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# How Does Reading Fiction Improve Theory of Mind?

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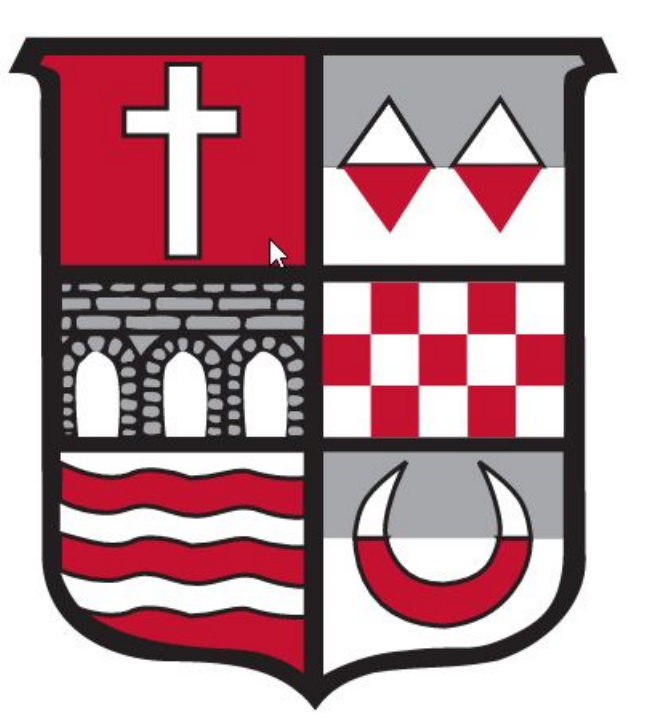
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# How Does Reading Fiction Improve Theory of Mind?

Anna Brown, Noelle Mayne, Gabrially Monferrato, Margot Simeone  
Faculty Mentor: Stephen Briner

## Abstract

How does reading fiction influence how we interact with others? Previous research has suggested that reading literature may increase skills related to understanding what other people are thinking (Theory of Mind, ToM). But reading "pop fiction" does not. Why do these effects occur?

### Key Findings

- 1) People who have read less than their counterparts experience less of the effect of literature on theory of mind.
- 2) Stories that require the reader to infer the characters' emotions may lead to higher scores on measures of ToM

## Introduction

•How does reading fiction influence our interpersonal behavior?

•Fiction helps us understand the perspectives of others (Black & Barnes, 2008; Mar & Oatley, 2008) and that reading fiction makes us more empathetic toward other people (Pinker, 2011).

•But does the type of fiction matter? Are some fictional texts better than others for increasing interpersonal understanding?

•—"Literary" fiction tends to focus on the "point" of the story—what is the author trying to convey? Often focuses on understanding individuals (Vipond & Hunt, 1984).

•"Pop" fiction focuses more on the plot, with more emphasis on characters overcoming challenges than on the character's internal thoughts/feelings (Vipond & Hunt, 1984).

•Recent evidence suggests that literary fiction improves people's ability to recognize what others are thinking and feeling (Theory of Mind; ToM). But reading pop fiction did not improve ToM (Kidd & Castano, 2013).

•**Current Study** extends Kidd & Castano's (2013) finding to determine whether reading literature vs. pop fiction affects reasoning about interpersonal ethical dilemmas where the reader must choose between saving an individual or saving a group.

•**Hypothesis:** Reading literary fiction should make participants more likely to choose to save the individual than if they had read pop fiction.

## Methods and Results

### Materials

Stories taken from Kidd & Castano (2013, Experiment 5)

Literary Story: "Corrie" by Alice Munro

Pop Story: "Space Jockey" by Robert Heinlein

**Content Analysis:** Character emotions are explicitly stated in the Pop story, but the emotions in the Literature story are often left unstated, meaning the reader needs to infer the emotional responses. This qualitative analysis was confirmed quantitatively using Linguistic Inquiry and Word Count (LIWC; Pennebaker et al., 2015)

LIWC emotion word counts for the two stories

Story	Affect	Positive Emotions	Negative Emotions	Anxiety	Anger	Sadness
Space Jockey (pop)	4.66	2.79	1.85	0.42	0.67	0.43
Corrie (literary)	3.75	2.46	1.28	0.1	0.32	0.43

