

Gradual Change Models

Shaping

Shaping

☒ The development of a new behavior by the successive reinforcement of closer approximations and the extinguishing of preceding approximations of the behavior.

☒ Shaping is used to establish a behavior that is not presently performed by the individual. In other words, the frequency of the behavior is zero. Because it is not occurring, you simply cannot wait for it to occur and reinforce it to increase its frequency.

There are four aspects of behavior that are particularly subject to shaping:

1. *Topography* -- spatial configuration or form of a particular response or the specific movement involved. Examples: printing a word and writing a word, the movements of a variety of sports, speech, etc.
2. *Amount* -- the frequency of a behavior (the number of times it occurs in a given time) or its duration (the length of time that a response lasts)
3. *Latency* -- reaction time
4. *Intensity* -- the force of a response

Factors influencing the effectiveness of shaping:

1. Specifying the final desired behavior. This needs to include a very specific description of the terminal behavior, the conditions under which it is or is not to occur, and any other guidelines that seem necessary for consistency.

Factors influencing the effectiveness of shaping:

2. Choosing a starting behavior. The starting point should be a behavior that occurs often enough to be reinforced within the session time and approximate the final behavior.

Factors influencing the effectiveness of shaping:

3. Choosing the shaping steps. Outline in advance the successive approximations through which the individual will be moved, but still be flexible enough to change this outline if needed.

Factors influencing the effectiveness of shaping:

- 4. Moving along at the correct pace.
 - Don't move along too soon. Moving too quickly to the next step before the previous one has been established can result in losing the previous approximation through extinction without achieving the new approximation.
 - Proceed in sufficiently small steps.
 - If you lose a behavior due to moving too fast or taking too large a step, return to an earlier approximation where you can pick up the behavior again.

Factors influencing the effectiveness of shaping:

- 4. Moving along at the correct pace.
 - Don't move too slowly either. If one approximation is reinforced for a long time, it may become very strong and new approximations will be less likely to appear.

Pitfalls and Cautions:

- ❑ Be careful not to inadvertently shape an undesirable or harmful behavior.
- ❑ Self-destructive behaviors are often inadvertently shaped in developmentally disabled children or temper tantrums in "normal" children. Note, it is often more so the *intensity* of the behavior which is undesirably shaped.
- ❑ Significantly abnormal behaviors can be brought about by failure to apply shaping when it should be applied, either through indiscriminately reinforcing or failure to give any reinforcement.

Summary: Guidelines for Effective Shaping:

- Select the desired final behavior
- Select an appropriate reinforcer
- List successive approximations of the terminal behavior, beginning with one that is already in the learner's behavioral repertoire and resembles the terminal behavior

Summary: Guidelines for Effective Shaping:

- Implement the plan
- Tell the learner about the plan before starting
- Begin reinforcing immediately following each occurrence of the starting behavior
- Never move to a new approximation until the learner has mastered the previous one

Summary: Guidelines for Effective Shaping:

- Move to the next step when the learner performs the current step correctly in six of ten trials
- Do not reinforce too many times at one step and avoid under-reinforcement at any step

Summary: Guidelines for Effective Shaping:

- ☒ If the learner is inattentive or bored you may have moved too slow or too fast. Return to the previous step for a few more trials.
- ☒ if the learner continues to have difficulty, despite retraining at previous steps, add more steps at the point of difficulty.
