

1.3

Integrated Marketing Communications: Provenance, Practice and Principles

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The last 100 years of advertising gave birth to four big ideas: *Scientific Advertising* by Claude Hopkins, *Unique Selling Proposition* (USP) by Rosser Reeves, *Brand Image* by David Ogilvy, and *Integrated Marketing Communications* (IMC) propagated by Don Schultz (for details, see Jones, 2002). Each marks the best response of advertisers and agencies to the then prevailing market conditions. Specifically, advances in print media and direct mail in the first quarter of the twentieth century led Claude Hopkins to master the art of copy writing and to experiment and measure consumers' response, thus ushering science into the craft of advertising. As roadways and railways connected the distant towns, competing manufacturers found opportunities to expand distribution and sales of their products. So Rosser Reeves' USP approach emphasized functional benefits, articulated via a proposition (e.g., Head & Shoulders eliminates dandruff), to not only appeal to

millions of consumers, but also differentiate the advertised product uniquely from other brands. The second half of the last century discovered television and intensified competition, which led David Ogilvy to champion the idea of "building a brand image". Utilizing the strengths of television medium that combines sights, sounds and motion, this idea associates inanimate products with human personalities (e.g., Marlboro conveys masculinity) so that the resulting associations endure for decades because competitors cannot imitate such non-functional brand values (unlike USP-based differentiation via attributes and benefits). During the 1970s through the 1980s, the ideas of USP and brand image fused together and metamorphosed into what is now known as "positioning", where the firm differentiates its brand from competing ones (as in the USP approach) using perceptual dimensions (as created by brand imagery). At the core, however, these three ideas

are alike: they decompose advertising into specialized media – print, television, billboards, promotions, direct mail – and manage them individually.

In contrast to this reductionism, Don Schultz at the Northwestern University promoted the IMC perspective, which takes the holistic view of building brands by integrating all marketing communications activities (Schultz, 1989). Such integration, it was felt, would result in synergies, especially given the diminished effectiveness of individual activities due to the proliferation of newspapers and magazines, fragmentation of media via multiple channels, growth of price promotions to concede to powerful retailers, and emergence of the Internet. Advertisers embraced the IMC concept; agencies responded by creating “one-stop-shops” via mergers and acquisitions of related businesses (e.g., database marketing firms). But two fundamental issues surfaced: How can managers measure synergies? How should their decisions differ from those under previous paradigms?

This chapter elucidates not only these issues, but also related principles of IMC. Addressing squarely how managers should act differently, the principle of synergy states that brand managers should *increase* the media budget and allocate *more* than fair share to the *less* effective activity as synergy between activities increases (see Naik and Raman, 2003). I clarify the intuition for these results in propositions 3 and 4. The rest of the chapter proceeds as follows: provenance of the four big ideas, IMC practice, principles of IMC, current trends, and lastly, a prognostic view of the emerging media landscape and areas where research is needed. Finally I provide a chapter summary.

PROVENANCE OF FOUR BIG IDEAS

I briefly sketch these four big ideas that shaped the practice of mass advertising in last century.

Scientific advertising

Claude Hopkins (1866–1932) introduced the scientific method to the practice of advertising. Best known for the “hard sell” approach to copywriting, he believed that the purpose of advertising is to sell and that consumers would buy if an ad copy articulates the “reason why” they should buy the advertised product. He not only implemented this principle, but also measured consumers’ response by counting the number of coupons they redeemed, which is a proxy for sales generated by the ad copy. According to Jones (2002, p. 4), he could demonstrate “differences in effectiveness between media vehicles, between different advertisements, and – most important – between relatively small variations of individual subjects”. This application of scientific method to improve advertising sowed the seeds for the formation of market and opinion research companies. Specifically, in 1921, J. Walter Thompson hired John Watson, the father of behavioural research, to understand consumer behaviour; Young and Rubicam hired George Gallup in 1932 to further develop copy and media research.

The big idea in Hopkins’ approach that makes it “scientific” is not the hard-selling style per se; rather it is the implicit notions of *measurement* and *accountability*. Companies must use those notions even today; see Schultz’s (2005) call for “measure, then budget”, urging managers to estimate the effects of advertising so that they could determine the appropriate budget rather than the prevailing practices of either “budget, then measure” approach (i.e. first develop a media plan and then track sales or awareness) or, worse yet, the budget-and-forget approach (i.e., spend budget, collect no measurements, mark-up the budget for media inflation in subsequent years).

Unique selling proposition

Building on Hopkins’ research-based hard-sell approach, Rosser Reeves (1910–1984) defined the concept of Unique Selling Proposition (USP), which requires the

company to make *a* proposition to its customers (see Reeves, 1960):

- "Buy *this* product, and you will get *this* specific benefit".
- "The proposition must be one that the competition either cannot, or does not, offer".
- "The proposition must be so strong that it can move the mass millions, i.e., pull over new customers to your product".

The advertisement itself should focus on a single message to be presented repeatedly because "the consumer tends to remember just one thing from advertising – one strong claim or one strong concept".

Another key element of the USP approach is repetitive advertising, i.e., the intensive use of media weight and frequency to "pound the concept into the heads of consumers", as Don Schultz says (personal communication). This combination of USP and repetition increased the sales for such brands as *Anacin*, *Listerine* or *Colgate*. Recent examples of the USP approach include *Oil of Olay's* campaign, "you get younger-looking skin", or *Head and Shoulders'* slogan, "you get rid of dandruff".

As I noted in the Introduction, the big idea underlying USP was *functional differentiation, mass appeal, and repetitive advertising*, which were driven by intensified competition and increased distribution due to the then prevailing economic milieu. However, functional differentiation is not sustainable because competitors *will* imitate, especially if the advertised benefit succeeds in moving millions of consumers away from their brands!

Brand image

To overcome this drawback of the USP approach, marketers recognized that the advertised benefit need not be "functional" – just something memorable that differentiates the brand from competing ones. David Ogilvy (1911–1999) advocated that, in the long run, advertising can associate a brand with an image or personality.

His advertisements created brands such as Hathaway shirts, American Express, Rolls-Royce and Pepperidge Farm.

The big idea underlying the brand image concept is that clients and/or agencies can *engineer an abstract (i.e., non-functional) differentiation* via associations, personifications, or even imaginary characters. Because an abstract feature cannot be copied by competitors (without evoking ridicule from consumers and trade), it sustains differentiation in the long run (e.g., up to 30 years).

