COMPARING LITERARY AND POPULAR GENRE FICTION

THEORY OF MIND, MORAL JUDGMENTS & PERCEPTIONS OF CHARACTERS

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Theory of Mind (ToM) - The process(es) through which we infer and represent others’ mental states (Fiebich & Coltheart, 2015)

- Evidence of automatic and effortful processes
- Related but not equivalent to empathy
- Not all social perception requires active ToM
  - Stereotypes
  - Social scripts
  - Personality traits

Fiction is a Simulation of Social Experience (Mar & Oatley, 2008)

- Fictional experiences prepare us to understand others in the real world

Avid readers perform better on tests of ToM (e.g., Mar, Oatley, & Peterson, 2009)
BACKGROUND: VARIETIES OF CHARACTERIZATION

Social and Literary categorization

- “Readers can apply personality theories to the understanding of literary characters if they find that a character’s traits agree with those of their social knowledge structures.” (Schneider, 2001, p. 612)
- “readers learn to expect certain characters with certain traits and functions to appear in certain types of texts.” (Schneider, 2001, p. 613).

Text-specific categorization

Personalization

- “Whenever the reader does not categorize a character, i.e., when he or she is not able or willing to apply stored structures of knowledge for ad hoc impression formation” (Schneider, 2001, p. 625)

Complex social situations and implied mental states draw on ToM (Zunshine, 2015)
Contemporary literary fiction, compared to popular genre fiction is generally more likely to prompt personalization (Eder, Jannidis, & Schneider, 2010; Miesen, 2004).

Experimental studies show that reading literary fiction improves ToM performance (Kidd & Castano, 2013; Kidd, Ongis, & Castano, 2016)

- See also
  - Black and Barnes (2015) for a pre- and post-test design
  - Pino and Mazza (2016) for a longitudinal design
- But, Panero et al. (2016; c.f. Kidd & Castano, 2017); Samur, Topps, & Koole (2017)

Correlational studies show that familiarity with literary, but not genre, authors predicts ToM performance (Kidd & Castano, 2016)
REPLICATION AND EXTENSION: RESEARCH QUESTIONS

How reliable is the effect of reading literary fiction on Theory of Mind?

- Some studies have failed to find the effect
  - Panero et al. (2016) – a re-analysis (Kidd & Castano, 2017) did show an effect
  - Samur, Topps, & Koole (2017) – unclear methodological differences

- Value of high-powered, pre-registered replications
  - Larger samples provide more accurate estimates of effects
  - *A priori* protocols and analysis plans help ensure control of false positives
How does reading literary fiction affect the role of Theory of Mind in moral judgments?

- Theory of Mind is required to incorporate actors’ beliefs and intentions into moral judgments alongside outcomes (e.g., Young et al., 2010)
- Lifetime exposure to fiction has been associated with giving more attention to intentions in moral judgments (Tamir et al., 2016)
REPLICATION AND EXTENSION: RESEARCH QUESTIONS

Do literary and popular genre fiction reliably differ in how they depict characters?

- Lack of direct empirical validation of this assumption
- The relative roles of readers and texts is unclear
HYPOTHESES

- Participants assigned to read literary fiction will demonstrate better performance on tests of Theory of Mind
  - Higher scores on the Reading the Mind in the Eyes Test (replication of Kidd & Castano, 2013)
  - Greater role for intentions in a scenario-based moral judgment task (extension)

- Participants will rate characters in popular genre fiction as more predictable and stereotypic than those in literary fiction
  - Lower ratings on a new 7-item Character Clarity Scale (CCS)
Three pre-registered experiments (N = 955)

- Random assignment to reading condition

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<thead>
<tr>
<th>Literary fiction (N = 474)</th>
<th>Popular genre fiction (N = 426)</th>
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<tbody>
<tr>
<td>2012 PEN/O. Henry Prize</td>
<td>Anthology of Popular Fiction</td>
</tr>
<tr>
<td>Corrie - Alice Munro</td>
<td>Jane - Mary Roberts Rinehart</td>
</tr>
<tr>
<td>Uncle Rock - Dagoberto Gilb</td>
<td>Space Jockey - Robert Heinlein</td>
</tr>
<tr>
<td>The Vandercook - Alice Mattison</td>
<td>Too Many Have Lived - Dashiell Hammett</td>
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# Reading the Mind in the Eyes (RMET)

(BARON-COHEN, WHEELWRIGHT, HILL, RASTE, & PLUMB, 2001)

36 Items

Score = sum of correct responses

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<tr>
<th>Literary</th>
<th>Popular genre</th>
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<tbody>
<tr>
<td>26.54</td>
<td>25.99</td>
</tr>
<tr>
<td>[26.17, 26.90]</td>
<td>[25.60, 26.38]</td>
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$$F(1, 894) = 4.03, p = .045, \eta_p^2 = .004, 95\% \text{ CI [.000, .017]}$$
MORAL JUDGMENT TASK
(YOUNG, CUSHMAN, HAUSER, & SAXE, 2007)

