The Impact of Technological Innovation on Media Exposure Tracking: In Search of "The New Traditional"

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Introduction

In 2006, numerous developments is U.S. media audience measurement are combining to challenge the firmament of the audience measurement landscape as it has existed and evolved over 50+ years. Some of the more notable, recent initiatives include:

- Nielsen Media Research, in declining to continue their participation in Arbitron's PPM project, announced a comprehensive plan to "*follow the video*." Importantly, following the video implies following it out of the TV, and into alternative platforms. (Whiting, 2006.)

- TNS has recently announced their intent to commercialize the set top box initiative under test in Hawaii, which deploys digital cable set top box data to develop estimates of audience behavior.

- Erinmedia (http://www.erinmedia.net/) has aggressively entered the audience measurement space, positioning their clickstream data from set top boxes as an alternative to, and extension of, traditional TV and cable audience measurement.

- In radio, Arbitron has announced plans to commercialize their PPM audience measurement system in Houston, and to begin converting diary markets to PPM data collection. Several major broadcasters have already signed up for the PPM service.

- Radio broadcaster Clear Channel issued an RFP for radio audience measurement solutions in 2005. The Media Audit, in partnership with IPSOS, has responded with a measurement system that uses "smart" cell phones for data collection. Media Audit IPSOS and Arbitron's PPM are the two finalists in what has become an industry-wide coalition to evaluate radio audience measurement techniques. Meanwhile, a San Mateo start-up, Integrated Media Measurement Inc (IMMI), is developing a cell-phone-based technology that could measure exposure to traditional electronic media, as well as CDs, DVDs, and video games.

- Earlier this month, Google engineers announced at industry conference EURO ITV their intention to build a system "using ambient-audio identification technology to capture TV sound with a laptop PC to identify the show that is the source of the sound and to use that information to immediately return personalized Internet content to the PC." (Clayburn, 2006.)

- The U.S. Out-of-Home industry, under the auspices of the Traffic Audit Bureau, is developing an audience measurement system with primary data collection (surveying), modeling, and software development components to enhance the Daily Effective Circulation (DEC) metric, which is based on government traffic counts for specific road segments.

- New platforms are emerging which challenge traditional perceptions of the role of traditional media advertising in message dissemination. These include blogging, vlogging, and podcasting, as well as Word of Mouth marketing (WOM), and consumer generated media (CGM). These channels behave differently than traditional advertising channels, and for the most part remain unmeasured (Kiley, 2005; Krihak, 2006.)

- In newspaper, audited circulation reports typically serve as currency for valuation of audience. Several recent developments-- controversy over reported circulation, a persistent decline in both

circulation and readership, and a consumer migration online for newspaper content-- has created questions about the nature of newspaper audiences.

These and other developments indicate that we are in the middle of a sea change in the field of media audience measurement. Users of audience measurement services—typically classified as buyers (advertisers and agencies) and sellers (media companies and their sales representatives)—appear to be increasingly concerned that audience measurement as provided does not meet their business needs.

User complaints about audience measurement services are in no way new. What does appear to be relatively new is the extent to which the media landscape has changed over the past 15 years, placing far more stress on audience measurement than ever before. The authors believe that these changes are all technological in nature.

Fortunately, technology also presents a set of tools that practitioners can use to modify existing audience measurement services, or to develop fresh contemporary solutions. In this paper we will look at the ways in which technology has changed the paradigm in which audience measurement operates, and resulted in changes in the efficacy of traditional methods of audience measurement. And, informed by the collective opinions of some of the thought leaders in media research, we will attempt to describe what we believe will emerge as the "new traditional" best practices in media audience measurement.

In Search of the New Traditional

What will the best practices in media research look like in 5-10 years? In order to gain some insight, the authors conducted an online survey of a group of U.S. media research thought-leaders. These thought-leaders included representatives from media companies, advertisers, agencies, and research suppliers. The results of this survey provide us with an opportunity for some fresh learning, and an invaluable tool in seeking to define "The New Traditional" in media audience measurement.

Below, we will briefly summarize (1) the existing challenges confronting the audience measurement practitioner; (2) the technological developments that comprise the new media researcher toolkit; and (3) the key business issues confronting users of audience measurement services. Collectively, these provide the context for the development of the questionnaire which was implemented to our sample of media research thought leaders.

We will report on the findings of our survey, and then draw conclusions about the future of US audience measurement.

Challenges to the Existing Audience Measurement Paradigms

The litany of factors posing the greatest challenges to audience measurement should come as no surprise to the reader:

- ***Fragmentation:*** the explosion in media platforms, and in media vehicle choice within platform. A quantum increase in fragmentation requires vastly larger samples to report on all vehicles with sufficiently robust cell size. Increasingly, media vehicle exposure is becoming a low-incidence behavior that traditional samples cannot hope to measure.

- ***Convergence:*** Multiple media content types converging in the same platform (e.g., video and radio both available over the Internet.) Convergence poses challenges to measurement systems or techniques that are set-based (e.g., TV meters), and to single-platform measurement systems (e.g., newspapers accruing audience via paper copy and online.)

- ***Divergence:*** a corollary to convergence; media content diverges from its traditional platform. Radio, for example, has diverged from radios to include Internet streaming, downloading via podcast, and distribution via satellite systems to special receivers.

- ***Respondent elusiveness:*** As competition for consumer time and attention increases, survey respondents are becoming increasingly scarce, elusive, and expensive. Response rates continue to decline; samples are less and less representative of the universe as these response rate declines occur differentially across population segments; and, survey costs increase as cost per respondent (respondent acquisition and retention costs) increases.

- ***On-Demand:*** Increasingly, media content is available to consumers on-demand. Historically, electronic media have been available in a linear fashion based on air time; a media vehicle audience generally accrued simultaneously and in real time. Increasingly, content “debuts” rather than airs, and consumers are free to consume that content at any time after the debut.