To appreciate the power of this simple idea, consider Kellogg's *Frosted Flakes* brand that enjoys the largest volume share in the US in an intensively advertised category of cereals. In 1952, Leo Burnett agency created *Tony the Tiger*, and this abstract entity has been associated with Kellogg's *Frosted Flakes* for the last five decades consistently. The special centennial issue of *Advertising Age* ranks it as the top 10 icons of the 20th century based on criteria such as effectiveness, longevity, recognizability and cultural impact. Other nine icons include Marlboro Man, Ronald McDonald, Green Giant, Betty Crocker, Energizer Bunny, Pillsbury Doughboy, Aunt Jemima, Michelin Man and Elsie. They all corroborate the hypothesis: strong brand image shields and strengthens the brand's share.

Given that these images stick for decades, managers need to balance the contrasting needs for continuity and for change. As for *Tony the Tiger*, children's book illustrator Martin Provensen first created an orange cat, which walked on all fours, with black stripes and a blue nose. To keep freshness, combat ad wearout (see Naik et al., 1998 for media spacing strategy), maintain relevance with new cohorts of consumers, Tony experienced dramatic changes, for example, American football-shaped head was replaced with a rounder form; eye colours changed from green to gold; new addition of whisker bones and contours. To maintain continuity, Tony's voice remained unchanged: the sole voiceover and trademark growl – *They're Gr-r-reat!*[®] – was offered by Thurl Ravenscroft (who passed away recently at the age of 91).

Integrated marketing communications

The IMC concept originated in US business practice in the 1980s and has been forcefully promoted by Don Schultz since then (Schultz, 1989). Many companies embraced this concept in practice not only because mergers and acquisitions led to consolidation of the advertising industry (which resulted in one-stop shopping of communications needs such as media and creative, consumer promotions and direct marketing, PR and product placement), but also because synergies emerged when various communications activities were integrated within the IMC framework. Consequently, academic journals devoted space to deepen the understanding of IMC; see the special issues of *Journal of Advertising Research* (2004), *Journal of Marketing Communications* (1996), *Journal of Business Research* (1996), and numerous textbooks (e.g., Schultz et al., 1993; Belch and Belch, 2003).

The big idea in the IMC concept is *the holistic view* of marketing communications so that brands capitalize synergies among advertising, direct response, sales promotion, and public relations. This creative combination of multiple activities should offer clarity, consistency and impact (Schultz et al., 1993, p. 6). Raman and Naik (2006) propose a succinct objective:

An IMC program plans and executes various marketing activities with consistency so that its total impact exceeds the sum of each activity's impact.

PRACTICE OF IMC

The practice of IMC crossed from North America to Asia to Europe to the Pacific Rim and South America. Several studies

investigated this rapid diffusion of IMC. Specifically, Schultz and Kitchen (1997) survey the practices of the US agencies; Eagle et al. (1999) and Eagle and Kitchen (2000) review the perceptions among marketers and agencies in New Zealand; Kitchen and Schultz (1999) provide a multi-country comparison, including the UK, Australia and India; Kim et al. (2004) complement these studies conducted in English-speaking countries by surveying managerial practices in South Korea, where marketers tend to operate in-house ad agencies (unlike other countries). Based on this cumulative knowledge, I summarize three conclusions from surveying the practice of IMC.

First, according to 90% of the agencies, communications budgets increase or stay the same when brand managers adopt IMC programmes. This may seem slightly surprising since the realized synergies might prompt some companies to achieve the same results with smaller budgets. Specifically, Table 1.3.1 reports this finding from Schultz and Kitchen (1997, p. 11), indicating that advertisers are likely to spend more dollars when they adopt IMC programmes. Interestingly, this fits with Proposition 3 in section 4, which suggests that increasing budgets, where IMC has caused them to become more productive, can maximize an advertiser's own profit in the long run.

The second conclusion pertains to the importance of measuring synergy. Schultz and Kitchen (1997, p. 13) note, "How to measure IMC programs seems to be an issue that most executives are not able to clearly answer, though it is a criteria which is very important to them". In the IMC Framework section, I explain the challenges faced by previous methods, which eluded the estimation of synergy during the past

Table 1.3.1 Impact of IMC on communications budget

	<i>Across all agencies (%)</i>	<i>Across those agencies whose clients practiced IMC (%)</i>
Client budget will increase	73.0	66.6
Client budget will remain the same	19.8	25.4
Client budget will decrease	3.2	4.0

decade, and then describe an implementable approach for estimating synergy using market data readily available to brand managers (also see the section titled Perils of using regression analysis to estimate synergies, for more recent advances).

Third, some skeptics wondered whether IMC entails anything different from the other three advertising paradigms. In the Principles of IMC section, normative results show that budgeting and allocation behaviours, carryover effects, long-term profitability, and managers' decision-making under uncertainty differ substantively when brand managers adopt the IMC perspective. In addition, empirical evidence from a field study validates some aspects of the IMC concept. Specifically, McGrath's (2005) results show that messages employing an IMC strategy (i.e., those with a common theme executed across multiple media in a visually consistent manner) induce stronger attitude towards the brand than the same messages employing a traditional strategy (i.e., executions with less visual consistency). These empirical results resonate with the emerging IMC principles, which I describe next.

PRINCIPLES OF IMC

Here I review both the standard and IMC models so that I contrast not only their essential difference, but also the consequences for decision-making and profitability. Before presenting the principles, I have extended the IMC framework from communications to marketing-mix activities of various kinds (e.g., sales promotion, displays, customer acquisition and retention, Internet advertising) that potentially increase brand sales and that exhibit synergies amongst them. The IMC model (Naik and Raman, 2003) assumes that the brand sales result from the "efforts" invested in multiple activities in the firm's marketing mix. Although Naik and Raman (2003) *operationalize* "effort" via dollars spent on television and print advertising empirically to validate their model specification, the following propositions hold

true for multiple marketing-mix activities with positive impact on sales and for *all* feasible parameter values (not just the estimated coefficients). So the propositions to be presented below are not empirical generalizations but theoretical generalizations based on an empirically validated model specification. Given this focus on the integration of various kinds of marketing activities, readers interested in advertising budgeting process or media planning and scheduling (i.e., optimal allocation of budget over time) should consult the other chapters (by Farris and West, 2007, Chapter 5.3; Danaher, 2007, Chapter 5.2 and Vakratsas and Naik, 2007, Chapter 5.4).

