VS.

RULE-
GOVERNED
BEHAVIOR

- *Human beings live in a verbal world.*
- *All attempts to change human behavior must take these simple facts into account in one way or another.*
- *The study of verbal regulation is the basis of all applied techniques in psychology.*
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Contingent-shaped behavior

- Contingent-shaped behaviour is behavior that is primarily governed by direct exposure to contingency

- For example, trial and error to learn how an electronic dippedutt works

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Verbal stimuli

- Verbal stimuli can control human behavior just as effectively as nonverbal stimuli
  - Verbal stimuli are produced by verbal behavior (writing, speaking, etc.)
- The term "rule-governed" behavior is used for responses that are controlled by a verbal description of a contingency, rather than the contingency itself
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Rule-governed behavior

- Rule-governed behavior allows humans to respond very precisely and effectively when contingence-based learning will be ineffective, such as when the impact on behavior is subtle, small, temporarily removed, cumulative, or problematic

- Rule-governed behavior is primarily governed by a verbal description of the reinforcement or punitive contingency
  - The description usually implies the behavior, SD for this behavior and the typical consequence for this behavior in the presence of the SD

- Reading the instruction manual before using an electronic device is an example of a complex rule-based behavior

Contingent-shaped behavior vs. rule-governed behavior

- Different variables control the behaviors, although in both cases the response topography may be the same

- Contingent-shaped behavior is controlled by the MO that correlates specifically to the consequence

- Rule-governed behavior is controlled by the MO that is related to previous reinforcement of rule following

Differences between contingent-shaped behavior and rule-governed behavior

- Contingent-shaped behavior is 'fluent' and is characterised as more natural
- In the beginning, rule-based behavior is often rigid and curious
- It may often appear that the behavior is rule-governed in the beginning and becomes contingent-shaped after some time
  - Ex: The first time we make a specific dish, a recipe is followed, but gradually changes and adaptations are made.
- New rules can be the result of trial and error
- Behavior that was originally rule-governed and repeated again and again will appear contingent-shaped

Benefits of rule-governed behavior

- Learn new behaviors faster by avoiding repetitive "trial and error"
- We can construct verbal SDs to regulate future behavior
  - (pre-current behavior)
- Rules can supplement a defective natural contingency
  - (those with delayed consequences or rare but serious consequences)
- Rules can alter the function of stimuli

Some facts about rule-following

- People follow rules as long as it leads to reinforcement
- When reinforcement is no longer conveyed to follow rules, people will be less likely to follow the rule
  - except when there is social reinforcement to follow the rule
- People seek reliable descriptions of contingens
- Unreliable rules or rules leading to aversive consequences are not followed

Definitions of rules

- Skinner (1966) defined rules as contingent-specifying stimuli. The rules must then describe the conduct and reinforcement conditions
  - For example: «Do your homework and I'll read one chapter to you in your favorite book»
- Catania (1998) has a much broader definition
  - "Behaviors affected by verbal occasions"
  - No specification of consequences
- However, the rules are about something to do
  - This means that they must specify behaviors

Although there are different definitions …

- A rule must evoke a behavior in the listener, which implies:
  1. The rule must occur before the behavior described
  2. The behavior must not occur due to circumstances other than those corresponding to the rule

Rules as function-altering stimuli

- Schlinger et al. have a different definition of rules:
  - Rules must specify conditions, not just reinforcement that leads to rule governance
  - (Blakely & Schlinger, 1987; Schlinger & Blakely, 1987)
- What does function-altering mean?
  - Stimuli and events have no prior function
  - Stimuli and events have a different function beforehand
- We often get rules about what to do in the presence of certain stimuli or events
  - «When you see a yellow house, then..."
  - "When you get to the sign, turn left"

Rules such as function-altering stimuli (cont.)

