

DYNAMIC SUNK COSTS: IMPORTANCE MATTERS WHEN OPPORTUNITY COSTS ARE EXPLICIT

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The sunk cost effect

- Tendency to continue or escalate commitment to an objective due to previously committed resources. (Arkes & Blumer, 1985)



The sunk cost effect

As the president of an airline company, you have invested 10 million dollars into a research project to develop a radar blank plane. When the project is 90% complete, a competitor starts marketing a radar blank plane that is clearly better and more economical than the plane you company is building.

Should you invest the last million dollars of the research funds to finish the radar blank plane?

[yes – 41; no – 7]

The sunk cost effect

- Limitations to hypothetical one time choices
- Static. Often, sunk costs occur over time
 - ▣ Not always immediately obvious
- Opportunity costs may be more or less salient
- Relative importance of / familiarity with objectives rarely measured

Simlife game

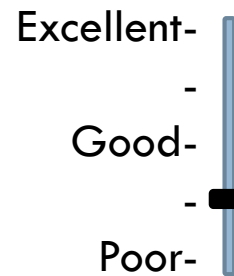
Current Status of your life:

Day: 58

Romantic Relationship



Friends



Academics



Balanced design

Current Status of your life:

Day: 58

Relationship



Friends



Academics



□ Per trial decay

-3

-3

-3

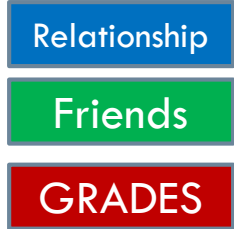
□ If chosen

+9

+9

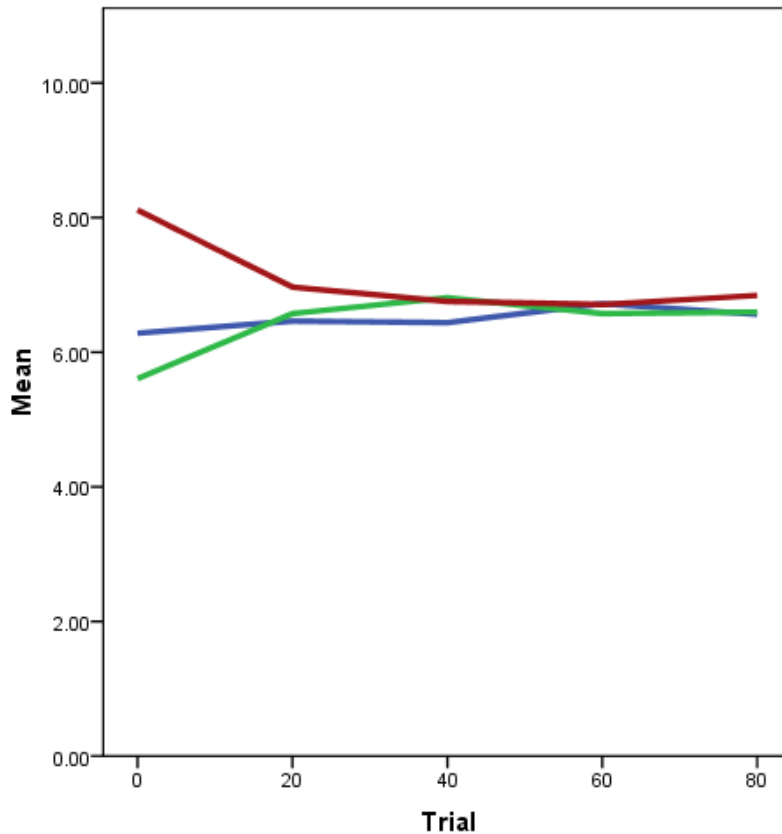
+9

Balanced design - results

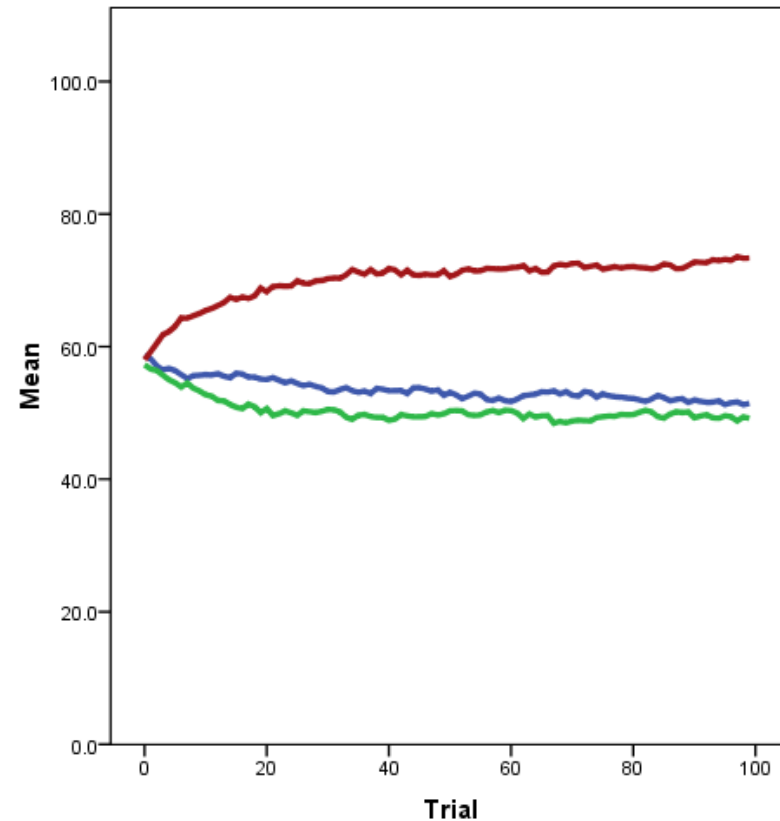


Mean
marginal
choice
R = 32
F = 32
G = 35

CHOICE (20 trial block)



STATUS (running total)



Current work

- How do people allocate resources to a goal over time when obtaining/maintaining that goal is not possible
 - Learning
 - a priori importance
 - Explicit opportunity costs

Current paradigm

Relationship



Friends



Academics



Per trial decay

If chosen

or

Per trial decay

If chosen

-3

+4

-6

+7

-3

+7

-3

+7

-3

+7

-3

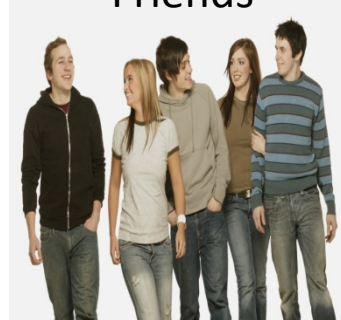
+7

A priori preferences

Relationship



Friends



Academics



□ Mean rank	2.2	2.4	1.2
□ Mean importance (1-5)	3.3	3.3	4.5
□ Mean importance (allocation of 100 pts.)	25.8	23.6	48.9

Study 1 (n = 59)