Traditional advertising (non-IMC) framework

Across the three big ideas in advertising, excluding IMC, the various modes of communications such as television, radio and newspapers exert independent effects on consumers. Given the lack of consideration of joint effects and cross-media complementarities, inconsistencies could arise between the messages carried by disparate communications media from the same organization. This potential for inconsistencies raised questions about how media advertising works. In addition, cognitive psychology shed new light on consumer information processing, suggesting that consumers absorb information about goods and services from a number of sources, not all of which are formal promotional messages. So, no longer can marketers assume that they control the way consumers think about brands via image-building media advertising. Despite these concerns, standard advertising theory offered deep insights by deducing fundamental principles of budgeting and allocation, which I explain in the next two propositions.

For clarity, suppose managers spend u_1 and u_2 dollars on two communications activities with effectiveness β_1 and β_2 , respectively; then the total budget is $(u_1 + u_2)$, and the budget allocation is u_1/u_2 . Based on Naik and Raman (2003), I state the normative

result in the following proposition:

Proposition 1: In multimedia advertising, as the effectiveness of an activity increases, the optimal spending on that activity increases, thus increasing the optimal total media budget. Furthermore, the total budget should be allocated to multiple activities in proportion to their relative effectiveness.

This proposition informs managers that if an ad agency improves the creative copy, thereby increasing the effectiveness of television advertising (say β_1), then they should *increase* the expenditures on TV advertising (i.e., increase u_1). This proposition cautions the managers against the tempting – but incorrect – intuition: “now that we have a better advertising campaign, we should be able to achieve greater impact with less (or the same) budget”.

Another insight from this proposition is revealed by the question: Why should managers spend any dollars at all on the less effective media? Because they should not invest in the most effective activity after diminishing returns set in. Rather, they should shift the allocation to the next most effective medium so as to locate the firm on the steep region of the response curve for the less effective medium rather than stay on its flatter portion for the more effective medium. Consequently, as in proposition 1, the eventual budget allocation results in the optimal proportion β_1/β_2 (and not 100% to the most effective activity and zero to the less effective ones).

The standard advertising theory also investigated the role of carryover effects, which capture the long-term effects of advertising. Naik and Raman (2003) showed that not only do managers need a larger total budget when carryover effects are large, but that they should increase spending on each of the communications activities proportionately so that the relative allocation remains *invariant* to the magnitude of the carryover effect. I summarize these findings as follows:

Proposition 2: In multimedia advertising, as the carryover effect increases, the optimal total media budget increases; however, budget

allocation does not depend on the carryover effect.

To develop the intuition for this proposition, I observe that *the carryover effect enhances the long-term effectiveness of communications activities*. Specifically, if λ denotes the carryover effect, then the long-term effectiveness of each activity is given by $\beta_i/(1 - \lambda)$, which exceeds the short-term effectiveness β_i (because λ is a positive fraction). Furthermore, the long-term effectiveness of each activity increases *proportionately* by the same factor, $(1 - \lambda)^{-1}$. Hence the *relative* proportion β_1/β_2 must necessarily remain unchanged, keeping the budget allocation invariant to changes in the carryover effect.

IMC framework

Managers should recognize that consumers combine the information they receive from various media whether or not the firm itself integrates those messages across media. To prevent consumers from integrating them inconsistently, they should take charge of this process, and this *proactive* view of IMC represents the new approach to media planning (see the section on Negative synergies between advertising and promotion in oligopoly markets for further details). The overriding purpose of IMC is to manage all marketing activities that impact sales, profits, and brand equity.

The IMC model emphasizes the role of joint effects or *synergies* generated due to the orchestration of multiple activities. Consider, for example, the recent launch of F-150 that utilized an IMC campaign. Briggs et al. (2005) report that, in the first two months of this campaign, Ford spent over \$60 million in television advertising to target consumers (males, 25 to 49 years), who saw these ads 30 times during the 60-day launch period. Online advertising consisted of page takeovers of major portals and portal “roadblocks”, which is a simultaneous ad display across multiple sites. Besides television and online ads, Ford used radio, print, outdoor, and direct mail to support this launch.

One of the goals was to generate synergies between mass media campaigns and online advertising. To this end, Marketing Evolution, a specialist marketing measurement firm, in conjunction with the Advertising Research Foundation (ARF), Association of National Advertisers (ANA) and American Association of Advertising Agencies (AAAA), conducted Cross-Media Optimization Study (XMOS).

Using a model-based approach, Ford measured not only the effectiveness of individual media effects, but also the complementary effects and synergies (for further details, see Briggs et al., 2005). Thus, IMC framework is much more than simply using multiple media concurrently as in the standard multimedia model, where the effectiveness of each activity does *not* depend upon any other activity. In contrast, in an IMC model, the effectiveness of *each* activity depends upon *all other* communications activities used by the firm. Given this IMC framework, a number of fundamental questions arise:

- How to measure synergies using readily available market data?
- How does synergy affect the magnitude of the multimedia budget?
- How should managers alter budget allocations as synergy increases (or decreases)?
- How does synergy moderate the effects of advertising carryover on the budget and its allocation?
- Are there catalytic effects of synergy?
- How should managers make budgeting and allocation decisions under uncertainty?

I address all these issues in turn.

Measurement of synergy

One of the earliest studies attempting to measure media synergy was conducted by a consortium of radio network companies, who sampled 500 adults, ages 20–44, across 10 locations in the United Kingdom. The main findings indicated that 73% of the participants remembered prime visual elements of TV ads upon hearing radio commercials. In addition, 57% re-lived the TV ads while listening to the radio advertisement. Thus, radio ads reinforced the imagery created by TV commercials, resulting in synergy

between television and radio advertising (for further details, see Radio Advertising Bureau at www.rab.co.uk).

