Papers

Comparing prompted and unprompted methods for measuring consumer brand associations

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Abstract A common method used to measure brand associations is a free choice, 'pick any' approach. This is where a battery of attributes is provided and consumers are asked which brands they associate with each attribute. One issue that arises using this method is whether to prompt for brand names or ask people to recall brands. In tests across two different markets, it was evident that while the brand ranks for prompting or not prompting were similar, an unprompted approach was less likely to elicit associations from nonbrand users and smaller share brands. Unprompted methods were also more prone to priming and inhibition effects over the duration of the attribute battery. Therefore, using an unprompted approach will risk under-reporting consumer knowledge structures from these lower accessibility groups. This is problematic for marketing managers seeking to monitor smaller share brands and particularly new entrants into a marketplace, as well as for those seeking to grow via acquisition of nonbrand users. *Journal of Targeting, Measurement and Analysis for Marketing* (2006) **15**, 3–11. doi:10.1057/palgrave.jt.5750029

INTRODUCTION

Information encountered during brand experiences, which may be buying, consuming, viewing the brand's advertising or engaging in word of mouth can, if processed, become linked to the brand name in buyer memory. Brand associations are the results of this processing. These are the concepts linked to the brand name in consumer memory.¹ These associations have many uses, including being components of the overall brand attitude or to access brands from memory for further information processing.^{2–4} As a result, most brand health tracking instruments include a section that

measures the associations that consumers hold for competitive brands in a market.

One of the most popular approaches for capturing the brand associations held by consumers is via a free choice, 'pick any' method. In this approach, brand attributes (such as *good value* or *low fat*) are provided to respondents who are asked to indicate which, if any, brands they associated with each attribute.⁵ One decision that needs to be made when adopting this type of measure is whether to provide respondents with a set of brands (prompting for brands), or have them elicit brands from memory (unprompted). While some have argued that unprompted methods are more appropriate in certain categories, there are other issues such as priming, inhibition effects that may lead to under-reporting of brand associations, particularly for less accessible associations such as those for small

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brands or for nonbrand users. While there have been several studies that have compared the results for a free choice, pick any method with other possible approaches such as rating scales or ranking brands on attributes,^{5,6} the technical aspects within specific measures (particularly a free choice, pick any approach) have received less academic attention.

While it might seem that the decision to prompt or not might only arise in certain situations, this issue is becoming even more relevant with the growth in the number of brands in most categories. This means that the list of possible competitors is often longer than can practically be provided to survey respondents. A movement to a methodology where brands are not prompted becomes more attractive as it removes the requirement to decide which brands to include in brand lists. This makes the difference between the consumer associations elicited in brand prompted and unprompted methodologies of interest to marketers in most categories.

The aim of this research is therefore to compare the nature of brand associations elicited unprompted with those elicited when consumers are prompted for brands. The objective is to determine if there are meaningful differences that would lead one method to be preferable over the other under any specific conditions.

BACKGROUND

There have not been any studies that have specifically examined this issue from the perspective of brand associations. This is most likely because most of the academic research into brand associations has focussed on measurement using rating scales. In the advertising and brand awareness literature, however, there has been considerable debate on the difference between prompted and unprompted approaches. These areas of research can be considered similar in that they involve retrieval of the brand name, but in response to category or brand cues rather than an image attribute. In the advertising awareness area, there has been considerable debate about unprompted (recall) and prompted (recognition) measures, examining both the differences and the conditions under which one is preferable over the

other.⁷⁻¹⁰ Overall, there has been no general consensus except for broad agreement that response levels for prompted measures are higher and more stable over time.¹¹

In the brand awareness literature, there has been a similar, albeit more muted debate. Again there is agreement that prompted measures produce more responses than unprompted measures. Laurent *et al.*¹² compared three commonly used brand awareness measures (top-of-mind or first brand recalled, unprompted recall and prompted recognition that the brand is a member of the category). The measures were found to follow a similar underlying structure, with the difference in response levels able to be explained by a constant that represented the degree of difficulty of the measure, with unprompted measures considered more difficult than prompted measures. Further research by Romaniuk *et al.*,¹³ however, found that the relationship found by Laurent *et al.* was simply a reflection of market share. A large share brand will always gain more responses than a small share brand for brand awareness measure. Also any brand will gain a higher number of responses under a prompted methodology than an unprompted methodology. These two patterns combine to make the relationship observed by Laurent *et al.* and Romaniuk *et al.* When examining brands over time, however, the similarity between the measures becomes less clear, with larger share brands varying over time more on more difficult measures while small share brands varied more over time on easier measures. This means that the two types of measures might not be interchangeable.