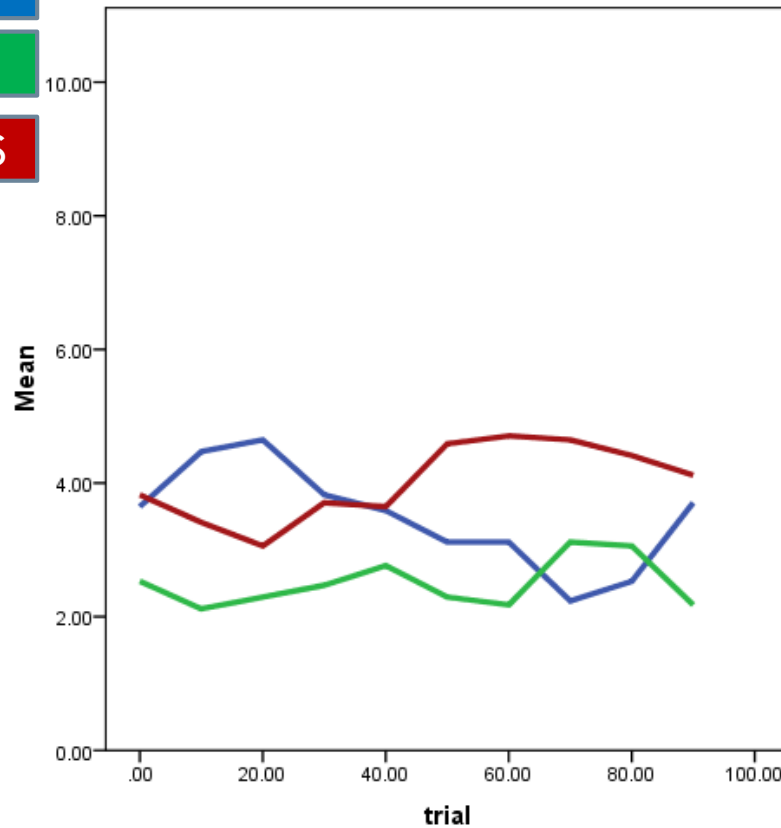


Relationship

Friends

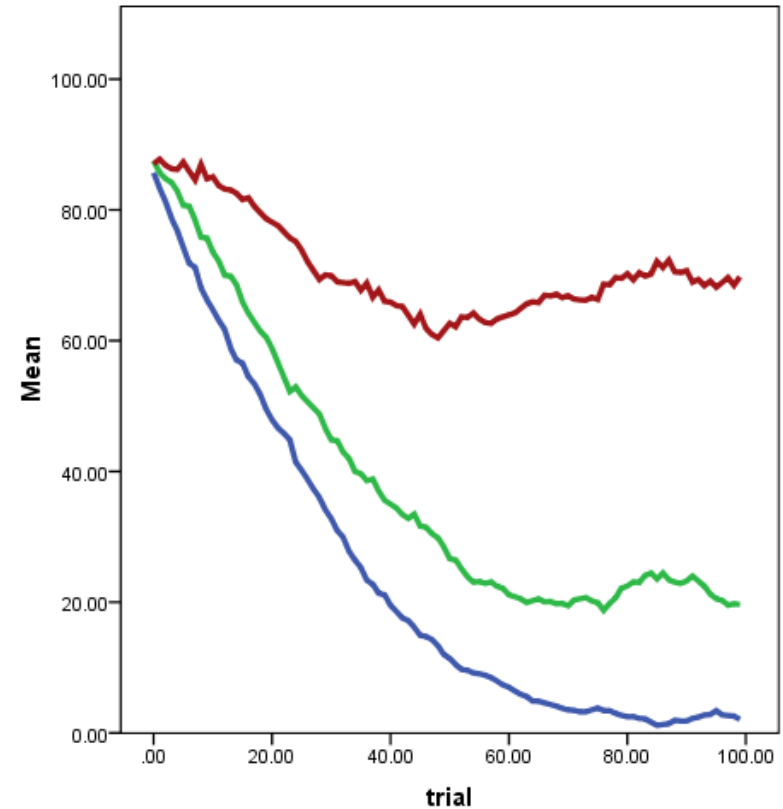
GRADES

CHOICE (10 trial blocks)



(n = 59)