- Is it the rule or sign that is SD for turning left?
- There is usually a time gap between the presentation of the rule and the rule-following
- Schlinger et al. argue that the sign is SD, not the rule.
- The sign has become an SD through the rule.
  - The rule has altered the function of a neutral stimulus.
- Function-altering rules describe relationships between events.
  - Sign, turn left
  - Ring the doorbell, enter
- Rules can, in principle, have the same effect as a reinforcement story, but are much more effective
- Only verbally capable individuals will respond to function-altering rules

Descriptive and prescriptive rules

- Descriptive rules.
  - Descriptions of general relations between events. This is not about what the person is going to do
    - For example: "If the curtains are drawn too, the sun is shut out"
- Prescriptive rules:
  - Description of what the person is going to do
    - For example, "Stand still"

Zettle and Hayes (1982)

- Described two types of rule-governed behavior
  - Pliance
  - Tracking
- Later, Hayes has also come up with a third form
  - Augmenting

Pliance

- PLIANCE means following a verbal rule based on a history of socially mediated consequences for the correspondence between the rule and the rule-follower's behavior
- Developmentally, PLIANCE is probably the first variant of rule-following that an individual learns
- There is a lot of evidence that PLIANCE is a very pervasive form of rule-governed behaviour, even in clinical situations
- Pliance means; Do as you are told
- Not showing pliance can lead to a change in motivational operations and consequences, such as repetitions, promises, threats
- Pliance appears to be important in early stages of moral development

Tracking

- Tracking is rule-governed behavior under the control of a history of correspondence between a rule and "natural" social or nonsocial contingencies
- Tracking is sustained by the consequence for the behavior and NOT for rule following
- The amplification conditions are often more uncertain and delayed for tracking.
- There is usually a higher verbal functioning associated with tracking compared to pliance
- In natural contingencies, these are mainly produced by an exact form of behavior in a given situation
    - Other consequences are not natural in this way, because the correspondence depends on the discrimination of others about historical factors, motivations, or characteristics of the behavioral episode beyond the simple form of response

Augmenting

- AUGMENTING is rule-governed behavior that changes the likelihood that some events will act as consequences
  - controlled by changes in the event's potential to act as reinforcers or punishers.
- There are two subvariants of AUGMENTALS
  - The first consists of motivational AUGMENTALS. These are rules that increase the value of an event that is already a functional consequence
    - Marketers use this form of rule management
    - Reminds someone to get in touch with contingents…
  - Another variant of AUGMENTALS is the formative augmentals, which establish new events as an important consequence
    - Tells about a good movie
- AUGMENTING is a difficult form of rule-governed behavior, because it is used primarily to establish control of abstract, imagined, or previously unexperienced consequences

Publication of rules

- Two groups were studied.
- Notes were placed with rules to follow in a box.
  - One group read the rule to themselves.
  - The second group additionally gives the rule to the experimenter.
- The results showed that only the group that showed the rules drawn to the experimenter showed behavior change.
- The conclusion is therefore that if rules are to govern conduct, the rules must be made public.
  - Private rules have little effect.

    - Hayes mfl.

Empirical findings regarding rule-governed behavior

- Hayes and Ju (1998) point out that there have been two main strategies for investigating the significance of rules for modifying behavior.

- The first strategy concerns how rules affect form-driven behavior, and the conclusions here are that people tend to generate rules themselves with regard to reinforcement forms that govern behavior, or simply put, it can be said that responding to reinforcement forms can be partly rule-driven.

- The second strategy has focused on rule-driven behavioral influences on programmed reinforcement contingents, showing that instructed subjects show more resistance to change than uninstructed subjects to multiple types of contingency changes.

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Empirical findings regarding rule-governed behavior

• Furthermore, several other findings are mentioned; Rule-based behaviour can both increase and decrease contact with natural contingents, increase social control, change motivation and, not least, rules can alter the function of the nonverbal environment.

• Hayes and Ju (1998) summarize that rules are powerful events, allowing a remarkably indirect, conventional, and specific form of stimulus control. However, it can also lead to negative effects, such as rigidity and making other sources of control over behavior ineffective.

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