- ***Advertising avoidance:*** Pop-up blockers, DVRs, and on-demand content are all providing consumers with the tools to avoid advertising content. Ad avoidance increases the demand for audience measurement that can account in some way for likelihood of exposure to the ad itself, as opposed to the media vehicle in which it is contained (Chapell, 2004.)

Interestingly, each of these factors is a direct outcome of technological innovation (and most of them result specifically from introduction of digital technology.) The one factor that may not immediately appear to be technology-driven is respondent elusiveness. However, the underlying causes of increasing respondent elusiveness—an increase in direct mail and direct marketing calls; increased concerns about

privacy and identity theft; greater lifestyle clutter competing for the consumer's attention—are, indeed, functions of technology.

Technological Innovation: the New Media Research Toolkit

Technology has altered the landscape in which consumers consume media, and so in which audience behavior is measured. Conversely, technological innovation provides a toolkit for developing and deploying new audience measurement solutions:

- ***Data collection technologies:*** audio matching and encoding; RFID; GPS. Some of these technologies have already been applied to audience measurement; others provide promise and potential.

- ***Exporting meter technology to consumer electronics platforms:*** The cell phone initiatives (IPSOS, IMMI) involve taking the audio matching or encoding technologies and porting them into consumer electronic devices via software.

- ***Database technology:*** Data creation, warehousing, storage, manipulation: Database technology has empowered information companies to collect, store, and integrate large and disparate databases from different sources. As database technology improves and information demands escalate, it becomes clear that ultimate audience measurement solutions may no longer be "single source."

- ***Datamining***: Technologies for constructing and integrating databases are empowered by advances in datamining, which allows actionable insights to be derived from voluminous data bases that would have once been too unwieldy to be practical. (Rosen, 2006; Papasliotis, 2005)

- ***"Naturalistic" data:*** Census-level data which is created, stored, and mined, generally in the course of providing digital media content. For example, set-top cable boxes provide information on channel tuned for every set to which a box is affixed. Naturalistic data typically has shortcomings that must be overcome in converting it to audience measurement currency. However, it may be adjusted via external data sources, or may serve as an input into a holistic system of audience measurement. (McClellan, 2006)

- **Modeling:** Statistical models can be created to adjust incomplete data sets. For example, typically reach & frequency models are used to turn datasets of vehicle exposure into more complex reporting on unduplicated exposure to a collection of inventory units ("schedule reach.")

Issues Confronting U.S. Ad-Supported Media

Finally, in considering the new paradigm in which audience measurement must operate, and especially in framing questions for a survey of media research thought leaders, one must consider the question of what an audience measurement service needs to do. We understand, fundamentally, that the task of audience measurement is to count, and classify based on relevant descriptors (e.g., age, gender),

those persons in the audience to a media vehicle. Further, to pass muster as a currency ratings service, the audience measurement must be mutually accepted by both buyers (advertisers and agencies) and sellers (media operators) as a surrogate for actual audience in the ad sales transaction of dollars for audience. This surrogacy enables the audience measurement to serve as "currency" ratings.

Increasingly, the definition of audience itself has come under scrutiny. Erwin Ephron has written extensively on the concept of "Opportunity to See" (OTS), noting that consumer presence in the room while a TV is tuned to a TV tuned program may not be the same as the consumer actually watching the ads within that program. (Ephron, 2004.) Ephron notes too that audience members in a TV peoplemeter sample are self-identified based on the fact that they pushed the appropriate button on the peoplemeter remote, and that button-pushing may be an imperfect surrogate for program exposure, let alone advertising exposure.

In light of questions about the nature of audience membership itself, several other key issues have arisen which may inform the task of a contemporary audience measurement service:

- ***Engagement:*** Much ado has been made over the past 18 months about the importance of engagement. The Advertising Research Foundation defines engagement as "turning on a prospect to a brand idea enhanced by the surrounding context." Marketers and media operators seem to have unanimously jumped on the engagement bandwagon; it remains unclear if engagement is a function of advertising itself, the carrier media vehicle, or some combination. It is also unclear whether or not audience measurement services will need to account for engagement in some way. (Creamer, 2006)

- ***Ad-specific audiences:*** DVRs allow TV viewers to skip through commercials. Presence on a road does not necessarily imply that the driver saw a roadside billboard. Increasingly, measures of media vehicle audience have been called into question as adequate surrogates for audiences to the actual ads contained therein (Brown and Barkhuus, 2006).

- ***Multi-media:*** Historically, audience measurement services have been "siloed," measuring a single medium. Do users require measures of multiple media from a single source? (*Note:* services like MRI, which provides magazine audience measurement, and Scarborough, which provides newspaper audience measurement, also provide data on usage of other media, which does not rise to the level of currency.)

- ***ROI:*** Expenditures tend to shift toward marketing variables for which return on investment (ROI) can be calculated. It is possible that audience measurement may no longer be a sufficient tool to enable advertisers to justify ad expenditures; audience measurement may need to encompass some sort of metric for ROI. This runs counter to the long-held belief that advertising should be treated as a long-term investment; ROI metrics are generally applied to tangible near-term benefits accruing from the expense.

- ***Advertising impact on sales:*** The Holy Grail of media audience measurement may be the ability to tie back exposure to advertising to ultimate product purchase, such that a causal relationship may be established. (Clark, 2006)

- ***Simultaneous media:*** With the rising prevalence of multi-tasking—exacerbated by the Internet, and especially among young persons—there has been some discussion about the importance of

tracking the usage of multiple media simultaneously. (Foroohar, 2005; Harris, 2006; Brightman, 2005)

THE SURVEY

Methodology

We conducted an online survey of senior-level media professionals between May 22 and June 2, 2006. We developed a sampling frame consisting of prominent media and research professionals in the following media categories: Broadcast TV, cable TV, radio, newspaper, magazine, OOH, Internet, and other emerging media, and working in various roles, including Media companies, advertisers & agencies, research companies, consultancies, and industry organizations.