Although the estimation of cross-media synergy remained elusive, standard advertising models attempted its estimation by specifying brand sales a *response function* of managers' current actions and past outcomes; for example, $S_t = \beta_0 + \beta'_1 u_{1t} + \beta_2 u_{2t} + \lambda S_{t-1} + \varepsilon_t$. Gatignon and Hanssens (1987) pioneered the distinction between a response function and *process functions*, which explain how effectiveness parameters themselves depend on managers' actions. In other words, managerial actions affect not only market outcomes (e.g., sales, share), but also the *effectiveness* of marketing activities. For example, suppose that radio and TV advertising enhance each other's effectiveness. Such effects are captured in the process function (say) $\beta'_1 = \beta_1 + \kappa u_2$, which suggests that the spending level u_2 increases the effectiveness β'_1 in the presence of positive synergy ($\kappa > 0$). When this process function is substituted into the above response function, the resulting IMC model is

$$S_t = \beta_0 + \beta_1 u_{1t} + \beta_2 u_{2t} + \kappa u_{1t} u_{2t} + \lambda S_{t-1} + \varepsilon_t \quad (1)$$

which contains an interaction term that captures the extent of synergy.

This notion of process function is deterministic and static (i.e., without the error terms or lagged β s). Even so, many challenges arise in applying the ordinary least squares (OLS) or related statistical approaches to estimate the parameter for synergy, κ . These challenges arise because OLS and related statistical approaches ignore inter-temporal dependence and non-stationarity in the observed sales process, thereby resulting in biased parameter estimates and incorrect budget determination. I substantiate the perils of using OLS in the section titled Perils of using regression analysis to estimate synergies.

Advanced estimation techniques overcame these challenges and facilitated the *joint* estimation of both response and process functions. Specifically, applying Wiener-Kalman

filtering theory, Naik and Raman (2003) developed an appropriate method and demonstrated its application by analyzing the sales and advertising data for Dockers® brand of Khaki trousers in the fashion apparels market. They furnished strong evidence for the presence of synergy between television and print advertising.

Figure 1.3.1 displays the fit and forecast from Naik and Raman's IMC model. The goodness-of-fit measures in-sample fit with the market data. On the other hand, the quality of forecasts shows how well the model *predicts* out-of-sample observations. To assess this predictive validity, Naik and Raman (2003) conducted a cross-validation study, and these results also are shown in Figure 1.3.1 (see hold-out sample). It indicates that the proposed model, fitted with sub-sample data, predicts the new observations, including the turning points, satisfactorily. Thus, the IMC model not only fits the sample data, but also exhibits strong predictive performance.

They further generalized this approach to estimate a general nonlinear, non-stationary, dynamic and stochastic process functions (for details, see Naik and Raman, 2003, p. 384). Thus, managers can *use* this Kalman filtering approach to estimate the magnitudes of synergy for their own brand-specific multimedia advertising (see Schultz, 2004).

In sum, Dockers® brand's advertising furnishes strong support, in terms of both fit and forecast, for the proposed IMC model. Not only the resulting empirical findings contribute to the sparse marketing literature on cross-media synergies, but also the estimation method – based on the Kalman filter for fitting dynamic multi-media advertising models to market data – enables managers to discover empirical insights for their particular brands.

Multimedia budgeting in the presence of synergy

After managers establish the existence of synergy in their markets, how should they determine the multimedia budget? Applying optimal control theory, Naik and Raman (2003) addressed this question by showing that, in dynamic equilibrium, the total budget should be increased to capitalize media synergies. I present this normative result as

Proposition 3: As synergy increases, the optimal total media budget increases.

First, this proposition is consistent with agency beliefs. Table 1.3.1 displays how senior agency personnel think about the impact of IMC on their clients' budgets. A vast majority (73%) believe that the budget will increase when clients adopt the IMC perspective. For agencies whose clients have adopted IMC, their beliefs are informed by their clients' actual use of IMC, and this subset

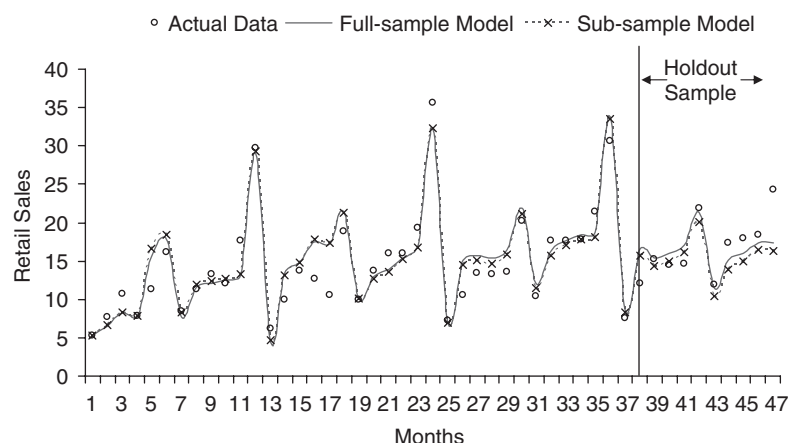


Figure 1.3.1 Actual retail sales versus model forecasts

of agencies also lends support to the above proposition (see the last column of Table 1.3.1).

Second, this proposition addresses the age-old issue of whether or not managers overspend, i.e. actual expenditure exceeds the optimal budget. Overspending is likely to be smaller when the total budget reflects the objectives of orchestrating the communications mix.

Lastly, managers should not simply spend additional money to “do more of the same thing”. Rather, the increased budget should be utilized to create synergies between activities. The resulting synergies then enhance both short- and long-term effectiveness of marketing activities.

Multimedia allocation in the presence of synergy

Next I note the important finding that budget allocation is *qualitatively* different in the presence of synergy, requiring managers to act *differently* when implementing IMC. Based on Naik and Raman (2003), synergy alters the budget allocation:

Proposition 4: As synergy increases, the proportion of media budget allocated to the more (less) effective communications activity decreases (increases). If the various activities are equally effective, managers should allocate the media budget equally among them regardless of the magnitude of synergy.

The counter-intuitive nature of this result is its striking feature. To understand the gist of this result, suppose that two activities have unequal effectiveness (say, $\beta_1 > \beta_2$). Then, in the absence of synergy ($\kappa = 0$), the optimal spending on an activity depends only on its own effectiveness; hence, a larger amount is allocated to the more effective activity (see proposition 1). However, in the presence of synergy ($\kappa \neq 0$), optimal spending depends not only on its own effectiveness, but also on the spending level for the *other* activity. Consequently, as synergy increases, marginal spending on an activity increases at a rate proportional to the spending level for the other activity. Hence, optimal spending on the more effective activity increases slowly, relative to

the increase in the optimal spending on the less effective activity. Thus, the proportion of budget allocated to the *more* effective activity *decreases* as synergy increases.

