

## GLOSSARY

**Access Panel.** An access panel is basically a rich database of willing respondents, which is used as a sampling frame for Internet studies, but may be used for other data collection procedures too. Panel members are invited and selected in various ways, through self-selection via websites, through acquisition by other panel members, at the end of successful face-to-face or telephone interviews, and so forth. Quality panels use a probability sample (e.g., **RDD telephone interview**) to approach and invite potential panel members.

**Acquiescence.** The tendency for respondents to agree or say yes (rather than disagree or say *no* to questions that are put in the form of statements.

**Adaptation.** Adapted questions are derived from existing questions by deliberately changing some content or design component to make a question more suitable for a new socio-cultural context or for a particular population. Adaptation can be necessary without translation being involved (e.g., adapting a questionnaire for children). However, whenever translation is necessary, some forms of adaptation are also generally required. Adaptations may be substantive, relate to question design, or consist of slight formulation and wording changes. Regardless of the form or the degree of change, it is wise to consider adapted questions as new questions and to test them accordingly.

**Adaptive behaviors.** Behaviors that are tailored to the actual situations encountered.

**Adjustment (for nonresponse).** A term applied to a number of post fieldwork procedures, such as weighting and imputation that can be used to reduce nonresponse error, see also chapter 3.

**Adjustment (for mode differences).** When different modes are used to collect data, an appropriate survey design allows for adjustment (removing mode differences) via statistical procedures, see also chapter 16.

**Administrative register.** A register that is primarily used for administrative purposes, that is, a register containing information on objects that is required for administrative or other governmental action concerning individual objects.

**Ask-Different-Questions Approach (ADQ).** In ADQ approaches, researchers collect data across populations/countries using the most salient population-specific questions on a given topic that are felt or demonstrated to tap a construct that is germane or shared across

populations.

**Ask-the-Same-Question Approach (ASQ).** With the exception of **decentring**, researchers adopting ASQ approaches collect data across populations/countries by first deciding on a common source questionnaire in one language and then producing whatever other language versions are needed on the basis of translation. Although *close translation* is often preferred, adaptations of several kinds may nonetheless be necessary.

**Assimilation effect.** A catch-all term for any influence that makes the answers to two questions more similar than they otherwise would be; it does not entail specific assumptions about the underlying process.

**Attenuation.** The reduction of the estimated bivariate relationship between variables when one or both of these is measured with low reliability.

**Attrition.** Loss of respondents from a panel. Panel participants may either drop out voluntarily or may be asked to leave.

**Auditor.** A person appointed and authorized to conduct the *compliance audit* and report the results.

**Aural Communication.** The method of providing information to another person that depends upon speaking and listening, through which questions are communicated by entirely in telephone interviews and to a large extent in face-to-face interviews.

**Autonomy.** The right of self government.

**Back Translation.** Back translation is a procedure which can be used for several purposes, but in survey research is now most often used to assess translations. The translated questionnaire is translated back into the source questionnaire language. Then these two versions in the source language are compared for difference or similarity. Good similarity between these two is taken to indicate that the translated text, which is not itself examined, is faithful to the original source questionnaire.

**Backfire effect.** See **contrast effect**.

**Banner ad.** A graphical part of a web page usually used for advertisements. In case of web surveys it can be used to invite visitors of a web page to participate in a survey. It then provides a link to a web survey.

**Base (or design) weight.** The starting point for weight construction and derives from the survey design. It is the inverse of the probability of

selection for unit *i*.

**Behavior Coding.** The systematic coding of both interviewer and respondent behavior as a way of diagnosing problem questions.

**Beneficence.** In Belmont Report, the requirement to minimize possible harms and maximize possible benefits for the subjects of research, and to decide when research may be permissible in spite of the risk of harm, and when it may not.

**Bias.** The difference between the survey estimate of the population parameter and the true value in the population. Random errors cancel each other out in the long run, those from bias will not. Bias can be classified into negative and positive bias. Negatively-biased estimates are estimates that tend to be smaller than the true parameters and positively-biased estimates are estimates that tend to be larger than the true parameters.

**Break offs.** Occur when a respondent fails to complete the survey request. The break off is determined to be at the last question the respondent answered before hanging up or exiting the survey. This results in a partial interview that may or may not be counted towards the final dataset, depending on the researcher's decision.

**Carry-over effect.** See **assimilation effect**.

**Cascading Structure.** A network-like system that makes it possible for a documentation item to build upon the information presented by a previous item or even a chain of previous items.

**CATI.** The acronym for Computer Assisted Telephone Interviewing. CATI systems allow centralized survey administration, instant and relatively error free data entry, and automatic dialing. Questionnaires must be programmed and loaded into the system. Interviewers then read the survey questions from a computer screen and instantaneously record the respondent's answer on the computer keyboard.

**CASI.** The acronym for Computer Assisted Self Interviewing. Also known as Computer Assisted Self Administered Questionnaires (CSAQ). Defining characteristic is that the respondent operates the computer: questions are read from the computer screen and responses are entered directly in the computer. One of the most well-known forms of CASI is the **web survey**. Other forms are Disk-by-mail (DBM) and **Interactive Voice Response (IVR)**.

**Check box.** Design element used to present response options in computerized questionnaires. Check boxes are usually used to present response options for questions with multiple possible answers. A respondent can select individual response options by clicking on them.