One justification given for the awareness measure choice is the buying situation, where Percy and Rossiter¹⁴ argue that the two types of awareness (and therefore the types of measures that underpin them) are very different constructs. Lynch and Srull¹⁵ distinguish between three different types of buying situations; memory based, stimulus based and mixed (both memory- and stimulus-based) situations. If the category is one that requires consumers to retrieve brand names from memory (eg, pizza delivery), then unprompted methods are considered more

appropriate. In contrast when the buying situation faced by consumers involves selecting from alternatives that are present (such as when selecting haircare in a supermarket); then prompted measures are more appropriate. The idea behind this being that it is best to match the measurement approach with the cognitive processes undertaken by the consumer during the choice situation. It is, however, unclear what would be preferred in a mixed scenario (the third of Lynch and Srull's categories). This is problematic given that it has been argued that most, if not all, buying situations involve some mix of the external environment as a stimulus and retrieval of information from memory.¹⁶ Even in a stimulus-based supermarket environment, very little time is spent attending to all stimulus, with an average of 12s spent selecting a brand from a category, with nearly half in under 5s.¹⁷ This suggests that even in that environment, when everything is in front of the consumer, retrieval of information from memory plays an important role in the choice process. Therefore, while some categories might lean towards more memory or more stimuli based, all categories may have sufficient mix of both to be indistinguishable from the perspective of measuring brand associations. If the consumer choice situation influences measurement, then the patterns of responses for brand across markets should differ in different markets that traditionally fall under the differing Lynch and Srull categorisations. If, however, both rely on both memory and stimulus, the pattern of responses will be highly similar in both types of markets.

PRIMING AND RECENCY EFFECTS

While some similarities can be drawn between Brand/Advertising awareness measures and brand association measures, there is one important difference that may mean the findings from awareness research might not extend to this similar context. Brand and advertising awareness measures typically involve only one instance of brand retrieval with the product category/brand as the retrieval cue. In contrast, brand associations are measured via a battery of attributes, where over 20 different ones are not unusual. A key

difference between prompted and unprompted methodologies is the requirement, when brands are not prompted, for the consumer to recall brand names from long-term memory. The act of recall moves a brand from long-term memory into working memory for further cognitive processing. Working memory has well-established limitations in capacity, which restricts the number of items that can be held.¹⁸ Further the presence of brands in working memory can inhibit the retrieval of other brands even when the consumer is actively trying to recall as many as possible.^{19,20} Therefore, measuring brand associations unprompted might reduce the number of brands that are retrieved as the respondent goes through the list. This may lead to an under-representation of brand associations in unprompted methodologies as working memory fills up with options and the ease of retrieval of additional items declines. If it is due to the filling up of working memory inhibiting other brands from being retrieved, the effect should be greater in the later attributes than in earlier attributes (eg, the last ten in a battery of 20).

The other issue of inhibition effects is that it might penalise some sub-groups of the less accessible brand associations. Two such sub-groups of associations are those provided by nonbrand users and those for smaller share brands. Brand usage is well known to have an effect on the propensity to give any brand associations,^{21,22} but marketers are still interested in measuring and understanding the brand associations held by nonbrand users. Given that the first brands that are likely to be retrieved by a consumer are those that they currently use, it might be that brands not used are unduly penalised in an unprompted methodology. Similarly small share brands are in a situation that for the initial retrieval instances, larger share brands are more likely to be accessible than smaller share brands. Therefore, smaller share brands have a lower chance to be retrieved for the first attributes and this should decrease even further as working memory becomes 'full'. It might be expected that brand associations given by nonusers and brand associations given for smaller share brands will be disproportionately lower than comparative results

for associations given by brand users and for larger share brands.

RESEARCH HYPOTHESES

This leads to the following hypotheses:

- H₁:** If unprompted and prompted methodologies are drawing on the same construct, then the brand response levels for an attribute when prompted for brands should be able to be estimated from the unprompted response levels for the same brand on the same attributes (and vice versa).
- H₂:** The difference in the number of brands generated by an unprompted versus a prompted method will be greater for attributes presented later in an attribute battery.
- H₃:** Unprompted methodologies will generate disproportionately fewer responses from nonbrand users than prompted methodologies.
- H₄:** Unprompted methodologies will penalise smaller share brands more than larger share brands
- H₅:** If the consumer choice situation is important determinant in deciding whether to measure brand associations via an unprompted or prompted methodology, then the relationships will differ for categories that represent either memory or stimulus dominant buying situations.