If the two activities are equally effective, then the optimal spending levels on both of them are equal. Furthermore, as synergy increases, marginal spending on each of them increases at the *same* rate. Hence, the optimal allocation ratio remains constant, regardless of the increase or decrease in synergy.

Advertising carryover effects in the presence of synergy

I describe how synergy moderates the carryover effect in the next two propositions:

Proposition 5 (budget): As the carryover effect increases, the optimal total media budget increases; the rate of increase in the media budget increases as synergy increases.

Proposition 6 (allocation): In contrast to proposition 2, budget allocation depends on the carryover effect in the presence of synergy. Furthermore, as carryover increases (decreases), the proportion of budget allocated to the more (less) effective activity decreases (increases).

Based on propositions 2 and 6, managers should act differently: absent synergy, they should allocate the budget to a variety of activities in simple proportion to the relative effectiveness; when synergy is present, the allocation should incorporate the information on the increased magnitude of the carryover effect.

Note that “the carryover effect increases” means the magnitude of λ in equation (1) increases, which can be interpreted as purchase reinforcement or inertia from previous sales (due to loyalty or retention). Although not applicable in the equation (1), if multiple lags were involved (e.g., Tellis et al., 2000), then “the” carryover effect needs to be defined and such a construct would relate to either an average or the total summation of multiple carryover effects across different lagged terms. Future research should investigate how different carryover effects due to multiple lags moderate the effects of synergy within an IMC context.

Catalytic effects of synergy

Does synergy introduce any fundamentally new advertising effect? Yes, since all media are not alike, managers can capitalize on the “catalytic effects” of ancillary activities. This new effect – the *catalytic effect of ancillary activities* – can be defined as follows: a marketing activity is a catalyst if it has negligible direct effect on sales, but exhibits substantial synergies with other activities. For catalytic activities, Raman and Naik (2004) prove the following result:

Proposition 7: Managers should allocate a non-zero budget to catalytic activity even if it is completely ineffective in itself.

Recall that managers should allocate the total budget to various media in proportion to their relative effectiveness (see proposition 1), and so the completely ineffective activity should not even be considered in the communications mix. In contrast to this traditional way of thinking, managers who seek to orchestrate an IMC program benefit from not only the direct effects, but also the indirect effects of various activities. Therefore, they should *not* eliminate spending on an apparently ineffective activity when it enhances the effectiveness of other activities due to its catalytic properties.

In marketing, many activities exert catalytic influence on one another. For example, BMW used product placement in James Bond movies, which may not have increased sales of BMW, but made its TV and print advertising more effective. Or Mini Cooper used the real movie, *The Italian Job*, to build its brand image. More specifically, consider the example from the pharmaceutical industry: product samples or collateral materials may not directly increase sales of prescription medicines, but it may enhance the effectiveness of detailing efforts (Parsons and Vanden Abeele, 1981). Indeed, marketing communications using billboards, publicity, corporate advertising, event marketing, in-transit ads, merchandising, and product placement in movies may not have measurable impacts on sales. Yet, millions of dollars are spent on these activities. Why? Because, these activities, by their

mere presence in the communications mix, may act like catalysts, and enhance the effectiveness of other activities such as broadcast advertising or salesforce effort.

While the above propositions and discussions advanced our understanding of synergy, the impact of marketing effort on sales was assumed to be deterministic. When this assumption is untenable, for instance, in turbulent, volatile markets where uncontrollable factors also may affect sales, managers need to incorporate the role of uncertainty in the analyses. To this end, Raman and Naik (2004) generalized the deterministic IMC model by using the Wiener process to represent uncertainty in their continuous-time dynamic model.

Extending IMC to uncertain environments

Applying stochastic optimal control theory, Raman and Naik (2004) derived the optimal IMC program for uncertain markets. Below I present their main propositions and discuss the substantive implications.

Proposition 8: In uncertain markets, the total media budget increases as synergy increases. Furthermore, the proportion of budget allocated to the more (less) effective medium decreases (increases) as synergy increases.

It is intriguing to find that propositions 3 and 4 in the absence of uncertainty are identical to the above one, seemingly implying that uncertainty plays no role! But jumping to such a conclusion is inaccurate because uncertainty directly affects sales evolution, thereby making the level and growth of sales less predictable in the future. In addition, uncertainty affects the variability in long-term profit, thereby increasing the downside risks of losses and bankruptcies. Thus, uncertainty has serious consequences on both sales and profit.

The proper interpretation of proposition 8, therefore, is that managers should *not alter* their decisions by increasing or decreasing budget in response to the effects of uncertainty on sales and profit. This finding clarifies the conflicting views prevalent in the existing practice. Specifically, advertising agencies advocate that managers should *increase* the

media spending in response to demand shocks such as recessions (also see Srinivasan et al., 2005). Whereas an empirical analysis of the national media spending data indicates that managers are likely to *decrease* their media budget during recessions. Resolving these conflicting views, Proposition 8 recommends *neither increasing nor decreasing the media spending, but sticking to the course of action in uncertain times*.

In sum, this proposition highlights the fact that “no action” on budget changes does not imply managerial “inaction”, the former requiring knowledge of optimal decision-making under uncertainty, the discipline not to tinker with marketing budgets in the short term, and the commitment to building brands over the long term.

I next describe the effects of uncertainty on the profitability of IMC programs:

Proposition 9: In uncertain markets, the expected value of long-term profitability of the optimal IMC program increases as synergy increases.

Proposition 10: In uncertain markets, the variability of long-term profitability of the optimal IMC program is unaffected by the magnitude of synergy.

According to these propositions, managers should adopt an IMC perspective to increase the brand’s profitability. That is, they should think of marketing communications activities not as a set of independent variables, but rather as a set of interconnected activities with potential synergies. By generating synergies, they not only increase the expected profitability in the long run, but they also keep profit variability unaltered. In other words, synergy imposes no tradeoff between profitability and

variability. Thus, an IMC perspective raises profit but leaves its variability unaffected, and so it is prudent to build synergies by orchestrating the communications mix.

CURRENT TRENDS

Here I present findings from recent research on marketing synergies.