The total number of professionals in the sampling frame was 106. Non-responders received up to two follow-up email reminders. At the conclusion of the survey, there was a total of 53 respondents in the sample, representing a 50% response rate. Respondents were offered a summary of results as an incentive to participate.

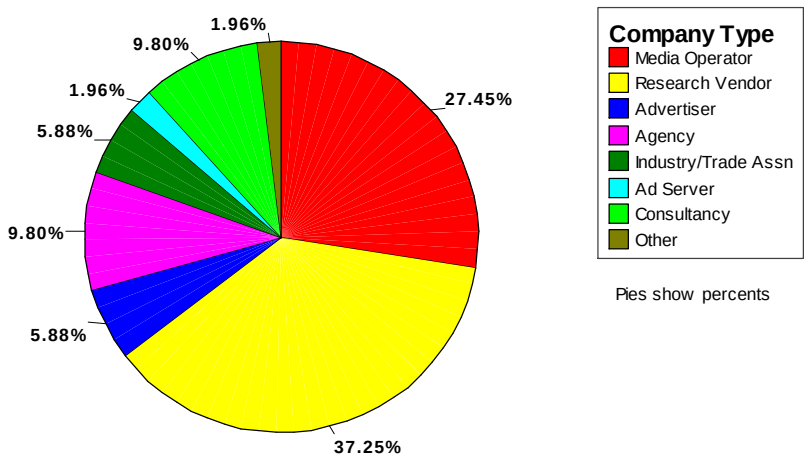
The survey contained numerous questions about the respondent's perceptions of research quality and methods, the importance of various types of information and research capabilities, and four open-ended questions concerning the respondent's view of current and future challenges in media research, and the impact of initiatives such as Apollo and the availability of "naturalistic" data sources. Additionally, we asked about the individual's industry category, title, years of experience, and age.

DISCUSSION OF RESULTS

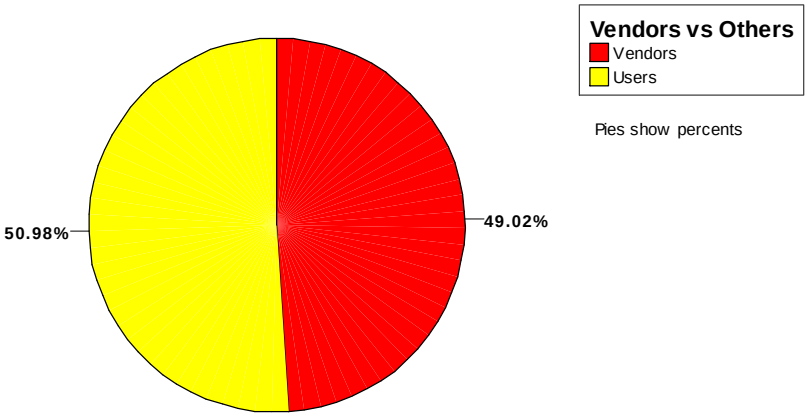
Respondent Characteristics

The survey respondents represented many different types of companies. More than a quarter (27.4%) said they worked at media operators/owners, more than a third were research vendors (37.2%), and the balance worked for advertisers, agencies, industry/trade associations, ad server networks, or consultancies. Companies represented included large research vendors (e.g., MRI, Arbitron, and Scarborough); agencies (Campbell-Mithun, Doubleclick, FCB, Media Edge:CIA, Universal-McCann, Ogilvy), advertisers (e.g., Microsoft, Procter & Gamble, Novartis) and media operators (e.g., Univision, Turner, ABC, Lifetime, NY Times, Post-Newsweek.)

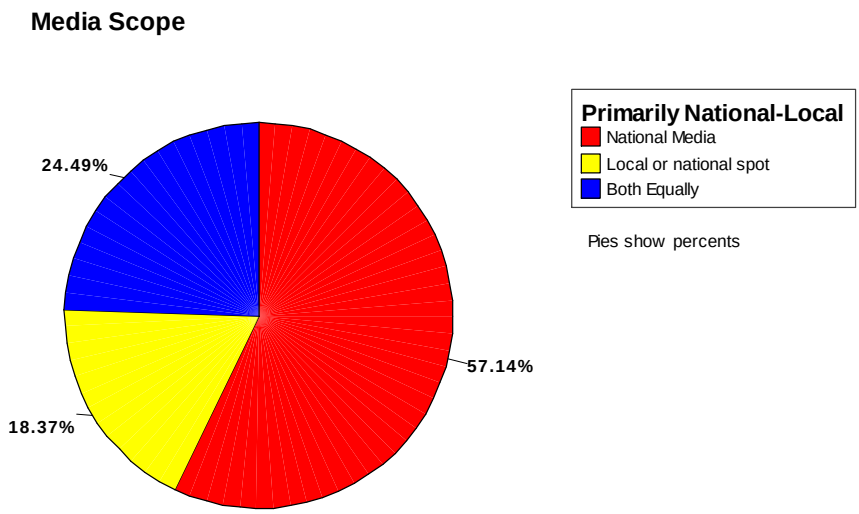
Company Type



Company Type: Research Vendors vs. Research Users

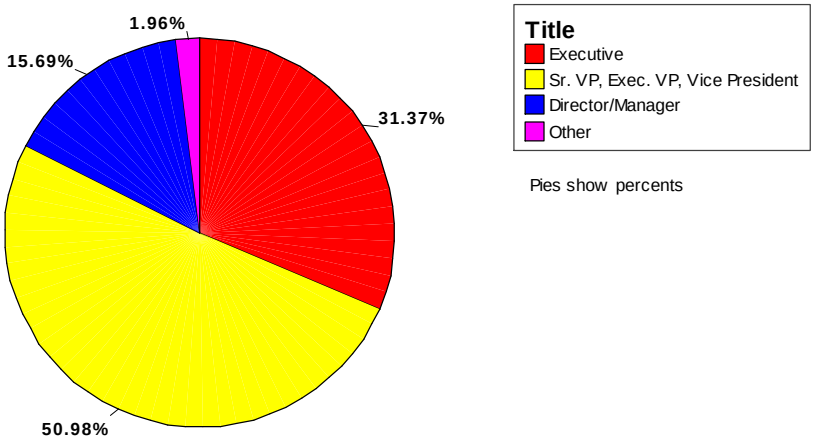


Responses to type of company in which participants worked were recoded to represent two categories: research buyers vs. research vendors. The "vendor" category also included consultants as well as the single respondent who reported working in an ad sales network (which produces research data.) This divided the sample roughly in half, with 49% classified as research vendors, and research buyers/users nearly 51%. We used this split to compare results among research practitioners as compared to research consumers.



