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Panel "Consistency": Newly Crowned Metric for Online Research Quality

Industry efforts to improve online research data quality have been stymied by politics and financial concerns, but a landmark research-on-research program with a particular emphasis on sample "consistency" may surmount those barriers.

For more than 18 months, **MKTG Inc.** (East Islip, NY) President **Steve Gittelman** and his team have been quietly gathering data for The Grand Mean Project™, an exhaustive inspection of online panels in the U.S. and abroad. The program uses a non-probabilistic metric–the Grand Mean–based on buying behavior for cross-panel comparisons. Only data from participating panels are calculated into the Grand Mean. Responses are collected via a standard online survey that includes 37 different elements for buying behavior, with a minimum 400 completes per supplier. A first U.S. wave covering more than 20 leading domestic online sample providers was completed in mid-2008. An international wave initiated in Q4 of 2008 expanded total participants to 130 panels across 40 markets, making it the largest, most comprehensive online sample assessment ever conducted.

Steve Gittelman

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MKTG Inc's work differs from other industry studies in its unorthodox underlying premise: "We're not particularly interested in what the responses were or why," Gittelman told ***RBR***. "We're interested in the degree of variability of those responses from the norm, which is in this case the Grand Mean. If I could monitor only one thing from here on out, it would be how consistent a panel is, in other words the replicability of data within each panel regardless of inherent differences. Overall consistency of a panel's output is the most important consideration in selecting an online sample provider because data are affected by sample source changes. Unintentionally, most panels have aspects that are in a continuous state of change."

Panel Identity Crisis

"The panel companies have an identity crisis," commented Gittelman, "in that they have attempted to define themselves in a probabilistic framework. Excluding Knowledge Networks–which deserves to be in a separate category–online samples are non-probabilistic. That doesn't mean you can't have quality sample or do good research online, but we need to sever our ties to the Census because the question of bias has become a red herring: There is no correct probability universe out there. It's time our industry considers the virtues of consistent bias, and, whatever that bias is, can we count on it over time?"

Gittelman's Ph.D. in Ecology helped shape his perspective. "I look at online panels as an ecologist might sample a series of ponds," he explained. "We do not sample the whole pond. We don't claim to have a census of all the ponds. We don't ground our statistics in the probability of understanding the whole universe. We think in terms of a sampling frame that floats within other sampling frames and generalize outward.

"In contrast," he explained, "public opinion and market research attempt to anchor to a known universe. There is no framework like telephone sampling in ecology, unless you get into monocultures, like big fields of corn. We investigate one segment of an ecosystem at a time."

The Grand Mean Project originated from a study commissioned by DMS (Dallas, TX) in late 2007. "DMS wanted to understand how their river sample compared to the rest of the U.S. commercial online sample market," Gittelman recounted. "We bought sample from various panels and ran them through a questionnaire. The results were completely blind; DMS never knew the source of any sample." The study satisfied DMS' needs, but Gittelman wanted to dig deeper; in mid-2008, DMS gave MKTG Inc. permission to continue the study independently.

