

7.4 Observation Studies

- The uses of observation
 - Nonbehavioral
 - Behavioral
- Evaluation of the observation method
- The observer-participant relationship
- Conducting an observation study
- Unobtrusive measures

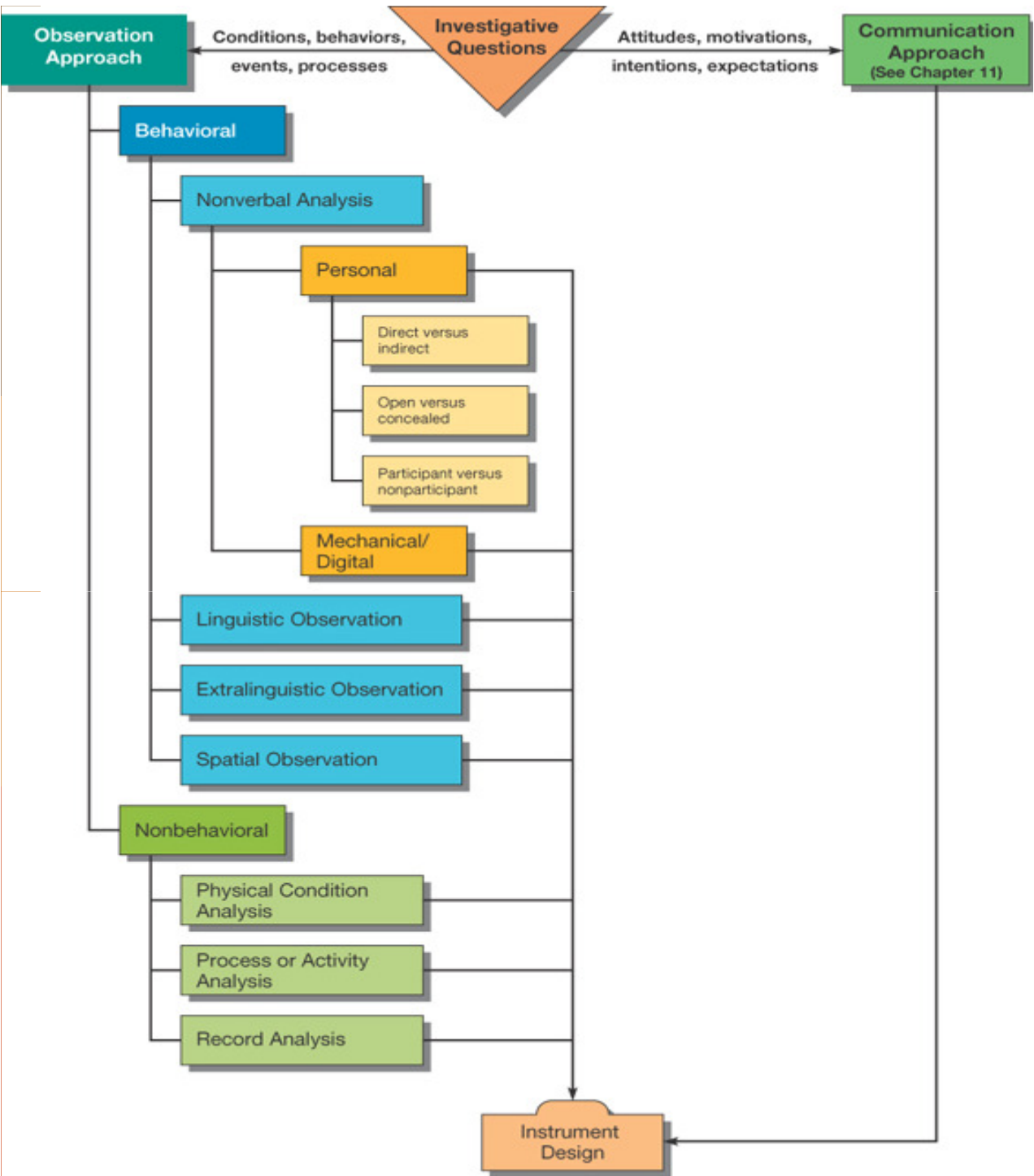
Observation and the Research Process



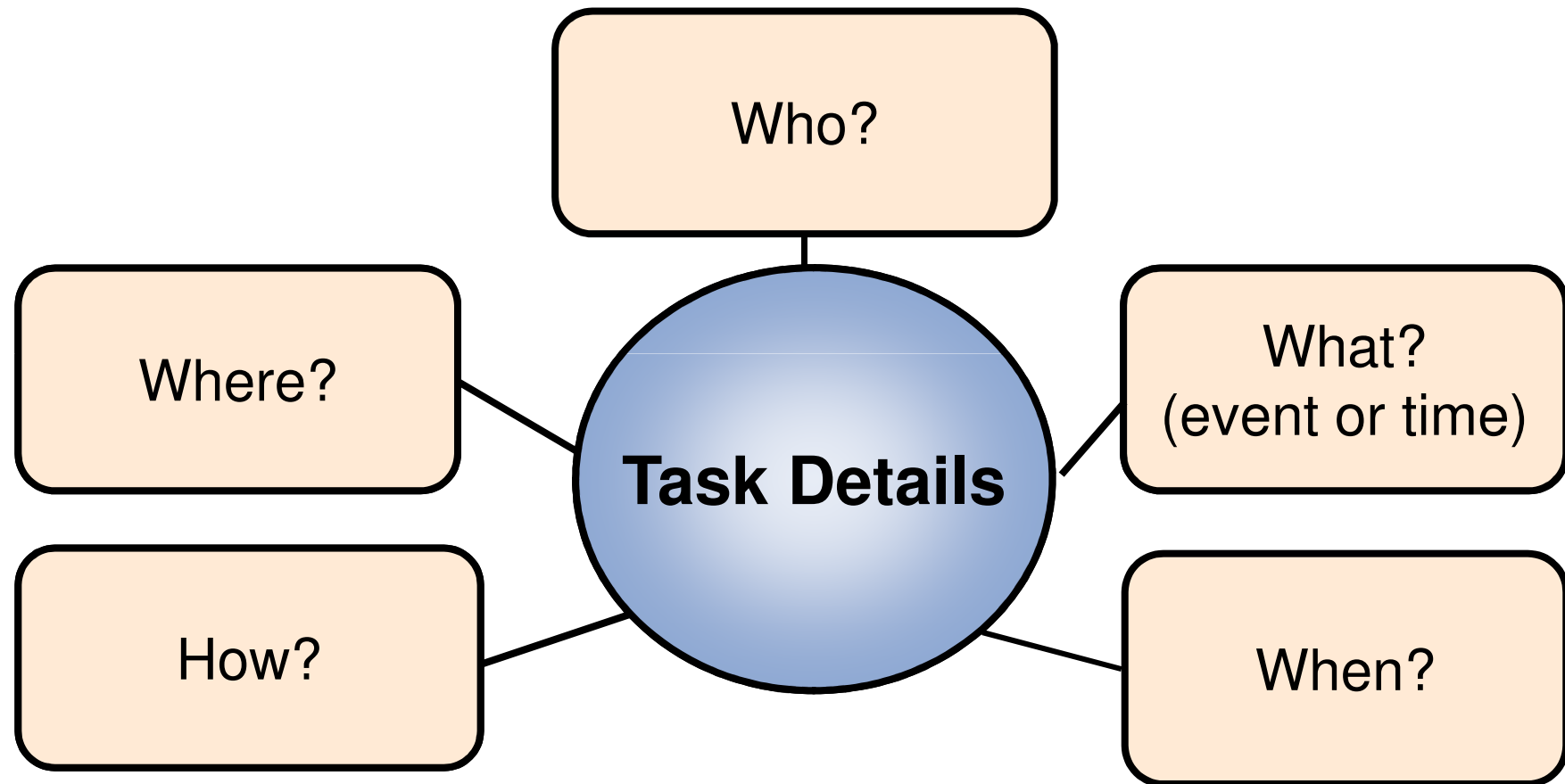
Selecting the Data Collection Method



Selecting an Observation Data Collection Approach



Research Design



Content of Observation

Factual	Inferential
Introduction/identification of salesperson and customer.	<ul style="list-style-type: none"> • Credibility of salesperson. Qualified status of customer.
Time and day of week.	<ul style="list-style-type: none"> • Convenience for the customer. Welcoming attitude of the customer.
Product presented.	<ul style="list-style-type: none"> • Customer interest in product.
Selling points presented per product.	<ul style="list-style-type: none"> • Customer acceptance of selling points per product.
Number of customer objections raised per product.	<ul style="list-style-type: none"> • Customer concerns about features and benefits.
Salesperson's rebuttal of objection.	<ul style="list-style-type: none"> • Effectiveness of salesperson's rebuttal attempts.
Salesperson's attempt to restore controls.	<ul style="list-style-type: none"> • Effectiveness of salesperson's control attempt. • Consequences for customer who prefers interaction.
Length of interview.	<ul style="list-style-type: none"> • Customer's/salesperson's degree of enthusiasm for the interview.
Environmental factors interfering with the interview.	<ul style="list-style-type: none"> • Level of distraction for the customer.
Customer purchase decision.	<ul style="list-style-type: none"> • General evaluation of sales presentation skill.

Data Collection

Watching

Listening

Touching

Smelling

Reading



Classification of Observation Studies

Research Class	Environment	Purpose	Research Tool	Example
1. Completely unstructured	Natural setting	Generate hypotheses	Recorded notes	Jason and Sara's exploratory trip to HomeExtravaganza to identify possible locations and behaviors to observe in the full-scale study.
2. Unstructured	Laboratory	Generate hypotheses	Pen-paper notes or electronically recorded	Videotaping participants as they maneuver through a "store" set up within a laboratory and recording their use of signage.
3. Structured	Natural setting	Generate hypotheses	Observation checklist	The full observation study that MarketViews will conduct for Visionary Insights, Inc., on client HomeExtravaganza.
4. Completely structured	Laboratory	Test hypotheses	Observation checklist; probably also electronic record of events	A follow-up study on HomeExtravaganza where a participant will see computer-altered signage designs and placement. Modifications will reflect the direction provided by the earlier study.