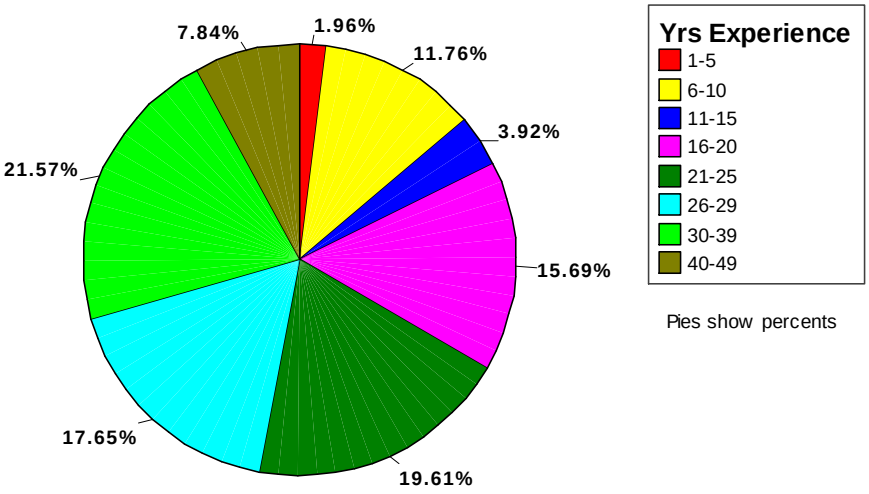
Most respondents reported working in national media exclusively (57%) with nearly a fifth (18%) working exclusively in local or national spot media. A quarter said they worked in both national and local (or national spot) equally (24.5%).

Respondent Title



The majority (82%) of participants were either Executives (CEO, CIO, CMO, etc.) or at the SVP, EVP, or VP level in their companies. A few (16%) said they were Directors or Managers.

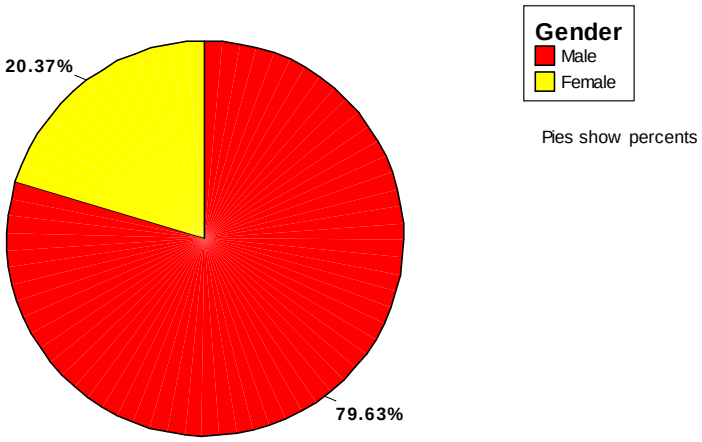
Years of Experience



Participants were experienced, with an average of 25 years in the industry.

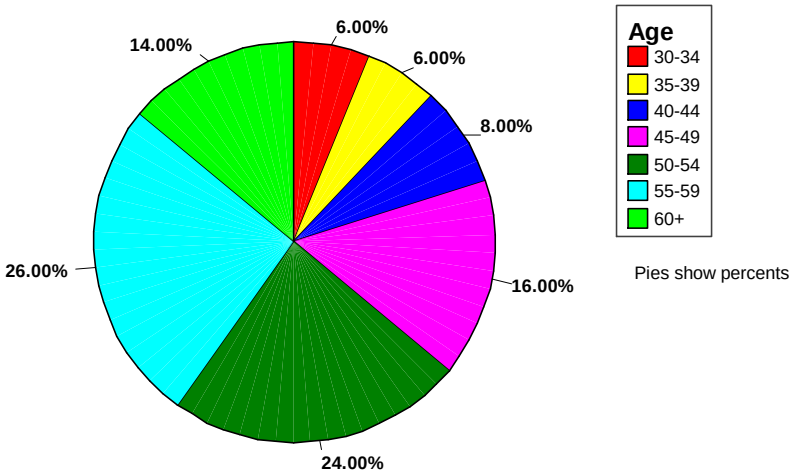
The majority (80%) of respondents were male.

Respondent Gender



Respondent ages were diverse, although all reported being 30 or above, and 80% were over 45.

Respondent Age



KEY FINDINGS: PERCEPTION OF RESEARCH QUALITY AND METHODS

We presented respondents with a battery of statements about audience measurement quality and methods, and asked them to respond on a scale of strongly disagree (1) to strongly agree (5). The results are summarized in the tables below.

Findings

There was consensus on several issues….