### Example Stimuli (Excerpts)

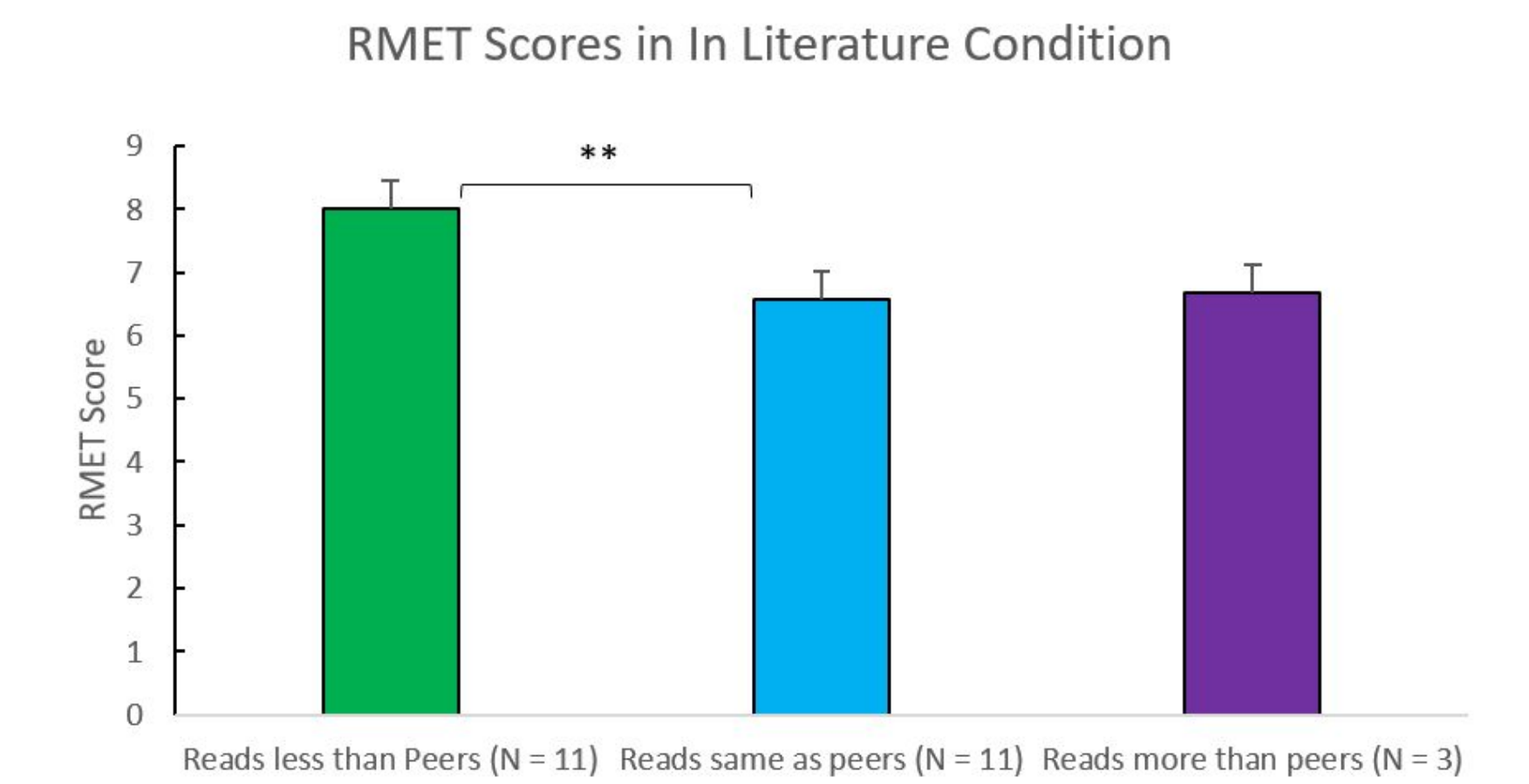
Space Jockey (Pop Fiction)

"Don't look at me that way." She waited, hoping that he would speak, regretting the side issue, and wondering how to tell him that her own fretfulness was caused, not by disappointment, but by gnawing worry for his safety every time he went out into space.

She went on desperately, "You don't have to take this flight, darling; you've been on Earth less than the time limit. Please, Jake!"

Corrie (Literary)

"There is no news to give him. No news, because there never was any. No news about Sadie, because Sadie doesn't matter and she never did. No post office box, because the money goes straight into an account or maybe just into a wallet. General expenses. Or a modest nest egg. A trip to Spain. Who cares? People with families, summer cottages, children to educate, bills to pay—they don't have to think about how to spend such an amount of money. It can't even be called a windfall. No need to explain it."



In the literature condition, people who read less experienced a bigger benefit of literature on the RMET task,  $F(2,23) = 4.87, p = .001$ . No such relationship was observed for the pop condition.

## Conclusions & Future Directions

Results replicate findings of Kidd & Castano (2013): exposure to literature has an effect on ToM tasks.

This effect seems to be greater for those who are less exposed to fiction prior to experiment.

Results might be driven by different levels of "emotional cohesion" in the two stories. The more you have to infer the emotions of characters, the easier it is to infer emotions on the RMET task.

### Future Goals for the Project

We are collecting more stories that feature character emotions that have to either be inferred or are stated directly. This will help us test the hypothesis that "emotional cohesion" in a text affects Theory of Mind task performance.

## References

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- Pinker, S. (2011). *The better angels of our nature: Why violence has declined*. New York: Viking Press.
- Vipond, D., & Hunt, R.A. (1984). Point-driven understanding: Pragmatic and cognitive dimensions of literary reasoning. *Poetics*, 13, 261-277.

## Reading the Mind in the Eyes



Common measure of Theory of Mind (Baron-Cohen REF)

10-item version of the RMET

## Procedure

Participants ( $N = 26$ ) were randomly assigned to either the **literary fiction** condition or the **pop fiction** condition, and read one of the 3 possible stories for their condition. After reading their assigned story, they completed the RMET task, and indicated whether they enjoyed reading Less than their peers, as much as their peers, or more than their peers.

## Preliminary Results

