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Updating the synergy situation

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Papers

Media synergy comes of age — Part I

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Abstract

The research reported in this paper, which is part 1 of a two-part paper, is a follow-on to the Schultz paper (*JDDDDMP* (2006) Vol. 8, No. 1. pp. 13–19), in which the subject of media synergy was raised. In this study, the concepts identified in the original paper have been extended using data from the SIMM (Simultaneous Media Usage) database, which has been collected in the United States since 2002. Four consumer media usage and impact variables are used in the analysis: (a) the amount of time spent with each of the 31 media forms gathered in the studies, (b) what media forms were used and in what combinations (simultaneous usage), (c) the impact of the media forms in each of the eight product categories and (d) consumer-reported intent to purchase in a product category in coming periods. Using CHAID analysis, the key media forms were identified for each of the three product categories: computers, automobiles and visit a fast food restaurant. This research is an important step in the actual determination of media synergy that can be used by media planners and buyers. *Journal of Direct, Data and Digital Marketing Practice* (2009) **11**, 3–19. doi:10.1057/dddmp.2009.13

Background

A paper was published in the *JDDDDMP*, Volume 8, No. 1 titled: ‘Media synergy: The next frontier in a multimedia marketplace’.¹ In that paper, it was argued that today’s media planning methods, based primarily on achieving delivery efficiency for the marketer’s outbound commercial messages and incentives, are badly flawed and do not fit today’s marketplace. The author challenged today’s media planning models that are based primarily on intra-media comparisons, that is, ratings or estimates that assist media planners in selecting specific television or radio shows or magazine titles to provide the most efficient delivery method. The argument continued that those intra-media comparisons use rather broad, primarily demographic descriptors. The problem with those descriptors is that they assume that the components of all media audiences are essentially the same, that is, women between 18 and 49 years are alike whether they be in broadcast or print, and therefore, gross rating points (GRPs) are

essentially equal across media forms, with cost per thousand (CPM) as the primary differentiator. Today's belief, therefore, is that the real skill in media planning is in identifying which individual media vehicles most efficiently distribute the marketer's promotional messages ... with the least waste. Thus, optimisation models are today's most relevant solution.

Simultaneous media usage drives inter-media needs

Inter- not just intra-media comparisons

In that paper, Schultz raised the need for inter-media comparisons, that is, he argued, the first task is the identification of the proper media delivery vehicles. Then, the next step was to drill down into the specifics of each medium. These were needed by the media planner, he argued, to enable the understanding and allocation of the marketer's finite media resources in an increasingly fragmented, multimedia marketplace.¹ One of the needs for inter-media comparisons is the increasing understanding of the media consumer's polychronic information processing capabilities.¹ That simply recognises the multi-tasking approaches consumers are using with all media forms, that is, they are online, monitoring television, flipping through a magazine and talking on a cell phone ... all at the same time. It is these combinations of media being simultaneously consumed by the audience that challenge the basic skills of media planners, not just the identification of the specific vehicle in the broad media spectrum. If the intended consumer does not see, hear or experience the messages being sent, either because they are not attuned to that media form or because they were multi-tasking at the time of media delivery, thus giving only partial attention to the commercial messages, then efficient distribution cost measures become irrelevant. This means that media distribution is prohibitively expensive in terms of marketer returns, no matter how efficient the distribution system might appear to be. In short, it is more important today to identify the audience's media consumption capabilities than to develop some type of optimised distribution system.

Consumer consumption not marketer distribution

Media consumption as the relevant measure

Schultz provided a basic media consumption model for that analysis. The model he proposed is reproduced in Figure 1 for reference.²

The model was initially presented at the ESOMAR WAM conference in Geneva in 2004.² Schultz also referenced a populated version of that initial model in a paper delivered at the ESOMAR WAM conference in Montreal in 2005.³ Since then, two of the authors of this paper have done additional work on the model along with its structure and format. Those results were presented at the ESOMAR M3 seminar in Shanghai in 2006.⁴

All these examples and illustrative models were based on ongoing consumer research studies using the facilities of BIGresearch and their SIMM data (Simultaneous Media Usage). The data for these analyses are based on a series of online, nationally projectable studies conducted twice yearly in the United States since 2002.⁵ These studies have now been expanded with similar data being gathered from Chinese consumers since 2006, using approximately the same methodology