STATUS

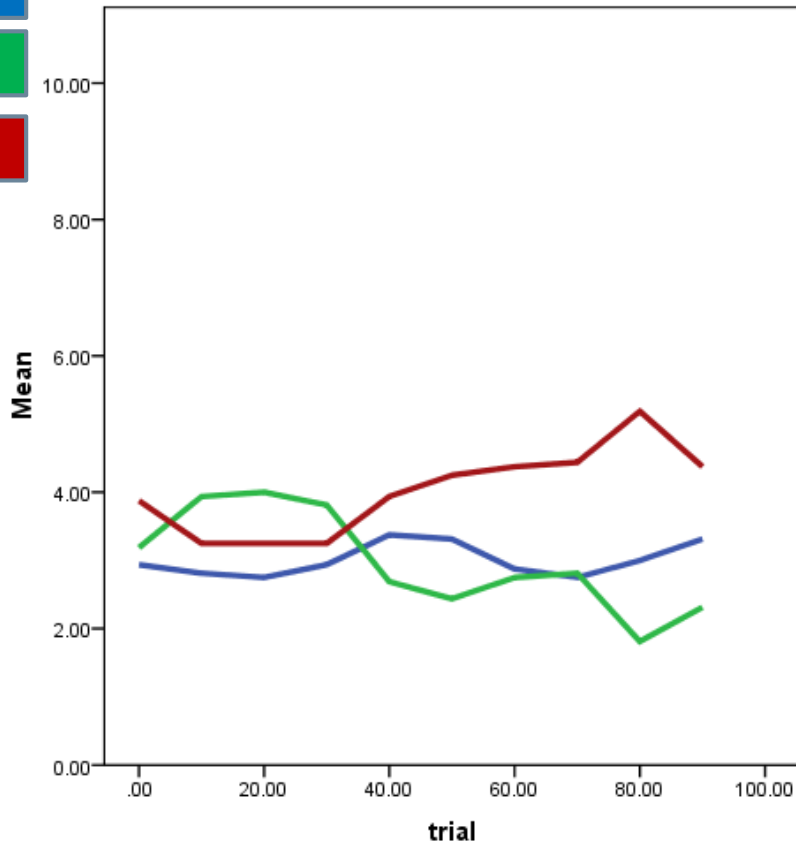


Study 1

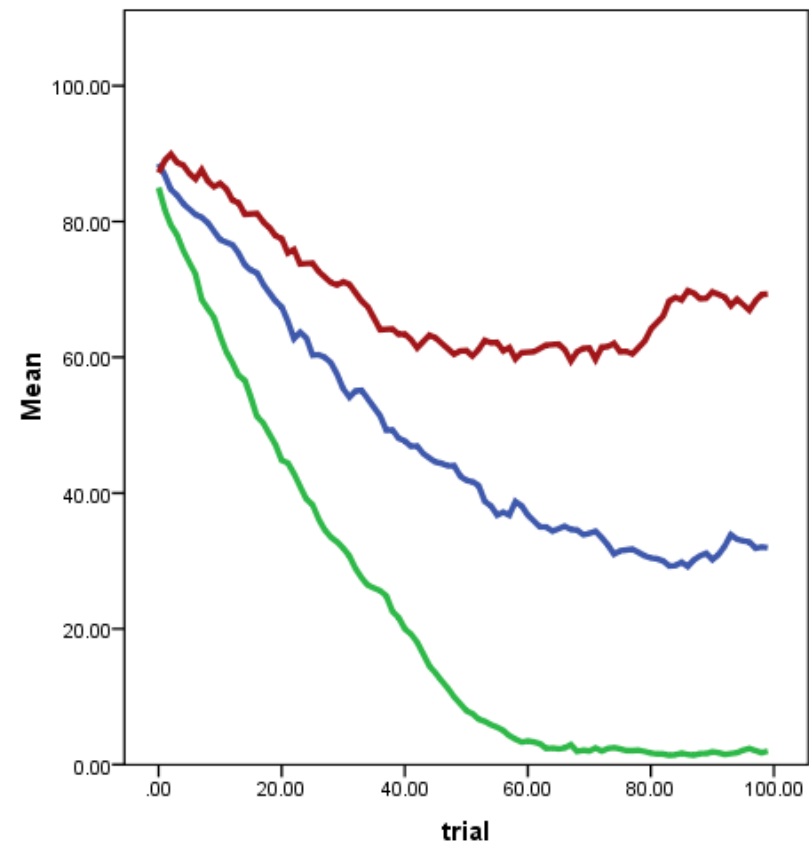


- Relationship
- Friends
- GRADES

CHOICE
(10 trial blocks)

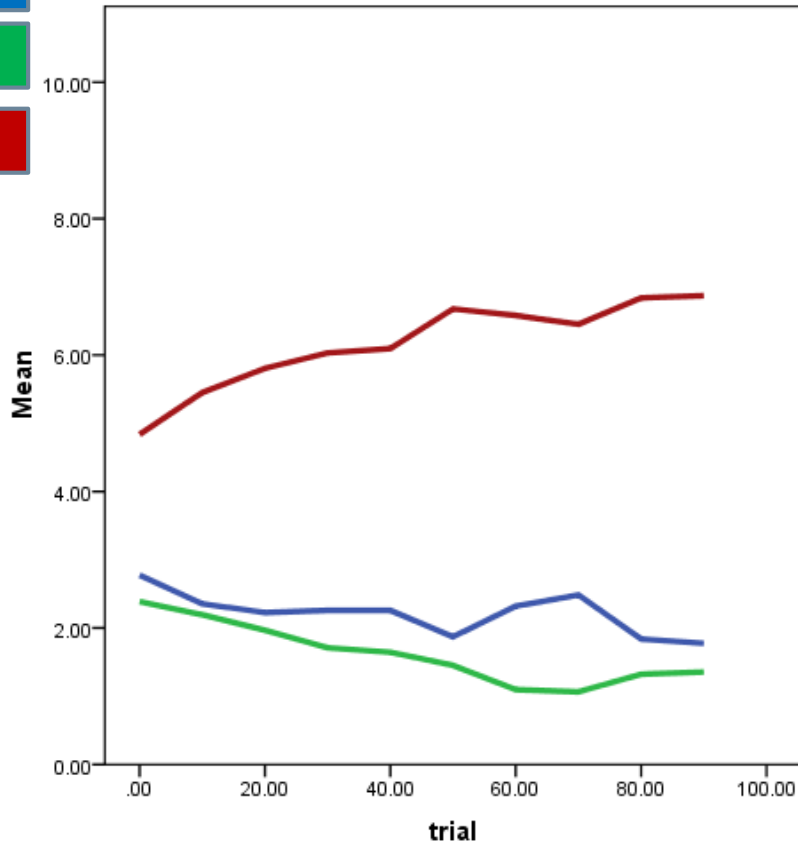


STATUS

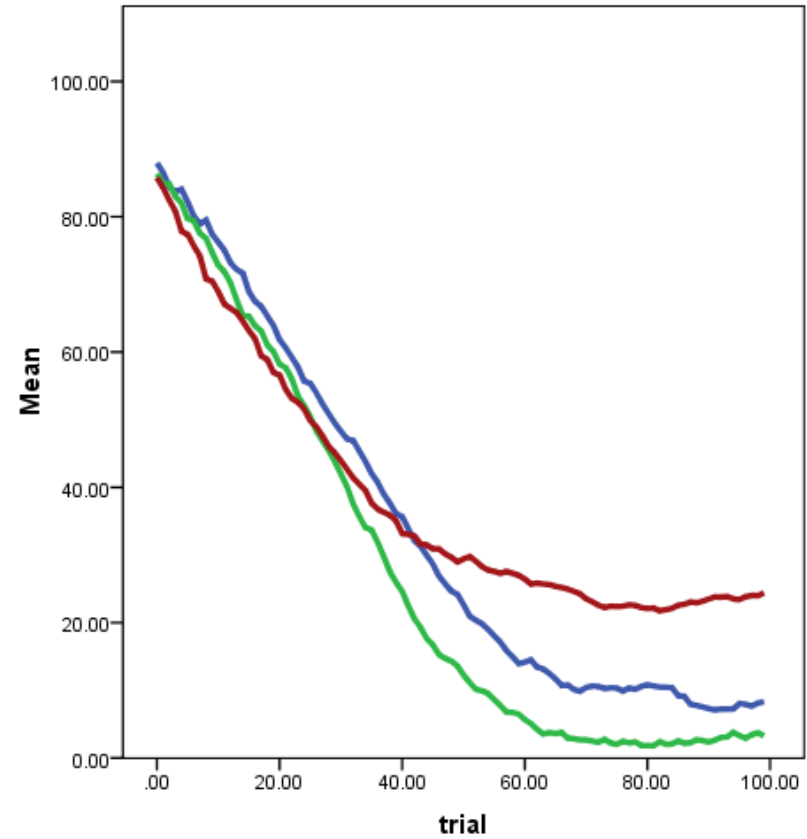


Study 1

CHOICE
(10 trial blocks)



STATUS



- Relationship
- Friends
- ★ GRADES

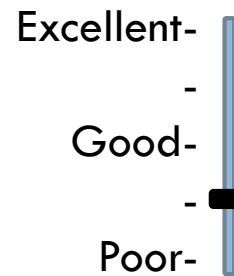
Current Status of your life:

Day: 58

Relationship



Friends



Academics

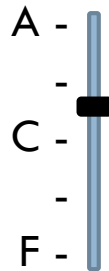
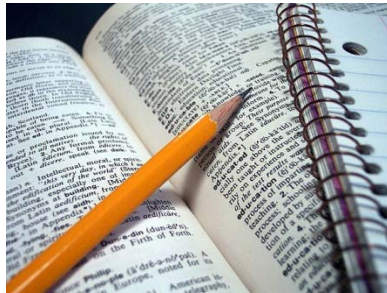


Study 2

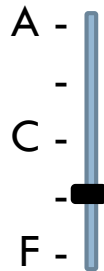
Current Status of your classes:

Day: 58

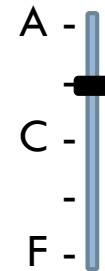
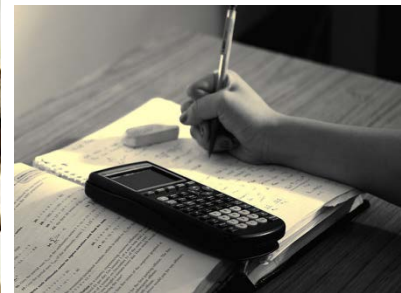
English