Simultaneous media usage

Pilotta and Schultz (2004) offer a fresh perspective on how IMC works in the presence of multiplicity of advertising media and scarcity of consumer attention. They posit that consumers multi-task or use various forms of media in combination with each other, a phenomenon they refer to as “simultaneous media exposure”. In the presence of cross-media synergy, the impact of advertised messages is not simply additive, but synergistic, so that the overall impact of media advertising may be greater than the sum of its individual parts. They suggest that consumers process multiple media synesthetically, i.e. one source of stimulation evokes the need for information from the other. Consequently, each media pair operates in either foreground or background of consumers’ attention.

To validate this conceptualization, Schultz et al. (2005) conduct a large-scale survey-based study. This study reveals that media usage is one of the primary daily activities because consumers devote a substantial part of their life. Table 1.3.2, based on their study, shows that an average respondent devotes 145.6 minutes to television, which represents 10.1% of the total 1,440 minutes

Table 1.3.2 Reported daily media consumption

Media forms	Minutes per day	Percentage per day
		(Total 1440 minutes = 24 × 60 minutes)
Television	145.6	10.1
Internet	128.6	8.9
Radio	74.6	5.2
Newspaper	36.4	2.5
Magazine	29.0	2.0
Direct mail	20.4	1.4

per day (24 hours $\times$ 60 minutes). Television and Internet account for a disproportionate amount of reported media consumption. Radio, Newspaper and Magazine, together, consume a substantial amount of time.

Furthermore, Schultz, Block and Pilotta (2005) present empirical evidence to support their notion of “foreground” and “background” media. To identify the primacy of media forms, Schultz et al. (2005) asked the respondents, “When you are online, do you watch TV?”, and 25.7% of them said they watched TV while online. When the question was reversed, “when you are watching TV, do you go online?” – 21.8% of them reported they went online while watching TV. In other words, consumers clearly considered one medium to be primary and the other as secondary. Schultz et al. (2005, Tables 6 and 7) report the results that suggest consumers do identify “foreground” and “background” media. This distinction of primary-secondary media, together with the catalytic effect explained in Proposition 7, suggests that brand managers and ad agencies should adopt the IMC perspective and allocate more than fair share to the secondary media.

Negative synergies between advertising and promotion in oligopoly markets

Naik et al. (2005) extended the IMC model to dynamic markets with multiple brands. In dynamic competitive markets, brand managers need to account for not only interactions between marketing activities, but also interactions among competing brands. By recognizing interaction effects between activities, managers can consider inter-activity tradeoffs in planning the marketing-mix strategies. On the other hand, by recognizing interactions with competitors, managers can incorporate strategic foresight in their planning, which requires them to look forward and reason backwards in making optimal decisions. Looking forward means that each brand manager anticipates how other competing brands are likely to make future decisions and

then, by reasoning backwards, deduces one’s own optimal decisions in response to the best decisions to be made by all other brands.

To operationalize this strategic foresight in practice, for example, brand managers for Ford F-150 truck can build a forecasting model and calibrate it using recent sales and advertising data for their own brand and those for GM, Honda, Nissan and Toyota trucks; then they can simulate various forward-looking scenarios for the plausible *counter-factual* spending plans to be made by all other competing brands. The prediction of spending plans of the competitors for the next quarter can then be compared with the actual spending realized in the marketplace. The resulting discrepancy, or the forecasting errors, between the expected spending and the actual spending can also be used to update the next quarter’s forward-looking expectations. This understanding gained from such counter-factual reasoning would allow managers to better anticipate competitors’ actions, thereby enhancing their intuition, which can be incorporated in their best response.

Formalizing this notion in a dynamic game-theoretic sense, Naik et al. (2005) investigated the joint consideration of interaction effects and strategic foresight when planning marketing-mix strategies. Consequently, managers can address such questions as: Do advertising and promotion amplify or attenuate their impact on market outcomes (e.g., brand share) when used together? What should be the level of the optimal budget in the presence of strategic foresight? How should managers optimally allocate the total budget to advertising and promotion in the presence of interaction effects? Is own (or competitor’s) brand under-advertising or over-promoting (or both)? If brand A’s interaction effect increases, should brand B optimally respond with increased advertising or increased promotion?

To enable managers gain insights for their particular brands, Naik et al. (2005) developed two methods: (i) a marketing-mix algorithm to plan optimal marketing-mix strategies, and (ii) an estimation method to determine the

effectiveness of marketing activities and their interaction effects for each brand in dynamic competitive markets. Both the methods are general and can be applied to various dynamic oligopoly models used to describe and predict the marketing environment.

Applying the dual methods, Naik et al. (2005) studied dynamic competition among the detergents brands Tide, Wisk, Era, Solo and Bold, where each brand uses advertising and promotion to increase its own market share and reduce or limit the growth of competing brands. Empirically, advertising and promotion have the usual main effects of increasing own brand shares. However, they exert negative interaction effects: *promotion diminishes ad effectiveness and advertising reduces consumers' sensitivity to promotion*.

My summary of the literature is that large brands under-advertise and over-spend on promotion, while small brands under-advertise and under-promote. Besides empirical and normative findings, Naik et al. (2005) furnish evidence that competitive responsiveness is asymmetric. For example, when Tide's negative interaction (between advertising and promotion) increases, it decreases advertising and increases promotion; all other brands' follow Tide's actions. By contrast, when Wisk's negative interaction increases, it increases advertising and decreases promotion (unlike Tide's actions); other brands' follow suit, but not Tide whose best response is to decrease advertising and increase promotion.

In practice, based on this dual methodology, managers can gain insights into how their own brands should respond to changes in a competing brand's situation, whether their own brand experiences synergies, and the budgeting implications of such synergies (for example, whether they are over-spending on promotion or under-spending on advertising). In other words, this dual methodology empowers managers to gain valuable and hitherto unavailable insights into their product markets. Thus, the next step for managers is to create PC-based software to implement the dual methodology so that they can incorporate the resulting market-based insights in their

mega million dollars budgeting and allocation decisions.

Synergy between tradeshow and personal selling

Does tradeshow activity enhance selling effectiveness? Is there empirical evidence that a trade show, when deployed in conjunction with personal selling, provides a sufficient economic return to justify the investment? Smith et al. (2004) address these managerially relevant – but hard-to-answer questions – by investigating synergies between personal selling and trade shows. They conduct a field study with a group of industrial distributors to show that follow-up sales efforts generate higher sales productivity when firms have already exposed customers to its product at a trade show. They further show that overall profits are greater when firms use the trade show in conjunction with optimal levels of sales effort. Their study not only furnishes strong support for the concept of integrated marketing communications, but also quantifies the productivity of both selling and trade shows activities.