**Classical true score theory.** A measurement model that decomposes each measurement into a true score and an error component. The main object is to estimate the proportion of true score variance in a measure, which is defined as its reliability. The limitations of true score theory have led to the development of **item response theory**.

**Close translation.** A variety of terms, including close translation, are sometimes used to express that a translation tries to stay as close as possible to the original text in content, presentation and in the case of surveys, format and design. In practical terms, a close translation policy often stands at odds to an approach embracing **adaptation**.

**Closed-ended questions.** Provide the respondent with a set of response alternatives from which to choose an answer.

**Cluster (or Multistage) Sampling.** A sampling technique where the entire population is divided into groups, or clusters, and a random sample of these clusters are selected. When all observations in the selected clusters are included in the sample, the sample is called a cluster sample and when only a sample within the cluster is selected, the sample is called a **multistage** sample.

**Codebook.** A document provided by data archives that is similar to a **codeplan** but contains additional information such as frequencies and a general description of the study.

**Codeplan.** The most basic document that establishes matches between items in a questionnaire and numbers in a data file.

**Cognitive Interviewing.** A type of in-depth or intensive interview that pays explicit attention to the mental processes respondents use to answer survey questions and uses specialized techniques, such as thinking aloud.

**Cohort study.** A study in which a group of individuals are followed over time. These individuals usually share a certain condition (e.g., birth year, year of retirement).

**Common cause variation.** Arises from phenomena that are constantly active within the system and is expected and predicable. Sometimes referred to as white noise.

**Compliance audit.** A collaborative procedure where the **auditor** (or audit team) meets with the key project staff to review the design and execution of critical components of the survey process, check on the status of project deliverables, identify irregularities in the budget and assess client satisfaction with the progress of the work.

**Compliance system.** A set of guidelines and procedures for conducting **compliance audits**.

**Confidentiality.** The safeguarding, by a recipient, of information about another individual.

**Construct validity.** The extent to which a measurement instrument measures the intended **construct** and produces an observation distinct from that produced by a measure of a different construct.

**Construct.** The abstract conception of the reality that a question is designed to measure.

**Context effect.** A catch-all term for any influence of the context in which a question is asked; it does not entail specific assumptions about the direction of the effect or the underlying process.

**Contrast effect.** A catch-all term for any influence that makes the answers to two questions more different than they otherwise would be; it does not entail specific assumptions about the underlying process.

**Control chart.** A statistical tool intended to assess the nature of variation in a process and to facilitate forecasting and management. It displays upper and lower control limits (usually three sigma limits) for distinguishing common and special cause variations. Sometimes referred to as a Shewhart chart after its inventor Walter A. Shewhart.

**Conversational interviewing.** Interviewing style in which interviewers read questions as they are worded but are then allowed to use their own words to clarify the meaning of the question and resolve the respondent's uncertainty regarding how to answer the question.

**Cookie.** A file that is sent from a web server to a web browser to be stored on user's disk for later retrieval. It contains data that enable the web server to recognize returning visitor of a web page, though it cannot reveal user's identity. This enables some control over multiple responses to web surveys by potentially recognizing persons who have already completed the survey.

**Coverage.** The percentage of the population of interest that is included in the sampling frame.

**Coverage error.** Coverage errors occur when the operational definition of the population includes an omission, duplication, or wrongful inclusion of an element in the population. Omissions lead to undercoverage, and duplications and wrongful inclusions lead to overcoverage. Examples include lack of telephone in a CATI survey, lack of Web access in a Web survey, or lack of a touchtone phone in an IVR survey.

**Cross-sectional study.** A study in which a single measurement is made on a sample of individuals at a single time point.

**Current best method (CBM).** Written documentation of a preferred way of conducting some type of operation such as imputation, nonresponse adjustment, editing or keying that represents the best practices of the field. See also **Standard Operating Procedures (SOP)**.

**Data security.** Protection of data against loss and unauthorized access. It applies to the protection of data during the collection process and when stored at the server. Data security is also salient for web surveys since sufficient protection (e.g., encryption) of the communication between respondent and server, and protection of storage of data on the server, is necessary.

**Decentring.** In classical decentring models, two different cultures are asked the same questions but the questions are developed simultaneously in each language. Thus there is no source questionnaire or target language questionnaire. The decentring process removes culture-specific elements from both versions. Decentring can thus be seen to stand between *ADQ (Ask-Different Question)* models and models based on *ASQ (Ask-the-Same Question)* source questionnaire and translation models.

**Declarative knowledge.** Knowledge of factual information or of what is true, which can be communicated directly to others.

**Design Effect.** The inflation or deflation in the sampling variance of a statistic due to the sampling design.

**Direct rating.** A type of question that asks respondents to locate their views of an idea, a person or something else on an abstract continuum.

**Documentation.** The act or process of substantiating by recording actions and/or decisions.

**Drop-down menu.** A design element used to present response options for single-answer question in web questionnaires. When a respondent clicks on a drop-down menu a list of available response options is opened. The respondents can choose one of them by scrolling down the list and select it.

**Drop out rate.** Proportion of respondents who only partially complete the questionnaire and preliminary abandon it. It is calculated as the ratio between the number of respondents who abandoned the questionnaire prior its completion and the number of all respondents (total+partial) to the survey.