History

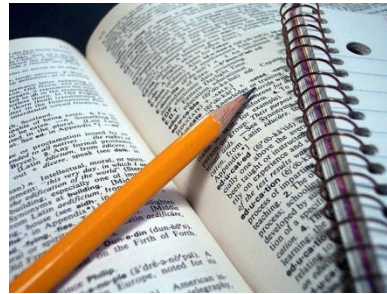


Math



Study 2 (n = 72)

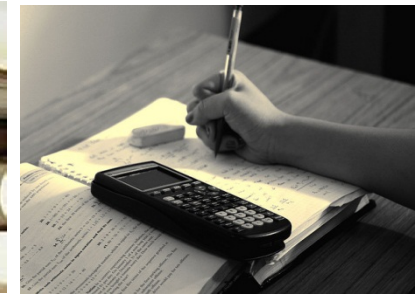
English



History

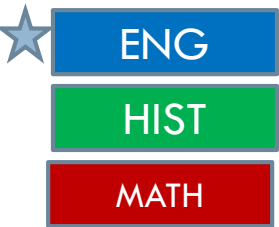


Math

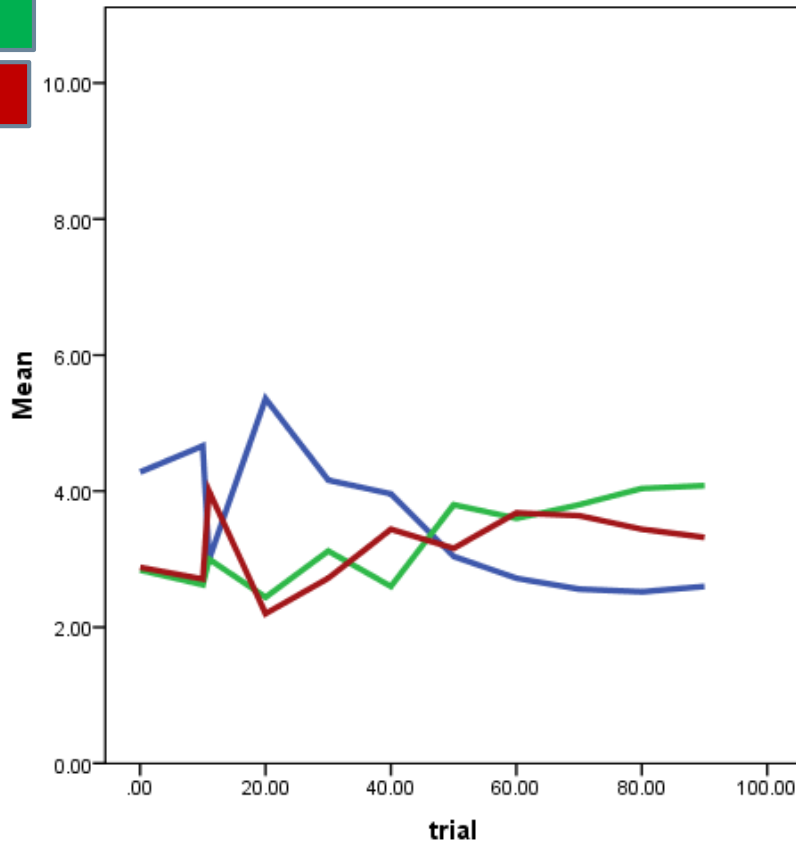


□ Mean rank	2.2	1.7	1.9
□ Mean importance (1-5)	3.2	4.1	3.8
□ Mean importance (allocation of 100 pts.)	27.2	38.2	34.5