Synergies between DTC advertising and detailing

In pharmaceutical marketing, detailing activities, which refers to the efforts of the sales force to inform and educate medical doctors to buy or prescribe drugs, are an important element of the firm's marketing mix. Narayanan et al. (2004) investigate whether synergies arise between detailing and direct-to-consumer advertising (DTC). Using data from a category of pharmaceutical products (the second-generation prescription antihistamines), they study the impact of synergies between pairs of marketing-mix elements on return on investment. They replicate the empirical analysis for a different pharmaceutical product category (antivirals to treat genital herpes) and lend further support to the key results. Their main findings are as follows: (1) DTC affects category sales, but detailing does not; however, both detailing

and DTC affect brand share; (2) detailing has a greater impact on revenues than does DTC; (3) detailing and DTC have long-term effects on revenue that are approximately four to seven times the current-period effects; and (4) synergies between marketing-mix elements (e.g., between price and detailing; between detailing and DTC) do not affect category sales, but influence brand shares. An implicit synergy exists between DTC and detailing because DTC affects category volume and detailing affects brand share. Managers need to consider this implicit synergy when allocating resources between the marketing-mix elements. More generally, resource allocation decisions must also account for explicit marketing-mix interactions. This study identifies several explicit interaction effects; among them is a negative interaction between price and detailing. Because of the negative interaction, greater detailing can exert a downward pressure on prices.

Does impact of synergies vary by brand characteristics?

A national brand may gain more than a private label brand from an end-of-aisle display, while the private label brand may benefit more by combining a display with a price promotion rather than offering the promotions in separate weeks. To understand such issues, Lemon and Nowlis (2002) explore potential synergies among displays, feature, advertising, price promotions, and brands types in different price-quality tiers. Using scanner data and experiments, they find that high-tier brands benefit more than low-tier brands from price promotions, displays, or feature advertising when these promotional tools are used individually. This advantage disappears, however, when certain promotional tools are used in combination with one another. In particular, price promotions have a stronger effect on low-tier and high-tier brands when these promotions are offered in settings where comparisons are difficult (end-of-aisle displays or feature advertising). Furthermore, the combined effects of displays and price

promotions, or feature advertising and price promotions, are greater on the low-tier brands than on the high-tier brands. For strategic implications of these results for retailers and manufacturers, see Lemon and Nowlis (2002).

Media synergies and marketing-sales coordination

Poor marketing coordination can reduce a firm's profit. Consider a market where consumers' buying decisions involve multiple stages such as impersonal mass communications generate customer inquiries (i.e., contact with the call centre), which are then followed by personal sales calls that culminate in potential sales. For example, a home improvement retailer employs direct mail, radio advertising, newspaper and trade shows to generate leads. In the subsequent stage, the company's salesperson follows up with those leads, but significant delays in making appointments for in-home visits result in a longer wait for prospective customers, thereby risking lost sales opportunities due to declining interest of the prospective customers. Hence, the firm should not generate too many leads that the sales force cannot fulfill given its capacity.

To understand such trade-offs at the marketing-sales interface, Smith et al. (2005) develop a three-stage model that captures the effects of sequential marketing communications on lead generation, appointment conversion, and sales closure. They discover relationships between marketing efforts (multiple media generating leads), delays in subsequent communications (time-lag between inquiry and personal selling follow-up), and the stress placed on sales efficiencies (appointment and sales conversion). More specifically, using household-level data obtained from a national home improvement retailer, they show that each medium (e.g., print advertising, radio advertising, and exhibitions) exerts differential impact across the three buying stages. These findings then serve as inputs to a decision support tool for improving the effectiveness

of the entire system through two distinct but interrelated mechanisms: cross-media synergies between lead-generating media, and coordination between marketing and selling activities influenced by capacity-driven delays. Smith et al. (2005) create a user-friendly decision support tool, called *MediaMD*, which empowers the managers to make informed decisions by simulating sales and profit consequences of varying communications budgets and media allocations. Future research should investigate such multi-stage communications by using hidden Markov models (Smith et al., 2006).

Synergy between advertising and sales contest

In financial services or prescription drug sales, a firm's sales depend on both advertising and personal selling efforts (e.g., journal and/or DTC advertising, product sampling). Because of synergies, product advertising can make personal selling more productive and vice versa. Hence, to drive sales, companies like IDS Financial Services utilize a mix of advertising and sales force incentive programmes (e.g., sales contest-based bonuses and memberships in the President's Advisory Council for top financial agents).

To understand trade-offs in allocating a fixed marketing budget to customer-focused advertising and agent-focused sales, Murthy and Mantrala (2005) build a model that takes into account synergy between advertising and selling efforts. They derive the optimal allocation of IMC budget between brand 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. One of their findings is that sales contest should be designed such that the number of winners is about two-thirds of the sales force size. They also highlight the need for coordination between marketing and sales management when designing a promotion

program that involves both advertising and sales force incentives.

Closed-loop IMC

In markets characterized by uncertainty, managers need to adapt marketing budgets in response to changes in market conditions besides taking into account cross-media synergy. To this end, Prasad and Sethi (2005) formulate a stochastic IMC model and derive the closed-loop strategy that depends on a brand's market penetration. One of their insightful findings is that, when brand share drops, managers should spend *more* on IMC activities to offset the share decline.

This result, based on optimality analysis, is in stark contrast with textbook recommendation to decrease spending as sales decline. I emphasize that textbook recommendation rests on the percentage-of-sales rule of thumb, which not only lacks theoretical justification, but also initiates the *suicide spiral*: sales decline begets a smaller marketing budget, which in turn drives lower sales and so marketers get to work with still smaller budgets in subsequent years, and so on. To avoid the suicide spiral, following Prasad and Sethi (2005), managers should increase spending when share drops (and vice versa).

They further inquire into an intriguing question, "What would happen if synergy were present in the market, but ignored by managers?" They prove that the total IMC budget would be smaller, brand's profitability diminishes, and the brand attains a lower share in the long run. The smaller IMC budget, however, does not imply that expenditure on all activities drops proportionately. Consequently, an incorrect allocation to various media sets in when managers ignore synergy present in the marketplace. Hence, it behooves managers to measure synergy using market data and appropriate estimation methods, as I explain next.

