Signs, Signs, Everywhere a Sign: How to use Antecedents in Practice

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Apologies to the Five Man Electric Band

faison center — Pioneering Possibility

OBM

* Organizational Behavior Management (OBM)
-The application of behavior analysis to business settings/employees

* You are interested in this field as well!

Consequences

* Environmental change 'immediately' following performance

* The driver of behavior change across all sub-domains of ABA

* A lot of OBM studies: Reinforcement works

Consequences

* I have been perseverating on refining this area in OBM for a while

* If you want to maintain behavior over time you need consequences. Who took a statistics class here?

Antecedents

* Typically defined as stimuli that 'immediately' precede behavior. (Cooper, Heron, & Heward, 2007)

* In OBM, we are not so concerned with the immediate portion. Also, antecedents are mostly used to evoke behavior, often at specific times: no smoking sign

* Are remarkably common in society

Antecedents

* We often try them first and put a lot of hope in them

* Examples: Training, texting, vocal reminders, meetings, emails, no parking signs

* In practice it's often difficult to separate the Antecedents from the Consequences

Barker, Bailey, and Lee (2004)

* Delivered a specific verbal prompt for shoppers to use safety belts for their young children riding in shopping carts. Results indicated that seat belt use increased but it is difficult to separate out the effects of the isolated antecedent condition from other contingencies that could have been in-place when humans interact (e.g., something as innocuous as eye contact from a data collector may have influenced behavior).

Scherrer and Wilder (2008)

* Taught cocktail servers how to correctly carry trays. Training alone was effective and the change in behavior maintained over time

* Why? And is this common?

PDC-HS

* A free tool: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4788645/

* A survey used to interview employees and management when there is a performance problem. It will suggest an intervention in one or more of four areas (training, antecedents, resources/processes, consequences)

PDC-HS: Training

* Has the employee received formal training on this task: instructions, demonstration, rehearsal
* Can the employee accurately describe the target task and when it should be performed
* Is there evidence that the employee has accurately completed the task in the past
* If the task needs to be completed quickly, can the employee perform it at the appropriate speed?

Training

* Conduct competency-based training for mandated tasks and for skills that are needed for job tasks that they would not know how to do

* The: "Could you do it for a million dollars test"

Education vs. Training

* Education is different from training

* We will not assign grades or rank employees

* We need to bring employees up to a specific standard so that they can engage in a job task

* Professional Development

The Order of Training Development

1. Develop objectives

2. Develop test

3. Develop practice

4. Develop instruction

Training

The mandate: train employees to evacuate students in case of a fire

Create objectives from this mandate that:

1. Can be measured by two people: Escort all students at least 20 feet away from the building

Action verbs: Write, implement, record, state, sort, point to

Training

2. Have a performance criteria:

-Within 2 minutes

3. State when the performance should occur:

-When the fire alarm sounds or a fire is announced

Training

The form can vary, but objectives should have all three components:

When the fire alarm sounds or a fire is announced escort all students at least 20 feet away from the building within 2 minutes

＊ How many objectives?

Training

＊ Objectives allow the test….essentially whatever the objective stated either once or on a number of occasions

＊ Then, practice and instruction: BST

＊ How long does training last?

PDC-HS: Task clarification & Prompting

- Has the employee been informed that he/she is expected to perform the task (Goals)
- Can the employee state the purpose of the task (Training, actually)

- Is a job aide (checklist, data sheet) for completing the task visibly located in the task area (Task Clarification)
- Is the employee ever verbally, textually, or electronically reminded to complete the task (job aides)

- Is the task being performed in an environment well-suited for task completion (e.g., not noisy or crowded) (Systems)

Typical Antecedents

* Goals: A time-limited statement of quality and quantity of performance

* Goals, the one antecedent that should always be in-place. General advice is that goals should be challenging yet attainable—but can you use industry standards, clinical best practice

Task Clarification

* Should be in-place for all complicated tasks

Front of House Opening Routine
1. Brew coffee
2. Remove chairs
3. Set out silverware
4. Set out baked goods
5. Turn on radio
6. Set out money drawers
7. Unlock doors
8. Turn on open sign

Typical Antecedents

* Job-Aides: Signs, announcements, and memos
-Best used when employees are capable but behavior is not occurring (the million dollar test)

1. Training: Can't do at all
2. TC: Complicated task, or something that doesn't come up often
3. Job-aides: Can do it, just need a reminder

Signs

* Most of the literature is on signs: Generally defined as a written message or markers affixed in a visible location

* Likely the target of investigation because they are cheap and relatively easy to implement

Static vs. Dynamic Signs

* Static signs have been found to be effective in some settings, but it seems like it's when the population changes. For example, (Clayton & Blaskewicz, 2012)