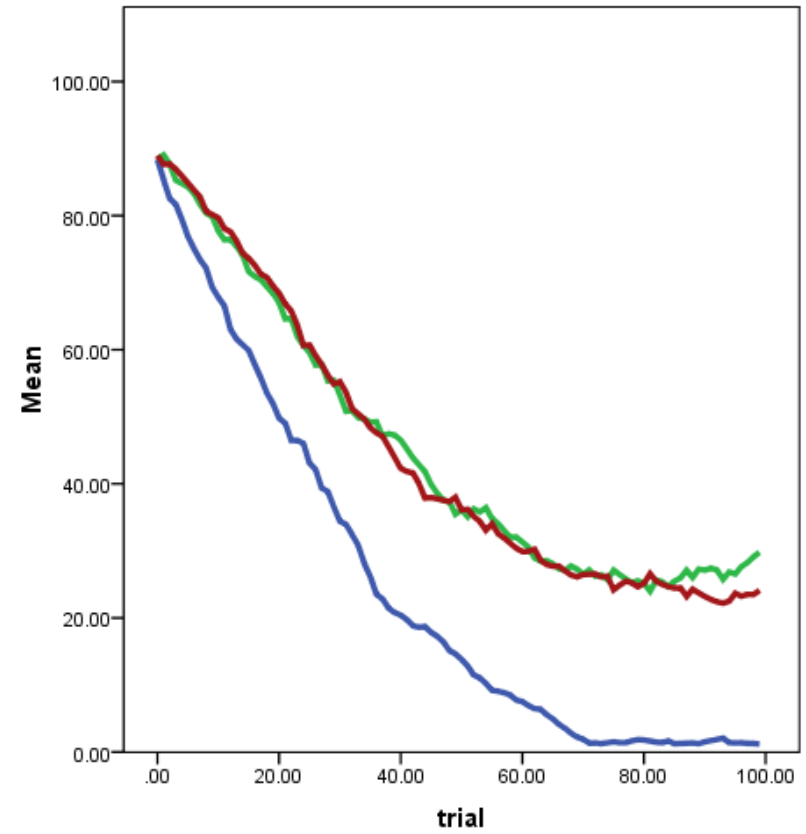
Study 2



CHOICE



STATUS

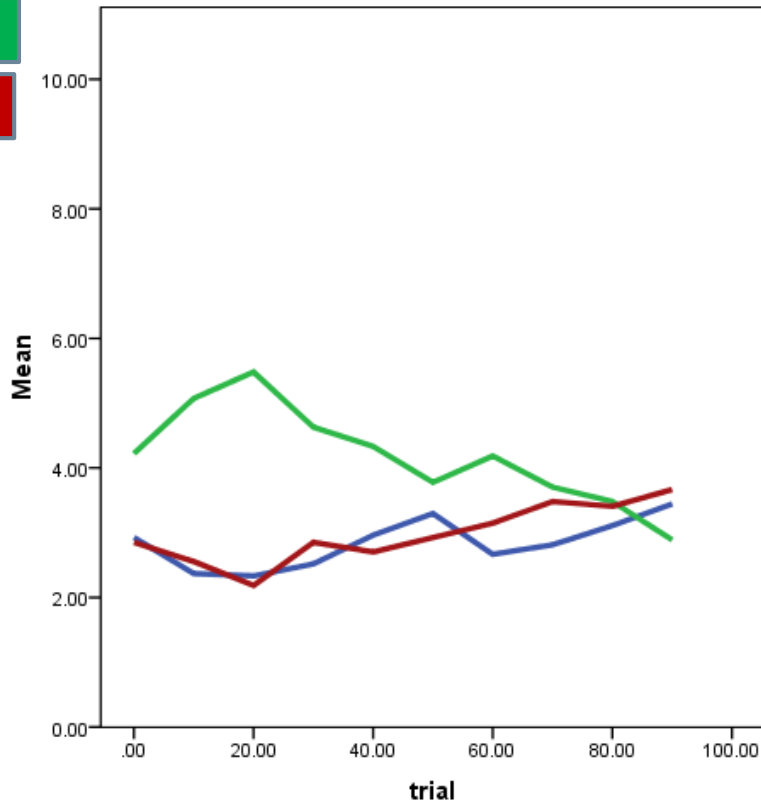


Study 2

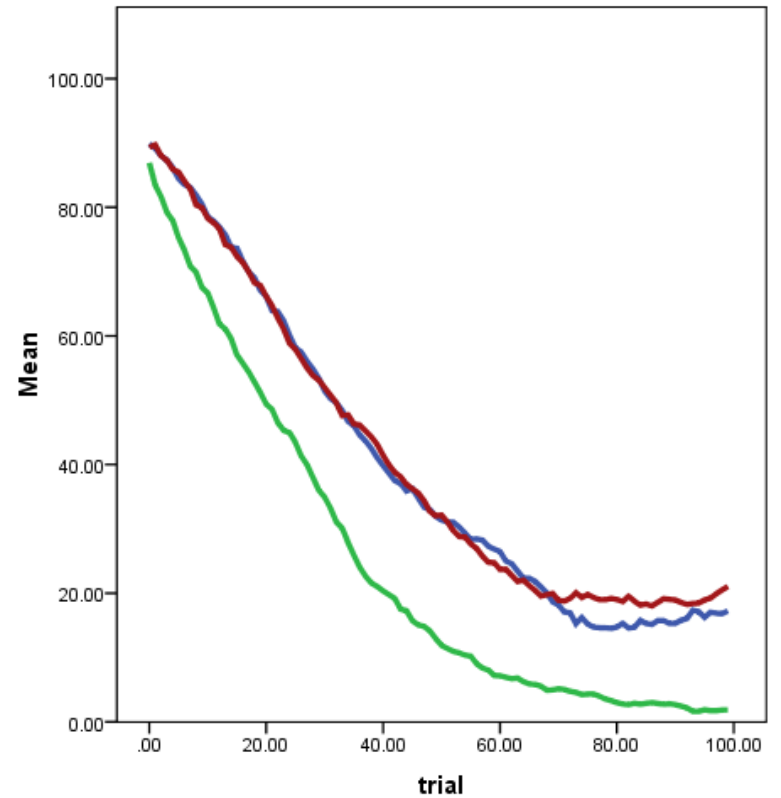


- ENG
- HIST
- MATH

CHOICE



STATUS



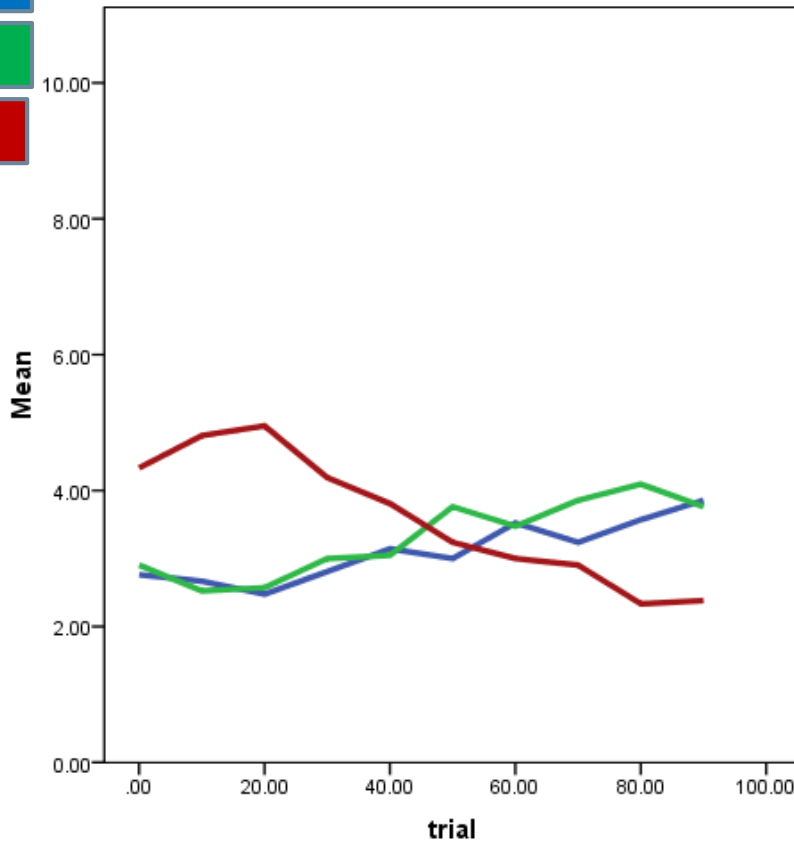
Study 2



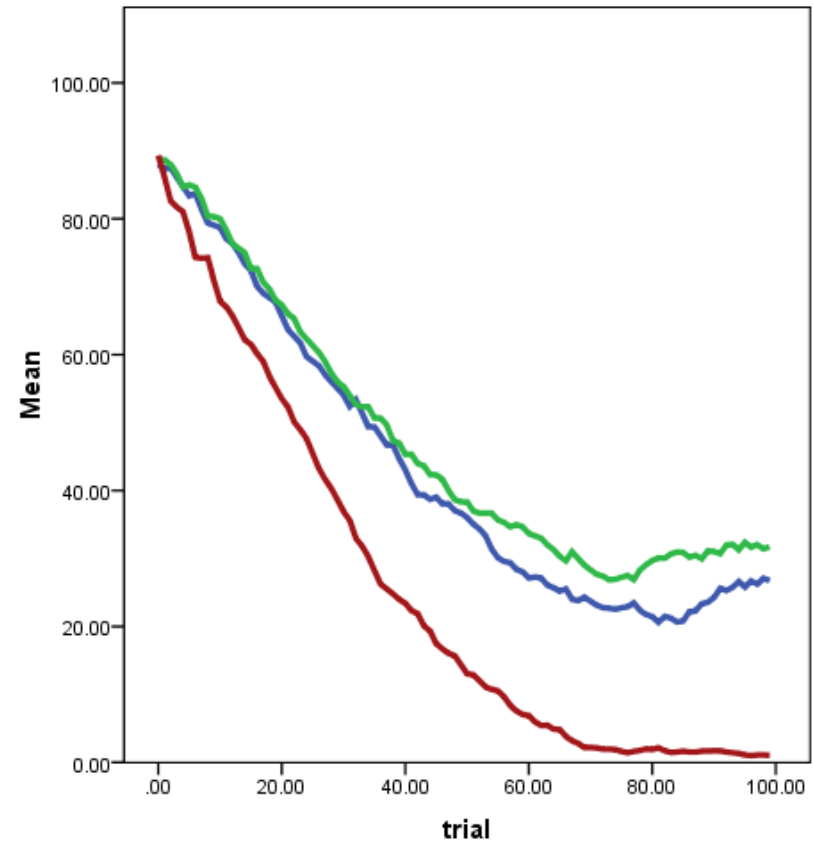
★

- ENG
- HIST
- MATH

CHOICE



STATUS

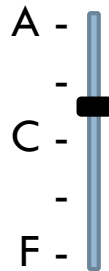
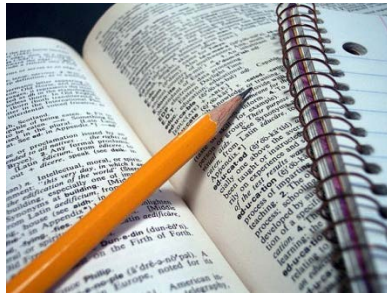


