

for the interval is sent to the printer. If you select a one minute interval, you will have a record of frequencies on a minute by minute basis. If you select a 5 minute interval, the printed summaries will record the total count for each behavior for five minutes.

This program is especially useful for live demonstrations of behavior baselines and interventions. Summaries of behavior counts may be printed out every minute (or any other interval selected) until the baseline appears stable. When the baseline looks stable, put a contingency into effect. The output from this program will show you "on line" whether the contingency is functional.

This program was written by Dr. Henry Tenenbaum, Multidisciplinary Classroom, College of Education, University of Florida, Gainesville, FL 32611. Please contact him for copies.

If this program could be made to work on a Radio Shack Model 100 computer it would make a very portable and convenient package for traveling and consulting PTers. The Model 100 is a new generation of "lap" computer, weighing only 3.9 pounds and about the same volume as a large textbook. It has a very versatile set of programs included and operates on batteries for about 20 hours.

That's all folks! Next time we hope to be able to give you some firsthand user evaluations of AIMSTAR and other goodies.

**TERMINOLOGY**  
**Free/Abbreviate, Free/Write,**  
**and Free/Say**

Ogden R. Lindsley

At the Second Orlando Winter Precision Teaching Conference, Julie Vargas commented from the floor at one of the sessions that we should stop using the word "think" for learning channels without specific input. I agreed with her as did Steven Graf and also John Eshleman. Others at the conference snickered and mentioned that we were trying to be old-fashioned behaviorists refusing to accept the obvious.

At the Third Orlando Winter Precision Teaching Conference held a year later, the same rooms in the same motel called back our concerns from the prior year. I started searching for more accurate substitutes for the "think" in the channels "think/abbreviate", "think/write", and "think/say".

Although logical to say nothing or write a dash for the input in these channels without specific

immediate input, it is awkward and almost impossible to talk that way. "Nothing/abbreviate", "dash/abbreviate", "simply abbreviate" are not only awkward, but downright misleading.

This second time I worked on this problem of handling unspecified channel input, I discovered an excellent solution. I had just finished describing the origins of small animal free-operant conditioning to several conferees, stressing the importance of the lack of controlling antecedent stimuli in the "free" aspect of the free-operant.

Guess what? As I walked off into the room where a year earlier Julie had criticized "think/abbreviate" and "think/write", I said "free/abbreviate" and "free/write" and "free/say"! Those words accurately describe the channel where the behavior is free to perform with no stimulus restrictions before an audience or with a pencil or blank paper.

The word "free" comes from "free-operant conditioning" which was used to describe the important differences between free- and controlled-operant conditioning in the laboratory research of the fifties (Ferster, 1953). The difference between "free/say" and "see/say" is that the "see/say" channel specifies that visual stimuli are controlling the behavior. Of course, "see the lower case letter/say its sound" is the precise way to describe a channel using a detailed object for each channel input and output verb. We should only resort to verbs without objects when we are summarizing across a lot of specific channels using the same sense inputs and motor outputs.

Julie Vargas wanted to do away with "think" as channel input and also as output. She wanted to do away with all "thinking" in our descriptions. I disagree. Thinking frequencies are very useful to compare with a person's writing and saying frequencies when analyzing behavior. We need to keep "think" as a behavior, as an output.

"Think" outputs are impossible for someone else to monitor entirely, but external products can be counted. We would then have channels like:

Free/think the alphabet names in sequence and repeat.

Free/think the alphabet sounds in sequence and repeat.

Free/think count by ones.

Free/think count by twos.

Free/think multiply sequentially by 2

starting at 1.

Currently, it is impossible for others to count each thought as you think it. It is also impossible for you to count your own high frequency thoughts as you have them. But you can record their product to roughly indicate your thought frequency. For example, in "free/think the alphabet letter names in sequence" you can make a tally mark every time you think the letter "Z". I made 15 tally marks and got to "K" when my minute was up. So my letter thinking frequency was 15 alphabets X 26 letters + 6 up to "K" equalling 396 letters per minute.

In summary, we should not use "think" as a synonym for unspecified channel input. We should use "free" instead. However, we can still use "think" as a channel output, if that is the behavior we are recording. We can count output thinking by its products without seriously interfering with its process.

#### REFERENCES

- Eshleman, J. Personal communication, 5 March 1982.
- Ferster, C. B. (1953). The use of the free operant in the analysis of behavior. *Psychological Bulletin*, 50, 263-274.
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- Vargas, J. Personal communication, 5 March 1982.