**Etic-Emic.** Following distinctions developed by Pike, etic concepts or constructs are universal and therefore shared across multiple cultures, whereas emic concepts or constructs are culture-specific in constellation or significance and cannot be assumed to be shared across populations.

**Evasive answer bias (or socially desirable responding).** The tendency of a respondent to respond in a socially acceptable way in order to obtain social approval or to avoid disgrace and embarrassment, see also **social desirability bias**.

**Expert Reviews/Panels.** A way of making use of the advice of an expert or panel of experts to identify potential problems in the questionnaire. No respondents are involved.

**Extraneous units (or erroneous inclusions).** Refers to the inclusion of nonpopulation units on the frame.

**Fabrication.** Making up data or results and recording or reporting them.

**Face-to-face interview.** In a face-to-face interview an interviewer administers a structured or partly structured questionnaire to a respondent within a limited period of time and in the physical presence (usually at the home) of the respondent.

**Falsification.** Manipulating research materials, equipment, or processes, or changing or omitting results such that the research is not accurately represented in the research record.

**Feedback.** Reactions of an interviewer that inform the respondent about how well or bad he/she is performing his or her role. See also **reinforcement**

**Final weights.** The weights used in analysis and are a multiplicative combination of the **base weights** and post-survey **adjustments**.

**Flat File Data.** Rectangular data files that contain each respondent's answers to the survey questions in a row by column format, where the rows correspond to each individual respondent's answers and the columns contain the variables asked in the questionnaire.

**Focus Groups.** Small group discussions under the guidance of a moderator. Focus Groups are used extensively in qualitative research, but they can also be used to test a survey questionnaire.

**Frame multiplicity.** Occurs when some population elements are listed multiple times on the sampling frame.

**Frame noncoverage.** Occurs when the frame population does not include all units in the target population.

**Frame population.** The subset of the target population that is represented by the sampling frame.

**Functional Equivalence.** Multiple definitions of functional equivalence exist within and across disciplines. When used in Chapter 4, it refers to the comparability of the function of a question in a specific context with that of another question in a different specific context.

**Gantt chart.** Named for Henry Laurence Gantt), it consists of a table of project task information and a bar chart that graphically displays project schedule, depicting progress in relation to time and often used in planning and tracking a project.

**General instruction for the respondent.** General instructions clarify the purpose of the interview and the respondent's actions involved in achieving the goals of the interview.

**Generalized mode design.** Purposively constructing questions and questionnaires to be different in different modes with the goal of achieving cognitive equivalence of the *perceived* stimuli, thereby resulting in equivalent answers across modes. See also **Uni-mode design**

**Gross change.** The change at the individual level. Examples are changes in the status of economic activity, marital status etc. of individual persons. Measurement of gross change requires longitudinal studies.

**Grounded utterances in a conversation.** Utterance in a conversation for which the participants in the conversation accept that they understand the meaning of the utterance.

**Identification variable / Key variable.** Variables that appear in different data sets, and that are used to link a record of an object in one



data set to a record of the same object in another data set.

**Ignorable missingness.** If the data are *MAR* (**Missing At Random**), which includes *MCAR* (**Missing Completely At Random**), and if the parameter governing the distribution of the data is distinct from the parameter governing the missingness mechanism given the data, the missingness is said to be ignorable with respect to likelihood-based or Bayesian inference. In this case, the observed data likelihood does not depend on the missingness mechanism. Distinct means a priori independent for Bayesian inference and that the joint parameter space is the product of the individual disjoint parameter spaces for likelihood-based inference.

**Inbound studies.** Those in which the sample member dials into an **IVR** (Interactive Voice Response) system at his or her convenience.

**Indirect rating.** A type of question that asks respondents to answer questions that are not themselves direct ratings but from which the values of direct ratings may be inferred.

**Informed consent.** The “knowing consent of an individual or his legally authorized representative ... without undue inducement or any element of force, fraud, deceit, duress, or any other form of constraint or coercion.”

**Interactive web survey.** A web survey using an interactive survey questionnaire – a questionnaire where interaction with the server occurs during its completion. It enables interactive features such as conditional branching, randomization of items, inclusion of multimedia elements, control of answers, and so forth.

**Intercept web survey.** A web survey in which respondents are recruited by intercepting them during their visit to a specific web page. This is usually done using pop-up windows or banner ads on web page.

**Internet (or Web) survey.** Broad term for all surveying modes implemented through one or more Internet services. These include World Wide Web (web surveys), email (email surveys), and WebTV (WebTV surveys). Internet surveys are a form of self-administered questionnaires, in which a computer administers a questionnaire on a web site. Survey questions are viewed and answered using a standard web browser on a PC. The responses are transferred through the Internet to the server.

**Interviewer bias.** Bias caused by interviewers due to systematic interviewer effects (error).

**Interviewer design effect ( $Deff_{int}$ ).** The extent to which the variance of a sample mean of a simple random sample is increased due to interviewer variance.

**Interviewer respondent interaction analysis.** Description of the successive utterances of the interviewer and the respondent during a question answer sequence.

**Interviewer variability or variance.** Component of the overall variability associated with the interviewer. The responses of different respondents who are all interviewed by the same interviewer are more alike than those of respondents who are interviewed by different interviewers. The intra class coefficient,  $\rho_{int}$  (rho-int), can be used to measure the amount of variability in a response variable that can be accounted for by the interviewers.

