

When you can measure what you are speaking about and express it in numbers, you know something about it.

Lord Kelvin

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## Conclusive Research

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## Session Objectives

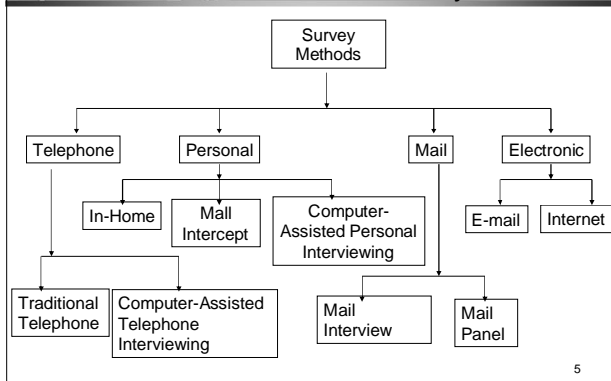
- § Survey Methods
- § Observation methods
- § Experimentation
- § Research proposal

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| Criteria                                   | Focus Groups      | Depth Interviews    | Projective Techniques  |
|--|-------------------|---------------------|------------------------|
| 1. Degree of Structure                     | Relatively high   | Relatively medium   | Relatively low         |
| 2. Probing of individual respondents       | Low               | High                | Medium                 |
| 3. Moderator bias                          | Relatively medium | Relatively high     | Low to high            |
| 4. Interpretation bias                     | Relatively low    | Relatively medium   | Relatively high        |
| 5. Uncovering subconscious information     | Low               | Medium to high      | High                   |
| 6. Discovering innovative information      | High              | Medium              | Low                    |
| 7. Obtaining sensitive information         | Low               | Medium              | High                   |
| 8. Involve unusual behavior or questioning | No                | To a limited extent | Yes                    |
| 9. Overall usefulness                      | Highly useful     | Useful              | <b>Somewhat useful</b> |

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## A Classification of Survey Methods



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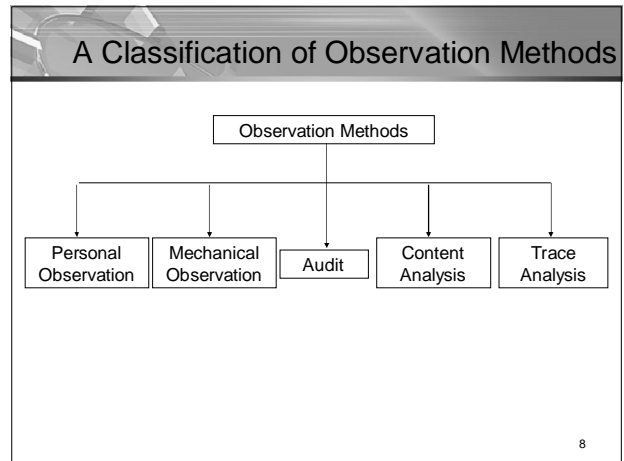
## A Comparative Evaluation of Survey Methods

| Criteria | Phone/CATI | In-Home Interviews | Mail-Intercept interviews | CAP | Mail Surveys | Mail Panels | E-Mail | Internet |
|----------|------------|--------------------|---------------------------|-----|--------------|-------------|--------|----------|
|          |            |                    |                           |     |              |             |        |          |

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### Some Decisions Related to the Mail Interview Package

|  |                      |            |                      |
|--|----------------------|------------|----------------------|
| <b>Outgoing Envelope</b>                                   |                      |            |                      |
| Outgoing envelope: size, color, return address             |                      |            |                      |
| Postage  | Method of addressing |            |                      |
| <b>Cover Letter</b>  |                      |            |                      |
| Sponsorship  | Type of appeal       | Postscript |                      |
| Personalization  | Signature            |            |                      |
| <b>Questionnaire</b>                                       |                      |            |                      |
| Length   | Size                 | Layout     | Format               |
| Content  | Reproduction         | Color      | Respondent anonymity |
| <b>Return Envelope</b>                                     |                      |            |                      |
| Type of envelope Postage                                   |                      |            |                      |
| <b>Incentives</b>  |                      |            |                      |
| Monetary versus non-monetary. Prepaid versus promised amt. |                      |            |                      |