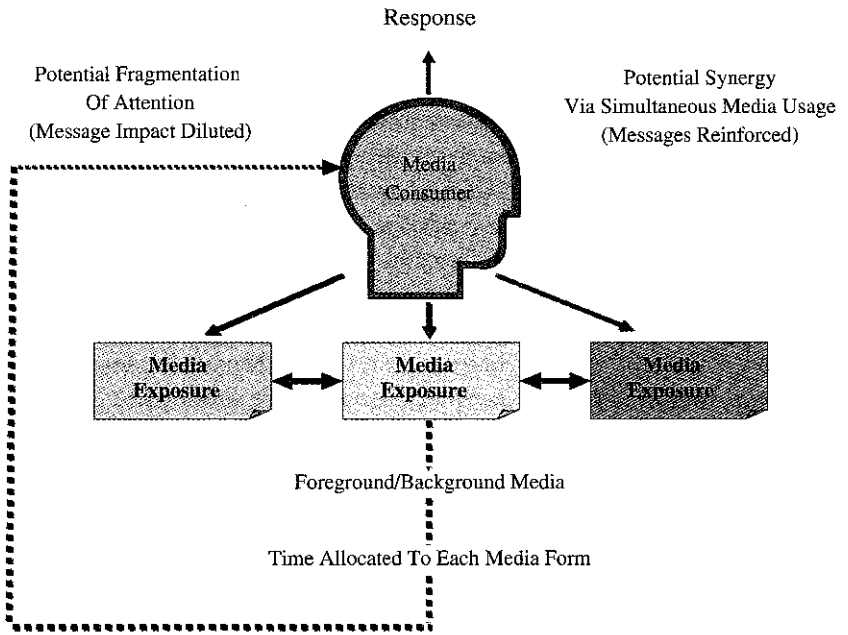


Figure 1: A consumer consumption model of marketing communication

and approaches.⁶ Thus, we are now able to report not just on media consumption studies but also view them cross-culturally. See the Appendix for more details on the SIMM studies, how data are collected, the sample base, etc.

The challenge revisited

The thrust of the 2007 *JDDDM* paper was to point out the need for further research and the need to develop measurement methodologies that could identify the synergistic value of various media forms among audiences engaged in simultaneous media consumption.⁷ That type of information could be used to improve and enhance media planning in a very media-fragmented marketplace. This type of multimedia understanding would seem to be critically important today, given that most distribution-based media measures are based on single media form identification, that is, television viewing is measured separately from radio listening, which is measured separately from magazine readership, which is measured separately from outdoor exposure and so on. Today, even the newer forms of media, such as mobile, word-of-mouth and even social media are also measured separately and individually with no regard for the simultaneous media consumption by the participating audiences.

Media measurement organisations clearly are single-medium-focused. They seem to assume that consumers are totally focused on only the one media form being measured to the exclusion of all others, during the specific media period when the marketer’s message is being distributed. Advertising and media agencies, while they have given lip service to multimedia measures, have continued to depend

on the traditional intra-media measurement systems, as they have no real alternative.

With no practical inter-media measures available, planners and buyers have been forced to continue employing simplistic constructs, such as the equality of GRPs or of estimated opportunities-to-see (OTS) across various media forms. Even the more recently developed and relevant measures of media engagement provide only a limited view of multimedia usage,⁸ as they ignore simultaneous media consumption. Traditional media planning continues down these traditional paths, despite the fact that both marketers and agencies know that multitasking media consumption by all types of media audiences is a simple fact of life. It is all around us, for all to see.

The argument made in the previous paper was based on the idea that the media consumer is the only one who really knows what media consumption occurs and through what media form various messages and incentives were received, and even what impact they had on their purchases or purchase intentions.¹ Even the most sophisticated tracking systems, such as that proposed in the ill-fated Apollo project⁹ and even the RFID systems being used in the now defunct PRISM studies,¹⁰ reflected only OTS, not actual media consumption. That can come only from the consumers who can report on which or what media form or forms they were attending to and which ones influenced them, no matter what message and incentive distribution pattern the marketer employs.

This need for consumer-based media consumption reporting complicates most attempts to measure which medium is consumed and by whom, but, it also clarifies the issue at the same time, that is, consumer-reported media consumption, which is the basis for all SIMM studies, means that consumers are attuned to and consuming the media form, not the device designed to measure message distribution.