**Interviewer-related error.** Systematic or variable measurement errors for which interviewers are responsible.

**Intraclass Correlation (ICC).** The amount of variance in a response variable that can be attributed to a clustering effect.

**Item Nonresponse.** A unit answers some items on the questionnaire but not other items. Item nonresponse (incomplete data) occurs when the unit participates but data on particular items are missing.

**Item response theory (IRT).** Statistical measurement models that assume a mathematical model for the probability that a given subject will respond correctly (positively, agree to) to a given question.

**IVR.** The acronym for Interactive Voice Response, which is a data collection technology in which the computer plays a recording of the question to the respondent over the telephone, and the respondent indicates the response by pressing the appropriate keys on his or her touchtone telephone keypad. IVR is a form of a self-administered telephone survey. See also **T-ACASI**.

**Justice.** In Belmont Report, the requirement to achieve some fair balance between those who bear the burdens of research and those who benefit from it.

**Key variable / Identification variable.** Variables that appear in different data sets, and that are used to link a record of an object in one data set to a record of the same object in another data set.

**Knowledge Management.** The process of collecting, organizing, classifying, and disseminating information so as to make it purposeful to those who need it.

**Latent variable.** A characteristic that can not be observed or measured directly. It is hypothesized to exist in order to explain observed variables. Also called factor.

**Linearization.** A method by which sampling variances (and standard errors) are estimated under complex sample designs. Also referred to as Taylor Series approximation, variance propagation, and the Delta method.

**List-Assisted.** A list-assisted design increases the chances of selecting a working residential number for a telephone sample. It eases the interviewer burden of calling nonworking, ineligible numbers and increases the efficiency of the sample, thus also lowering costs.

**List-based web survey.** A type of web survey where a list of units from the target population (sampling frame) is available.

**Login procedure (to web survey).** A procedure used in web surveys with restricted access to authenticate respondent's permission of entering the web questionnaire. We speak about automatic login procedure when respondent's identification is part of the survey's URL address provided to him/her to access the survey. We speak about manual login when the respondent is asked to manually enter his/her username and password to access the survey questionnaire.

**Longitudinal study.** A study in which the same group of individuals is interviewed at intervals over a period of time, such as, a Panel Study or Cohort Study.

**Mail (postal) survey.** When a mail questionnaire is used, a respondent receives a structured questionnaire and an introductory letter by mail, answers the questions in her/his own time, without any assistance from the researcher or her/his representative except for any written instructions in the questionnaire or in the accompanying letter, and finally sends the questionnaire back.

**Management system.** A set of guidelines and procedures for managing quality in an organization.

**Mass imputation.** A form of imputation in which a large amount of missing values for individuals are replaced by synthetic values, computed by using nonmissing information for these objects.

**Mean Squared Error (MSE).** Total error of a survey statistic: the sum of all variable errors and all biases (sum of all variances and squared biases).

**Measurement error.** The extent to which there are discrepancies between a measurement and the true value, that the measurement instrument is designed to measure. Measurement error refers to both variance and bias, where variance is random variation of a measurement and bias is systematic error. If measurement errors are random they decrease the **reliability**, if they are systematic they decrease the **validity**. There are a number of potential sources of measurement error; for example, measurement error can arise from the respondent, questionnaire, mode of data collection, interviewer, and interactions between these. Measurement errors occur for instance when the respondent does not understand the question, or does not want to give the true answer, or if the interviewer makes an error in recording the answer. Also, interview effects, question wording effects, and memory effects belong to this group of errors.

**Meta data.** Definitional data that provides information about or documentation of other data managed within an application or environment. In other words, data that describe other data. The term encompasses a broad spectrum of information about the survey, from study title to sample design to details such as interviewer briefing notes to contextual data or information such as legal regulations, customs, and economic indicators.

**Meta information in surveys:** Information about the survey and the questions. This includes explanations on the goal and content of the study, and instructions on how to respond to specific questions. In interview surveys this is mostly conveyed by the interviewer. In self-administered questionnaires this has to be done explicitly in written form. In Web surveys and other forms of computer-assisted self interviewing this information may also be (partly) available in the help system.

**Missing Completely At Random (MCAR).** Data are missing completely at random if the missingness is unrelated to the (unknown) missing values of that variable as well as unrelated to the values of other variables. For example, the missing values are a random sample of all values. The rate that values are missing can vary across the different items in the questionnaire.

**Missing At Random (MAR).** Data are missing at random if the missingness is possibly related to the observed data in the data set, but conditional on these data, is not related to any unknown values. In other words, the missing values are a random sample of all values within

classes defined by observed values (i.e., conditional on the observed data, the missingness is completely at random).

**Mixed-mode survey.** A survey where multiple and different data collection modes are used to make contact with the respondents or to complete the total questionnaire. Modes can be mixed in the contact phase and in the actual data collection phase.

**Mode effect.** The effect that using a specific mode has on the responses that are obtained in that mode. Mode effects may be interpreted as a form of measurement bias.

**Mode specific design.** Writing questions and implementing a questionnaire in the best way for a mode, regardless of what might be done in another mode. That is, the questionnaire is optimized for each mode separately in an effort to improve the performance of individual survey modes, even if that results in different question formats across modes.