Using Observation

Systematic planning

Properly controlled

Consistently dependable

Accurate account of events



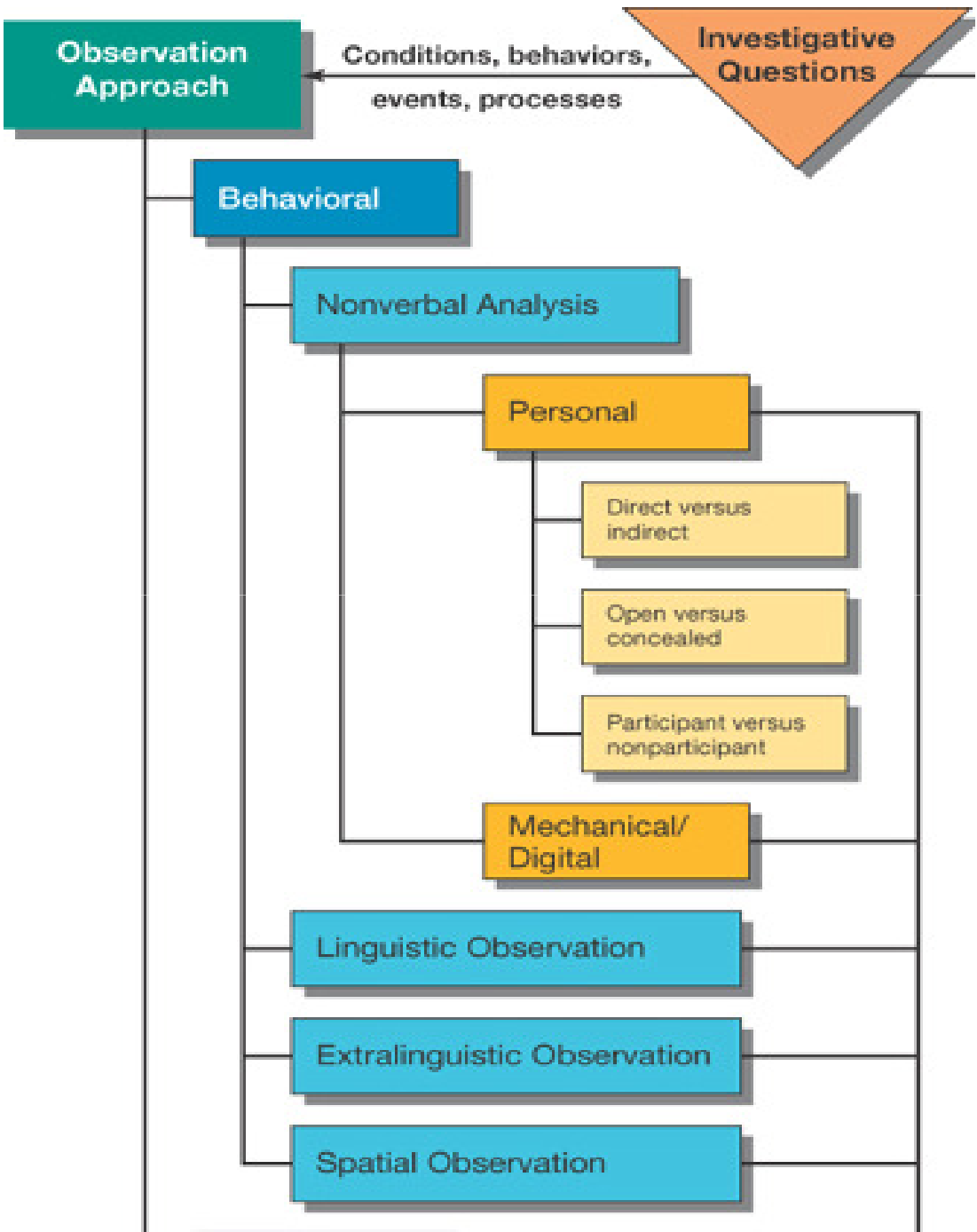
Observation Classification

Behavioral

- ❑ Nonverbal
- ❑ Linguistic
- ❑ Extralinguistic
- ❑ Spatial

Nonbehavioral

- ❑ Physical condition analysis
- ❑ Process/activity analysis
- ❑ Record analysis



Selecting an Observation Data Collection Approach

Observation Classification - behavioral

- **Nonverbal observation** is the most prevalent and refers to recording physical actions or movements of participants. These behaviors can be measured with the human eye and with several mechanical or digital devices.
- **Linguistic observation** is the observation of human verbal behavior during conversation, presentation, or interaction.

Observation Classification - behavioral

- **Extralinguistic observation** is the recording of vocal, temporal, interaction, and verbal stylistic behaviors of human participants.
- **Spatial observation** is the recording of how humans physically relate to one another.

Observer-Participant Relationship

Direct or indirect observation

Presence is known or unknown

Observer involved or not involved in events



Observer-Participant Relationship

- **Direct observation** occurs when the observer is physically present and personally monitors what takes place.
- **Indirect observation** occurs when the recording is done by mechanical, photographic, or electronic means.