What we know about media synergy

In the previous *JDDDMP* paper, some basic explanation of media synergy and the limited research that had been conducted in this area was discussed.¹ The most relevant study was that of Naik and Raman¹¹ on how media synergy could be estimated for a consumer product using real-world data, enhanced by the use of Kalman filters. Since then, additional research has been reported. In the following sections, we describe what we really know about media synergy.

What is synergy?

Synergy comes from the Greek word 'synergos'. It has an illustrious conceptual and philosophical heritage, dating back to Aristotle. The concept encompasses a broad range of phenomena across disciplines, sometimes being described as an 'umbrella term'.¹² This means that it is used in a variety of ways and has a variety of meanings. A common element linking the various conceptions of synergy is that they all focus on parts-wholes relationships prevailing in a system. Thus, synergy, broadly defined, refers to the combined

Synergy: Parts-wholes relationships

or cooperative effects produced by the components of a system that operate together.

Synergy as added value

Does synergy increase value of media

Naik and Raman¹¹ conceptualised synergy in terms of the *added value* aspect of integrated marketing communications (IMC), which is created by the joint impact of multiple activities (eg television plus print advertising at the same time). They posited that the combined effect of multiple activities sometimes exceeds the sum of the individual effects — a concept that is frequently associated with the slogan ‘the whole is greater than the sum of its parts’, or ‘ $2 + 2 = 5$ ’. They also recognised that there may be times when the combination of media elements may be negative. Although we accept this potential, we do not consider that potential in this paper.

Our thinking on synergy has been sharpened and refined by ongoing research on the topic, both within the marketing and communications discipline and in other fields that deal with complex systems. Indeed, examples of synergy abound in the real world. For example, in neurology, each individual neuron is a simple computational device functioning as a basic on-off switch. Yet, the combined effect of the interactions among all the neurons in the human brain create the emergent phenomenon of consciousness.¹³ This simple example illustrates the usefulness and broad applicability of the concept of synergy in marketing and communications.

What we know about media synergy

In terms of synergy and integrated marketing communication, we now summarise the current knowledge. We start with the Naik and Raman study that appeared in the *Journal of Marketing Research* (JMR).¹¹ Although real-world markets are plagued by response uncertainty to the media mix, Naik and Raman ignored those complications — an omission justified on the basis of mathematical tractability. It did, however, leave important questions unanswered. For example, would the JMR findings on synergy and its implications for optimal budgeting and media allocation hold in a world characterised by market response uncertainty? What about the long-term profitability implications of synergy — how would they be affected by uncertainty? Is there a trade-off between harnessing synergy and controlling uncertainty? Is synergy more or less important in markets with greater or lower uncertainty? What about competition — would the implications of synergy for IMC planning, budgeting and allocation change in a competitive setting? All these questions are still relevant.

Raman and Naik answered these questions in a paper published in the *Review of Marketing Science* (ROMS).¹⁴ The answer they developed fundamentally depends upon the nature of uncertainty and the manner in which it affects market response. Exogenous uncertainty enters additively into the mathematical model and simply adds to or subtracts from the predicted effect of the media. Parametric uncertainty enters in a multiplicative way and is commonly due to uncertainty

regarding the temporal variation of the individual effects of the media mix. Media effects may, of course, vary in both predictable and random ways over time. Most media and marketing mix models, however, assume exogenous rather than parametric uncertainty, so that media effects are assumed to be constant over time — an assumption that is justifiable over a short time interval.

Exogenous vs. parametric uncertainty

In the ROMS paper,¹⁴ Raman and Naik showed that their earlier findings¹¹ were in fact robust with respect to uncertainty, as long as that uncertainty was exogenous rather than parametric, and that there was no trade-off between synergy and uncertainty. Thus, even in an uncertain market, managers could base their decisions upon the budgeting and allocation recommendations derived by Naik and Raman.¹¹ They also argued that managers could focus on harnessing synergy in IMC without worrying about its trade-offs with the response variance caused by marketing uncertainty. Furthermore, the authors proved that synergy had positive long-term persistent effects on the expected profitability of the IMC programme.¹⁴