**Model fit.** How closely the model-implied data match the observed data. In SEM model fit can be tested using a formal chi-square test ( $p$ -values  $>.5$  indicate good fit), or it can be evaluated using model fit indices such as CFI ( $>0.9$  indicates good fit) or RMSEA ( $<.05$  indicates good fit).

**Mode-specific Questionnaire Design.** See **mode specific design**

**Modular Structure.** A structure that avoids single, large chunks of text and instead identifies smaller elements (e.g. classes, sub-classes) that are interconnected or linked.

**Multi-barreled questions.** Questions phrased so that they, in fact, are asking two or more questions at once. As a result, there potentially is more than one answer that the same person could give that would be an accurate answer to one or another part of the question.

**Multiple frame survey.** A survey in which samples are selected separately from two or more sampling frames.

**Multiple imputation.** Each missing value is replaced by a set of  $m$  ( $m>1$ ) values, resulting in  $m$  completed data sets. Each of these is analyzed as if it were the true data, and the results are combined to produce a single final point estimate and its associated sampling variability, which reflects both sampling variance if no data were missing and the uncertainty with which the missing data can be predicted from the observed data. Generally, valid procedures are obtained without specialized equations. See also **single imputation**.

**Multistage (or cluster) Sampling.** A sampling technique where the entire population is divided into groups, or clusters, and a random sample of these clusters are selected. When all observations in the selected clusters are included in the sample, the sample is called a *cluster sample* and when only a sample within the cluster is selected, the sample is called a multistage sample.

**Mutually exclusive and exhaustive.** Describes response choices for *closed-ended questions* that provide all respondents with at least one, but only one, option that answers the question.

**Net change.** The change at the aggregate level, with individual level changes in opposite directions cancelled out. Examples are month-to-month changes in rates of unemployment and other economic indicators. Net changes can be derived from cross-sectional studies and does not require panel designs, although the precision of the estimates in a panel study is usually higher.

**Network scale-up.** The network scale-up method is designed to obtain estimates of the size of hidden populations. These estimates are computed using the respondent's knowledge of the appearance of certain behavior in his personal social network. A random sample of respondents is collected. Every respondent receives two questions. The first question consists of 8–15 names (or professions, or traits), with known distribution in the population. The size of his or her personal network is estimated on the basis of the number of people with these names (professions) recalled by the respondent. The second question concerns the number of people affected by the sensitive issue. Using both numbers, the number of offenders in the population can be estimated.

**Noncontact.** Failure to communicate with a selected sample unit and to inform the unit of their selection for the survey.

**Noncoverage adjustment.** An adjustment to the nonresponse adjusted *base weight* that is designed to partially correct for bias due to frame noncoverage.

**Noncoverage bias.** The bias in parameter estimates due to frame noncoverage.

**Nonignorable missingness.** When the missingness is not ignorable. In this case, a model for the missingness generally must be postulated and included in the analysis to allow valid inferences.

**Nonresponse adjustment.** An adjustment to the *base weight* that is designed to partially correct the bias due to nonresponse.

**Nonresponse bias.** Defined as the expected nonresponse rate times the difference in the means of the respondent and nonrespondent populations

**Nonresponse.** Failure to obtain useable survey data from an eligible selected sample unit. Either because that individuals in the selected sample do not provide the requested information, or that the provided information is useless. There are two types of nonresponse: unit nonresponse and item nonresponse. **Unit nonresponse** occurs when the survey fails to obtain any data from a unit in the selected sample. **Item nonresponse** (incomplete data) occurs when the unit participates but data on particular items are missing. Nonresponse leads to nonresponse error if the respondents differ from the nonrespondents on the variables of interest.

**Nonresponse error.** The difference between a survey estimate and the equivalent estimate that would have been obtained if all selected units had responded.

**Nonsampling errors.** Errors that even occur if the whole population is investigated. Nonsampling errors are errors made during the process of recording the answers to the questions.

**Not Missing At Random (NMAR).** The missingness depends on some unobserved (missing) values, even after conditioning on all observed values.

**Open-ended questions.** Ask respondents to answer in their own words. There are no precoded response categories.

**Optimizing.** See **satisficing**

**Opt-out (in web panels).** Feature usually available in web panels. It enables participant to opt out from the panel, that is, to leave the panel when convenient to them.

**Organizational culture.** The assumptions, values, norms, and tangible signs (artifacts) of organization members and their behaviors.

**Organizational structure.** The way in which the interrelated groups of an organization are constructed, their inter-relationships and divisions of authority and responsibility.

**Outbound studies.** Those in which an interviewer dials out to the sample member to recruit respondents to participate and then transfers them directly into the **IVR** system.

**Panel conditioning.** The systematic error that occurs when panel participants change their (observed) behaviour as a result of being part of the panel, see also **panel effect**.

**Panel effect.** See **Time-In-Sample effect**.

**Panel maintenance.** The process of maintaining contact with respondents, including administrative actions (e.g., address changes) and actions to stimulate cooperation.

**Panel study.** A study in which similar measurements are made on the same sample of individuals at different points in time (waves). The sample may change between waves in order to correct for changes in the population.

**PAPI.** The acronym for Paper and Pencil Interviewing, which can take several forms, but is typically a mailed questionnaire in which the respondent is asked to write in their responses and mail their completed questionnaire back to the data collection organization.