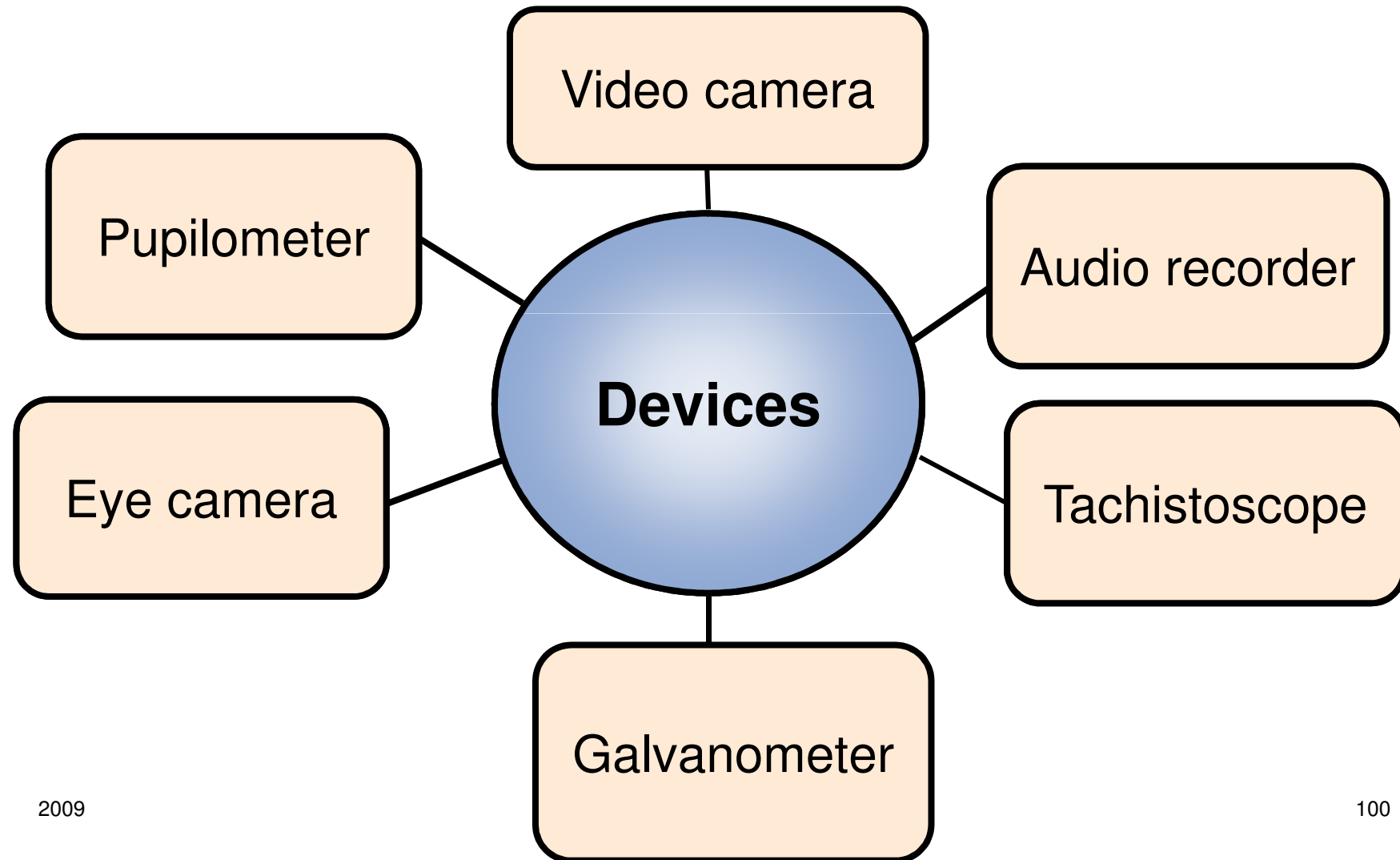
Observer-Participant Relationship

- ❑ When the observer is **known**, there is a risk of atypical activity by the participant.
- ❑ Concealment shields the observer from the participant to avoid error caused by the observer's presence.
- ❑ A modified approach involves partial concealment.
- ❑ The presence of the observer is not concealed, but the objectives are.

Observer-Participant Relationship

- The third issue is whether the observer should participate in the situation while observing.
- Mystery shopping is an example of observer-participation.

Mechanical/ Digital Behavioral Observation



Extralinguistic Observation



Vocal

Temporal

Interaction

Verbal Stylistic

Extralinguistic Observation

- ❑ **Vocal behaviors** include pitch, loudness, and timbre.
- ❑ **Temporal behaviors** include the rate of speaking, duration of utterance, and rhythm.
- ❑ **Interaction** includes the tendencies to interrupt, dominate, or inhibit.
- ❑ **Verbal stylistic behaviors** include vocabulary and pronunciation peculiarities, dialect, and characteristic expressions.

Evaluation of Behavioral Observation

Strengths

- ❑ Securing information that is otherwise unavailable
- ❑ Avoiding participant filtering/ forgetting
- ❑ Securing environmental context
- ❑ Optimizing naturalness
- ❑ Reducing obtrusiveness

