

# The Pain of Doing Nothing: Preferring Negative Stimulation to Boredom

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## Introduction

• Deliberate reverie, or the ability to purposefully engage in enjoyable mental thought, is deeply valued but surprisingly difficult<sup>1</sup>

• Deliberate reverie may be difficult partly due to our desire for external stimulation from the environment. Many people appear to find external stimulation more enjoyable than internal mental stimulation<sup>1</sup>

• Does our desire for external stimulation (compared to mental stimulation) continue even if that external stimulation is negative?

• The present study asked participants to engage in deliberate reverie in an empty room for 15 minutes. During this time, participants were given the option of experiencing negative external stimulation in the form of voluntarily self-administering a mild electric shock.

### Hypotheses

• People will not enjoy entertaining themselves with their own thoughts in the absence of external stimulation

• People will voluntarily choose negative external stimulation (i.e., an electric shock) over the boredom of entertaining themselves with their own thoughts when given the choice

## Methods

### Participants

- 55 UVA undergraduates (31 female, 24 male)
- Ages 18-25 (Mean age = 20.40,  $SD = 1.60$ ).

### Procedure

#### Initial Rating Phase

- Experienced 3 positive and 3 negative stimuli, including a mild electric shock (4 mA for men, 2.3 mA for women)
- Rated their enjoyment and how much they would pay to experience/not experience the stimulus again later in the study

#### Thinking Period

- Participants sat by themselves alone in an empty room for 15 minutes with instructions to entertain themselves with their own thoughts.
- Participants were told that at any time during the "Thinking Period" they could voluntarily experience one "randomly selected" stimulus from earlier in the study. It was emphasized that this option was entirely voluntary.

• In reality all participants were given the "electric shock" option. A computer recorded whether and how many times the participant chose to administer an electric shock to him or herself during the Thinking Period

#### Post-measures

- Participants completed ratings of their enjoyment of the Thinking Period, as well as individual difference measures

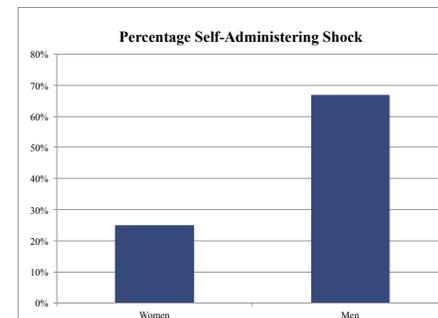
## Results

**Shock Ratings & Enjoyment of Thinking Period:** Men and women did not differ in their shock ratings ( $p = .17$ ) or willingness to pay to avoid future shocks in the study ( $p = .38$ ). Men reported slightly higher enjoyment of the Thinking Period than women ( $p < .01$ ). Participants who went on to shock themselves showed no difference in their shock ratings ( $p = .28$ ), willingness to pay ( $p = .16$ ), or their enjoyment of the Thinking Period ( $p = .73$ ) than participants who did not go on to shock themselves.

	Enjoyment of Thinking Period	Pleasantness of Shock	Willingness to Pay To Avoid Shock
Men	5.44 (1.83)*	3.96 (1.30)	\$1.50 (1.35)
Women	4.00 (1.67)*	4.53 (1.63)	\$1.88 (1.69)
Shockers	4.53 (1.75)	4.52 (1.36)	\$1.39 (1.36)
Non-shockers	4.71 (1.99)	4.07 (1.62)	\$1.98 (1.66)

**Figure 1.** Descriptive data for participants' shock ratings (pleasantness on a 1-9 pt scale, willingness to pay \$0-\$5) and enjoyment of Thinking Period (1-9 pt scale), broken down by gender and shockers/non-shockers

**Self-Administered Shocks:** 67% of men voluntarily chose to experience shocks during the Thinking Period (range = 0-4,  $M = 1.47$ ,  $SD = 1.46$ , not including one outlier who administered 190 shocks to himself), compared to 25% of women (range = 0 - 9,  $M = 1.00$ ,  $SD = 2.32$ ).



**Figure 2.** Percentage of men vs women who voluntarily chose to self-administer at least one electric shock during the Thinking Period

## Positive and Negative Rating Stimuli



Spanish Guitar



Knife Scraping In  
A Bottle



Electric Shock

2 Ag-AgAl ankle electrodes  
with isolated physiological stimulator  
(Colbourn Instruments)

## Conclusions

(Non) Enjoyment of Reverie

- Overall, participants did not enjoy engaging in mental reverie and reported that it was "difficult" and "boring"
- Participants reported that the electric shock was unpleasant and that they would pay to avoid experiencing it again

Opting for Electric Shocks

- A substantial percentage of participants opted to voluntarily self-administer an electric shock rather than sit quietly with their thoughts
- Men were more likely than women to voluntarily seek external stimulation in the form of an electric shock
- People do not seem to anticipate this, since they told us earlier in the study that they would pay an average of \$1.87 ( $SD = 1.57$ ) out of \$5 to avoid experiencing the shock again in the second half of the study

Conclusions

- Relying on the thought in the absence of external stimulation may be particularly difficult. Many participants elected to receive negative stimulation over no external stimulation
- Future research might examine why mental stimulation is so difficult and aversive that people are willing to seek out a negative form of external stimulation if that is their only available option.



## References

1. Wilson, T.D., Reinhard, D., Westgate, E., Gilbert, D., Ellerbeck, N., Hahn, C., Brown, C., & Shaked, A. Just Think: The Challenges of the Mind at Play. Manuscript under review.

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