**Para data.** Data on the process of collecting data. Para data provides information about how a process was conducted.

**Para information:** Information that goes alongside the textual information and adds meaning to the textual information. For example, to emphasize a word in order to give it more importance para-information is necessary. In interviews this is achieved through para-linguistic information (for example, tone of voice); in self-administered questionnaires through graphical language (for example, fonts, lay-out).

**Plagiarism.** The theft or misappropriation of intellectual property or the substantial unattributed copying of another's work.

**Plausible values.** Estimated latent score values drawn at random from a conditional distribution, given the responses to the items and a set of background variables (conditioning variables).

**Post-stratification adjustment (PSA).** A type of noncoverage adjustment that uses strata selected after sampling and target population counts to estimate and correct for noncoverage bias.

**Post-survey weight adjustments.** Multiplicative factors applied to the *base weights* to compensate for nonresponse, noncoverage and to reduce the variance through **post-stratification** and ratio estimation.



**Pragmatic meaning.** Refers to the intended (rather than literal or semantic) meaning of an utterance and requires inferences about the speaker's knowledge and intentions.

**Preferred-mode-specific design.** Designing a mixed-mode study where one mode is the primary or preferred mode, and other modes are seen as auxiliary. In this design the questionnaire is optimized for the primary mode and the questionnaires for the other (auxiliary) modes are adapted to the optimal design for the main mode.

**Prescribed behaviors.** Interviewer behaviors that must be carried out exactly as specified by a standard protocol.

**Primacy effect.** A given response alternative is more likely to be chosen when presented at the beginning rather than at the end of a list of response alternatives.

**Primary data analysis.** Statistical analysis of a data set that has specifically been collected for the study at hand.

**Privacy.** The right to determine when, and under what conditions, to reveal information about oneself to others.

**Probability sampling.** Probability sampling methods give a known (non-zero) probability of selection for all possible samples from the sampling frame. They thus provide protection against selection bias, and give a means of quantifying sampling error.

**Probability proportional to size (PPS) sampling.** Gives a greater probability of selection to larger units than to smaller units according to some size measure. If sampling is without replacement, it is referred to as pps sampling.

**Probing.** Asking additional questions with the purpose of getting more and adequate information.

**Procedural knowledge.** Knowledge about how to do something, which involves a degree of skill that increases through repetition or practice. Not easily communicated directly from one individual to another.

**Progress indicator.** A graphical or textual element of computerized questionnaires that informs respondent about the proportion of the questionnaire that he/ she has already completed. It is usually implemented in web surveys.

**Quality assurance.** A system of procedures, checks, audits, and corrective actions to ensure that the products produced by an organization are of the highest achievable quality.

**Quality control system.** A set of procedures or guidelines for conducting **quality control** within an organization.

**Quality control.** Part of the quality assurance system and refers to a set of procedures and techniques aimed at verifying the quality of outputs of various processes.

**Quality framework.** A specification that defines the various dimensions quality for an organization and how these dimensions will be interpreted.

**Quality profile.** A report that provides a comprehensive picture of the quality of a survey, addressing each potential source of error: specification, nonresponse, frame, measurement, and data processing. The quality profile is characterized by a review and synthesis of all the information that exists for a survey that has accumulated over the years that the survey has been conducted.

**Question order effect.** The order in which questions are asked influences the obtained answers; different processes can give rise to this influence.

**Radio button.** Design element used to present response options in computerized questionnaires. Radio buttons are usually used to present response options for questions with single possible answer. A respondent can select an individual response option by clicking on it.

**Raking (or raking ratio estimation).** An iterative process of estimating cell counts from marginal counts for weighted class cells.

**Randomized response technique.** The randomized response technique was originally introduced by Warner (1965) to study sensitive topics. The rationale behind all randomized response designs is that the respondent's privacy is absolutely guaranteed by introducing an element of chance into the data. This is thought to enhance respondent's cooperation and honest reporting of sensitive information.

**Rare population.** A subpopulation that does not constitute a large proportion of the overall population, and is often widely dispersed in that population.

**RDD.** Random Digit Dial denotes a procedure for drawing probability sample of the general population using computer generated telephone numbers.

**Recency effect.** A given response alternative is more likely to be chosen when presented at the end rather than at the beginning of a list of response alternatives.

**Refusal.** A decision by a selected sample unit not to respond to the survey.

**Register.** A register is a collection of data on a well-defined group of objects. For each individual object, the register contains the values of the same well-defined set of variables. These variables describe the state of the objects at a specific moment in time. A register has facilities to update the information about objects contained in it.

**Reinforcement.** Reactions of an interviewer that inform the respondent about how well he/she is performing his or her role in order to stimulate good respondent behavior.

**Reliability.** The extent to which answers to a question provide consistent results at different times or for different respondents when the values of a construct are the same. A high reliability implies absence of random **measurement errors**.

**Replication Techniques.** Methods by which sampling variances (and standard errors) are estimated under complex sample designs. With these methods, replicate samples are created from the original sample and the empirical variability of the statistics across the replicate samples is used to create a measure of the sampling variability for parameter estimates from the original sample. These methods include Jackknife Repeated Replication, Balanced Repeated Replication, and Bootstrapping.

**Resource allocation.** The process of assigning a percentage of the budget and other resources to specific operations that together define a survey project.

**Respect for persons.** The basis for the **informed consent** requirement.

**Respondent burden.** A measure of the amount of time and effort it takes a respondent to respond to a question or a survey. See also **response burden**.