RESEARCH METHOD

The research included two categories of Toothpaste and Insurance. These categories were chosen based on being relative extremes in consumer choice situations, while still being normal everyday categories that most people encounter. The stimulus-based condition covered brands in the Toothpaste category, while the

memory-based condition was brands in the Insurance category. A split sample methodology was used where 199 respondents were randomly split into two groups. The first group ($n = 110$) were prompted for insurance brands, but not for toothpaste brands. The second group ($n = 89$) were prompted for toothpaste brands but not insurance brands.

Respondents were asked which brands they associated with a list of 16 attributes for each category, which were derived from prior experience with each category, category benefits and observation of advertised messages and product claims. The order of the attributes in the questionnaire was randomly derived. In Toothpaste, 12 brands were analysed, while for Insurance nine brands were included in the research.

As expected, based on prior research, the prompted scenarios did also elicit more brands overall (see Table 1), with the prompted scenarios eliciting 2.0 and 1.3 responses on average, compared to 1.3 and 0.9 in the equivalent unprompted scenarios. There were some specific attributes where there were no differences. These were all attributes with a lower mean number of brands (1.2 brands or below), however, this was not a characteristic of all low mean attributes. In Insurance the attributes were *cover all needs*, *has a range of policies*, *has an efficient telephone enquiry system*, *help in an emergency* and *fast service*. In toothpaste *for sensitive teeth* was the only attribute where there was no difference. This might suggest that for these attributes, there were so few brands linked to the attribute that there was no retrieval threshold to reach and so all brands could be retrieved in each methodology.

RELATIONSHIP BETWEEN PROMPTED AND UNPROMPTED BRAND RESPONSES

The first analysis was to compare the brand responses gained for each attribute from the prompted versus the unprompted scenario. This was analysed for each attribute individually, using single linear regression (prompted responses as the independent variable). Results shown in Table 2

show that the responses are equivalent with Beta's generally close to 1 and adjusted *R*-squareds averaging 0.90 for toothpaste; and Adjusted *R*-squareds averaging 0.67 for Insurance. The size of the constant is directly correlated with the response level for that attribute (0.96, $p < 0.001$ for toothpaste and 0.94, $p < 0.001$ for Insurance). The attributes that were exceptions to this were concentrated in the Insurance market, seem to be linked to some of the smaller brands not being

mentioned at all when unprompted, indicating that a lack of variation was the reason for the low *R*-squared, rather than a totally different relationship between the two approaches for those attributes. Therefore, H_1 is supported.

PRIMING AND RECENCY EFFECTS

To test for potential priming/inhibition effects, respondents in both methods were presented attributes in the same order. This allows the

Table 1: Average number of brand responses for each attribute

Attribute	Prompt	Unprom	Attribute	Prompt	Unprom
Offers car insurance	2.5	1.7	Fights plaque	3.7	1.8
Home insurance	2.0	1.3	Provides protection	3.3	1.9
Complete cover	2.0	1.0	Reduces tartar	3.0	1.5
Brand I can trust	1.4	0.9	Freshen breath	2.9	2.0
Good value	1.3	0.8	Confidence	2.7	1.5
Cover all needs	1.2	1.2	A brand I trust	2.2	1.5
Range of policies	1.2	1.2	Looks after gums too	2.1	1.3
Respect	1.2	1.0	Taste great	1.9	1.4
Socially responsible	1.2	0.5	Whiten teeth	1.8	1.6
Treat me well	1.1	0.9	Great value for money	1.8	1.2
Efficient telephone	1.1	1.1	New innovations	1.7	0.9
Conv. located branches	1.0	0.5	Sensitive teeth	1.1	1.1
Help in an emergency	1.0	1.0	Option for kids	1.0	0.9
Keeps me informed	0.9	0.5	Contains mouthwash	1.0	0.6
Fast service	0.8	0.8	Pump style options	0.7	0.6
Easy to understand	0.8	0.6	Fun	0.6	0.5
Average	1.3	0.9	Average	2.0	1.3