Study 2

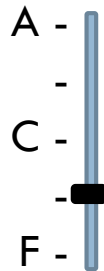
Current Status of your classes:

Day: 58

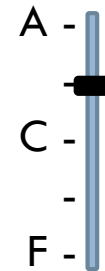
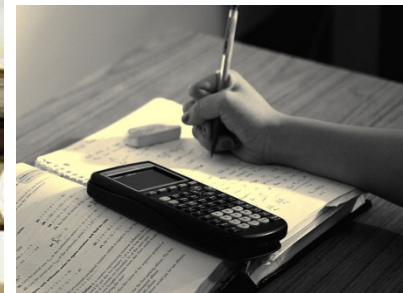
English



History



Math

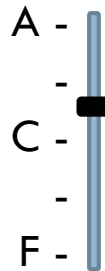
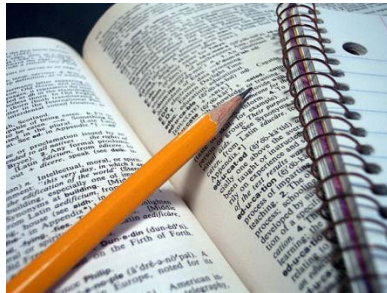


Study 3

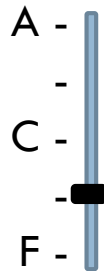
Current Status of your classes:

Day: 58

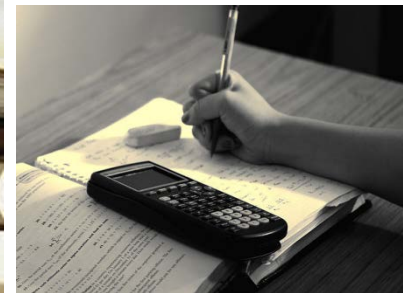
Sociology



History

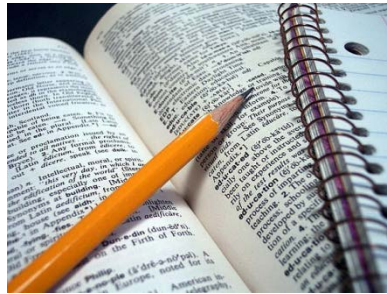


★ Psychology



Study 3 (n = 96)

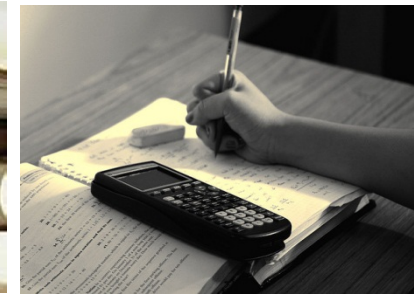
Sociology



History



Psychology



□ Mean rank	2.5	2.2	1.2
□ Mean importance (1-5)	2.7	3.2	4.5
□ Mean importance (allocation of 100 pts.)	24	26.5	49.5