Weaknesses

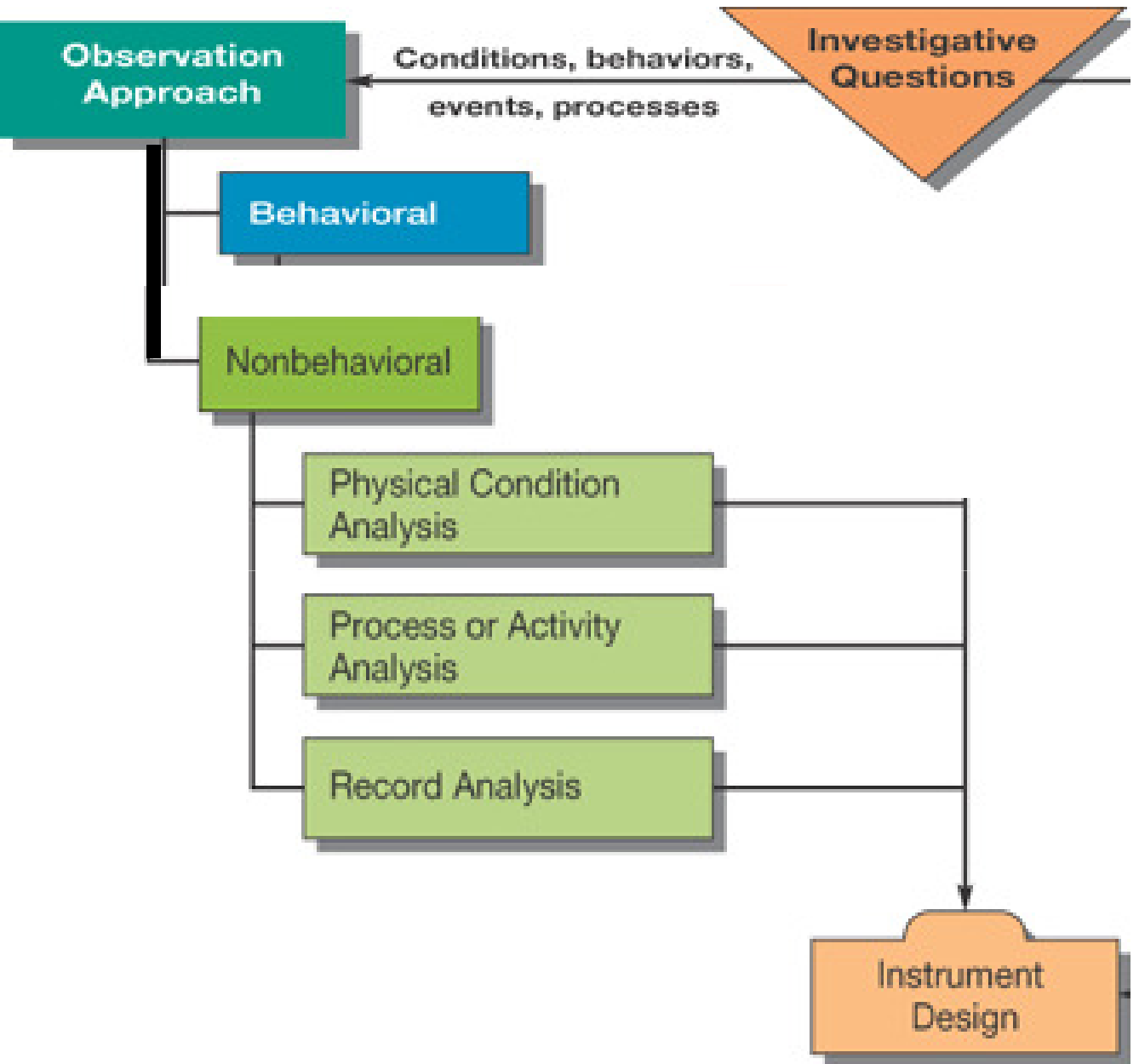
- ❑ Enduring long periods
- ❑ Incurring higher expenses
- ❑ Having lower reliability of inferences
- ❑ Quantifying data
- ❑ Keeping large records
- ❑ Being limited on knowledge of cognitive processes

Observation Classification – non behavioral

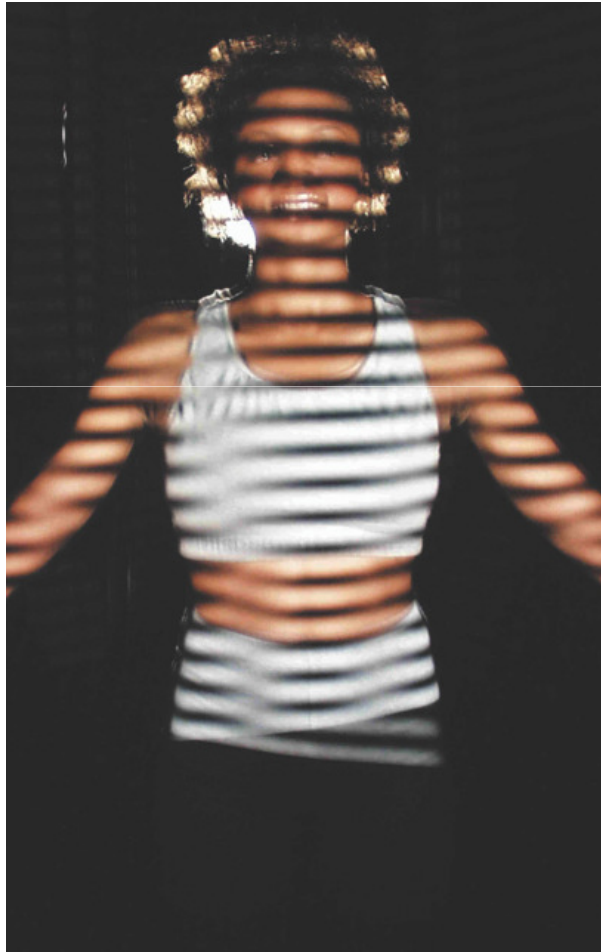
Nonbehavioral observation is the observation of the effects or traces of prior actions or of nonhuman activity.

- ❑ **Physical condition** analysis is the recording of observations of current conditions resulting from prior decisions.
- ❑ **Process (activity) analysis** is observation by a time study of stages in a process, evaluated on both effectiveness and efficiency.
- ❑ **Record analysis** is the extraction of data from current or historical records. Data mining is a type of record analysis, which is discussed further in the slide show.