Table 2: Attribute regression results

Attribute	Adj <i>R</i> -square	Beta	c	Ave RL	Attribute	Adj <i>R</i> -square	Beta	c	Ave RL
Fights plaque	0.92*	1.0	17	30	Help in emergency	0.90*	1.0	9	20
Provides protection	0.92*	1.0	17	29	Efficient telephone	0.88*	0.9	22	31
Freshen breath	0.78*	0.9	12	25	Offers car insurance	0.85*	0.9	27	47
Reduces tartar	0.89*	0.9	13	23	Offers home insurance	0.85*	0.9	40	52
Confidence	0.95*	1.0	11	21	Respect	0.84*	0.9	7	18
A brand I trust	0.95*	1.0	6	20	Range of policies	0.78*	0.9	38	48
Looks after gums	0.91*	1.0	7	19	Conv. located branches	0.75*	0.9	-2	10
Taste great	0.96*	1.0	7	19	Would treat me	0.72*	0.9	11	21
Whiten teeth	0.80*	0.9	4	15	Can cover all	0.72*	0.9	27	37
New innovations	0.95*	1.0	6	14	Trust	0.71*	0.9	1	19
Great value	0.91*	1.0	3	13	Easy to under	0.57*	0.8	7	11
Sensitive	0.99*	1.0	0	10	Keep me informed	0.57*	0.8	4	11
Option for kids	0.99*	1.0	1	9	Good value	0.53*	0.8	1	16
Mouthwash	0.61*	0.8	1	9	Fast service	0.41*	0.7	11	15
Pump style options	1.00*	1.0	0	6	Complete cover	0.40*	0.7	20	31
Fun	0.93*	1.0	0	5	Socially responsible	0.24	0.6	17	22
Average	0.90	1.0	7	17	Average	0.67	0.8	15	26

* $p < 0.05$.

ability to compare responses for earlier attributes with that for later attributes. The analysis compared the number of brands mentioned for each attribute to determine if the gap between prompted and unprompted methods is higher for latter attributes. The attributes were split into four groups of four, based on order of presentation. The percentage difference was calculated by dividing the difference between prompted and unprompted methods by the number of brands elicited prompted. The results (shown in Table 3) suggest different patterns for each market. In Insurance, the average difference between prompted and unprompted declined steadily for the later attributes (48 per cent for the first 4 compared to 10 per cent for the last 4). For Toothpaste, however, the difference rose for later attributes (21 per cent for the first 4 to 37 per cent for the last 4). This suggests that for Insurance, when unprompted the subsequent attributes access accumulates brands into working memory to make more brands accessible for later attributes. This suggests that with an unprompted methodology it is not that later attributes are inhibited, but that the harder initial retrieval means that fewer brands are accessed for early attributes.

For Toothpaste the opposite pattern was evident, despite there being no change in the number of brands elicited when the methodology was prompted, there were fewer brands elicited unprompted for latter attributes. The third 4 had an average of 1.4 brands mentioned unprompted, while the last 4 had an average of 1.1 brands. Therefore, while H_2 is supported for Toothpaste,

but not Insurance, however, both disparities suggest that the associations generated when the measurement approach is unprompted varies over an attribute battery for an individual.

BRAND NONUSERS

To examine this issue, respondents were classified as either brand users or nonusers for each brand based on self-reported responses about which brands they used for that category. For Toothpaste, the brand usage questions were *Which brands of toothpaste do you currently use?* and *Which brands of toothpaste have you used in the past?* to capture the full brand repertoire for an individual. For Insurance, the consumer had three opportunities to say they used the brand. Specifically, the question (asked after a category screen) was *which company do you use for your car insurance?* This was then repeated for Home building and Home Contents insurance. These three types of insurance were the main product categories covered by the insurance brands included in the study.

The proportion of responses from nonusers for each brand was compared for each method. Only brands with sufficient numbers of users were able to be included in this analysis, which limited the number of brands to five for toothpaste and six for insurance. The results, presented by brand in Table 4, show that unprompted methods get proportionally fewer responses from brand nonusers (about $\frac{1}{2}$) than generated by prompted methodologies. In contrast, there is very little difference in the number of associations from brand users by each method. This supports H_3 .

SMALL SHARE BRANDS

The final analysis was to determine if unprompted methodologies penalise smaller brands more than larger brands. To ascertain this, the share of market (as determined by the number of brand users) was compared to the share of associations (total proportion of brand associations). The sum for the three largest and three smallest brands was calculated in each market. The results (Table 5) show that for both markets, the results for the unprompted methodology show much more polarisation

Table 3: Relationship between attribute order presentation and difference between methods

	Prompted	Unprompted	% diff
<i>Insurance</i>			
First 4	1.3	0.7	48
Second 4	1.5	1.1	26
Third 4	1.1	0.9	18
Last 4	1.3	1.1	10
<i>Toothpaste</i>			
First 4	1.7	1.3	21
Second 4	2.2	1.3	33
Third 4	2.0	1.4	29
Last 4	2.0	1.1	37

Table 4: Brand users versus non-users

	Prompted methodology			Unprompted method		
	Nonusers	Users	NU/BU (%)	Nonusers	Users	NU/BU (%)
<i>Toothpaste</i>						
Colgate	53	59	90	17	59	29
Sensodyne	14	18	78	6	20	30
MacLeans	21	35	60	7	34	21
AIM	8	27	30	2	11	18
Oral B	10	42	24	5	24	21
Average	21	36	56	7	30	24
<i>Insurance</i>						
RAA	24	47	51	12	37	32
SGIC	15	35	43	13	38	34
Allianz	9	25	36	5	41	12
AAIM	13	45	29	7	44	16
CGU	4	24	17	1	38	3
QBE	4	27	15	1	21	5
Average	12	34	32	7	37	17