Study 3

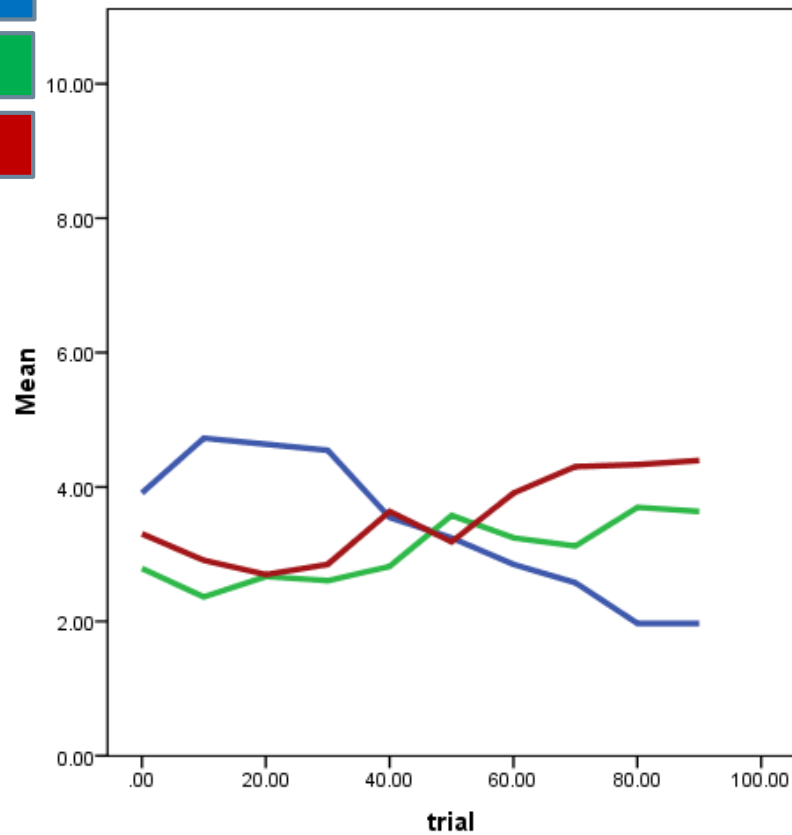


SOC

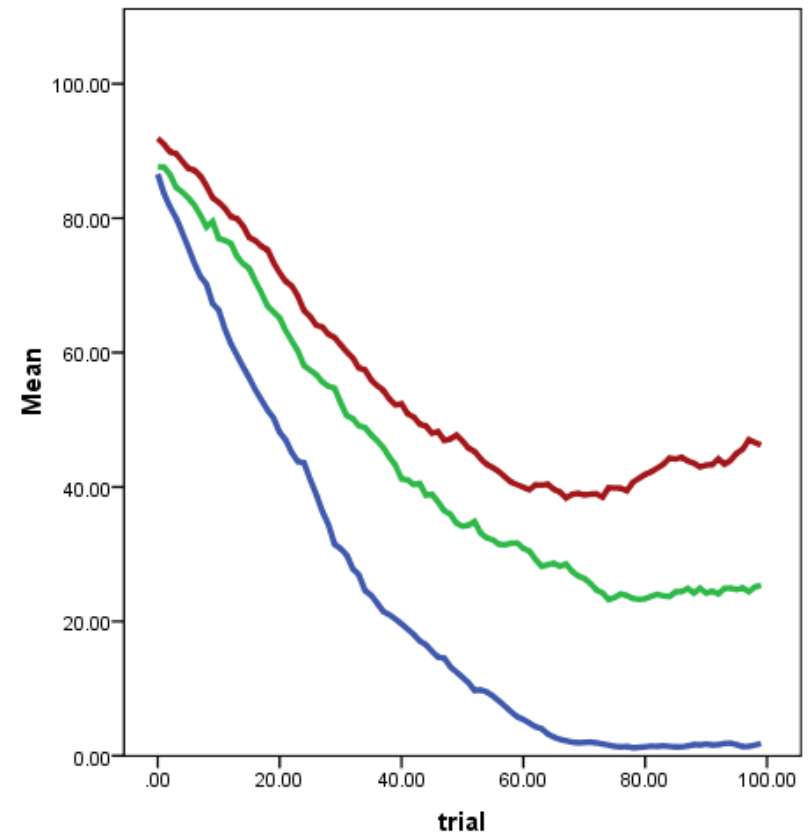
HIST

PSYCH

CHOICE



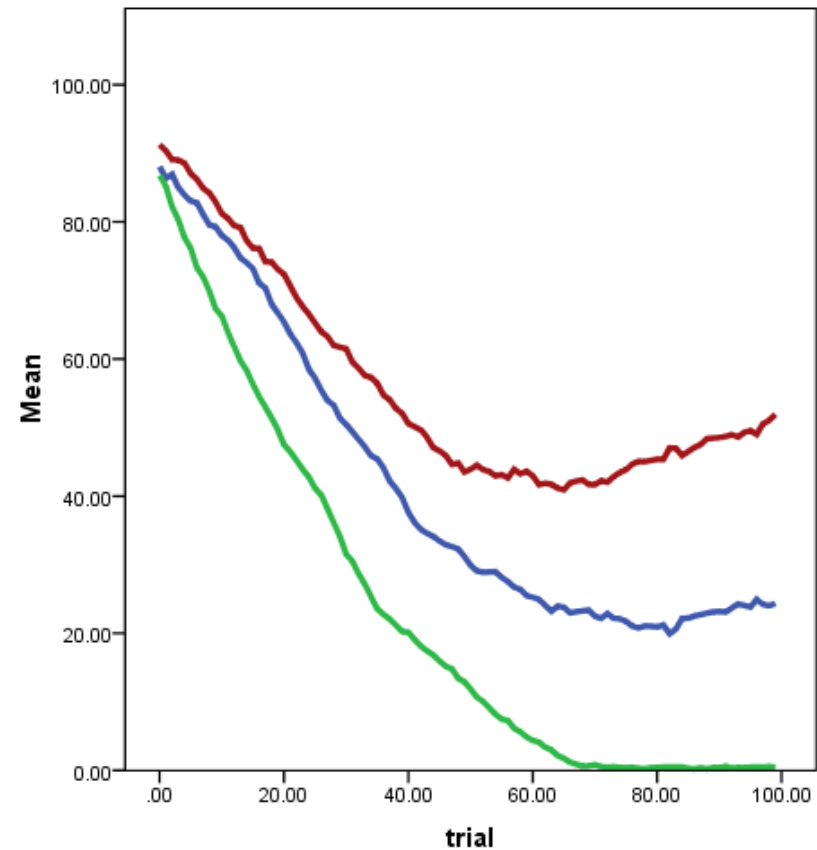
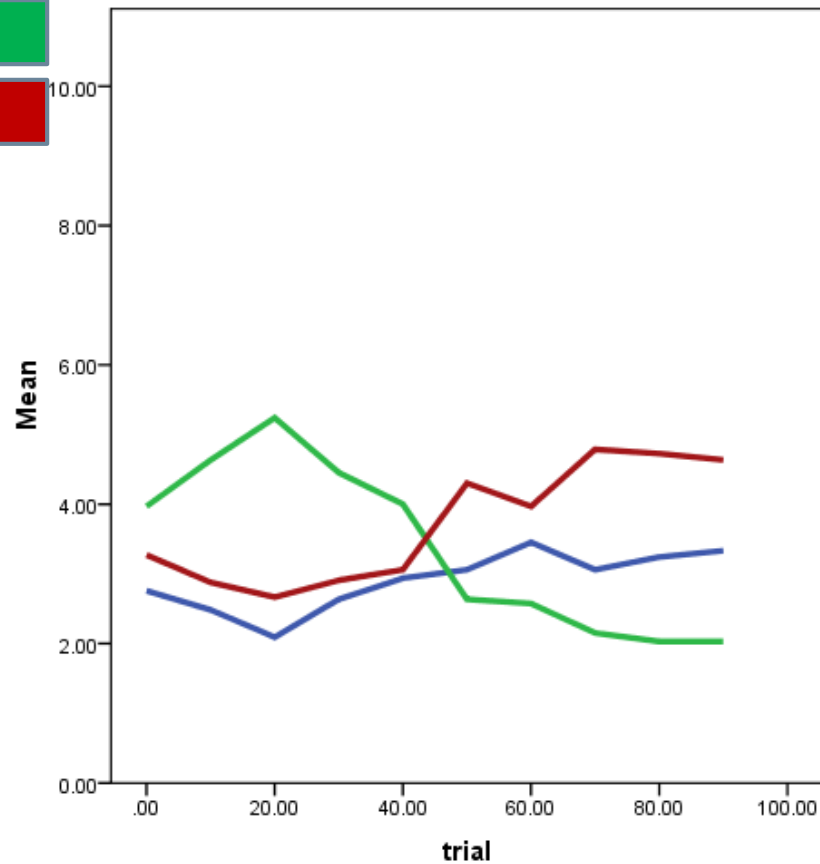
STATUS