Perils of using regression analysis to estimate synergies

Marketers measure a wide variety of metrics ranging from consumer awareness to brand

attitudes to dollar sales and market shares. Using these metrics, market research and consulting companies estimate the effects of marketing activities via some marketing-mix model. Based on regression analysis of market data, marketing-mix models would reveal (a) the effect of marketing and communication investments in generating incremental sales and (b) the relative contributions of various marketing activities. Due to increasing availability of single-source data, frequent-shopper programs, consumer panels, and other data gathering methodologies (see Dekimpe and Hanssens, 2000; Koen et al., 2005), marketing mix models have become the “de facto” tools for analysing the effects of marketing investments.

However, the real question is, *are the resulting estimates of marketing effects accurate?* With literally billions of dollars of marketing investments resting on such estimated effects, a more complete review of the methodology and its properties is justified. To this end, Naik et al. (2005) conduct Monte Carlo studies to investigate whether regression analysis yields the true impact of marketing activities accurately.

Despite its popular use, they find an eye-opening result that *regression analysis yields substantially biased parameter estimates because market data contain measurement noise*. This result holds even when a *dependent* variable in dynamic advertising models is noisy. More specifically, the resulting bias in ad effectiveness estimates range from 34% to 41%, whereas both carryover effects and cross-media synergy display downward bias of 13.6% and 27.5%, respectively. Naik and Tsai (2000) also offer similar evidence suggesting that measurement noise causes parameter biases in dynamic models. Empirical analysis based on actual market data also comport with these simulation-based findings. For example, the analyses of Toyota Corolla’s multimedia campaign reveal that the estimated effects of magazine and rebate effectiveness are indeed more than twice as large as they should be.

Utilizing such biased estimates in their decision-making, managers would overspend

on advertising and rebates because these activities seem more effective than they truly are. In the long run, however, they would commit to a smaller marketing budget than they should because of the under-estimation of carryover effects (which captures the long-term effectiveness of IMC programmes). Furthermore, the under-estimation of cross-media synergy entails the risk of allocating a smaller budget to achieve media integration. Consequently, managers are likely to misallocate a greater proportion of the marketing budget to short-run activities relative to long-term brand-building activities, and this myopic decision-making is driven by the inaccurate estimation of marketing-mix models via regression analysis.

Given the perils of regression analysis, are there alternative approaches that managers can adopt to estimate the effects of marketing activities and synergies? Fortunately, the answer is affirmative – the Wiener-Kalman filter (WKF) estimation approach yields unbiased estimates even in the presence of measurement noise. Naik et al. (2005) compare the performance of WKF with regression analysis under identical conditions, and they show that the WKF yields improved estimates that are much closer to the true effects of multimedia campaign than the corresponding regression estimates.

FUTURE DEVELOPMENTS

Over the last century, advertising evolved and IMC emerged (also see McDonald and Scott, 2006 and Tellis, 1998) in response to the new forms of product distribution and communications media (e.g., railways and roadways, radio and television). I now offer a prognostic view of the media landscape to come.

In the last two decades, a multitude of new forms of distribution and media surfaced; for example, supermarket chains and cable channels in the 1980s; Internet-based companies in the 1990s providing information (Google and Yahoo) and products (Amazon or

eBay); and, in this decade, mobile marketing and peer-to-peer communications via social networks on the Internet (Epinions.com). A central distinction between this new class of emerging media and the broadcast media (print, radio, television) is the shift in control from companies to consumers. Specifically, brand information obtained from social network sites, such as epinion.com, provides opinions of other real consumers of the products, whereas the information from broadcast media are controlled by either manufacturers or retailers.

This shift marks a change in the locus of ownership from manufacturers (of advertised images) to consumers (of personal views), raising significant new challenges for managers trying to integrate marketing communications. Not only do they face media proliferation (i.e., many media forms whose effectiveness and synergies need to be assessed) and media fragmentation (i.e., media channels unable to reach large audiences), but they may not even “own” the message content being communicated by consumers and consumed by other consumers. How do consumers, then, combine multiple messages some positive, some negative and other mixed reviews? How should managers, then, integrate their marketing communications strategy to maintain a favorable balance of positive imagery for their brands?

Researchers will also need to look at the effects of IMC across companies. Using IMC to increase synergy, and therefore the budget, sales and profitability should be the case, as indicated above, for a single company but if all companies in a static market adopt IMC, they cannot all increase sales.

Technological innovations will further fragment the media landscape, augmenting the need for IMC. The brand communications that prevail will then consist of both positive and negative messages, from both companies and consumers, giving a new connotation to the old term “communications mix”. Thus the resulting complexities would necessitate academic researchers and brand managers to deepen their understanding of

marketing communications in the emerging media landscape.

SUMMARY

- The objective of Integrated Marketing Communications (IMC) is to assist consumer processing of communications by ensuring consistency of communications and, by extension, of all marketing activities.
- This creates, or increases, synergy between the impacts on the consumer.
- I consider the following eight propositions to hold true:

1. *In multimedia advertising, as the effectiveness of an activity increases, the optimal spending on that activity increases, thus increasing the optimal total media budget. Furthermore, the total budget should be allocated to multiple activities in proportion to their relative effectiveness.*
2. *In multimedia advertising, as the carryover effect increases, the optimal total media budget increases; however, budget allocation does not depend on the carryover effect.*
3. *As synergy increases, the optimal total media budget increases.*
4. *As synergy increases, the proportion of media budget allocated to the more (less) effective communications activity decreases (increases). If the various activities are equally effective, managers should allocate the media budget equally among them regardless of the magnitude of synergy.*
5. *Budget: As the carryover effect increases, the optimal total media budget increases; the rate of increase in the media budget increases as synergy increases.*
6. *Allocation: In contrast to proposition 2, budget allocation depends on the carryover effect in the presence of synergy. Furthermore, as carryover increases (decreases), the proportion of budget allocated to the more (less) effective activity decreases (increases).*
7. *Managers should allocate a non-zero budget to catalytic activity even if it is completely ineffective in itself.*
8. *In uncertain markets, the total media budget increases as synergy increases. Furthermore, the proportion of budget allocated to the more (less) effective medium decreases (increases) as synergy increases.*

- Synergy, which varies by brand, category and media characteristics, therefore needs to be calculated but care should be taken with regression methods.

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