

The roots of ROI: the new single-source

A new service that exploits digital technologies and database resources can provide real media and market metrics. **Bill Harvey**, TRA, Inc., shows how it's done

OVERAHUNDREDDyears ago, Lord Leverhulme (1851-1925) said, 'I know that half of my advertising is wasted - I just don't know which half.' In those days the number of media choices was pretty small. A handful of print options, signage and sandwich boards, not much in the way of in-store media. Today in the US someone trying to figure out which media mix will maximise brand sales faces the choice of 22,000+ TV shows per week, hundreds of national print options, radio networks, thousands of local media outlets including outdoor and transit, internet, mobile, over 60 in-store media options, and more. The need for a means of optimising the media mix has never been greater.

One of the first ways to attack this problem was with higher-level mathematics - time-series analysis. Sales went up in week six of the media schedule; let's see what happened during week six. Unfortunately the problem the analyst must face is that many things were happening in the days leading up to week six and in differing degrees across the brand's sales territory, each with the potential to have influenced brand sales. Statistical methods to sort out multiple stimuli can only go so far. Science helped to improve our understanding when in the late 1950s marketing mix modelling (MMM) was born (Herb Krugman, IPG/Marplan, 1958, 'Grand Scale Analysis' for a major packaged goods brand). This work promoted the use of time-series analytics with further breakdowns by chunks of geography, thereby providing additional data points for correlation studies.

Inferred causality

While looking-backward time-series analyses and correlations may infer causality, they never *prove* causality. Once this deficiency was recognised, it is not surprising that controlled market experiments came into vogue, starting first with 'matched-market controlled testing' and followed soon thereafter by more precise 'in-market controlled checkerboard testing'. The idea of the latter was to create multiple demographically matched A and B consumer segments within a given

market area, where separate A and B segments if placed on a map would resemble a crude checkerboard. Even in the early days this technique was vastly expensive and available only to very large brands with budgets sufficient to justify testing advertising strategies in-market for new product launches or major shifts in ad copy and/or ad spending. While susceptible to interference from competitors who may locate and attempt to confound such tests, controlled in-market experiments have survived the test of time and remain today the only method widely accepted as proving sales causality.

In the 1960s, Max Ule created the Milwaukee Ad Lab, a split-cable testing technique where newspaper editions were split into separate A and B runs to permit two alternative advertising strategies to be tested against retail store sales. This service was followed by AdTel, a more sophisticated system founded by John Adler and perfected by a young man named Bill McKenna, where alternative A and B TV advertising strategies were delivered via matched cable system segments in the same market. Cable households within each A and B segment were recruited and asked to maintain purchase diaries.

With favourable recommendations from the Advertising Research Foundation, AdTel blew away the Max Ule concept and became the preferred TV ad-testing tool for many top advertisers. However, the missing link in these early single-source progenitors was knowing exposure of TV commercials and other ads to specific homes, since ad delivery was not measured, merely controlled by A and B area, with no ability to track at a household level what was really happening - other than inferring from the aggregate sales of the A and B segments.

Single-source

In 1966, in the UK, Colin McDonald for JWT, conducted a 13-week diary study through BMRB in which housewives kept track of both TV usage and brand purchases, thus creating what might be considered the first truly household-level single-source study with respondent-level



The media mix shifts implied by analyses of TRA data produce increased sales and other ROI effects

media and purchase data available for analysis. Although the results of McDonald's studies are quoted even to this day (as the basis for stating that TV advertising was found to sometimes be effective with a frequency of only two exposures) this type of single-source system was deemed unaffordable, failed to gain sufficient client support and disappeared from the scene, not to resurface for a period of nearly two decades.

In the early 1980s, IRI introduced BehaviorScan, the perfected version of predecessors such as AdTel, offering an improved cable-based ad delivery system and replacing household purchase diaries with card-carrying UPC scanner panellists. Soon after BehaviorScan's introduction came a quite similar system from Nielsen, developed by a former P&G executive, Marc Fortes, who called the system ERIM. The ERIM service was initially launched in France, but was unsuccessful when introduced by Nielsen in the US market. The IRI version took hold, quickly eliminated ERIM and eventually replaced AdTel, while expanding outside the US to other global markets.

