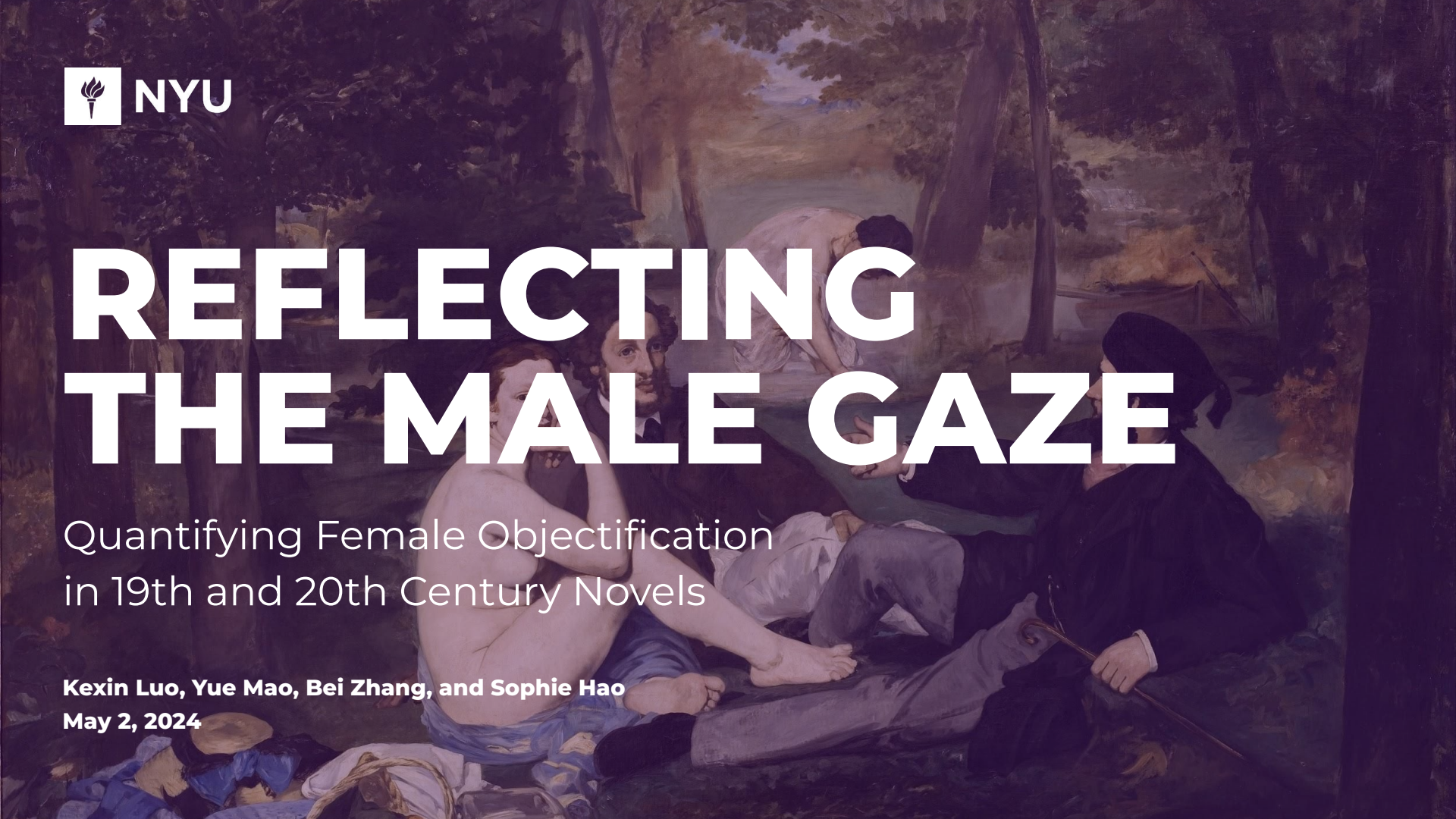

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REFLECTING THE MALE GAZE

Quantifying Female Objectification in 19th and 20th Century Novels

Kexin Luo, Yue Mao, Bei Zhang, and Sophie Hao

May 2, 2024

The Male Gaze

__Woman__ then stands ... bound by a symbolic order in which __man__ ... [__imposes his phantasies and obsessions__] __on the silent image of woman__ still tied to her place __as bearer of meaning, not maker of meaning__.