* Same People

Sign Content

* Mostly, they just contain a message, but some have altruistic or punishment content

* Altruistic: If all garbage is
Thrown away for a week
A local doctor will give
$50 to charity

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Geller (1982)

* Stated that signs not accompanied by a consequence should:
1. Make a specific request

Most seem to accomplish this

Geller (1982)

2. Be in close proximity to where the performance is to take place

But this one is too common and hidden

Geller (1982)

3. The response must be convenient. A convenient response may refer to a response that it not overly effortful, or prompts a specific topography of a response that is already likely to occur

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Warman, Wine, Newcomb, Chen, & Morgan

* There has been relatively little research in a consistent population asking participants to engage in a task that is not likely to take place, and has no correlated reinforcement
* We were designing a new playground and wanted to see how many people regularly used the existing school playground

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Warman, Wine, Newcomb, Chen, & Morgan

* We instituted a sign out procedure for employees (N = 225) when they took kids outside
* Baseline: Sign out procedure announced by email. A clipboard was placed by the door.
* Static Sign: An 8.5x11 sign was placed on the door at eye height that read: Please sign your student out using the form

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Warman, Wine, Newcomb, Chen, & Morgan

* The varied sign condition was identical to the static sign condition with the following changes: each day several of the characteristics of the sign were changed randomly. While the written message never changed, font size, font type, position of the sign on the door, and color of the sign were varied randomly

Warman, Wine, Newcomb, Chen, & Morgan

* The humorous sign condition, a sign of the same physical dimensions used in baseline was affixed at eye height each day. The sign presented a character from popular culture using a modified version of their catch phrase to deliver the prompt
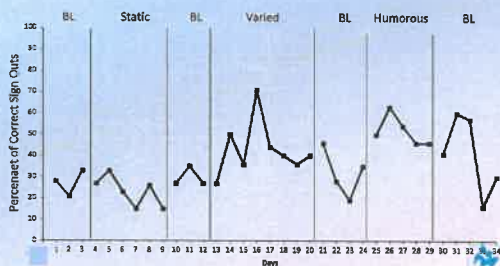

Sign out your students, you will

Warman, Wine, Newcomb, Chen, & Morgan

Warman, Wine, Newcomb, Chen, & Morgan

* Phase 2
* Data were collected on the second floor of the school in a student-run café that sold drinks and snacks to staff and student patrons. Students enrolled in a school-based employment program were responsible for setting up and conducting the operations of the café while one staff member remained on-site to assist and provide in-situ instruction to the student, as needed

Warman, Wine, Newcomb, Chen, & Morgan

* The dependent variable was the number of clock-ins and clock-outs completed each day. As there were two shifts, each with a clock-in and clock-out opportunity there were four total opportunities per day for the staff to respond
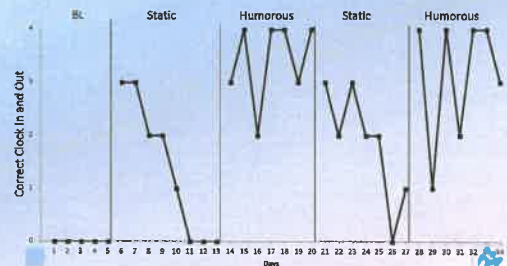
Warman, Wine, Newcomb, Chen, & Morgan

* The static sign condition consisted of an 8.5" x 11" sheet of paper inserted into a staff binder—staff binders were accessed by all staff daily and so were selected as a location that all staff working in the café were likely to see. The paper was white and contained the following message in Times New Roman, 16-font: "Please ensure the students are clocked-in and clocked-out." The humorous sign condition was similar to that used in experiment 1

"Dobby is…free…to clock in and out."

Warman, Wine, Newcomb, Chen, & Morgan

Results/Discussion

* First, the idea that a singular sign placed in public view will evoke reliable behavior in a static group of individuals does not appear to be supported; especially when a variant of the behavior is not likely to occur anyway.

Results/Discussion

* Both the varied and humorous signs from experiment 1 and the humorous signs from experiment 2 may have presented novel stimuli such that the employees continued to attend to the message day after day.

* The effects were moderate, you will likely need consequences to make large changes

Results/Discussion

* Antecedents without consequences are a lot of work in a static population, and even then it's just so-so

* Why are antecedents effective at all? A history of consequences.

* How close in time do antecedents need to be to the desired performance?

Takeaways

* If the population changes regularly/behavior is correlated with naturally occurring reinforcers you might be able to use antecedents alone

* Use checklists for complicated tasks

* Don't rely on training, but make sure you do it well in the beginning