In 1990, following several years of testing in Denver, Arbitron deployed ScanAmerica, a service conceived by Bill McKenna featuring in-home scanning of consumer purchases and including a

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people meter McKenna had invented and patented while at Burke and eventually sold to Time, Inc. and Arbitron. ScanAmerica was the first ambitious attempt to introduce single-source as a TV measurement currency in a major TV market. Soon after Arbitron's introduction of ScanAmerica, Dr Timothy Joyce, founder of MRI, helped Nielsen attempt something similar called HomeScan, which involved passive set meters, in-home scanning and the capture of multi-media usage.

Excessive cost

Many promising findings and much excitement came out of ScanAmerica, but yet again the cost of profitably marketing a single-source media measurement service proved to be excessive, unless the service would be accepted as a TV media currency. Unfortunately, the cost of incentives for consumers to perform continuous in-home barcode scanning and people-meter button pushing for years, while maintaining demographically representative panels with acceptable response rates, proved far greater than for traditional TV meter panels. The other side of the cost coin, with perhaps equal if not greater importance, was that the relatively small sample yield of an affordable single-source TV people meter service could never hope to attain the sample sizes required for most advertised brands to accept this method for their day-to-day media planning and buying.

Unfortunately, these realities of the single-source experience were re-learned during the past four years in the US through the P&G-led Apollo project, a noble experiment conducted by Arbitron and Nielsen that used a subset of the Nielsen HomeScan panel. Apollo was in essence ScanAmerica reborn with a portable, passive people meter rather than a conventional push-button people meter. Again the high operating costs and low sample size yields, together with multiple compliance and response-rate-related issues, killed the idea of Apollo ever achieving currency stature or identifying a sustainable source of funds to continue business operations and be prof-

itable. However, all was not lost, since the Apollo project produced useful findings for many of its sponsors, serving to prove that if a system like ScanAmerica or Apollo could be offered on a continuous basis with large representative samples in major media markets at an affordable cost, it would allow advertisers to make the long-awaited shift from managing media adspend with impressions to managing their media adspend with media ROI measurements.

Exploiting existing resources

While all this transpired, a new entry, TRA (True ROI Accountability' for media), was quietly in the making, developing solutions to the sample size, consumer cooperation and affordability problems that clearly plagued its predecessors. TRA's approach is to collect the household-level purchase and media/ad exposure information desired by supporters of single-source systems, but to do this without placing expensive TV measurement hardware into homes, without requiring the consumers to perform any work (thereby eliminating the need to compensate them) and by delivering an affordable, scalable service that includes massive single-source sample sizes for ROI-based brand media planning and post-evaluation.

TRA set out to accomplish this goal by licensing (sometimes exclusively in this field of use) already-existing databases, initially from cable service providers and supermarket chains, and employing unique TRA Privacy Shield technology that allows the linking of any number of disparate databases for each individual household without ever learning the identity or compromising the privacy rights of any individual household. We call this 'The Actuals Method' because it has the ability to employ actual hard, fact-based, census-type data (set-top box and server records, point-of-sale scanner data, audited household-level circulation, direct mail records, store-audit shelf facings, and so on) analogous to reading electric meters. The end result is TRA's ability to deliver affordable single-source consumer data virtually untainted by

non-response bias, with the sample size and granularity required for brand use in ROI-based media placements.

A major point of difference from its predecessors is TRA's use of near-census-level measurements for both media measurements and purchase data. This method of single-source data collection is made possible by the Digital Information Age. Specifically, the 'Industrial' Information Age that just ended provided electronic hardware systems to consumers for the purpose of communications and information gathering. In the Digital Information Age, with electronic communications distribution hardware and systems in place throughout the US, it is software that takes precedence and empowers marketers with an ever-increasing ability to deliver, measure and predict the effectiveness of their brand communications strategies.

In the end we appear to have come full circle, something that would make Herb Krugman and others of his time very proud, since MMM appears certain to be increasingly used to separate out effects of multiple media strategies on the consumer. The TRA system is set up to facilitate MMM and testing. As an example, TRA is working closely with IRI to control advertising tests within groupings of individual cable subscriber zones as a means of validating hypotheses generated by looking-backward analyses of TRA single-source data. These in-market tests conducted in major markets are designed to prove that the media mix shifts implied by analyses of TRA data produce increased sales and other ROI effects, verifying these effects before implementing media mix and spending shifts nationally.

The TRA service is up and operational in Los Angeles today, soon to expand to other US markets and a nationally representative sample. Lord Leverhulme, we hope, would be pleased to learn that with the help of TRA he might now say that 'each half of my advertising is effective - and I know which half does what'. ■



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