Table 1. ALMOST EVERYONE AGREED ON:

Perceptions of Research Quality	ALL: TOP TWO BOX (%)	MEAN N=53
Matching media exposure to action, and delivering ROI data, has become significantly more important in the past few years.	94	4.28
There are important media research questions that no one is answering.	83	4.19
Audience measurement services can be enriched by adding externally-derived data to account for things like engagement, quality of exposure, etc.	75	3.96
Media research methods have not kept pace with changes in audience behavior.	73	3.87
The utility of random samples can be enhanced by integration of external, empirical data sources (e.g., subscriber lists, click stream data, set top box data.)	70	3.72
Traditional research methods do not adequately measure current audience behavior.	68	3.72
Media research sample sizes have not kept pace with the sample size demands of an increasingly fragmented media landscape.	66	3.77

- Nearly everyone agreed with the statement "Matching media exposure to action, and delivering ROI data, has become significantly more important in the past few years." (94%)
- Interestingly, almost everyone also agreed with the statement that "There are important research questions that no one is answering." (83%)
- Respondents also agreed that audience measurement services can be enriched by adding externally derived data to account for things like engagement and quality of exposure (75%).

- Two-thirds also agreed that "Traditional research methods do not adequately measure current audience behavior" (68%) and that "Media research sample sizes have not kept pace with the sample size demands of an increasingly fragmented media landscape." (66%)
- It is striking that only a fifth (19%) agreed that "Audience measurement companies do an excellent job at providing the tools (software, training) that allow for interpretation of their data" indicating that research vendors still have an educational mission to perform for their clients.

- Likewise, few agreed (19%) that "The major ratings vendors offer acceptable solutions for measuring today's media landscape" or that "Media research suppliers do an excellent job of providing all the data necessary to make decisions" (21%)

Table 2. THERE WAS LITTLE AGREEMENT ON:

Perceptions of Research Quality	ALL: TOP TWO BOX (%)	MEAN N=53
We should be able to collect all the information we need for a ratings service from a single sample.	27	2.66
Electronic measurement will completely replace telephone collection, mail surveys, and in-person interviewing for measuring media audiences.	23	2.41
Media research suppliers do an excellent job of providing all the data necessary to make decisions.	21	2.53
The major ratings vendors offer acceptable solutions for measuring today's media landscape.	19	2.79
Audience measurement companies do an excellent job at providing the tools (software, training) that allow for interpretation of their data.	19	2.55

- Respondents were unwilling to say that they believed that "Electronic measurement will completely replace telephone collection, mail surveys, and in-person interviewing for measuring media audiences" -- only 23% thought that was likely.
- It is interesting to note that respondents were split on the question of whether or not media/ad research is considered essential at the highest executive levels within

advertising and media companies, and whether or not the quality of audience measurement services has improved since they have been in the business.

Table 3. RESPONDENTS WERE SPLIT ON THE QUESTIONS OF:

Perceptions of Research Quality	ALL: TOP TWO BOX (%)	MEAN N=53
Media/ad research is considered essential at the highest executive levels within advertising and media companies.	56	3.56
The quality of audience measurement services has improved since I've been in the business.	55	3.32
Audience media multitasking (using multiple media simultaneously) isn't being adequately measured at present.	55	3.55
Declining response rates have resulted in media research audience measurement that is not sufficiently projectable to the population.	48	3.1
In the next five years, a non-traditional measurement company will make significant inroads in the US audience measurement arena.	48	3.24
Media audience measurement must be derived exclusively from random samples.	45	3.08

It is further interesting to note that age and years of experience are not significantly correlated with any of the beliefs.

Audience Measurement Users vs. Research Vendors

There are remarkable differences in attitudes among respondents related to their role: research vendors tended to diverge in their opinions considerably from the research buyers/users in the sample. Note that for this 2-way split, we coded consultants as vendors; given the role that these consultants play in helping with audience measurement service development, we believe this was a fair treatment. We also coded a respondent from an ad server company as a vendor, as they are actively engaged in the practice of providing metrics about campaign audience.

Table 4. RESEARCH BUYERS AND VENDORS SEE THE WORLD IN DIFFERENT WAYS:

Perceptions of Research Quality	VENDORS (TOP TWO BOX %) n=25	BUYERS (TOP TWO BOX %) n=25	ALL: TOP TWO BOX (%)	MEAN N=53
Media research methods have not kept pace with changes in audience behavior.	60.0	88.5	73	3.87
I am concerned about the lack of innovation from audience measurement companies.	52.0	69.2	61	3.51
Industry information needs have changed dramatically in the past year.	40.0	65.4	56	3.48
Audience media multitasking (using multiple media simultaneously) isn't being adequately measured at present.	36.0	69.3	55	3.55
Media audience measurement must be derived exclusively from random samples.	64.0	30.8	45	3.08

Examples where these differences could be considered statistically significant include:

- Research users are twice as likely as suppliers to believe that "Media audience measurement must be derived exclusively from random samples" (64% vs. 31% of buyers.) Indeed, this question received a mean score only a fraction above 3 (which would indicate neither agree nor disagree); but the mean score is clearly driven by a pattern of agreement among vendors, and a pattern of disagreement among users of audience measurement.
- Conversely, research vendors were unlikely to agree that "Audience media multitasking (using multiple media simultaneously) isn't being adequately measured at present." The majority of research users, though, (69%) thought that this audience behavior was getting short shrift.
- Users also believed that industry information needs have changed dramatically in the past year (65%) vs. only 40% of research vendors.
- Most tellingly, research users overwhelmingly felt that "Media research methods have not kept pace with changes in audience behavior" (88%) while only 60% of research vendors thought that was true.

KEY FINDINGS: IMPORTANCE OF TYPES OF DATA SOURCES AND CAPABILITIES

We also asked respondents to indicate how important they thought various types of data and research features were to them which might comprise part of an audience measurement system, using a scale where 1=not at all important, and 5=extremely important. These results are presented in table 3 below.