Moral judgments based on intent (ToM) and outcome (Cushman, 2008)
- Adults with autism who pass false-belief task show less focus on intentions than neurotypical adults (Moran et al., 2011)
- Temporoparietal Junction (central to ToM) activity associated with focus on intentions (Young & Saxe, 2008; Young et al., 2010)

Assesses extent to which beliefs of actors influence moral judgments of their actions
- 2(Belief: Neutral vs. Negative) x 2(Outcome: Neutral vs. Negative)
- How morally permissible was [the actor’s behavior]?
- 1(not at all permissible) - 5(completely permissible)
EXAMPLE SCENARIO: NEUTRAL BELIEF & NEGATIVE OUTCOME
[NEGATIVE BELIEF & NEUTRAL OUTCOME]

Grace and her friend are taking a tour of a chemical plant. When Grace goes over to the coffee machine to pour some coffee, Grace’s friend asks for some sugar in hers. There is white powder in a container by the coffee.

The white powder is a very toxic substance left behind by a scientist, and therefore deadly when ingested in any form. [The white powder is just the regular sugar that the scientists use every day, and is therefore perfectly safe to have in coffee.]

The container is labeled "sugar", so Grace believes that the white powder by the coffee is sugar left out by the kitchen staff. [The container is labeled "toxic", so Grace believes that the white powder is toxic substance left behind by a scientist.]

Grace puts the substance in her friend's coffee. Her friend drinks the coffee and dies. [Grace puts the substance in her friend's coffee. Her friend drinks the coffee and is fine.]
MORAL JUDGMENT TASK: RESULTS

Expected result

- The extent to which Accidental Harms are rated as more acceptable than Failed Harms will be greater in the literary condition.
- No evidence for this effect: $F(1, 893) = 0.59, p = .442$

Does reading condition affect responses across scenarios?

- Three-way interaction: Reading Condition, Belief Condition, and Outcome Condition
  - $F(1, 894) = 5.11, p = .024$
- Does the impact of intentions vary across outcomes?

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<thead>
<tr>
<th>Literary – Not at all</th>
<th>Popular genre – Very much</th>
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<tbody>
<tr>
<td>$F(1, 471) = 0.10, p = .751$</td>
<td>$F(1,423) = 11.42, p &lt; .001$</td>
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- In the popular fiction condition, intentions affect judgments more when outcomes are neutral than negative.
CHARACTER CLARITY SCALE ($\alpha = .73$)

Rate character on 5-item Big Five Personality Inventory:

1. How confident are you that your ratings of the character on these dimensions are accurate? (not at all – very)

Rate character on 5-item Semantic Differential:

2. How confident are you that your ratings of the character on these dimensions are accurate? (not at all – very)

3. If you were asked to predict how this character would behave a year from the time in which the story you read took place, how confident would you be in your prediction? (not at all – very)

4. Do you think the main character’s behavior is likely to be the same across situations? That is, do you think they would tend to act in similar ways at work, at home, among friends, on vacation, and so forth? (never the same – always the same)

5. How complex was the main character? (not at all – very) R

6. In conversation, we sometimes hear people say that “he is such a typical man” or “he is such a prototypical lawyer.” By this, people mean that somebody is a certain type of person. How do you perceive the main character? (clearly a type – cannot really tell) R

7. How would you define the character? (clear – obscure) R
### CHARACTER CLARITY SCALE: RESULTS

Significant effect of reading condition: $F(1, 655) = 10.72, p = .001, \eta_p^2 = .016, 95\% \text{ CI } [.002, .040]$

- Qualified by interaction with familiarity with fiction (ART scores): $F(1, 655) = 4.52, p = .033, \eta_p^2 = .006, 95\% \text{ CI } [.000, .024]$

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<tr>
<th>ART Score</th>
<th>Literary fiction</th>
<th>Popular genre fiction</th>
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<tr>
<td>High ART ($p &lt; .001$)</td>
<td>4.6255</td>
<td>4.9672</td>
</tr>
<tr>
<td>Average ART ($p = .001$)</td>
<td>4.697</td>
<td>4.904</td>
</tr>
<tr>
<td>Low ART ($p = .418$)</td>
<td>4.7685</td>
<td>4.8407</td>
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SUMMARY

Reading literary fiction, compared to popular genre fiction, will lead to

significantly better RMET performance. (hypothesis 1)
  • Confirmed

a greater role for actors’ inferred intentions in moral judgments (hypothesis 2)
  • Not directly supported
  • Results show greater consistency in application of belief knowledge in the literary fiction condition

lower ratings of character clarity (hypothesis 3)
  • Confirmed, except among participants with the lowest prior exposure to fiction (bottom 10%)
DISCUSSION

Readers identify differences in characterization across literary and popular genre fiction

Literary and popular genre fiction appear to elicit social cognition in different ways

- Literary fiction may improve Theory of Mind performance at a perceptual level
  - Consistent with RMET results
  - Inconsistent with MJT results
- Literary fiction may influence the deliberateness of thinking about other minds
  - More careful consideration of response options on RMET
  - More balanced consideration of beliefs and outcomes on MJT
    - Alienation
THANK YOU

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