Synergy in duopoly markets

Media synergy in competitive markets

The issue of oligopolistic competition in uncertain markets, however, is complex, because — unlike the duopoly case — a stochastic differential game in an oligopoly is not reducible to a market share game among the players. Although a stochastic differential game in an oligopoly may be transformed to a market share game, there is no resultant reduction in mathematical tractability, as there is for a duopoly. Raman and Naik,¹⁴ therefore, focused on the analysis of uncertain markets for duopolies. Duopolies are an interesting and relevant special case because they do prevail in some industries — for example, Coke and Pepsi or McDonalds and Burger King. Using a stochastic differential game to model the strategic interaction among duopolists in an uncertain dynamic market, Raman and Naik¹⁴ showed that their earlier *JMR*¹¹ findings held in duopolistic uncertain markets.

While the ROMS¹⁴ study generalised earlier work on synergy to uncertain and duopolistic markets, the issue of oligopolistic markets remained untouched. But, many real-world industries are oligopolies, such as automobiles and airlines. Furthermore, companies compete in oligopolies, not only through marketing communication, but also through price and other components of the marketing mix. Naik *et al.*¹⁵ addressed the issue of optimising the marketing mix in dynamic oligopolies, accounting for marketing activities and interactions among the mix within and between brands in these types of markets.

The general problem of estimating synergies between different media instruments and developing dynamically optimal rules for budgeting and allocation in a multimedia, oligopolistic market is complex because of the interplay among dynamic media effects, strategic foresight and competitive interactions. Naik *et al.*¹⁵ captured the dynamics of market response through a Lanchester model and the effect of strategic foresight and interactions among market players through a differential game, employing the well-accepted concept of the Nash equilibrium to

derive recommendations for optimising the marketing mix. In general, they took the synergies between media into account. Using comparative statics analysis, the authors developed a set of guidelines for managers on how to respond to changes in a brand's situation as its market environment changes.

Synergy in multimedia systems

Synergy in a new media marketplace

Raman and Naik¹⁶ explored the implications for synergy resulting from new digital media, and the deployment of techniques such as RFIDs, sensors and smart environments in retailing. They proposed a conceptual model to consider the effect of synergies in modern retail environments in which consumers, weaned on media multiplicity and multi-tasking, respond to synergies that potentially exist at two different levels — *between* in-store and out-of-store activities, and *within* in-store and out-of-store activities, not too different from the intra-and-inter-media comparisons so often found in media planning.

It is our belief that the future of interactions, and thus synergies, will be marked by increasing uses of nanotechnology, smart environments, 'ubiquitous computing' (this term refers to environments saturated with computing and communication capability, but which are gracefully integrated with human users), sensors and context-sensitive technologies that can anticipate consumer intentions and highly advanced recognition technologies. Thus, there appears to be a very bright future for studies of synergy in marketing and communication.

Other views of media synergy

While the previous research used the Kalman filter estimation, time series methods, differential games, deterministic and stochastic optimal control, various authors have employed a number of other research methodologies to study synergy, including experimental and simpler quantitative techniques. Chul *et al.*¹⁷ studied synergy effects in brand extensions and demonstrated, through three experiments, that the simultaneous introduction of two brand extensions can have a positive influence on their evaluations independent of parent-extension similarity. This 'synergy' effect occurs when the extensions are complementary (eg a digital camera and a digital photo printer), but is not evident when they belong to the same category (two models of digital cameras) or to unrelated categories (a digital camera and a snowboard). The extension products were introduced by the same manufacturer.

Wang¹⁸ studied the extent to which synergy in marketing communication online enhances audience response, focusing on the effects of varying advertising and product publicity messages.

Pushkar and Mantrala¹⁹ proposed a normative model for allocating a fixed, short-term promotion budget between product advertising and prizes of a rank-order sales contest for a homogeneous sales force. Their model provides insights into how the optimal budget allocations vary with the synergy between advertising and selling effort, sales

force size, salesperson risk tolerance, perceived cost of effort, selling effectiveness and sales response uncertainty.

Chang and Thorson²⁰ studied television and web advertising synergies, emphasising that synergy is the fundamental concept of IMC and can be achieved through any of the four hierarchical levels: unified image, consistent voice, good listener and world-class citizen.

Acknowledging the effect of the consumers' current cognitive states on their response to media, Stammerjohan *et al.*²¹ empirically investigated the synergistic effects of IMC in a study of the interactions between publicity, advertising and existing brand attitudes and knowledge.