Table 5. Importance of Types of Data Sources and Capabilities

IMPORTANCE OF DATA TYPES AND FEATURES	VENDORS (TOP TWO BOX % n=25)	BUYERS (TOP TWO BOX % n=25)	TOTAL: TOP TWO BOX (%) n=53	MEAN
Data that definitively links ad exposure to purchase behavior	79.2	92.3	86	**4.25**
Data on ad exposure specifically... not just exposure to programming in which an ad is embedded	79.2	66.9	79	**4.06**
Media exposure data derived from a true random sample	75.0	57.7	66	**3.83**
Psychographic, extended demographic, and other profiling information, in addition to media exposure data	58.3	68.5	63	**3.71**
A “single source” methodology capturing a 360 degree media exposure view from a single pool of respondents	58.3	61.6	61	**3.71**
Measures of viewer "engagement"	41.7	77.0	60	**3.65**
Data on simultaneous media exposure (exposure to multiple media delivery systems or programs at once)	41.7	69.2	56	**3.50**
Data on PDA, mobile phone, streaming, and other emerging platform media exposure	50.0	65.4	56	**3.54**
The ability to match ad and programming offers to specific audience member location, such as via GPS and cell phone	33.4	30.7	31	**3.08**
5=Extremely important; 1=Not at all important *n=53*				

- Most respondents rated "Data that definitively links ad exposure to purchase behavior" as very or extremely important (86%.)

- In second place in terms of perceived importance was "Data on ad exposure specifically... not just exposure to programming in which an ad is embedded" -- with 79% rating it as very/extremely important
- Two thirds believed that "Media exposure data derived from a true random sample" Was important. (66%)
- Of much less importance to participants was the ability to match ad/program offers to audience location, such as via GPA or cellphone -- only 31% said this was important.
- Respondents were split in terms of perception of importance for data on PDA, mobile phone, streaming, and other emerging platforms, and with respect to data on simultaneous media exposure.

Audience Measurement Users Versus Providers

As before, remarkable differences between the perceptions of research vendors vs. research users emerge in this data.

- Research users considered both "measures of viewer engagement" and data on simultaneous media exposure much more important than did research vendors.
- Only 42% of research vendors said that data on viewer engagement was important, whereas **77% of research users said it was very/extremely important.**
- Similarly, 42% of vendors said simultaneous media exposure data was important, but 69% of users consider it of high importance.

OPEN-ENDED QUESTIONS - VERBATIM COMMENTS

We asked several open-ended questions related to the topics of the survey, including future challenges of media measurement, assessment of successes/failures, the potential impact of initiatives such as Apollo, and the importance of "naturalistic data." Some of the comments received include:

Successes/Failures and Future Challenges:

1. *In your opinion, in what areas do current media measurement methods and technology succeed and/or fail? What do you consider to be the most significant *future* challenge(s) of media measurement and research?*

Thirty-three respondents provided answers to this question. Not surprisingly, 17 chose to focus on current weaknesses of audience measurement systems. Specific areas included data collection methods and biases, sample size, response to fragmentation, need for multi-media currency-level data, and questions about the definition of response. Some illustrative verbatim quotes are as follows:

- "They fail in the fact that they are not passive enough in the way they are collected. They require and permit too much panelist interpretation (e.g., completing diaries, pushing buttons)." (Executive with major advertiser)
- "Multimedia audience measures are not fully developed. Major research vendors seem to be dedicated to single-platform results even though they may be collecting information across platforms. There is no recognized source for multi-media audience information." (Research executive at media operator)
- "They fail at consistently and logically defining usage and impact operationally. They rely too much on what we've always done and until recently, rarely questioned if that's the right way of doing things. Technology is also allowing us to measure just about anything and that would be too much data if we were to get everything on the plate." (Research executive at media operator)

Interestingly, 13 respondents provided answers that framed audience measurement performance as successful in the fundamental task, but then suggested that the task itself was insufficient to meet business needs as they are evolving. These verbatim quotes are illustrative of this group:

- "They succeed pretty much only at the vehicle measurement level--the same place they've been for the last 40 years. They do not keep up with the explosion of new vehicles and delivery methods, and utterly fail at measuring communication delivery and the quality of it." (Agency media researcher)
- "They do a very good job of estimating "counts of the house" -- how many people have an opportunity to see or hear an ad by virtue of their being exposed to a particular media vehicle. Current media measurement methods are not keeping page with the explosion of new potential exposure opportunities on new delivery platforms." (Executive at audience measurement provider)
- "They've succeeded in that they've been executed consistently throughout the years and have been the currency by which we value media exposures. They've provided a stable way to estimate audience potential. This very consistency and stability, however, has become the ultimate failing in that there's been no change in capturing audiences at the ad exposure level in addition to their lack of reporting granularity as audiences continue to fragment." (Agency media executive)

The challenges mentioned by these respondents are wide-ranging. Some of the comments:

- Declining participation rates [*mentioned by several as a key challenge]*.
- How people use media will only be more fragmented and more scattered.
- Being able to measure more disaggregated and granular behaviors without compromising too far on sample quality in the pursuit of large samples.
- Measuring non-video advertising. It is a disgrace.
- Consumers of media research have come to use the data very mechanistically. This is what has prevented more changes in (and more interesting and more relevant) media

research. I believe the biggest challenge will be getting research consumers to genuinely want and use what they already say they want.

- The ultimate challenge is providing a reason to exist in the first place. Research needs to facillitate the business and improve the actionability, not impede and confuse and create vaporware research
- To provide data that is truly reflective of behavior.
- You covered them in this survey. Old survey techniques don't work. But the cause is not just media fragmentation, it is consumer fragmentation. We do need to shift from the old survey metaphor to one where integrated research and analytics are used to provide us with more functional data.
- Industry researchers coming to terms with new forms of data other than behavioral -- researchers are driving the media industry to exclusive focus on eyeball delivery and commoditization -- a cheapening of inventory rather than a measurement of real value.
- The rapid changing environment with respect to channels of communication between the research company and the respondent. With a non-trivial portion of the population only reachable by cell phone, and a non-trivial proportion of the population primarily communicating through e-mail, research companies must react more quickly to changing modes of communication and changing lifestyles. Personal meters no longer fit the lifestyles of a number of important market segments. In home scanning no longer fits the lifestyles of a number of important CPG buyer segments. The divergence of communications channels and lifestyles by consumer segments is becoming more pronounced. Static methods no longer represent the full population. The research marketplace must be more open to dynamically changing methods used to generate greater coverage of the universe.
- Measuring media in a 'device agnostic' world in which audio and video are delivered when and where the consumer wants it on whatever device the consumer wants it.