Selecting an Observation Data Collection Approach



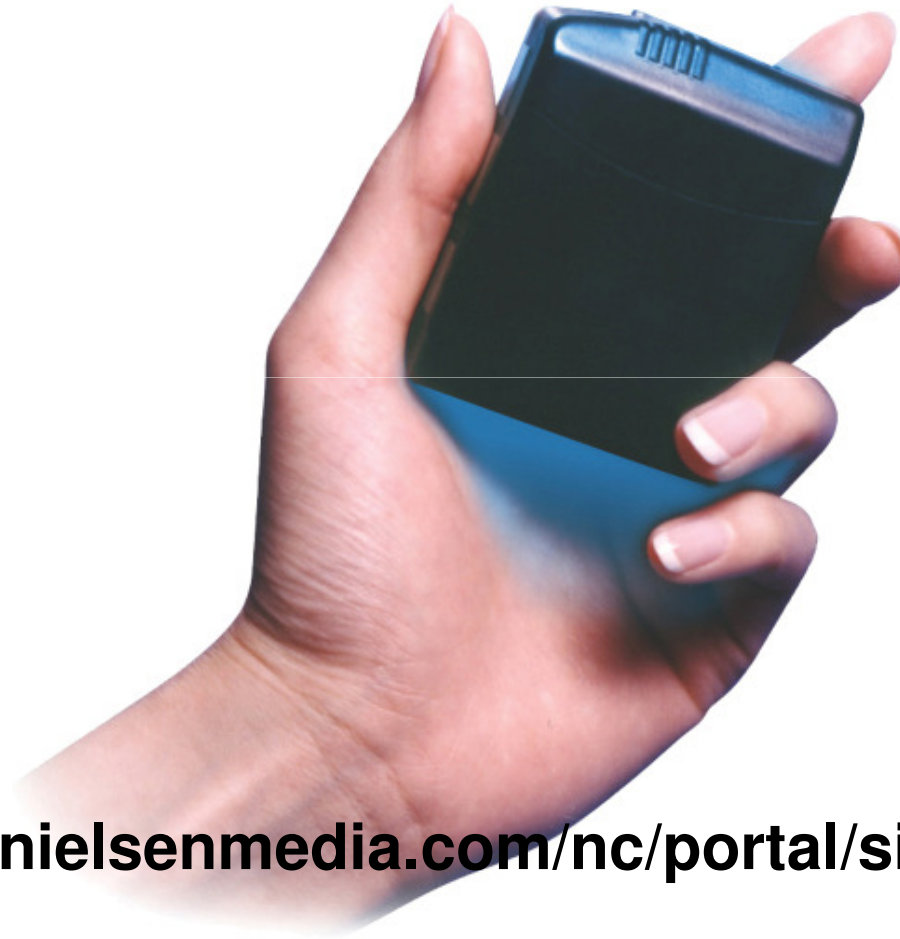
SizeUSA



Body Measurement System

http://tc2.com/news/arc/news_nx12.html

People Meters

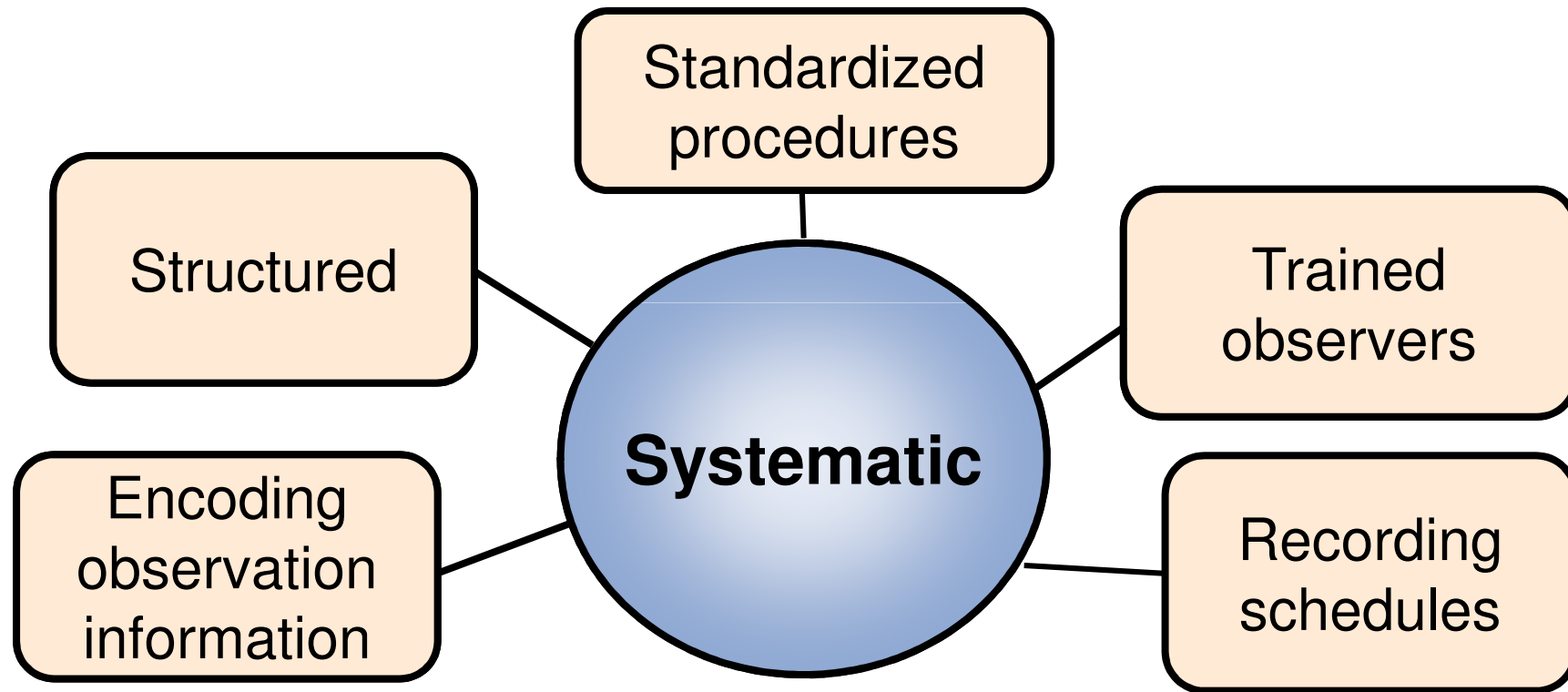


<http://www.nielsenmedia.com/nc/portal/site/Public/>

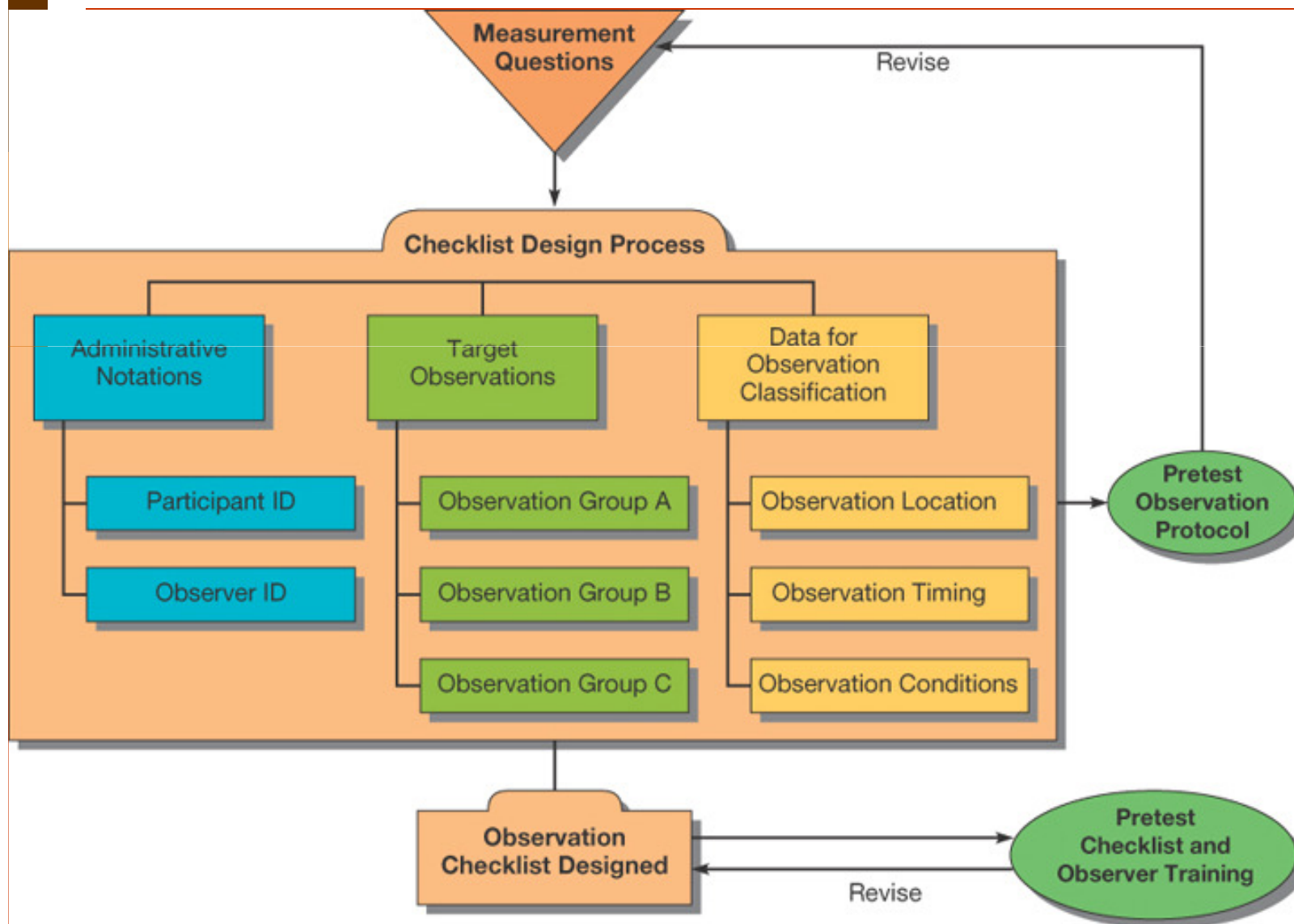
Wal-Mart Implements Use of RFID labels



Systematic Observation



Checklist



Desired Characteristics for Observers



Concentration

Detail-oriented

Unobtrusive

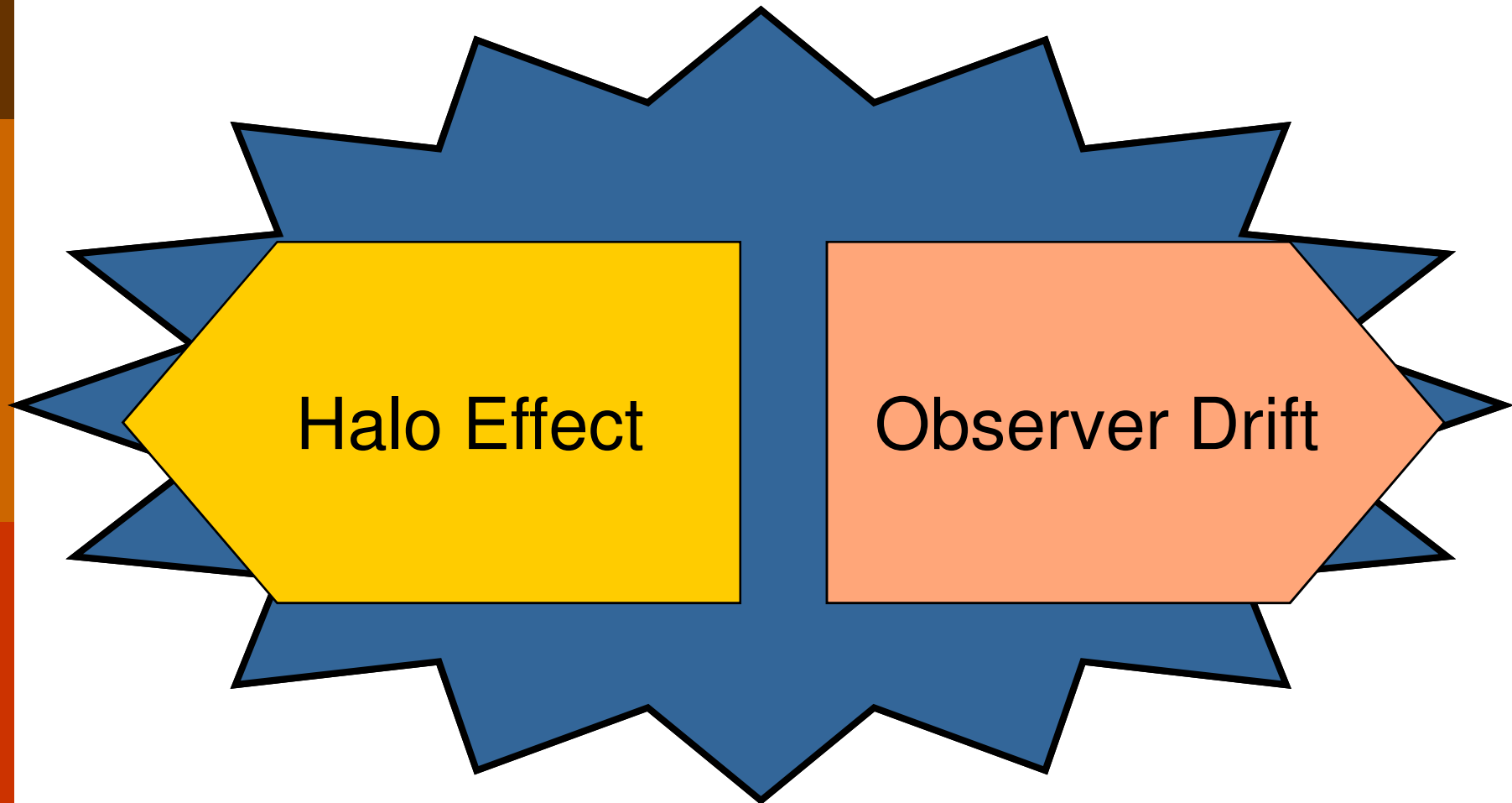
Experience level

Desired Characteristics for Observers

There are a few general guidelines for the qualification and selection of observers:

- ❑ Observers should have the ability to function in a setting full of distractions (**concentration**)
- ❑ They should have the ability to remember details of an experience (**detail-oriented**)