Study 3

CHOICE

STATUS



Study 3



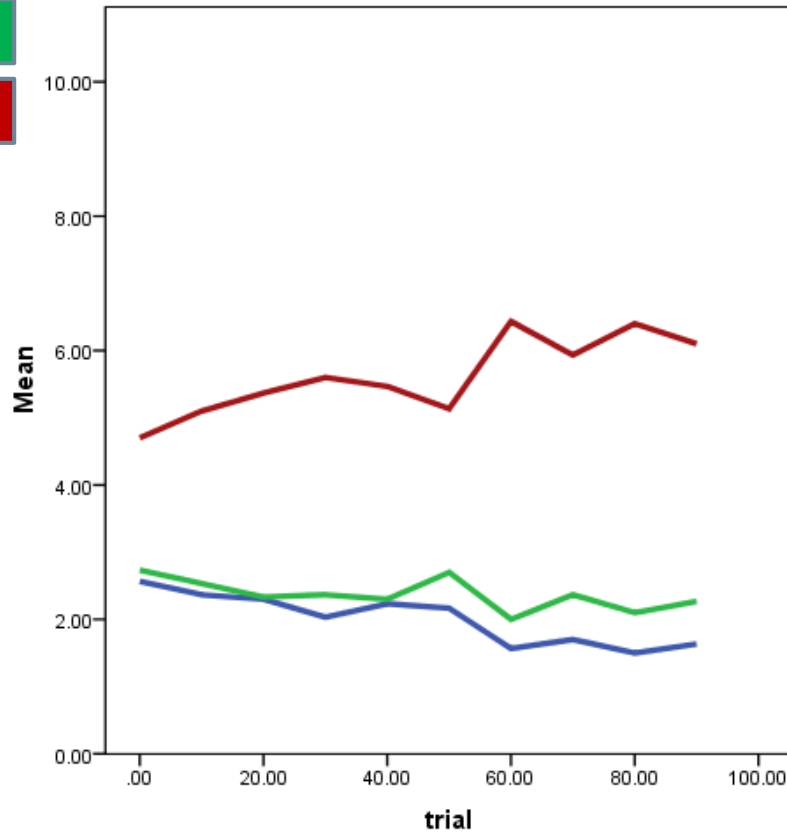
SOC

HIST

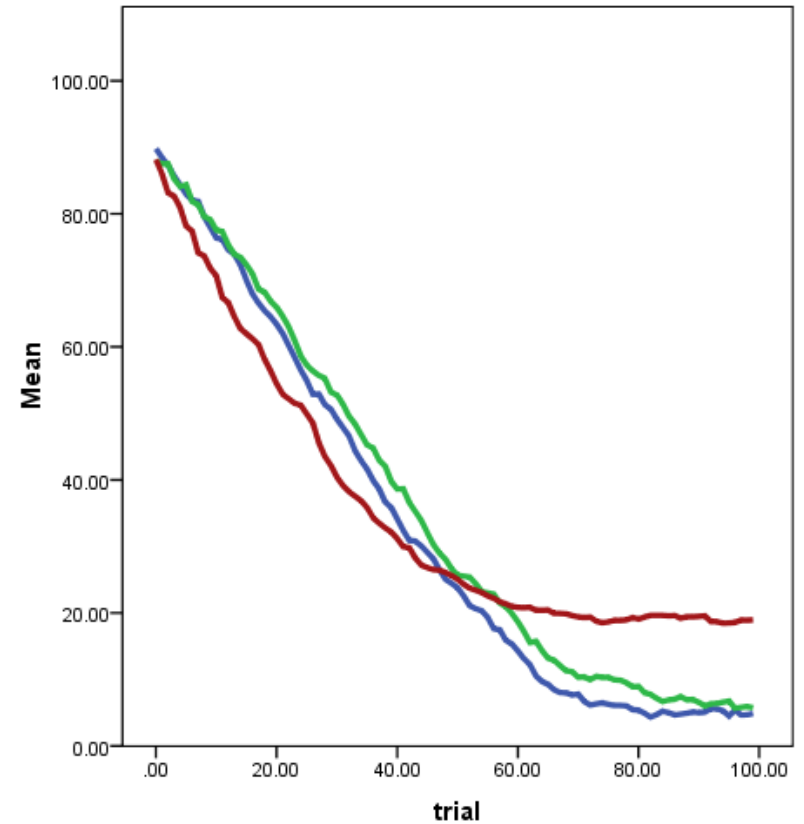


PSYCH

CHOICE



STATUS



Conclusions & future work

- Participants will escalate commitment
 - But only when the goal is more important than competing goals
 - De-escalation of commitment is rarely total (i.e. Shin & Ariely, 2004)
 - Individual level analysis under way

Questions?



Multiple Goal Pursuit (effective action)

Per trial decay

effect if chosen

Effective

-3

+12

-3

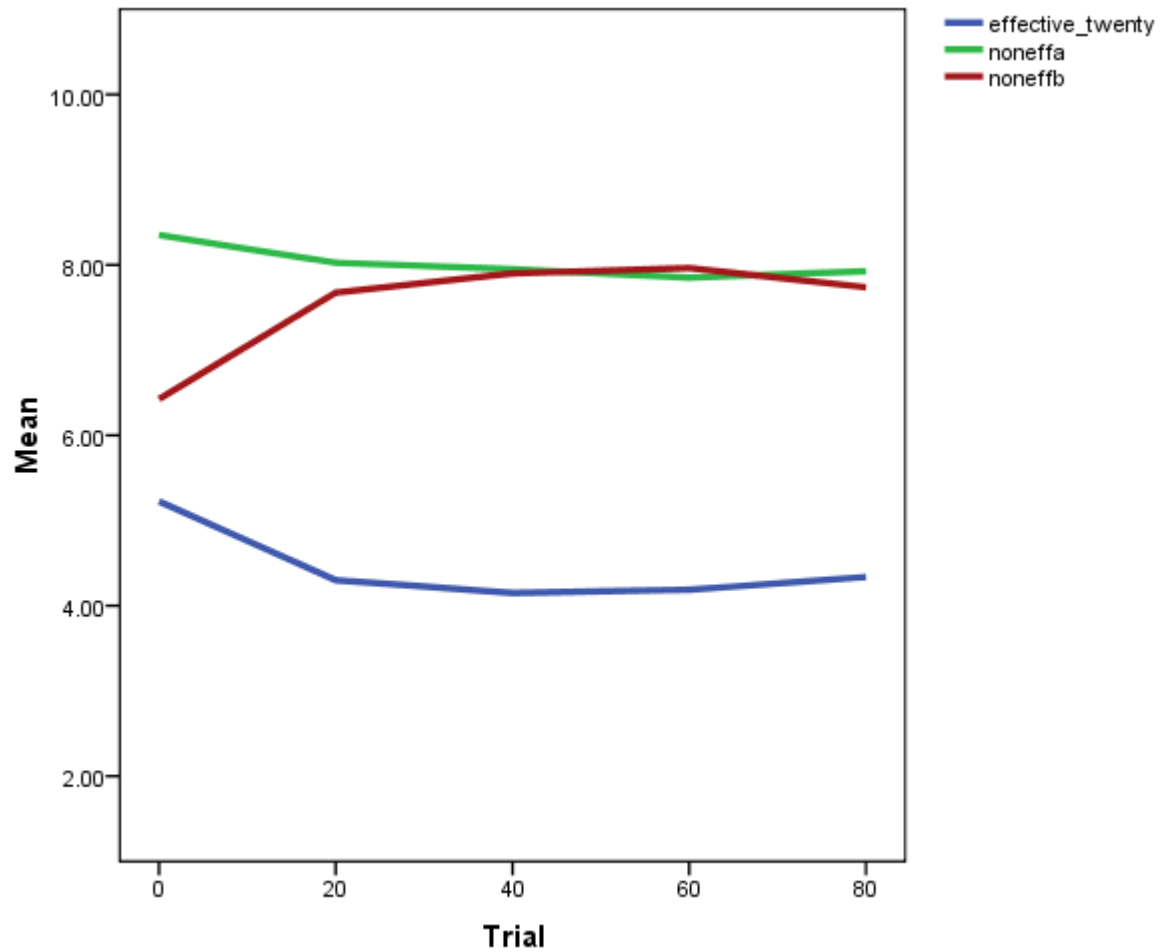
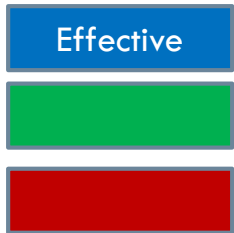
+9

-3

+9

Multiple Goal Pursuit (effective action)

CHOICE
(20 trial blocks)



Related work

- Sunk Costs (e.g. Arkes & Blumer, 1985)
- Unavailability & keeping doors open (Shin & Ariely, 2004)

Clicks Remaining: 45

Score: 144