Naturalistic Data

2. *What impact do you believe that "naturalistic" data (i.e., databases naturally created through the distribution of content; e.g. cable set top box data; click stream data; TiVo data on playback, etc.) might have on our future media measurement and research practices? Secondly, what might you do differently if you had this kind of data today?*

Thirty-two respondents provided an answer. Of these responders, 13 were unambiguous in believing that naturalistic data would be a primary component of audience measurement moving forward. Some verbatim comments from this group were as follows:

- "'Transactions' based data must play an important part in the future of measurement and measurement effectiveness. Particularly in light of the fact that many of these channels will provide addressability that can only be measured through the device itself as markets will be too thinly sliced." (Executive at an audience measurement provider)
- "As all media eventually migrate towards digital platforms, so will their measurement potential. Digital media leave a trail of electronic bread crumbs for us to track. It's very realistic that we could be living in a two-tiered world for measurement: one that captures a complete census of activity, the other a sample that better describes that activity. This is the current model for internet where we have ad serving data complemented by panel sources like Nielsen NetRatings and ComScore." (Agency media executive)
- "As media fragment 'traffic' data will serve as the backbone audience data (OTS), with surveys supplying demographics, R/F and "eyes-on" (VAI) data." (Consultant)
- "It is the only practical way to go. As a model, this approach measures real opportunity for exposure from a universe. In the future these data and strong analytics will become more valuable that the outdated survey centric models (used in isolation). We don't know what we would do differently until we see the numbers. One of the real issues is not total usage levels but the reallocation of share of exposure within a medium and a better indication of commercial audience." (Executive at media trade association)
- "If we had this data today it would only account for a small and atypical percent of audience. However, over time consumption derived measurement will be essential." (Executive at audience measurement provider)

An additional 11 respondents provided answers that suggested naturalistic data would find a niche supplementing or enriching, but not replacing, traditional survey-based data. Some of these verbatim comments included:

- "Additional data is always valuable but I would continue to weigh this against survey based data with the hopes that by cross-referencing the two, a clear picture will start to emerge." (agency executive)
- "This kind of data will ultimately become very valuable. Whether is becomes "currency" is another question." (Consultant)
- "Will enhance but not replace current sample-based methods. Would be able to drill down in areas needing larger samples, e.g. commercial measurement" (Research executive at media operator)
- Two survey respondents offered comments indicating that naturalistic data would not become part of the audience measurement mix. Several others zeroed in on areas of difficulty or challenges that would need to be overcome. Some illustrative comments:
- "For me, this data is not very useful. It would be nice to know rather than critical and I rarely get time or money to do analysis on "nice to know" data." (Research executive at media operator)
- "I think consumers are likely to bristle at this. Just look at the cookie-deletion problems online (some 40%+ of consumers delete their cookies monthly). I suspect they might react similarly to the idea of their set-top box or TiVo watching them. Expect to see special privacy software emerge for install into cable devices to thwart tracking." (Executive at an ad server company)

Linking Media Exposure to Ad Sales

3. *The Arbitron/VNU "Apollo" single-source measurement initiative, in which media exposure is linked to product purchase behavior, has been in development for some time now. What do you think the impact of "Apollo" in the media industry might be?*

We included an open-ended question about the Arbitron/VNU Apollo initiative, which is an enterprise designed to collect audience exposure data and product purchase data from a single panel of respondents.

Thirty-six respondents provided an answer to this question. The responses fell broadly into one of three categories: responders who saw potential efficacy (13); respondents who posed questions about viability and/or feasibility (10); and, respondents who were negative about the concept and/or project (13). Only two respondents suggested that Apollo data would or should eventually become currency ratings data.

Respondents who saw potential efficacy cited attributes such as ROI, accountability, improved media planning, and improved targeting. Some verbatim comments from this group are as follows:

- "If done correctly, this can be an invaluable tool for understanding how advertising works including exposure to a single medium and multiple media. It cannot replace the need for accurate audience measurement for defining the currency of the media." (Research executive at a media operator)
- "More consumer-centric media planning, heavier focus on ROI for each media, less focus on audience measurement." (Consultant)
- "Apollo has the potential to provide marketers with the best insights to date about multi-media usage from a single set of consumers. It should help us to target our media better, by adding in behavioral characteristics to age/sex demos. It should also provide new learning about the impact of media exposure on product purchase. Hopefully it eventually will become a currency." (Executive with major advertiser)

Respondents who raised questions about viability or feasibility of Apollo cited incomplete media coverage, marketplace acceptance, and the ambitious nature of the undertaking. Some verbatim responses from this group are as follows:

- "The single source model has been around for years. I believe that Apollo will only succeed if it truly supplies the industry with better measurement as old systems are

eroding. It is a solid creative approach that merits consideration, but the barriers are high." (Executive at media trade association)

- "I hope it will turn up something really exciting, but I believe the impact will be negligible in its present form." (Ad agency media researcher)
- "The impact will be limited until or unless they successfully include electronic measurement of additional media (print, outdoor, Internet). " (Consultant)

The negative responders cited sampling issues and business issues including economic feasibility. Some verbatim responses in this category:

- "Not much because the sample size is too small and the cost is too high and not enough media are covered and barcode scanner people are probably not a fair cross section." (Executive at a research supplier)
- "Right now very little; it'll likely be too expensive, overwhelming/taxing to the respondents and produce too much data that won't be terribly useful." (Research executive at media operator)
- "Bad sample; leap of faith that household purchase is linked to media exposure of one individual" (Research executive at media operator)

CONCLUSIONS AND RECOMMENDATIONS

For decades, media research buyers, particularly of ratings services, have expressed dissatisfaction with these products, but at the same time, have generally not embraced widespread changes, because like it or not, ratings are the "currency" on which media is bought and sold in this country. No serious challengers to the status quo, and the traditional methods by which media research has been produced, have gained traction. Changes in audience measurement have generally been evolutionary, not revolutionary.