Attempts to connect all the media 'dots'

Writing in the *Journal of Interactive Marketing*,²² Kumar and Venkatesan developed a conceptual framework to identify the customer-level characteristics and supplier factors associated with purchase behaviour across multiple channels. The authors report that their study found evidence for a nonlinear relationship between returns and multichannel shopping, and a positive synergy in multichannel shopping when customers were contacted through various communication channels. Thus, customers who shop across multiple transaction channels provided higher revenues, higher share of wallet, have higher past customer value, and have a higher likelihood of being active than other customers.

In an interesting new development in synergy and synergistic effects, Lindstrom²³ described some revolutionary new techniques that have enabled researchers to peer into the brain and find out how people actually react to and combine information from different marketing communications stimuli. These powerful techniques are called fMRI (functional magnetic resonance imaging) and SST (Steady State Topography). Their use has already yielded unexpected insights into the delicate balance between the rational and emotional parts of the brain as marketing information is processed about products from different sources. These insights explain, for example, why Coke has been successful in its marketing communication whereas Ford has not — the key conclusion from the fMRI and SST studies is that Coke has been able to achieve subtle and brilliant integration of information from various sources in its campaigns but Ford failed to do so.

All these studies highlight the fundamental importance of *integrated* marketing communications, a concept that has been emphasised for years based on its conceptual, theoretical, philosophical and practical appeal. Now we are beginning to see a large and growing body of empirical vindication of the IMC concept, based on sophisticated statistical and mathematical analysis, as exemplified in the early work of Raman, Naik and others, and now culminating in neurological insights on synergy formation using state-of-the-art technologies such as fMRI and SST, which the pioneering work of Lindstrom exemplifies.²³

With this review of the current research and thinking in synergy and synergistic effects, we provide the next steps in how synergy might be determined going forward.

The first step in a potential solution — SIMM media consumption measures

As shown in the literature reviewed above, most synergistic media effects are still estimations, that is, there are few examples of how and in what way synergy between and among various media alternatives might be determined and used by media planners. That comes primarily from the fact that synergistic effects are being estimated based on media distribution, not media consumption. But, until there are behavioural results of media synergy experiments, we must continue to accept estimations of marketplace effects.

As media planning still involves a system of finite, although increasingly numerous message distribution alternatives, the process used and reported on in this paper, uses a controlled and constrained approach to the use of and measurement of synergistic effects in media planning.

Four basic measures of media consumption

As outlined in the SIMM Appendix, in this study we have included four basic measures of consumer-reported media consumption. They consist of

Four critical measures

- Time
- Usage
- Purchases
- Media impact

1. The estimated amount of time, in minutes, spent with each of the 31 media forms reported on by the SIMM panel (see the list of media forms in the SIMM questionnaire in the Appendix).
2. In addition, survey respondents also report on what media forms were used in what combination, that is, respondents are asked: when viewing television were you also online or when listening to the radio were you also reading the newspaper, etc. They also report during what time parts (periods) this usage occurred. From this, we have been able to construct matrices that define the combinations of media forms that consumers use together, that is, the media forms used when they multi-task. Extending this concept, we can determine which media form the consumer considers to be the 'foreground' medium and which of the others are considered 'background' media. (Recall, this simply means that the consumer survey reports on which of the media forms they were attuned to and what other media forms were being used at the same time. The primary form is defined as the 'foreground medium' and all others reported are taken to be 'background media' forms.) An example of this foreground/background media usage is illustrated in Table 1. As shown above, this example is based on the average responses to the first quarter, 2008 SIMM study. In that study, the consumers reported that when asked 'When watching TV, do you simultaneously go online?' 37.5 per cent of the sample said they did. When that same question was reversed, that is, 'When online, do you simultaneously watch TV?', 26.2 per cent of respondents agreed. Thus, it is clear that foreground and background media are created by the media consumers for themselves and can be identified by those

Table 1: Media forms used together in the US primary medium (when ..., do you simultaneously ...) (regularly only)

	Online	TV	Magazines	Newspapers	Direct mail	Cell phone	Radio
Online		26.2	6.1	8.1	9.9	13.9	17.1
TV	37.5		20.2	24.1	21.4	14.9	8.0
Magazines	7.0	10.3				5.0	8.3
Newspapers	10.3	11.6				4.7	11.3
Direct mail	21.0	14.2				6.7	10.7
Radio	21.7	3.8	11.8	12.6	12.2	11.7	

consumers. Thus, we believe that we have developed a valid measure of foreground and background media consumption, a key step in determining media synergy.