Laura Mulvey (1975)
Visual Pleasure and Narrative Cinema

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The Male Gaze in Literature

- We propose a methodology for **measuring female objectification** in text using NLP tools.
- We decompose the male gaze in terms of two “biases”: **agency bias** and **appearance bias**.
- We show that English novels from the Late Modern period (c. 1800–1950) exhibit **systematic female objectification**.

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Dimensions of Female Objectification

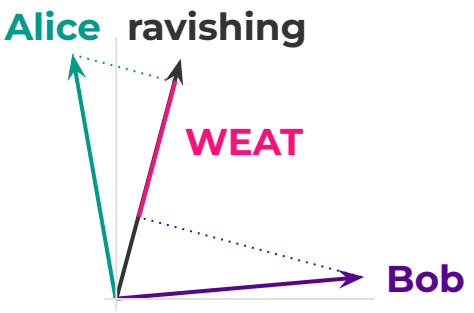
Agency Bias

Are male entities more likely to be **agents** than female entities?

Alice *saw Bob at the park.* ***She*** *waved to him.* ***Bob*** *smiled and walked over.*

Appearance Bias

Are “female” words more **similar in usage** than “male” words **to “appearance” words**?



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Agency Bias

Alice saw Bob at the park. She waved to him. Bob smiled and walked over.

Agency Bias

1. **Entity extraction** using spaCy's NER model

Alice *saw* ***Bob*** *at the park.* ***She*** *waved to* ***him****.* ***Bob*** *smiled and walked over.*

Agency Bias

1. **Entity extraction** using spaCy's NER model
2. Rule-based **gender classification** (similar to Toro Isaza et al., 2023)

Alice *saw* ***Bob*** *at the park.* ***She*** *waved to* ***him****.* ***Bob*** *smiled and walked over.*

Agency Bias

1. **Entity extraction** using spaCy's NER model
2. Rule-based **gender classification** (similar to Toro Isaza et al., 2023)
3. **Agency classification** using Shi and Lin's (2019) semantic role labeler

__Alice__ saw Bob at the park. __She__ waved to him. __Bob__ smiled and walked over.

Male Agentivity: 1/3 = **.33**

Female Agentivity: 2/2 = **1.00**

Agency Bias: **.33**/**1.00** − 1 = **−.67**

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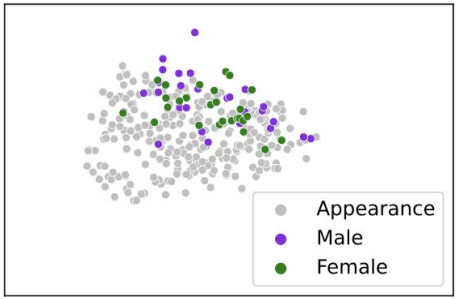
Appearance Bias

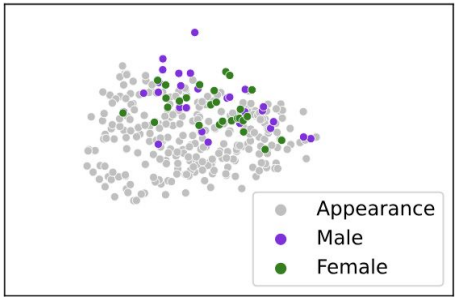
1. Use pre-trained GloVe embeddings



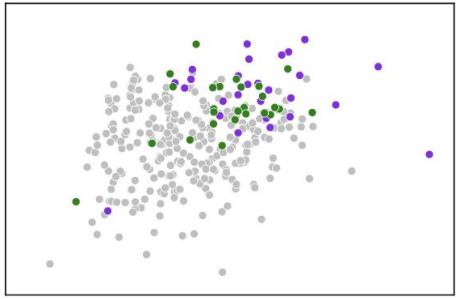
Pre-trained on Wikipedia + Gigaword Corpus

