METHODS IN BEHAVIORAL OBSERVATION

When recording or observing behavior the researcher needs to make the following two decisions:

1. **Sampling Rules**—which animals to watch and when to watch them.
2. **Recording Rules**—how the behavior is to be recorded.

**SAMPLING RULES**

There are a number of rules used to ‘sample’ the animals for observation.

- **ad libitum sampling**—is a sampling technique that has no systematic constraints on what is recorded or when recording takes place. The observer notes what behavior is observed and what is considered relevant at the time. Because this type of sampling often biases observations towards those behavior patterns and individuals that are most conspicuous/obvious, it is generally not a good technique for the scientific study of behavior. However, it may be an excellent way to make preliminary observations and is sometimes the only way that rare events may be observed.

- **focal sampling**—is a sampling technique that focuses on a single individual or unit (e.g. family unit, mating pair, or one litter) for a particular time period recording all instances of its behavior. The focal animal (unit) is chosen (randomly) prior to observations.

- **scan sampling**—is a sampling rule where the observer censuses an entire group at once at regular intervals and the behavior of each individual (at the scanning instant) is recorded. Scan sampling must use an instantaneous recording rule (see below).

- **behavior sampling**—is a sampling rule where the observer watches an entire group of subjects and records the occurrence of the behavior patterns of interest. This sampling rule is often used to record rare instances of behavior.

**RECORDING RULES**

There are two basic types of recording rules, **continuous recording and instantaneous recording**.

- **continuous recording**—is the a recording rule that notes all occurrences of behavior and tries to keep an exact record of behavior. This recording rule allows the researcher to measure the true frequencies, durations and latencies of the behavior patterns.

- **time recording**—the observations (sample points) are made at regular periodic intervals, sampling intervals. Note that as the sampling interval shortens, time sampling approaches continuous recording. Because there is a loss of information compared with the continuous recording rule, exact records of behavioral frequencies, etc. are not obtained.

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Time recording can be further subdivided into instantaneous or one-zero recording.
**Instantaneous time recording**—the observer notes whether a behavior is occurring at the sample point. This type of recording can be used to determine the proportion of times a behavior occurred. It can also be used to estimate the duration of the behavior (depending on sampling interval relative to the duration of behavior).

**One-zero time recording**—the observer notes whether a behavior has (+) occurred during the sample interval. Two problems with this type of recording is that it over-estimates durations of the behavior (as if the behavior occurs during the whole interval) and it under-estimates the frequency of the behavior (the behavior may occur several times during the interval but is only counted as once).

First choose a sampling rule and then apply a recording rule, continuous recording or time recording. If time recording is chosen, then the observer must decide between instantaneous or one-zero recording.

**References**