Recently, however, buyer dissatisfaction appears to have reached a new pitch, so much so that the CEO of Nielsen Media Research released a letter earlier this spring (Whiting, 2006) in which she made a pledge that Nielsen will "follow the video" wherever it might be… tacitly acknowledging customer dissatisfaction and noting that new technologies had untethered video from the home and allowed viewing in many other environments that Nielsen to date had failed to measure. Nielsen's public position suggests that the industry may be prepared to move beyond incremental quality improvements, and to fundamental shifts in the construct of audience measurement solutions.

The new complexity of audience behavior, and the burgeoning availability of media devices with which audiences can engage, suggested to us that the industry may well be more willing to jettison previously cherished "gold standards" that had defined media research, in favor of more flexible, and wide-ranging, types of measurement and analytics.

Indeed, in our survey of media thought-leaders and experienced professionals, this appears to be the direction in which buyers, and to a lesser extent, research vendors, will be moving.

The primary themes we identified include the following:

1. Dissatisfaction with Current Research

The indictment of current research practices as reflected in this data is relatively severe:

Almost everyone agreed that ROI data has become critical, that there are important media research questions no one is addressing, and that media research methods have not kept pace with changes in audience behavior -- and also that traditional research methods are inadequate to deal with the current environment. Sample sizes, likewise, are viewed as not having kept up with the fragmented media landscape.

Furthermore, very few agreed that the major ratings vendors offer acceptable solutions for measuring today's media landscape, media research suppliers do an excellent job of providing all the data necessary to make decisions, or even that audience measurement companies do an excellent job at providing the tools (software, training) that allow for interpretation of their data (the latter point suggests that research vendors need to improve their ability to place findings in a meaningful business context, from the customer's point of view.)

Verbatim responses suggest that even where there is satisfaction with audience measurement services performance, there is some question about the efficacy of the mandate the services follow; traditional audience measurement may be insufficient for users to meet business needs

There appears to be uniform dissatisfaction with the comprehensiveness of existing audience measurement systems; with the tools and support suppliers deliver for unlocking the value of the data; and, with innovation from audience measurement companies.

2. Reduced efficacy

Fragmentation and new digital platforms are rendering traditional methods insufficient to capture detail and granularity; traditional audience measurement is not equipped to measure low-incidence, long tail consumption behaviors.

3. This has apparently led to increased Interest in innovation, and willingness to experiment with new methods:

Just about everyone agreed that audience measurement services can be enriched by adding externally-derived data to account for things like engagement, quality of exposure, and other variables, and that the utility of random samples can be enhanced by integration of external, empirical data sources (e.g., subscriber lists, click stream data, set top box data.)

Although the sample was split in believing that media audience measurement must be derived exclusively from random samples, this level of disagreement on such a fundamental question is itself quite interesting. Not many agreed that they should be able to collect all the information needed for a ratings service from a single sample. Also, respondents were unlikely to agree that electronic measurement will *completely* replace telephone collection, mail surveys, and in-person interviewing for measuring media audiences.

4. Research buyers see the world in different ways, compared to their research vendors:

- *Research buyers are much less likely to consider random sampling an essential element of their research strategies.*
- *Buyers also expressed strong interest in learning about audience multitasking – but their vendors consider it much less important.*
- *Buyers are much more likely to say that research methods just have not kept pace with audience behavior changes… a clear signal to their vendors that methods must continue to innovate as technology and audience engagement with new means of media delivery evolve.*
- *Measures of engagement are more important to users than to vendors.*

Users are generally more satisfied with the level of information available on physical location of consumption, suggesting that this topic is a low priority need.

These findings strongly suggest that traditional audience measurement services can no longer be viewed as wholly self-contained entities—meaning that data base manipulation and integration are increasingly important tools for audience researchers.

Digital media distribution generates naturalistic data. This data will have increasing efficacy in developing comprehensive audience measurement solutions, especially as media consumption shifts to digital platforms.

The inevitable conclusion is that future systems will have to be hybrid solutions, incorporating naturalistic data and data base integration. In fact, the most logical paradigm for audience measurement systems moving forward may be less the fielding of a survey, and more the construction of a database, with disparate sources assembled in a single repository, providing users the opportunity to query and drill down, and to overlay adjustment factors (e.g., for engagement) as desired. Such a solution would incorporate transactional, server, and other empirical data, and all existing naturalistic data; survey results can co-exist in such a database.

Importance of tying audience exposure to sales, and increasing role of ROI, suggest that the fundamental utility of audience measurement will depend on its ability to move beyond “counting the house” and toward some increased tangible quantification of results, accountability, and ROI. However at the same time, responders indicated decidedly mixed reactions to Apollo, a new service by the two leading US audience measurement providers to provide precisely these features. There is a seeming paradox in the responses; wanting everything in a single source, and yet doubting that such a system is possible within the constraints of acceptable quality research. This suggests that the increasingly complex business needs of users of audience measurement have outstripped the capabilities of traditional panel-based data collection, and points toward database-driven solutions.

In this light, it is significant that users of audience measurement services are far less committed to random sample-based solutions than the suppliers. It seems clear that for digital media platforms, the first best course in approaching audience measurement is to begin with a data-centric model—with the rich stream of naturalistic data, the “trail of breadcrumbs” that digital technologies produce. Surveys may then be appropriate to develop broad usage patterns, and to provide coloration that the naturalistic data lacks (e.g., complete user demographics, disentangling reach from frequency.)

As media consumption shifts to digital platforms, The new traditional audience measurement will increasingly become the domain of data base experts, and less the domain of sampling statisticians. When digital delivery of media content reaches critical mass, the business of audience measurement will fundamentally change.

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