Appearance Bias

1. Use pre-trained GloVe embeddings
2. **Fine-tune** the embeddings on a text



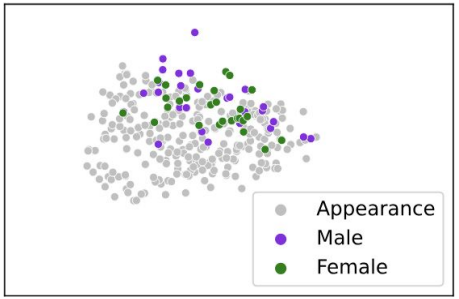
Pre-trained on Wikipedia + Gigaword Corpus



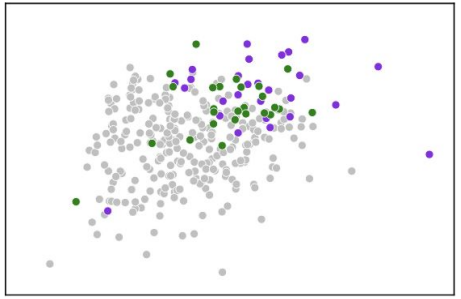
Fine-tuned on *Lady Audley's Secret* by Mary Elizabeth Braddon

Appearance Bias

1. Use pre-trained GloVe embeddings
2. **Fine-tune** the embeddings on a text
3. Use **WEAT** (Caliskan et al., 2017) to measure implicit associations between gender and appearance



Pre-trained on Wikipedia + Gigaword Corpus



Fine-tuned on *Lady Audley's Secret* by Mary Elizabeth Braddon

GloVe WEAT: **.777**

Fine-Tuned WEAT: **2.352**

Appearance Bias:
2.352 − .777 = 1.575

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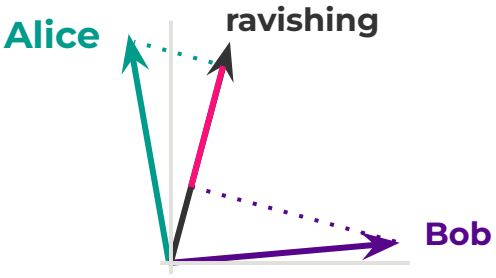
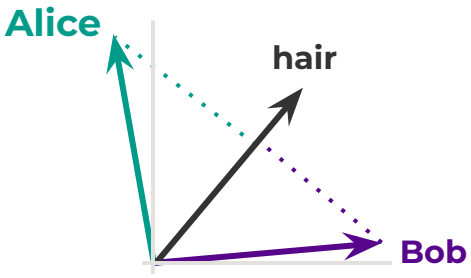
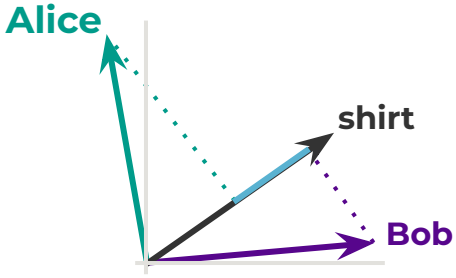
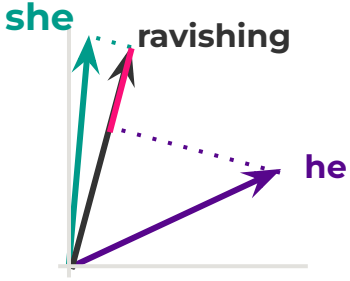
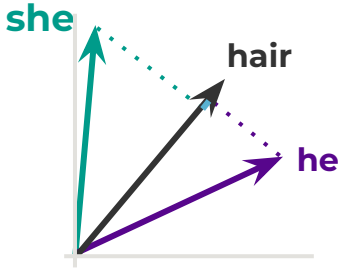
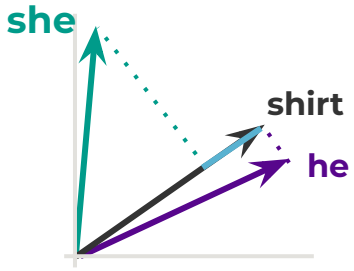












