Description of Each Inhibitory Experiment and the Basic Results

Experiment 1

32 trials per session, 32 reinforcers per session.

ITI = mean of 20s with exponential distribution.

CS duration either 10s,20s,40s,or 80s or Rnd.

In Rnd conditions, all 4 CS durs randomly intermixed,

with USs randomly programmed w/o regard to whether CS present or not.

Reinforcer delivery = exponential distributed w mean = 20s.

Pellets delivered only in the ITI for experimental groups,

and in ITI and CS for random control. 

**Experiment 2**

Design

Groups CS10, CS40 & CS10\_30 had 32 CSs and 32 USs. The ITI was 20s exponentially distributed. USs occurred only during ITIs. The CS10\_30 had 10s CSs followed by fixed dead period of 30s during which USs could not occur, followed by the exponentially distributed ITi w expectation of 20s. Group CS10x4 same as CS but sessions lasted 4 times longer--4 times as many trials.



**Experiment 3**

32 CS & 32 USs. ITIs exponential with expectation 20s. CS expectation was either 30s or 50s. For one group in each value of this expectation, duration was fixed; for the other, it varied exponentially.



**Experiment 4**

ITIs exponentially distributed with 20s expectation. Group names refer to average interval between USs as measured on a clock that only runs during ITIs. In the US40 groups, USs occurred on average only every other ITI, so there were only 16 USs in a session; whereas for the US20 groups, there were 32 USs per session.



**Experiment 5**

The group names give expectation of exponentially distributed ITI durations and the durations of the fixed CS. No matter what the duration of the ITI, the average time between USs on the ITI clock was 20s. Thus, for groups with longer ITIs, the average number of USs during and ITI was greater than 1. Session ended when they had received 32 USs and 8 CSs.



**Experiment 6**

Numbers in group names give following information: first # is # of CS; 2nd # is duration of CS; 3rd # is expected duration of exponentially distributed ITIs. Expected interval between exponentially spaced USs is 20s in every group (on the ITI clock).

There is a 2nd 'resistance-to-reinforement" phase, in which CS duration is 120s, USs occur only during the CS. There are 2 CSs, one of which was the inhibitory CS, the other of which is new. During a CS, there is a .25 probability that the US will occur at the end of 10 s. In other words, its an FI10 schedule with probability .25 of reinforcement at end of each interval.