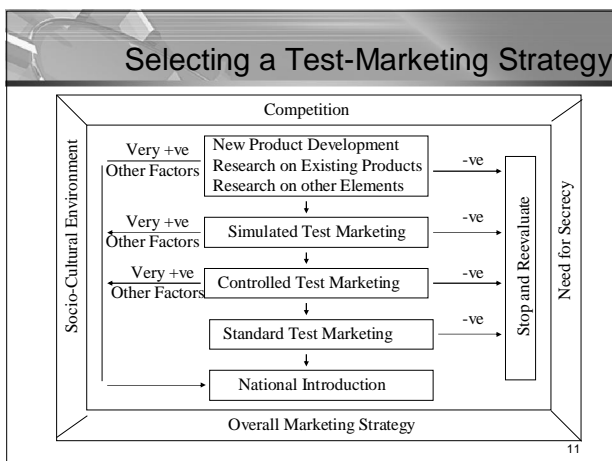
### A Comparative Evaluation of Observation Methods

| Criteria                              | Personal Observation | Mechanical Observation | Audit Analysis | Content Analysis          | Trace Analysis        |
|---------------------------------------|----------------------|------------------------|----------------|---------------------------|-----------------------|
| Degree of structure                   | Low                  | Low to high            | High           | High                      | Medium                |
| Degree of disguise                    | Medium               | Low to high            | Low            | High                      | High                  |
| Ability to observe in natural setting | High                 | Low to high            | High           | Medium                    | Low                   |
| Observation bias                      | High                 | Low                    | Low            | Medium                    | Medium                |
| Analysis Bias                         | High                 | Low to Medium          | Low            | Low                       | Medium                |
| General remarks                       | Most flexible        | Can be intrusive       | Expensive      | Limited to communications | Method of last resort |

### A Comparative Evaluation of Survey Methods for International MR

| Criteria   | Telephone | Personal | Mail | Electronic |
|--|-----------|----------|------|------------|
| High sample control                                    | +         | +        | -    | -          |
| Difficulty in locating respondents at home             | +         | -        | +    | +          |
| Inaccessibility of homes                               | +         | -        | +    | +          |
| Unavailability of a large pool of trained interviewers | +         | -        | +    | +          |
| Large population in rural areas                        | -         | +        | -    | -          |
| Unavailability of maps                                 | +         | -        | +    | +          |
| Unavailability of current telephone directory          | -         | +        | -    | +          |
| Unavailability of mailing lists                        | +         | +        | -    | +          |
| Low penetration of telephones                          | -         | +        | +    | -          |
| Lack of an efficient postal system                     | +         | +        | -    | +          |
| Low level of literacy                                  | -         | +        | -    | -          |
| Face-to-face communication culture                     | -         | +        | -    | -          |
| Poor access to comps. & Internet                       | +         | +        | ?    | -          |

Note: A (+) denotes an advantage, and a (-) denotes a disadvantage.



### Laboratory vs Field Experiments

| Factor                 | Laboratory | Field     |
|------------------------|------------|-----------|
| Environment            | Artificial | Realistic |
| Control                | High       | Low       |
| Reactive Error         | High       | Low       |
| Demand Artifacts       | High       | Low       |
| Internal Validity      | High       | Low       |
| External Validity      | Low        | High      |
| Time                   | Short      | Long      |
| Number of Units        | Small      | Large     |
| Ease of implementation | High       | Low       |
| Cost                   | Low        | High      |

## Validity in experimentation

- § Internal validity
- § External validity

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## Experimentation

- § After Only Design
- § Before – After Design
- § Before – After with Control Group
- § Four – Group – Six Study
- § After only with Control Group
- § Ex Post Facto Design
- § Randomized block design
- § Latin square design
- § Factorial design

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## Building Accord According to Personal Observation

Honda Motor Co. had a lot of complaints on their sporty, restyled Accord (not big enough for U.S. drivers, not stylish enough for the Japanese drivers). Being afraid to lose its market, Honda sent teams to visit U.S. families and observe how the Americans used their Honda Accords. By personal observation, the teams found out that the Americans like lots of compartments for storing maps and change. The teams also actually took U.S. road trips in Accord and in Ford Taurus and Toyota Camry as its rivals in midsize cars. The results of this observation study were used to design a new 1998 Accord for U.S. drivers which has 101.7 cubic feet for passenger space compared to 101.5 cubic feet for Ford Taurus and 97.9 cubic feet for Toyota Camry. Moreover, Accord also delivered higher customer value by cutting the price.

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## Research Proposal

- § Executive summary
- § Background
- § Problem definition / Objectives of the research
- § Approach to the problem
- § Research design
- § Field work / Data collection
- § Data analysis
- § Reporting
- § Appendices

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