



What is Pressure? Evidence for Social Pressure as a Type of Regulatory Focus.

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Introduction

- Choking under pressure – abnormally poor performance when under pressure.^{1,2}
- Previous work suggests pressure harms Explicit Rule-Based (RB) tasks, but *helps* Implicit Information-Integration (II) tasks.²
- However, what if pressure induces a *prevention focus*?

Regulatory Focus

Regulatory Focus³

Promotion → *Approach* positive states.

Prevention → *Avoid* negative states.

- High Pressure may induce a prevention focus
- Low Pressure participants may be in a promotion focus.

Regulatory Fit

- A regulatory fit occurs when one's regulatory focus (i.e. long-term goal) matches the reward structure of the task (i.e. short term goal).
- In category learning, a *regulatory fit* has been shown to help RB performance but hurt II.⁴
- Effects of pressure could reverse with losses.

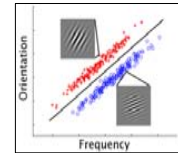
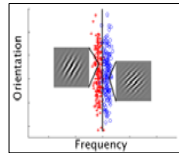
Regulatory Focus

Promotion (Low Pressure) Prevention (High Pressure)

Fit Increased WM	Mismatch Decreased WM
Mismatch Decreased WM	Fit Increased WM

Category Learning

Rule-Based Information-Integration



- Verbalizable
- Explicit
- Requires WM and attention
- Not Verbalizable
- Implicit
- Does not require WM and attention

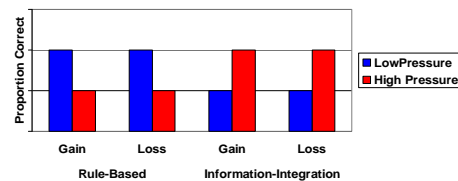
-A regulatory fit should lead to better RB performance, but worse II performance

Hypotheses

-WM Distraction Hypothesis suggests that pressure decreases WM resources regardless of the reward structure.

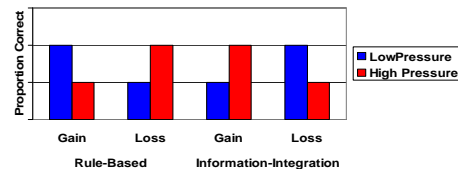
-Should lead to choking on RB, excelling on II.

Predictions Based on WM Distraction



-Regulatory Fit hypothesis predicts opposite performance for participants with a gains or losses reward structure.

Predictions Based on WM Distraction



General Method

- We replicated previous work done with a gains reward structure.
- Ran the same task with a losses reward structure.

Low Pressure High Pressure



• Told to "do your best"

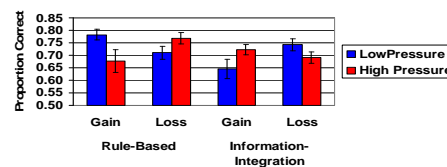
- Paired with a 'partner'
- Both reach criterion, both get \$6
- One fails neither get \$6
- Partner reached criterion

- Participants with a losses reward structure lost points each trial.
- They lost more points for an incorrect response.
- Had to minimize losses.

Results

-Results are consistent with the Regulatory Fit hypothesis.

Accuracy across all blocks



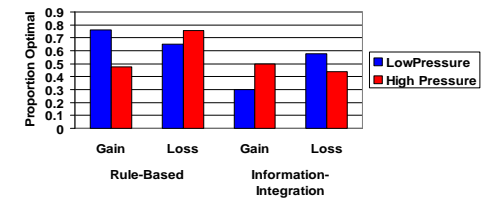
- Regulatory Fit led to better RB performance.
- Regulatory Mismatch led to better II performance.

Results

Model-Based Analysis

- We used decision-bound models to determine the strategy used by each participant.
- Use of the optimal RB or II model leads to the best performance

Proportion Best Fit by Optimal Model



- Participants in a Fit were more likely to use the optimal RB model
- Participants in a Mismatch were more likely to use the optimal II model

General Discussion

- Results support the hypothesis that pressure induces a prevention focus.
- This interacts with the reward structure of the task to produce a regulatory fit or mismatch.
- Fit leads to better RB performance, mismatch leads to better II performance.
- Pressure does not appear to cause WM decrements regardless of the reward structure.
- Suggests that pressure may lead to choking or excelling in different situations.

References

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 [3] Higgins, E. T. (2000). Making a good decision: Value from fit. *American Psychologist*, 55, 1217-1230.
 [4] Maddox, W.T., Baldwin, G.C., & Markman, A.B. (2006). A test of the regulatory fit hypothesis in perceptual classification learning. *Memory & Cognition*, 34, 1377-1397.

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Reward Structure
Gains
Losses