**Respondent Debriefing Questions.** Special follow-up questions used to determine respondents' understanding of the original survey question. Similar to probes used in **cognitive interviewing**.

**Respondent population.** That subset of the frame population that is represented by units who would respond to the survey if selected.

**Response burden.** The effort required to respond to a survey, usually quantified in terms of how long the survey takes. Other aspects of response burden are how difficult it is to provide the information, and how sensitive the respondent is about providing the information. See also **respondent burden**.

**Response order effect.** The order in which response alternatives are presented influences which alternative is endorsed; see also **primacy** effect and **recency** effect.

**Risk assessment.** A systematic process for quantifying and describing the risk of error arising from the various operations, processes, actions, and events for a survey.

**Sampling errors.** Errors introduced by the sampling design. They are due to the fact that estimates are based on a sample and not on a complete enumeration of the population. The sample is selected by means of a random selection procedure. Every new selection of a sample will result in different elements, and thus in a different value of the estimator. In other words, error in estimation due to taking a sample instead of measuring every unit in the sampling frame. If probability sampling is used, then the amount of sampling error can be estimated from the sample.

**Sampling frame.** A list, map, or other specification of units in the population from which a sample may be selected. Examples include a list of all university students, or a telephone directory.

**Sampling Variance.** The variability in the sample estimates of a population parameter if all possible samples (of the same size) were drawn from a given population. It is the square of the standard error. See also **sampling error**.

**Satisficing.** When the cognitive tasks required to answer a question is quite burdensome, respondents may look for ways to avoid expending all the effort required to optimally process the information, while still maintaining the appearance of answering adequately and responsibly; they try to find a heuristic. This is called satisficing. The opposite, respondents attempt to be fully diligent, is called **optimizing**.

**Secondary data analysis.** Statistical analysis of a data set that has been collected by others for other purposes.

**Self-Administered Questionnaire (SAQ).** Questions are administered and answered without the assistance of an interviewer. There are several forms of SAQ, for instance paper questionnaires in mail surveys, group administered questionnaire in schools (e.g., tests), individual questionnaires that are filled in during an interview to ensure privacy, and drop off questionnaires, where surveyors personally deliver questionnaires, but the respondents fill in the questionnaire on their own and either mail it back or keep them for the surveyor to collect.

**SEM or Structural equation model.** A multivariate model describing the relationships between multiple observed and/or latent variables

**Semantic meaning.** Refers to the literal meaning of words. Understanding the semantic meaning is insufficient for answering a question, which requires an understanding of the question's pragmatic meaning.

**Sensitive questions.** Questions are considered sensitive when they are about private, stressful or sacred issues, and when answering them tends to generate emotional responses, or potential fear of stigmatization on the part of the person or his/her social group.

**Single imputation.** Each missing value in a data set is filled in with one value, yielding one completed data set. To get valid inference from singly imputed data, in general, special variance estimators have to be used to account for the particular imputation method applied and for the particular point estimator used. See also **multiple imputation**.

**SMS.** Text messaging on mobile phones is made possible by the Short Message Service. Thus SMS has become shorthand for text messaging.

**Snowball designs.** A snowball design is a so-called link-tracing design; social links are followed from one respondent to another to obtain a sample, by asking a respondent to name one or more people who could be eligible respondents. These designs are developed to gain access to hidden and hard-to-find human populations.

**Social desirability bias.** Occurs when the respondent attempts to portray himself or herself in a positive light.

**Social Exchange Theory.** A social psychological theory that states that actions of individuals are motivated by the returns these actions are expected to bring.

**Special cause variation.** Variation that is inherently unpredictable because it is outside the historical experience base and is evidence of some inherent change in the system or our knowledge of it.

**Specific instructions for the respondent.** Specific instructions for a particular question or task clarify what is expected of the respondent and what he has to do to meet those expectations.

**Specification error.** Specification error occurs when the concept measured by a survey question and the concept that should be measured with that question differ. When this occurs, there is low **construct validity**.

**Standard Error.** The average distance any single sample estimate of a population parameter is expected to be from the true value. It is the standard deviation of the sample estimates of a population parameter, over all possible samples of the same size. It is the square root of the sampling variance.

**Standard operating procedures (SOP).** A prescribed procedure to be followed routinely for a given operation or situation.

**Standardized interviewing.** Interviewers use a questionnaire in which the wording and the order of the questions are fixed and they ask the all the questions in the same way so that the respondent's interpretation of the questions is the same.

**Static web survey.** Web survey based on simple HTML form without interactive features (in contrast to **Interactive web survey**). The web questionnaire is static – the same for all respondents.

**Stratified sample.** A sample in which the population is divided into sub-groups called strata and independent probability samples are taken separately in every stratum.

**Structural equation model.** A multivariate model describing the relationships between multiple observed and/or latent variables. Often referred to as **SEM**.

**Survey life cycle.** A progression through a similar series of stages that characterize the course of production of a survey from design to publication.

**Survey.** A study that collects planned information from a sample of individuals in order to estimate particular population characteristics.

**Synthetic matching.** A form of matching records from two data sets. Records are grouped using the values of a set of identification variables. Within groups, records from both data sets are combined randomly.

**Systematic Review of Questionnaire.** The review of a questionnaire by an expert using a specific checklist, often based on cognitive principles.