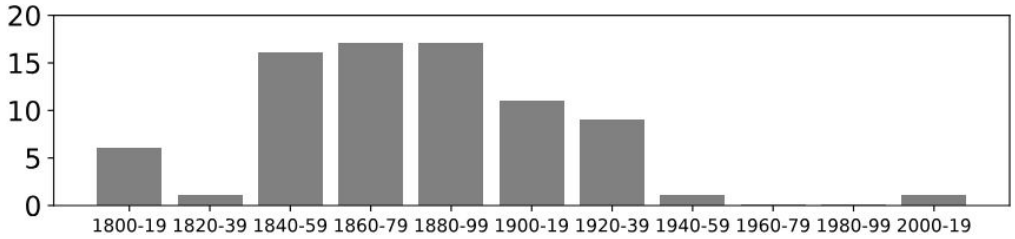
The **Word Embedding Association Test** (Caliskan et al., 2017) measures "implicit associations" in a word embedding space.

Male Words (M)	boy, brother, father, he, him, himself, husband, male, man, mr, sir, uncle, male named entities
Female Words (F)	aunt, female, girl, her, herself, lady, miss, mother, she, sister, wife, woman, female named entities
Appearance Words (A)	belt, complexion, dress, eye, lip, outfit, plain, pore, purse, ravishing, ugly, voluptuous, 992 others

"Male," "female," and "appearance" words used in the WEAT test.

Bias in Literature

We measure female objectification in commonly downloaded novels on Project Gutenberg.



Narrator	Author			Total
	F	M	Unknown	
1p-F	7	2	0	9
1p-M	2	19	1	22
3p	13	31	1	45
Multiple	1	2	0	3
Total	23	54	2	79

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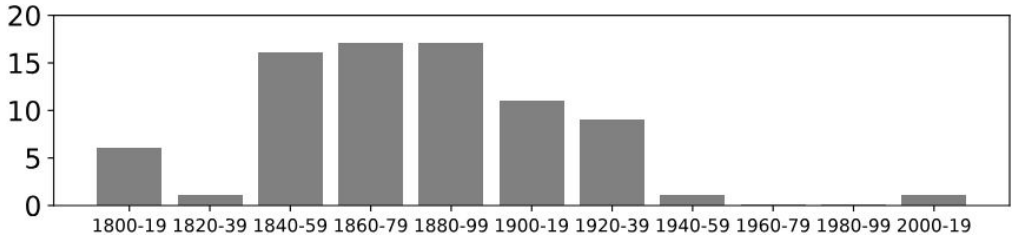
Bias in Literature

We measure female objectification in commonly downloaded novels on Project Gutenberg.

Agency Bias: .067 ($p < .01$)
Appearance Bias: .176 ($p < .01$)



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Multiple	1	2	0	3
Total	23	54	2	79

