

Masculine Defaults via Gendered Discourse in Podcasts and Large Language Models

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The way we speak and write are different.

The way we **speak and **write** are different.**

So he calls me up, and he's like, 'I still love you,' and I'm like, I'm just, I mean, this is exhausting, you know – like we are never getting back together. Like, ever.

- TAYLOR SWIFT

The way we speak and write are different.

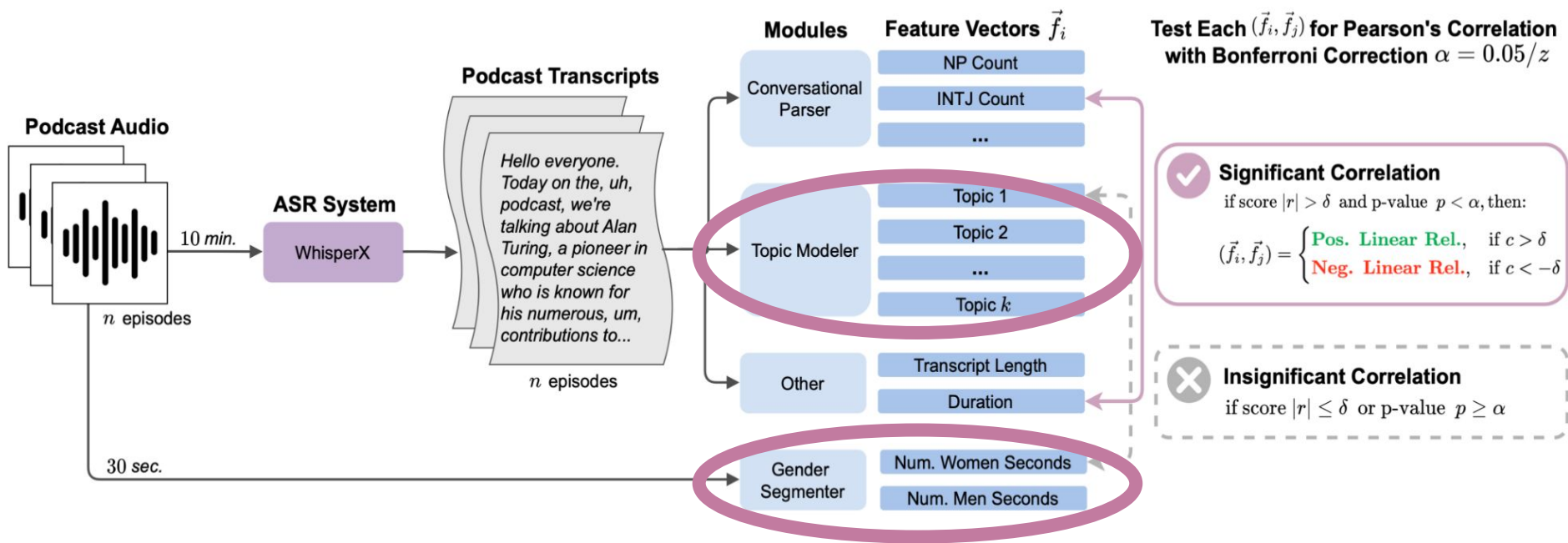
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We ask...

- How can we monitor & identify **discourse terms at scale** ?
- Are discourse terms **meaningful in LLMs** that are trained over this data?

We propose the **Gendered Discourse Correlation Framework (GDCF)** to monitor & identify discourse terms at scale.



We find that women & men's speaking patterns are different.

Topic N	Gender	r	Topic N Word List	Topic N Categories
Topic 3	Women	0.15	women, woman, men, baby, pregnant, girls, men, doctor, health, birth	Content - Pregnancy
	Men	-0.14		
Topic 10	Women	0.10	energy, body, feel, mind, space, yoga, love, beautiful, feeling, meditation	Content - Yoga
	Men	-0.12		
Topic 49	Women	-0.21	game, know, think, team, going, mean, play, year, one, good	Content - Sports
	Men	0.17		
Topic 71	Women	0.14	christmas, sex, girl, hair, love, get, date, girls, let, wear	Content - Dating
	Men	-0.14		
Topic 54	Women	–	get, like, know, right, people, going, podcast, make, want, one	Discourse
	Men	0.12		
Topic 60	Women	-0.27	going, know, think, get, got, one, really, good, well, yeah	Discourse
	Men	0.20		
Topic 62	Women	0.33	like, know, really, going, people, want, think, get, things, life	Discourse
	Men	-0.28		