- ❑ They should have the ability to blend with the setting and not be distinctive (**unobtrusive**)
- ❑ They should have the ability to extract the most from an observation study (**experience level**)

Errors Introduced by Observers



Errors Introduced by Observers

- ❑ **Halo Effect:** inexperience can be an advantage if there is a risk that experienced observers may have preset convictions about the topic or if prior observations will influence what is perceived in a current observation.
- ❑ **Observer Drift:** observers can also introduce error when fatigued, which can result in observer drift. Observer drift is error caused by decay in consistency and accuracy on recorded observations over time, affecting categorization.

The Evolution of Data Mining

Evolutionary Step	Investigative Question	Enabling Technologies	Characteristics
Data collection (1960s)	"What was my average total revenue over the last five years?"	Computers, tapes, disks.	Retrospective, static data delivery.
Data access (1980s)	"What were unit sales in California last December?"	Relational databases (RDBMs), structured query language (SQL), (ODBC).	Retrospective, dynamic data delivery at the record level.
Data navigation (1990s)	"What were unit sales in California last December? Now drill down to Sacramento . . ."	Online analytic processing (OLAP), multidimensional databases, data warehouses.	Retrospective, dynamic data delivery at multiple levels.
Data mining (2000s)	"What's likely to happen to Sacramento unit sales next month? Why?"	Advanced algorithms, multiprocessor computers, massive databases.	Prospective, proactive information delivery.

Data Mining Process

