=3,210)	.60	.0	.9	1.1	.4	.1	1.0	
Brand*Pre*Post (df=6,210)	.00	.1	.3	.6	1.1	.4	.3	

¹ Number of Cell corresponding with Figure I

● p<.05

by the more open-ended nature of the general **instructions**, which offer greater response flexibility than the more directed instructions. The remaining **differences** that appear notable in Figure 2 are not statistically reliable. Nevertheless, the insights they suggest will be addressed later.

The Reactivity and Method Bias Hypothesis (H_3)

An important question is whether these different elicitation procedures generate reactivity and bias. The results for H_3 provide favorable evidence since the heavy-handed combination of both **procedures** did not result in any more thoughts being communicated than when either procedure was used by itself. Further evidence that reactivity is not a concern will be found if it can be shown that the different **elicitation** procedures have no differential impact on the ratings of A_{brand} , A_{ad} , or usage intentions (H_4).

In order to guard against Type II errors (accepting the null hypothesis when it is false), a p-value of .20 was used instead of .05. Even after taking these conservative precautions, linear contrasts confirmed this hypothesis. As can be seen in Table 1, there is no statistical difference between the effect of directed instructions and the effect of general instructions (cells 4 and 5 versus cell 6) when analyzing A_{brand} ($F_{2,70} = .8$; $p > .20$), A_{ad} ($F_{2,70} = .1$; $p > .20$), and usage intentions ($F_{2,70} = .0$; $p > .20$). Similar results are found when comparing the effect of **pre-exposure** elicitation exercises and the effect of no such exercise (cells 1 and 2 versus cell 3). That is, the differences are statistically **insignificant** for measures of A_{brand} ($F_{2,70} = .9$; $p > .20$), for A_{ad} ($F_{2,70} = 1.2$; $p > .20$), and for usage intentions ($F_{2,70} = .4$; $p > .20$).

Conclusions

In the context of this paper, using either **pre-exposure** elicitation exercises or directed **post-exposure** instructions proved to be nonreactive while also effectively increasing the number of thoughts a respondent communicated about a particular target issue. **These** results are consistent with what **Batra** (1984) found when examining different types of elicitation exercises **across** different dependent variables. His results showed that general instructions can be as effective as directed instructions, but only when accompanied with some form of vivid pre-elicitation exercise or illustration (such as an example or a practice trial). The **results** in this paper are also consis-

tent with work conducted on **word-of-mouth communication** and on category substitution (Wan.sink 1993, 1994).

When should **pre-exposure exercises** be used in favor of directed **post-exposure instructions**? It is important to realize that both options **are not always** available. Pre-exposure exercises **are not always** feasible because they can be constrained by the experimental design or by time limitation. Under such **circumstances**, **directed post-exposure** instructions are the best alternative. When pre-exposure exercises **can** be used, Figure 2 suggests that they might elicit *more* thoughts about target issues. Nevertheless, it is **critical** that each researcher examine these different **alternatives** in light of the issues they are examining. As Russo, Johnson, and Stephens (1989, p. 759) point out, "protocol validity should be based on an empirical check rather than on theory-based assurances."

Limitations

A limitation of this study — as **with all method** studies — is that some degree of subjectivity must be used to determine the precise wording of the directed post-exposure instructions. Because of the stylized nature of target issues, the wording of these instructions will vary from research topic to research topic. Nevertheless, general guidelines have been given in **articles** by Wright (1980), **Batra** (1984), and Wright and Rip (1980).

Although **six** different ~'limitation alternatives were examined here, there **are** many **more** that could have also been considered. **The** point of this article is not to test all possible combinations **but to** show **how** various combinations can be compared. The appropriate combinations will change depending on the target issues under examination. This study illustrates that either pre-exposure exercises **or post-exposure directed instructions** can be valuable ways of increasing sensitivity and that their combined use provides **little additional** value.

In examining these **various** elicitation procedures, this study used a relatively small sample size and within-subject factors to strengthen the statistical power of the **tests**. The **ideal** design would have involved between-subject **comparisons**, but this was not believed necessary, given our objectives. It is **important** that researchers be mindful of the statistical power necessary to provide a valid **test** of bias. Having each subject provide multiple observations is one way such statistical power can be economically achieved.

Figure 2
Types of Cognitive Responses Generated by Various Elicitation Methodologies



A General Method for increasing Cognitive Response Sensitivity

The **study reported in this paper is important** because of the generalizations it makes about **increasing cognitive response sensitivity**. In doing so, it **illustrates** a general **pre-testing** methodology that can **help** researchers determine what procedure will be most appropriate for eliciting the cognitive **responses** that **are** of specific interest for a particular program of research. The general four step methodology follows:

1. Given the specific cognitive responses of **interest** (such as usage-related responses, affective responses, credibility-related responses), select a number of pre-exposure elicitation exercises and directed post-exposure instructions believed **to** provide the greatest level of sensitivity. Be certain to include a control condition.
2. Design the study by having the various procedures under examination represent **between-subjects factors**. Statistical power can be increased by having subjects respond **to** multiple ads. Care should be **taken** to insure that subjects are comparable to those who will be involved in the future studies.
3. Include **outcome** variables of interest to insure that the different procedures do not **generate** reactivity (such as A_{brand} , A_{ad} , usage intentions).
4. Select the elicitation procedure that best achieves the objectives of the **study** without affecting outcome variables (relative to the control condition). For instance, an objective may involve selecting the procedure which maximizes **usage-related** thoughts while minimizing **unrelated** thoughts such as ad play-back.

This general procedure, though illustrated in the context of advertising, can be extended to any experimental context where increased measurement sensitivity **is** a critical issue.

Summary

This paper emphasizes the importance of increasing the sensitivity of cognitive response elicitation procedures. Furthermore, it illustrates the steps researchers must go through if they wish **to** develop a stylized elicitation **procedure** for their own program of research.

It is clear that the types of cognitive thoughts that are communicated by subjects after having seen an ad are influenced by the way in which **these** responses are elicited. When exploring a specific construct, it is critical to have a cognitive response elicitation procedure that is sensitive, but not reactive, to the related thoughts a person might generate. **The** study described here is taken from an ongoing program of **research** that suggests either **pre-exposure** elicitation exercises (such as practice trials or prior exposure) or directed post-exposure instructions can increase this sensitivity without appearing **to** be reactive. The combination of the two procedures, however, provides no greater sensitivity than does either alone.

The various elicitation options examined here are among several combinations that can be used **to** build up a tradition of measures and procedures development. Experimentation with different elicitation procedures provides researchers a tremendous opportunity **to** study nontraditional cognitive responses. Such experimentation is especially important for researchers who are in the process of either exploratory research or model development. It must be underscored that major advancement in our understanding of measurement should not be the goal of a single study. A deeper understanding of the advertising process will be attained only as empirical research **systematically** focuses on measurement development.

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