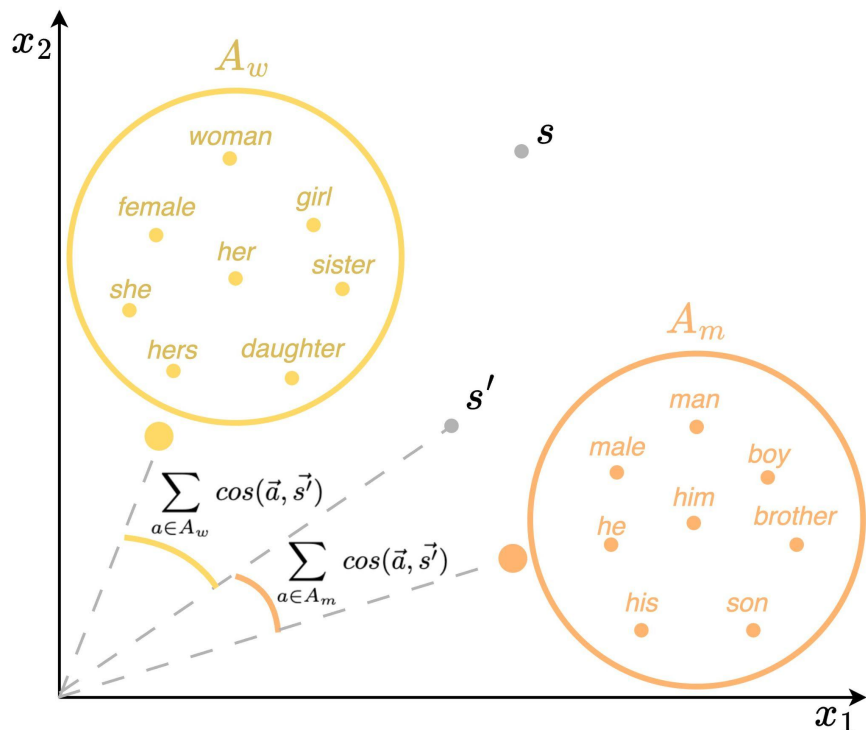
Men:

*s = And I was **going**, hey, it's cold outside...*

Women:

*s' = And I was **like**, hey, it's cold outside...*

Is this difference reflected in LLM embeddings?



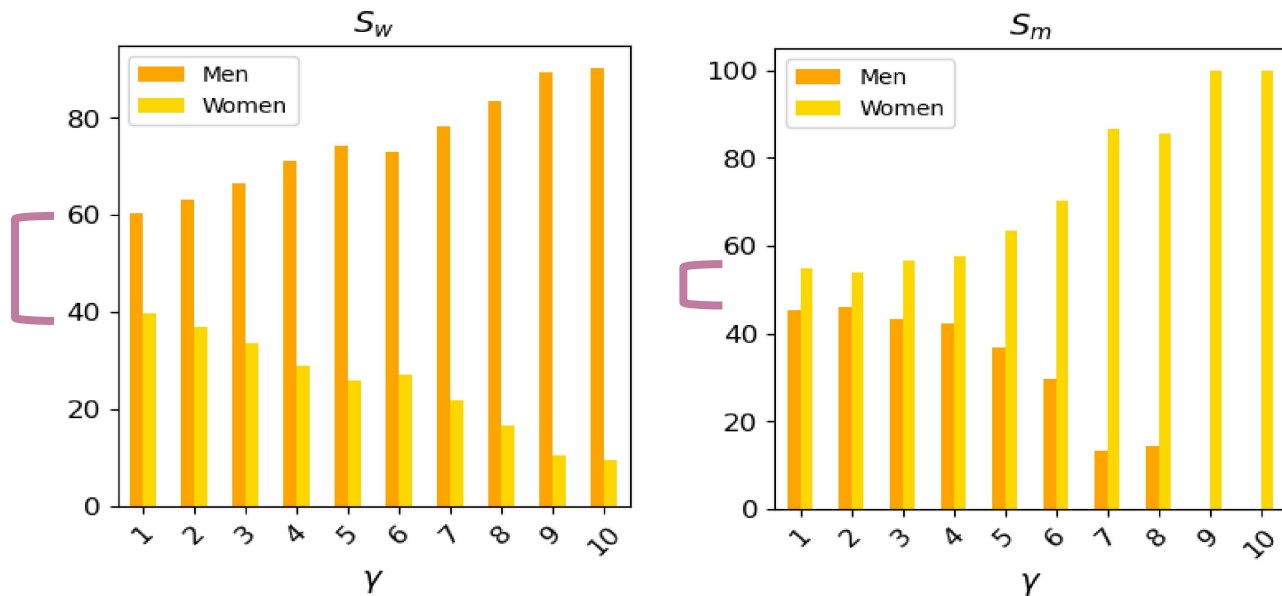
Men:

$s = \text{And I was } \text{going}, \text{ hey, it's cold outside...}$

Women:

$s' = \text{And I was } \text{like}, \text{ hey, it's cold outside...}$

Yes. Women have a **less stable/robust** embedding representation than men.



Men:

$s = \text{And I was } \textbf{going}, \text{ hey, it's cold outside...}$

Women:

$s' = \text{And I was } \textbf{like}, \text{ hey, it's cold outside...}$

And this difference in embedding stability is a masculine default.

Men:

$s = \textit{And I was going, hey, it's cold outside...}$

Women:

$s' = \textit{And I was like, hey, it's cold outside...}$

**For all the details,
check out the paper!**

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