Table 5: Comparisons between small and large share brands

	Share of market	Share of associations	
		Prompted	Unprompted
<i>Toothpaste</i>			
Three largest brands	80	52	70
Three smallest brands	1	10	5
<i>Insurance</i>			
Three largest brands	56	53	59
Three smallest brands	7	12	4

between large and small brands (14 times versus 5 times for prompted for Toothpaste and eight times versus four times for Insurance).

CATEGORY COMPARISONS

In order to draw some conclusions about the relationship between the choice situation and the type of measurement approach best used, two different categories were included in the research. Toothpaste was selected as a typical stimulus-based category, with most choice situations in a supermarket (or equivalent) setting with all stimuli in front of the consumer. Insurance was

chosen as a category where people have to typically retrieve brand names from memory to further follow up in choice situations. The results show that generally the relationship between prompted and unprompted responses was the same for both categories, with statistically significant and similar results from both. The brand user/nonuser analysis revealed the same types of patterns across categories. Nonusers were about 50 per cent less likely to give brand associations when not prompted while brand users varied little. While the small and large brand comparison revealed a similar under-representation of small brands when brands were not prompted, although this was more extreme for Insurance than for Toothpaste.

A difference did emerge when examining the effect of presenting attributes over time when an unprompted method was used. For toothpaste, the expected pattern of inhibition for later attributes was evident, with the prompted versus unprompted gap between the number of brands mentioned for attributes widening. While for Insurance, the difficulty of accessing brands when not prompted meant that after more attributes, more brands were accessible. This reduced the prompted versus unprompted gap in the number of brands per attribute for latter attributes. While the patterns differ, however, what was evident is

that there were more changes for unprompted methodology that could be linked to accessibility issues such as priming or retrieval. In contrast, brand associations elicited by sub-groups when prompted seemed more stable.

DISCUSSION

The objective of this research was to compare the brand associations retrieved via a method where consumers were prompted for brands, with an alternative where consumers were required to retrieve brands unprompted. The results show a high level of agreement in the results for each approach in terms of brand ranks, such that the level of prompted brand associations can be accurately estimated knowing the level of unprompted brand association for an attribute.

But the measures are not equivalent in that an unprompted approach seems to bias more against brand nonusers retrieving brand associations and (linked to this) brand associations for smaller share brands. This means that using an unprompted methodology under-represents the brand associations that consumers have for smaller share brands. Given that new entrants to a market begin as smaller share brands, this may lead a marketer to miss out on identifying potential threats in the marketplace. The unprompted methodology also seems to be influenced by accessibility factors as the consumer progressed through the attribute battery. While randomising the presentation of attributes across consumers might dampen the effects of this, these accessibility factors are still potential confounding factors in the results. Importantly, they show that repeated unprompted measures are prone to priming and inhibition effects. Unless these are somehow eradicated, they should be of concern to anyone trying to interpret a brands' association with any one attribute.

This result was evident for both a (more) stimulus-based and a (more) memory-based choice situation, giving support to the idea that at least from the perspective of measuring brand associations, the choice situation is not a major differentiating factor in measurement choice. This is not to say the two choice situations are the same, just that when measuring brand associations

— to more fully capture the brand associations from those in the market who do not currently buy the brand, smaller share brands, and to avoid the confound of priming or inhibition effects, prompting people for brands seems to be the better method to use. It might be argued that the measurement differences here are real differences that are important in the different choice situations. But given that most brand health metrics are hoped to be leading indicators of brand performance, a methodology that penalises at least two groups where growth is likely to be seen (nonbrand users and smaller share brands) seems a risky proposition.

LIMITATIONS AND FURTHER RESEARCH

As this research involved split sample and aggregate level analysis, it does not totally address the issue of if individuals respond to the different methods in the same way. It is also limited in scope to two markets, and further replication across a wider variety of markets would be useful to further generalise the findings.

If the choice is made to prompt for brands, then there are further questions about the composition of brand lists. What is the effect of adding or removing brands from that list on the brand associations that are elicited? This depends on the extent to which the consumer considers all other brands when eliciting an association for one. If other brands are considered, then the addition of a new brand should have an effect on the results. But if each elicitation is an independent 'is that brand linked to that attribute' then adding or removing attributes should have minimal effect on the overall results. This is an area for further research.

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