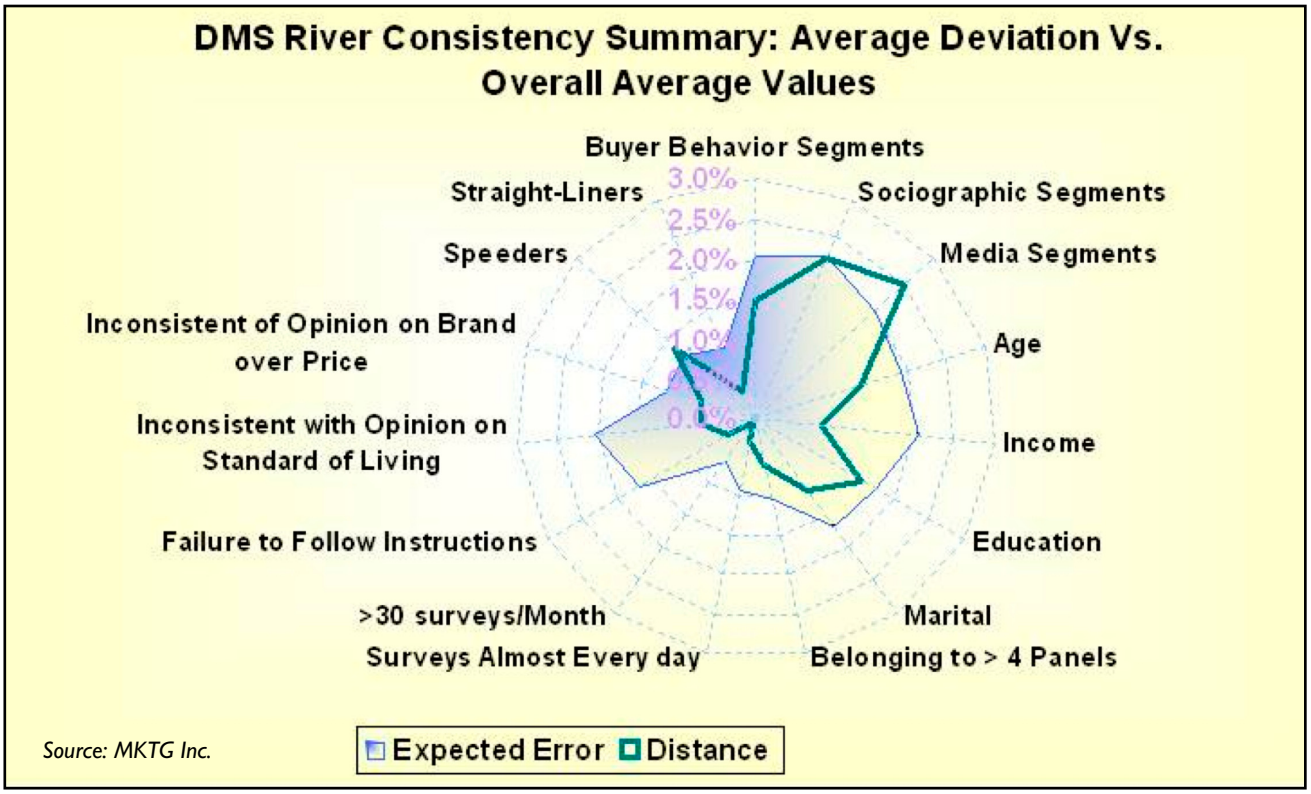
The first leg of the project yielded several surprises. "We

assumed panels were more similar than dissimilar, but there is actually significant variability from panel to panel; they are not interchangeable. And there is a shocking incidence of respondents who belong to multiple panels," he said. "We asked people to tell us how many panels they currently belong to, and to identify those panels from a list. In some access panels, 30-50% of respondents claimed to be members of five or more panels. We also found the variability in panelist tenure to be huge," Gittelman summed.

Multi-Panel Members & Heavy Survey Taking

Gittelman found a very high correlation between membership in multiple panels and frequency of survey taking. "Multi-panel membership is a legitimate measure of professional respondency," he asserted. "Our global research demonstrates that with market saturation, multi-panel membership starts to rise first, followed closely by frequent survey taking. It makes sense because panel companies can control how many surveys they issue to their members, but they can't control how many surveys members of one panel take across panels. We consider taking 30 surveys or more per month to be 'hyperactive,' and to reach these high levels of survey taking, participants must have multiple panel memberships because few individual panels will permit that."

Gittelman's conclusion contrasts with that of the ARF's recent Foundations of Quality study, which says multi-panel membership does not affect data quality. "A person who joins multiple panels and is likely to take surveys daily is at least demographically different from the average Joe. Many studies confirm this," Gittelman noted. "I believe frequent survey takers are more likely to be longer-tenured panelists. The ARF's latest press release says tenure impacts results. Ron Gailey (formerly Washington Mutual's research head) presented that data to ARF last year. So, how can multi-panel members–who frequently take surveys and whose tenure on panels is presumably longer than that of non-multi-panel members–not affect survey results?"



The chart above displays the results of the DMS consistency test for the 15 metrics that were analyzed. There are two somewhat circles on the chart–one defines the overall 'expected error' and the other is the measurement of the DMS data. Where the darker line is inside the larger, lighter line, that metric is considered consistent; that is, it is within the error bounds. When considering only larger inconsistencies (greater than a 25% discrepancy over one standard error), DMS' consistency measures at 93.3% with only one metric significantly outside the error bounds.

