

GOOD OR BAD?

LEARNING AND THE OVERUSE OF PUNISHMENT

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Minerva Workshop, March 9th

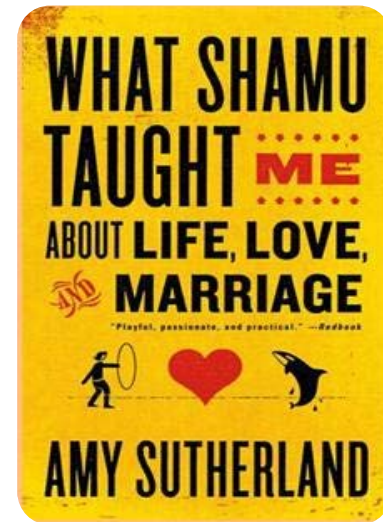
TWO OBSERVATIONS

Basic research in psychology and management emphasized the positive effects of rewards over punishments:

1. Students at school. (Skinner, 1953)
2. Performance at work. (Podsakoff et al., 1982)

It seems that people behave as if they ignore the negative effects of punishments:

1. Prohibition of corporal punishment.
2. Flight trainers. (K&T, 1982)
3. Managers. (Arvey & Ivancevich, 1980)
4. Women training their husband. (Sutherland, 2006)



OUR RESEARCH

Flight instructors learned from experience that verbal punishment are more effective because they failed to understand regression to the mean. (K&T, 1982)

1. Noisy – reward and punishment do not influence performance.

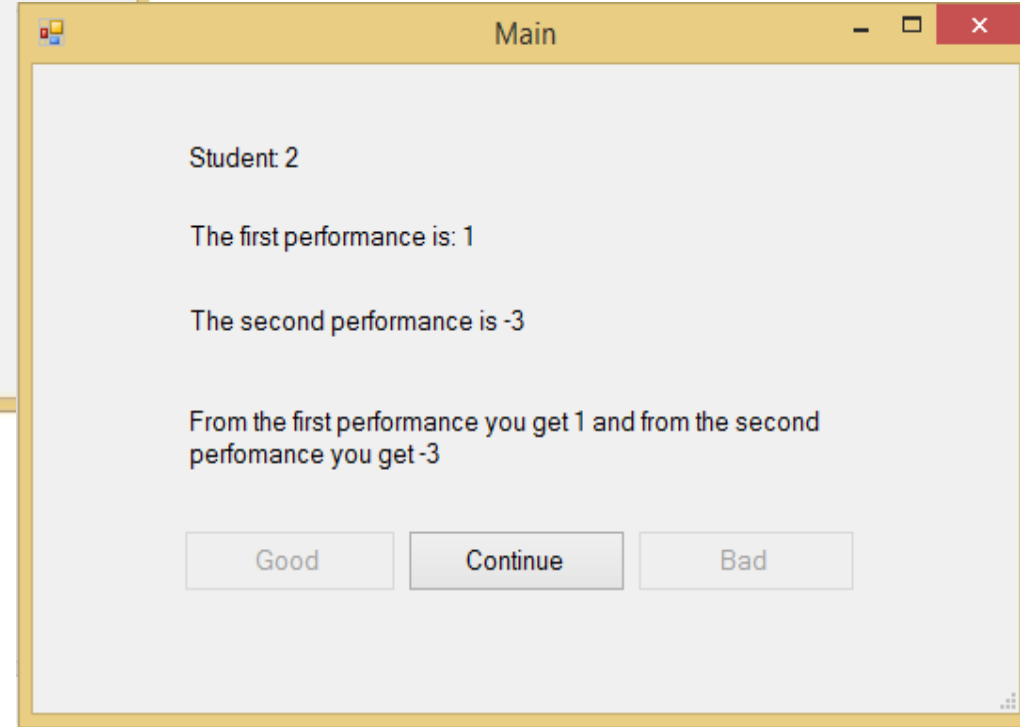
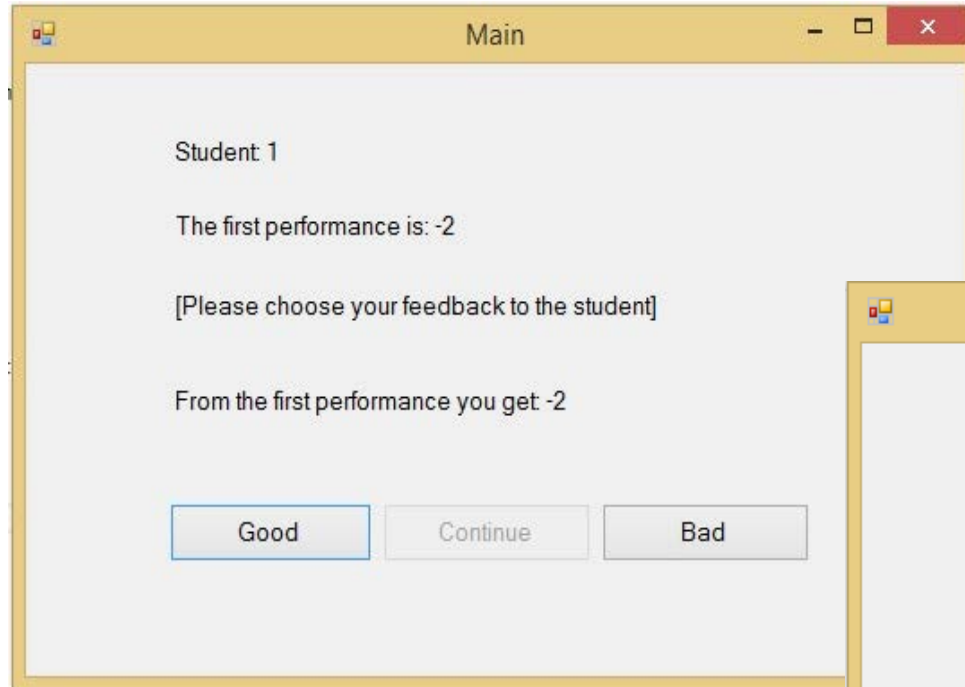
Decision from experience model that captures increase in punishment in a noisy environment also predicts increase in punishment when:

2. Punishment usually effective - punishment usually improves performance (+1) but has rare substantial detrimental effects (-10).
3. Reward usually costly - reward usually is costly (-1) but has rare substantial benefits (+10).



SMALL SAMPLE SIZE

EXPERIMENTAL TASK



EXPERIMENT

Method:

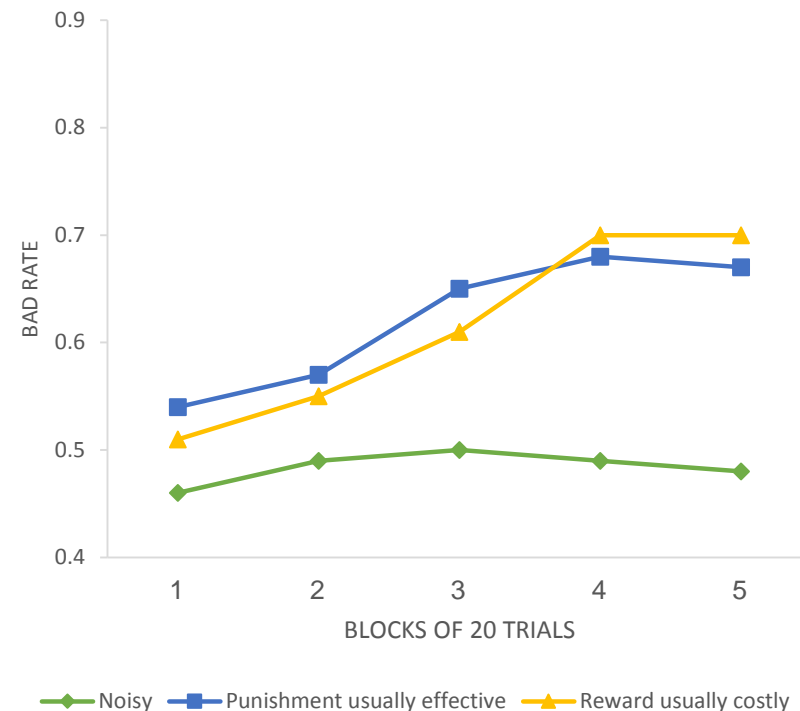
1. 79 participants.
2. Between subject design with three environments.

Task:

1. Participants' role is to train virtual students by choosing "Good" or "Bad" at each trial.
2. 100 students in each environment.
3. Each student performs twice.
4. Payoff determined by students' performance.

Results (Verbal punishment/Bad rate):

1. Noisy (50%)
2. Punishment usually effective (59%)
3. Reward usually costly (58%)



CONCLUSIONS

Model predicts increase in the use of verbal punishment when:

- Performance is noisy – faced by trainers. (K&T, 1974)
- Punishment leads to improvement most of the time – faced by teachers and managers. (Skinner, 1953)
- Rewards tend to be more costly – faced by women when training husbands. (Sutherland, 2006)

Experiment:

- No increase in the use of punishment when performance is noisy.
- The most important feature is reliance on small samples that implies underweighting of rare events.

Applications:

- Corporal punishment by teachers and punishment by managers.

