



Fusion Validation

MRI Fusion Projects

- J.D.Power and Associates
 - New Vehicle / Magazine Survey
 - ♦ Integrating MRI Attitude and Travel measures into New Vehicle / Magazine Survey
- Nielsen//NetRatings
 - NetViews
 - ♦ Integrating NetViews site information into MRI National Study

MRI Fusion Projects - Validation

- Each fusion possesses distinctive features and goals and as such entails different sorts of validation strategies
 - J.D.Power Magazine Survey
 - ♦ Fusing MRI Attitude and Travel measures to enhance automotive model and media profiling
 - Nielsen//NetRatings
 - ♦ Fusing internet site measures (30-day nets and page views) into MRI's National Study
 - Internet Profiling
 - Internet inclusive reach/frequency
 - Magazine Brand Total Audience

Validation Hierarchy

- Four levels of fusion/data integration validity
 - *Statistical Matching* by Susanne Ressler
 - *ARF Guidelines for Data Integration*

Validation Hierarchy

- First Level (Most Stringent)
 - “The true but unknown values ... of the recipient units are reproduced”
 - Are the correct values being assigned to particular individuals?
 - Direct marketing applications

Validation Hierarchy

- Second Level
 - “...the true joint distribution of all variables is reflected in the statistically matched files.”
 - Does the integrated dataset manifest the true relationships among the variables at the aggregate level
 - Integrating currency measures where it is important that relevant levels and relationships be more strictly preserved.

Validation Hierarchy

- Third Level
 - “The correlation structure and higher moments of the variables are preserved...”
 - Is the duplication/overlap between two variables preserved?

Validation Hierarchy

- Fourth Level (Least demanding)
 - “Marginal and joint distributions of the variables in the donor sample are preserved in the statistically matched file”
 - Are the profiles and incidences of variables in the fused database consistent with those in the source?

Fusion – Beginning with a Strong Foundation for Matching

- “Within media and consuming data the typical demographic and socioeconomic variables will surely not completely explain media exposure and consuming behavior...Roberts (1994) reports better results using such ‘specific common’ variables than the usual demographic and socioeconomic issues alone.” Ressler

MRI / J.D.Power Fusion

- J.D.Power and Associates / MRI Fusion
 - Fusion employing demographic, automotive and limited attitudinal data for matching
 - ♦ Level Four Validity as minimum
 - Are the attitude and travel profiles preserved in the fused database with respect to demographics and auto models?
 - Comparison of attitude and travel profiles by automobile models and demographics
 - ♦ Level Two Validity
 - Earlier work by J.D.Power involved a separate validation study as attempt to assess true joint distribution between automobile models and attitude data.

MRI / Nielsen//NetRatings Fusion

- MRI / Nielsen//NetRatings Fusion
 - Use of database
 - ◆ Media ranking, profiling and cross-tabulation
 - ◆ Multi-Media reach/frequency
 - ◆ Magazine brand total audience
 - Hardcopy and internet
 - Level Two Validity

MRI / Nielsen//NetRatings Fusion

- Currency levels are maintained through use of Transportation Algorithm / split weighting
- Extensive demographic and internet measures are employed as common matching variables
 - Demographics
 - ◆ Age, Sex, Household Income, Education, Ethnicity, etc.
 - ◆ Internet
 - Time spent per month
 - Where internet accessed
 - Types of internet behaviors
 - 40+ individual sites
 - ◆ Magazine readership
 - “How Obtained – Internet”

MRI / Nielsen//NetRatings Fusion

- Comparison of fusion results with separate/independent measures
 - “Without a small but completely observed data set no validation of the other levels is possible” - Rassler
 - MRI has done some custom research whereby relationship between hardcopy and internet site is assessed
 - Some of MRI’s clients have also performed similar research

MRI / Nielsen//NetRatings Fusion

- Other measures used to assess fusion results:
 - Evaluating fused relationships by examining relationships that already exist in MRI data
 - Validation Study
 - Other independent measures

MRI / Nielsen//NetRatings Fusion

- Evaluating fused relationships by examining existing relationships in MRI data
 - Look particularly at variables not controlled for in the fusion.
 - Eg. Travel – NNR Travel sites vs. “ordered from Expedia”, “Airline tickets purchased over the Internet” or “Used General Internet Travel site to arrange travel”
 - Can look at demographics and incidence
 - Although some attenuation to the mean is expected, the examination informs us regarding whether the relationships look reasonable

MRI / Nielsen//NetRatings Fusion

- Validation Study
 - Measuring magazine readership and website usage in the same study.
 - RDD Sample - 5000 respondents
 - 3 treatments –
 - ♦ All Magazines, then websites
 - ♦ All Websites, then magazines
 - ♦ Paired: Magazine readership followed by corresponding website.
 - 22 Magazines/websites measured – variety of genres

MRI / Nielsen//NetRatings Fusion

- Validation Study – What we expect to discover
 - Indication of the relationship between websites and magazines per genre.
 - Rank order of duplication between sites measured
 - We don't expect the validation study to define absolute levels because of:
 - ♦ Mode effect
 - ♦ Different questionnaires / methodology

MRI / Nielsen//NetRatings Fusion

- Other independent measures used to assess fusion results:
 - Recontact Study – previously conducted, asked MRI respondents about website usage, including 5-6 magazine websites
 - @Plan