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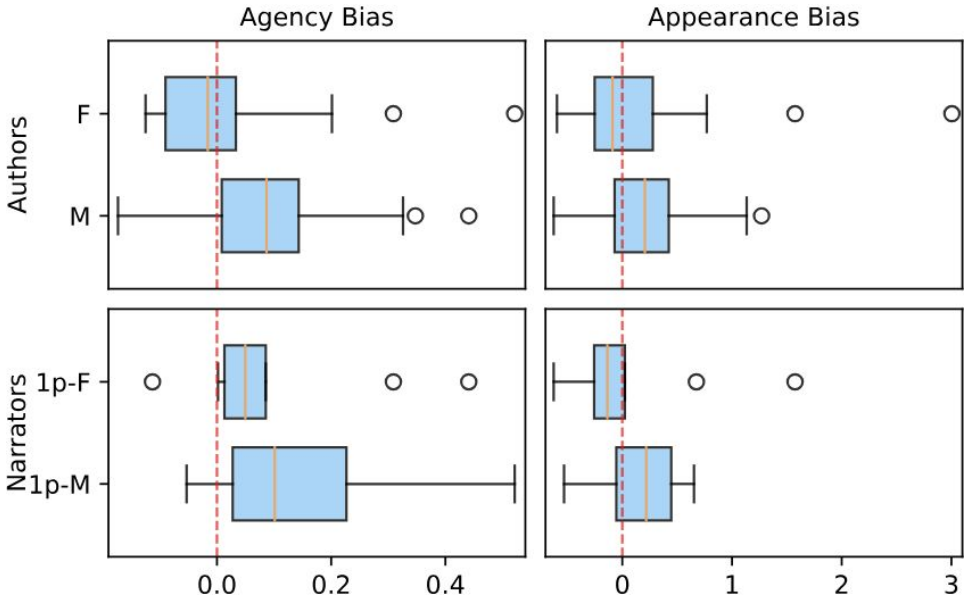
Bias and Perspective

Novels written from a **male perspective** have **mostly positive** agency and appearance bias.

Novels written from a **female perspective** have **positive and negative** agency and appearance bias.



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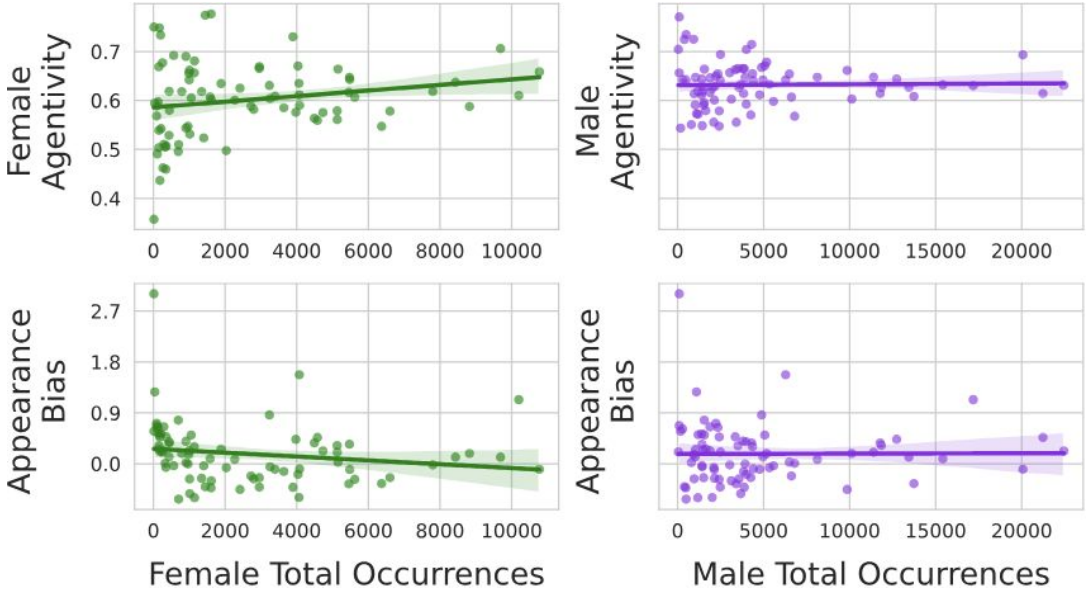
Bias and Frequency

Novels with **more mentions of female characters** exhibit **less objectification** of female characters.

The same is **not true of male characters**.



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Discussion

- The **majority of male-perspective novels** and a **large minority of female-perspective novels** participate in the male gaze.
- Female characters **can transcend the male gaze**, but **only when they are important**.
- Male characters are **never objectified**, even when they are unimportant.

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Conclusion

- We have found systematic evidence of the male gaze in Late Modern English literature.
- We have defined metrics of female objectification in terms of agency bias and appearance bias.
- Our methods can be used to study the male gaze in text corpora more generally.

THANK YOU!

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