**T-ACASI.** The acronym for Touchtone-Audio Computer Assisted Self-Interviewing. It refers to a telephone survey that is self-administered. See also **IVR**.

**Tailoring.** The practice of adapting behavior to the respondent's expressed concerns as well as other cues about the sample dwelling unit or the potential respondent in order to provide feedback to the respondent that addresses the respondent's reasons for not wanting to participate.

**Target (or inferential) population.** The population to be studied in the survey and for which the basic inferences from the survey will be made.

**TDE.** The acronym for Touchtone Data Entry. Touchtone Data Entry is a form of self-administered telephone survey that does not require interviewer assistance. See also **IVR** and **T-ACASI**.

**Team translation.** A team translation approach as described in Chapter 4 combines translation with translation review. It (a) uses more than one translator (b) involves the translators in the review process and not just for the first stage of draft translation (c) brings other expertise to the review process (e. g., survey design and implementation, substantive) and (d) reiterates translation, review, adjudication, and testing as necessary. Thus a good part of the work is carried out by members of the team working as a group.

**Telephone interview.** In a telephone interview the interviewer administers the questions (from a structured questionnaire and within a limited period of time) via a telephone. Telephone interviewing is often centralized; that is, all interviewers work from a central location under direct supervision of a field manager or a quality controller.

**Texting.** See **SMS**.

**Time-in-sample bias.** The effects from ongoing participation of panel participants. Given the experience with the survey over time, the responses of panel participants may increasingly begin to differ from the responses given by panel participants answering the same survey for the first time. See also **Panel conditioning**.

**Traditional Field Test.** For interview surveys this involves a small number of interviewers doing a few interviews each followed by an interviewer debriefing session with the researcher. For postal surveys this involves posting the questionnaires to respondents and reviewing the

questionnaires that are returned. It can be seen as a full 'dress rehearsal.'

**Unequal weighting effect (UWE).** The adverse effect of unequal weight variation on the precision of estimates.

**Unified Mode Questionnaire Design.** See **Uni-mode design.**

**Uni-mode design.** From **unified** mode (questionnaire) design; designing questions and questionnaires to provide the *same offered* stimulus in all survey modes in order to reduce differences in the way respondents respond to the survey questions in the different modes.

**Unit Nonresponse.** Unit nonresponse occurs when the survey fails to obtain any data on the questionnaire from a unit in the selected sample

**Unmatched count technique.** A research method developed by Dalton and coworkers (1994) to ensure the anonymity of respondents. Respondents are randomly assigned to two groups. The first group receives blocks of 5 behavioral statements, the second group receives the same block of statements + 1: the sensitive one. All respondents are asked to indicate how many statements apply to him or her. The difference in mean numbers of behavioral statements between both groups is an indicator for the base-rate of individuals involved in the sensitive behavior.

**Validity.** The extent to which the answer to a question corresponds to the true value for the construct that is being measured. A high validity implies absence of systematic measurement errors.

**Variance Estimation.** The process by which the sampling variance (or standard error) is estimated. Usually when using complex sample data sets, traditional estimates of sampling variance are found to be biased.

**Verification system.** A set of guidelines or procedures for checking the accuracy of the output from some process or set of processes.

**Vignette (or scenario design).** A vignette is a concrete and detailed description of a situation that should contain all the factors that are thought to be important situational motivators. In a survey, vignettes are followed by a set of questions about the situation they have presented. Vignettes can be used to find out about the respondent's, behavior, attitudes, norms and beliefs.

**Visual Communication.** The method of providing information to another person that depends upon what one sees, which is the means by which questions are mostly communicated to respondents in mail and web surveys.



**Visual design:** Using graphical language and lay-out in a planned and consistent way to facilitate (visual) communication and convey the information needed. Visual design incorporates graphical language tools, such as, figure-ground composition, location and spacing, size changes, brightness variations, and changes in similarity and regularity.

**VoIP.** Voice over Internet Protocol (VoIP) is the family of technologies that allow the internet to be used for voice applications, such as telephony, voice instant messaging, and teleconferencing.

**Volunteer opt-in panel.** A panel of units which self-selected themselves to it (inclusion in the panel is voluntary, not based on a probability sample from a certain sampling frame). It is a common approach in web surveys where such panels assure large number of participants of desired characteristics. Because such panels are not based on a representative sampling frame, statistical inference from such surveys is questionable.

**VRE.** The acronym for Voice Recognition Entry. See **IVR**.

**Wave.** A distinct time point where data are collected in a panel survey.

**Wave nonresponse.** The type of nonresponse that occurs when one or more waves of panel data are missing for an individual that has provided data for at least one wave.

**Web Survey.** See **Internet survey**

**(Base or design) Weight.** The starting point for weight construction and derives from the survey design. It is the inverse of the probability of selection for unit  $i$ .

**Weight trimming.** The process of moderating extreme weights for the purposes of improving the **MSE (Mean Squared Error)** of estimates.

**Weighted class adjustment (WCA).** A type of nonresponse adjustment that uses weighted classes and nonresponse rates to estimate and correct for nonresponse bias.

**Weighting adjustment/Adjustment weighting** The process of assigning weights to observed individuals in a survey. The weights are computed such that the weighted distribution of certain auxiliary variables is identical to the population distribution of these variables.