3. In the SIMM studies, the respondents are also asked to report on what major products they purchased in the past 30 days and what major products they intend to purchase in the next 90 days. These data are captured for eight broad product categories, that is, apparel/clothing, automobiles, eating out, electronics, grocery, home improvement, medicines and telecom/wireless. Then, the respondents are asked to enhance that by identifying the specific brand names purchased and through what retailer. This provides the basis for building the product-specific consumption models that we believe can eventually lead to the development of true synergistic measurement models, not just estimates.
4. The fourth element in the SIMM data gathering system is based on respondent reports on which media form or forms have the most impact on their purchasing decisions by product category. The average of all media influence impact among all consumers across the eight product categories for the first quarter, 2008 reporting period of the SIMM studies is shown below. As shown, on average, respondents to the SIMM study for the first quarter, 2008 reported that Word-of-Mouth had the most influence on their purchase decisions in the eight reported product categories. That was followed by Coupons, Inserts and then Television. Online media forms, that is, Internet, Email, Blogs and Instant Messaging were said to be much less influential. Yet, when we compare those data with results of the same question from the *Chinese Quarterly Studies* (ongoing SIMM-type studies in China, which use essentially the same approaches as those used in the United States) we find dramatic differences. Online and digital communications are much more influential in that country and among those consumers. That difference lends credence to the belief that all countries, all categories and all brands behave differently in the marketplace. Thus, the ‘one size media plan fits all’ approach that often comes from media optimisation models and other approaches used by planners today, may not serve the best interests of marketers going forward (Tables 2 and 3).

Table 2: What influence does the media form have on consumers? US average^a influence by media form

	% Influence		% Influence
Word-of-mouth	36.2	Radio	13.1
Coupons	28.4	Internet	12.3
Inserts	21.5	Email	11.7
TV	20.8	Outdoor	7.2
Newspapers	20.0	Yellow pages	7.0
Read article	19.8	Blog	3.1
In-store	19.6	Satellite	3.1
Direct	19.1	IM	2.9
Magazines	17.0	Web radio	2.7
Cable	13.6	Picture phone	2.2

^aAcross eight product categories, Apparel/Clothing, Automobile, Eating Out, Electronics, Grocery, Home Improvement, Medicines, and Telecom/Wireless.

^bSource: 1st Quarter, 2008 — BIGresearch, Inc.

Table 3: Chinese media influence^a data

	% Influence		% Influence
Word of mouth	21.7	Blogs	8.6
In-store promotion	19.7	Newspaper inserts	8.0
Magazines	19.1	Direct mail	6.8
TV	17.0	Email	6.6
Cable TV	17.0	Radio	5.7
Newspapers	16.1	Product placement	5.5
Coupons	15.5	Text on cell phone	4.3
Reading an article	14.5	Web radio	3.9
Internet advertising	13.5	Picture phone	2.9
IM	12.5	Video on cell phone	1.9
Outdoor	12.1		

^aAcross eight product categories, Apparel/Clothing, Automobile, Eating Out, Electronics, Grocery, Home Improvement, Medicines, and Telecom/Wireless.

^bSource: 1st Quarter, 2008 — BIGresearch, Inc.

Moving toward consumer behaviours

Thus, we have used the SIMM data to initially identify what media forms are used by what consumer groups and in what combinations. Once we know that, we are well on our way to creating a true synergistic media model. To develop a true synergistic model, however, behavioural data, that is, what behaviours the media consumer actually exhibited as a result of the media exposure, are required. At this point, we have only self-reported media consumption data. Once we have proven the approach, we are confident that we can connect this media consumption approach to actual reported or observed purchase behaviours. Thus, we will be able to construct a true synergistic media model based on media interactions and the results of those interactions.

Understanding the value of media combinations

To identify the media forms consumed and in what combination, we have used a form of CHAID analysis. CHAID is widely used and accepted in direct marketing analysis. A brief discussion of why

CHAID analysis was selected, and the initial models that we have developed, follow in the next part of this paper.