Tracking Data Consistency

"These are complicated issues," Gittelman admitted. "How panels are built and managed, panel functionality and the type of panelists are immaterial if the output is no good. Further, the dynamics around what influences results are so complex that even the most sophisticated practitioners would have difficulty weighting. We decided the problem needed to be tackled by stabilizing the

sampling frame through an analysis of the consistency and predictability of the output.

"If I understand what flows into my universe, how that impacts it and what flows out, I can adjust my inflows to match my outflows, and I can give you consistency. I can fine-tune," he said. MKTG Inc. has developed a unique sample blending approach. "We're not blending to average out the errors, we're scientifically blending in a targeted direction," Gittelman explained.

Grand Mean Project survey batteries cover sociological information, media use and buying behavior. A total of 15 measures and their constituent components compose a consistency analysis. "Buying behavior is the foundation for the Grand Mean because it is the most powerful market driver in the industry, and thus the most relevant indicator of consistency," Gittelman outlined.

Mktg. Incorporated

Harvesting Quality Data...since 1979

MKTG Inc. establishes a Grand Mean at a country- or market-level. Metrics have been scored for the U.S., Canada and Europe's Big Five, enabling online panel providers in those geographies to track their sample consistency by tracking panel data variability through MKTG's new audit system, Consistent Track™. Panels can submit samples as often as practical–at least every other month–with three successful waves required to certify sample consistency. MKTG Inc. is recruiting U.S. panels for a second wave of testing.

DMS has already completed three waves, and has taken the unprecedented step of making their results public. DMS' sample proved consistent across all but one metric. (See chart on facing page.) DMS reportedly plans to undergo regular Consistent Track audits and will provide the independent, objective third-party assessment to clients.

Consistent Track could also prove valuable to research clients. "How can you be sure that a shift in tracking study results is real and not caused by changes in the sample?" Gittelman volunteered. "We can run a continuity analysis on a panel while the client is conducting the tracking study to verify that results are an apples-to-apples comparison from a sample perspective."

To illustrate the extreme differences between commercial panels, Gittelman described how at one point in the U.S. study MKTG Inc. took four buying behavior segmentations collected from 18 different panels against the Grand Mean. "Two-thirds of the panels were statistically different from the average at a 3% tolerance," he revealed. "So, of these 18 panels, there was a 4% probability of randomly picking three similar panels, none of which differed from the Grand Mean significantly. Said differently, when researchers are get bids from three panels to get a competitive price there is a 96% likelihood that the three bidders will be totally different.

"We also see variability within the panels globally," he continued. "We originally thought that we would see less variability within markets with low saturation rates of professional respondents. But the sourcing on the international panels we've studied is so vastly different that there is a lot of variability. Sourcing is clearly a major determinant of the type of panelists you'll get."

Dealing With Problem Respondents

To deal with potential problem panelists, MKTG Inc. has borrowed another idea from DMS–recast with their own data and some proprietary twists. Its QMetrics™ uses a series of combination metrics. "No one test is sufficient to detect an undesirable respondent. Speeding can take place for any of a number of reasons. The same is true of trap questions and straightlining. Individuals who fail one or two measures are still acceptable. Approximately 5% of all respondents fail all three; data we get from them look very different from that of everyone else and they should probably be removed," Gittelman explained. "When we add questions together, you can see that in some samples, there is a random array of the Qmetric, and in other samples it is clearly not random. If it is not random, it signals a systematic change that needs to be investigated." RBR

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ARF's Rubinson: Consistency #1 Concern

The ARF's CRO, Joel Rubinson, must be a fan of Gittelman's "consistency" concept and work. FoQ didn't study consistency but in a June 11 interview for *Research Magazine* (www.research-live.com), Rubinson said suppliers "need to start managing how they source sample for a given study, not just based upon sample availability and productivity, but also based upon data consistency. That is the number one area that needs to be attended to, [in order] to be able to establish comparability across studies where you're hoping results can be compared."

Rubinson

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