Because of the length of this paper, it has been broken into two parts. This is the end of Part 1. In Part 2, the discussion of how the value of media combinations can lead to the first stages of a true understanding of media synergy is continued. It includes a discussion of the use of CHAID analysis, what it is and how it can be used to develop predictive models of consumer media usage. It also includes examples of how the SIMM data can be used and the outputs of the analysis found in the purchase of automobiles, visiting fast food restaurants and purchasing computers. Results, Limitations and Next Steps are also included in Part 2.

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Appendix

The SIMM database

Monitoring simultaneous media usage since 2002

The analyses, findings and methodologies used in this analysis are based on the SIMM (Simultaneous Media Usage) database, which has been collected twice each year since October 2001 in the United States. The SIMM data are developed and administered by BIGresearch, Columbus, OH. There are now over 170,000 individual responses stored in the database. This allows researchers to develop trend analyses and to compare various media forms over that period of time.

All responses held in the database have been generated online using a double opt-in e-mail consumer response methodology. The samples have been drawn using accepted online survey methods. The same approaches and methodologies have been used over the entire six-year period. The surveys that make up the SIMM responses are anonymous and self-administered.

The questions asked are based on several basic categories: demographics, leisure time, media influence on spending, frequency of purchases, website most often shopped at, planned purchases in the next 30 days, media behaviours, census region and other factors. The questionnaires are designed to be completed and returned very quickly.

BIGresearch data respondents are not paid for their participation. Rather, they participate in a quarterly contest for modest prizes. The questionnaire takes approximately 10–15 min to complete.

BIGresearch uses proprietary software that weights and balances all participants on the 14 age and sex cells used in the US Census. This assures a nationally representative sample in each wave.

Figure A1 shows the history of the first 12 waves of SIMM studies. The number of completed interviews is shown by survey. Over 17,000 responses are included in the most recent wave. The number of variables collected has also increased dramatically over the history of the surveys. The first wave had just over 100, whereas the most recent wave has over 1,000 variables.

Of particular interest to media planners, buyers and researchers is the fact that each SIMM study is representative of the entire US population.

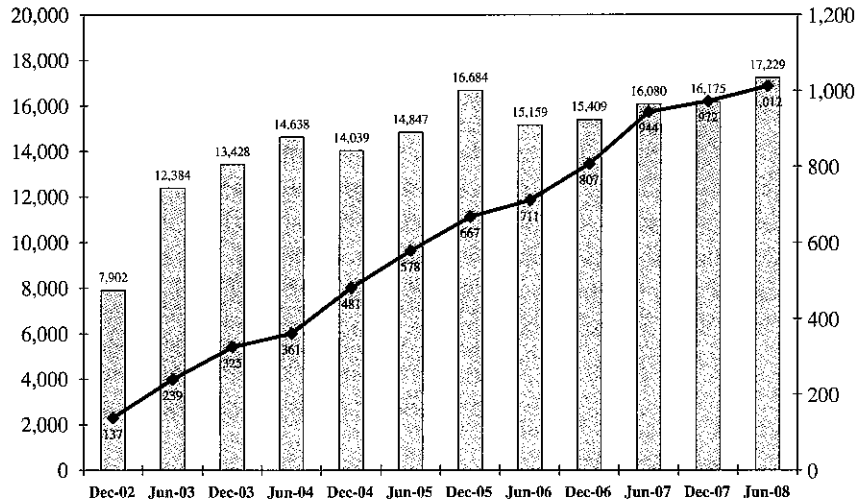


Figure A1: SIMM history completed interviews and variables measured

Table A1: Selected demographic characteristics of SIMM (June 2008)

	Per cent		Per cent
Male	48.6	White	66.0
Female	51.4	Hispanic	12.5
Married	49.9	African-American	11.5
Children-in-household	32.8	Other	7.2
		Multiracial	2.8

As Table A1 illustrates, the most recent SIMM survey shows demographic characteristics that are very close to US Census estimates, thus confirming the representativeness of the SIMM data.

Table A2 shows the distributions by reported age and household income for the SIMM wave conducted in June 2008. The average age is just under 45 years, and the average household income is about \$55,000.

SIMM media consumption characteristics

The SIMM database includes 31 media forms, ranging from over-the-air television to in-store signage to web radio. These usage data are collected in each SIMM study, thus making time series analyses of changes in media usage over various periods possible and practical.

In addition to the media forms used, three unique media consumption and usage characteristics are tracked in each SIMM study:

- *Experiential time* — the individual consumption of media by person by day parts. There are seven day parts: 6 to 10 am, 10 to noon, noon to 4.30 pm, 4.30 to 7.30 pm, 7.30 to 11 pm, 11 pm to 1 am and 1 to 6 am. This allows SIMM data to be compared and contrasted with traditional media measures.

Three media consumption processes

Table A2: Age and income of SIMM (June 2008)

Ages	Per cent	Income	Per cent
18–24	13.1	Less than \$15	7.9
25–34	17.9	15–25	8.9
35–44	19.4	25–35	12.2
45–54	19.2	35–50	16.2
55–64	14.0	50–75	21.7
65 and over	16.5	75–100	15.5
		100–150	12.1
		150 and over	5.5
Average	44.6		\$54,559

- *Simultaneity* — the multi-tasking/overlapping of media consumption by consumer, that is, how media forms are consumed and in what combination at the same time. This enables the researcher and media planner to identify the potential synergy that might be possible through the purchase of possible media combinations during certain time periods. It also helps to identify more accurately the actual media audience by medium. In comparison, traditional media measures are conducted on one medium at a time, such as television only or radio only.
- *Media engagement influence* — consumers report the influence each individual media form has on their product decisions in each of the measured product categories. In addition, as respondents also report their preferred retailers by product category, it enables the marketer to connect his or her media expenditures to channel and usage by consumers. This is a true, consumer-reported engagement measure, which identifies the value of the medium to the consumer in terms of the impact and effect it has on their purchase decisions. Thus, it moves beyond media engagement to media impact.

In addition to the media questions, many traditional demographic and leisure-time questions are asked. Thus, the questionnaire is quite comprehensive. For example, there are 13 standard demographic and 35 leisure-time questions in the survey instrument. These range from questions about individual and team sports to antique collecting to gambling.

A substantial amount of information on products and services is also obtained. Information regarding 13 major product categories, consisting of 37 specific products, is gathered in each survey. These are related to well over 266 specific retailer choices (ie favourite retailer for the various product categories), along with 39 automotive brands, more than 50 cable television channels, 15 television formats, five newspaper categories, over 50 magazine titles, 12 search engine alternatives, 35 specific websites, ten video game platforms, 12 questions regarding disease states and 23 spending and purchasing questions. In short, the SIMM data provide one of the most comprehensive views of US consumers, their media usage and media consumption available.

Connecting media consumption to purchases

Purchasing and SIMM reported data

There are other key elements in the SIMM database that relate specifically to individual purchase behaviour. These expand the view of how consumers act and react in a multichannel media world, such as:

- competitive shopping and customer loyalty trends;
- six-month purchase outlook and intent to purchase for soft goods by product category. In addition, frequency of product purchases is also gathered;
- consumer merchandise — purchased or planned;
- shopping trends;
- cross-shopping behaviour;
- search behaviour and purchasing;
- fast food frequency.

All of these are cross-tabulated with media consumption to provide a better view of customers and prospects, and the impact media have on their purchasing habits.

Of critical importance to the development of the media consumption study are the questions that relate consumer choice of media use to media forms that most influence purchase decisions. These questions form the basis for the media-influence questions. There are eight merchandise categories to which these questions are applied:

- Groceries
- Apparel/clothing
- Electronics
- Medicine
- Eating out
- Telecommunications
- Car/truck purchases
- Home improvements

The 31 media alternatives used in the questionnaire are

- Website
- Word-of-mouth
- Television
- Cable
- Internet service provider (ISP)
- Broadband
- IPTV
- Search engine use
- Retail channel shopped
- Radio
- Article about product in media
- In-store promotion
- Newspapers
- Newspaper inserts

- Direct mail
- Magazine
- Internet advertising
- Outdoor billboards
- Picture phone
- Instant messenger
- E-mail advertising
- Yellow pages
- Satellite radio
- Text message
- MP3 player
- Web radio
- Video games
- Personal digital assistant (PDA)
- Cell phone
- Blogging
- TiVo

With this broad range of media forms used and their value to the consumer, plus the ability to connect that data to past and planned purchases, the media planner and buyer have new views of consumers that have never before been possible.