

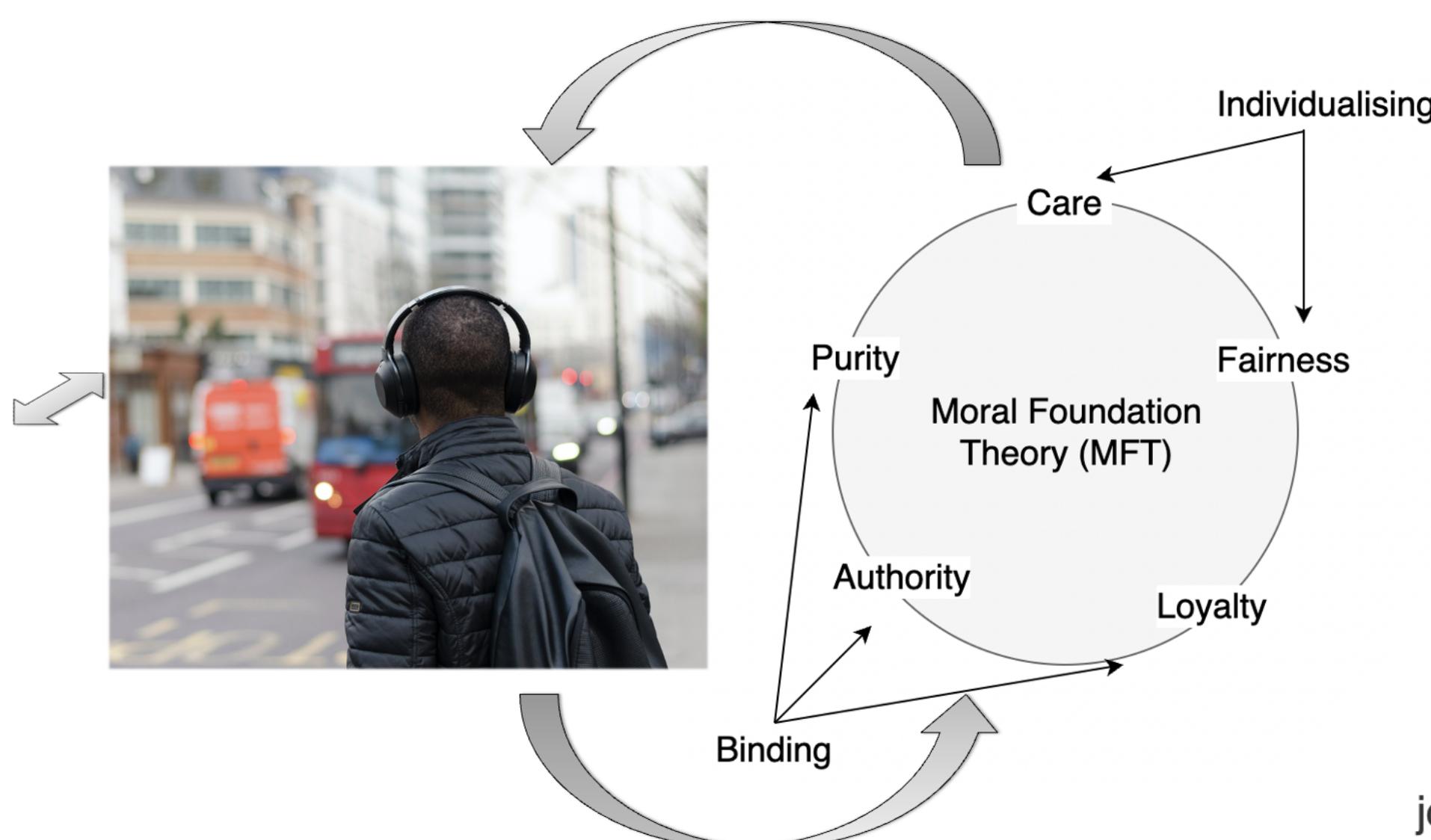
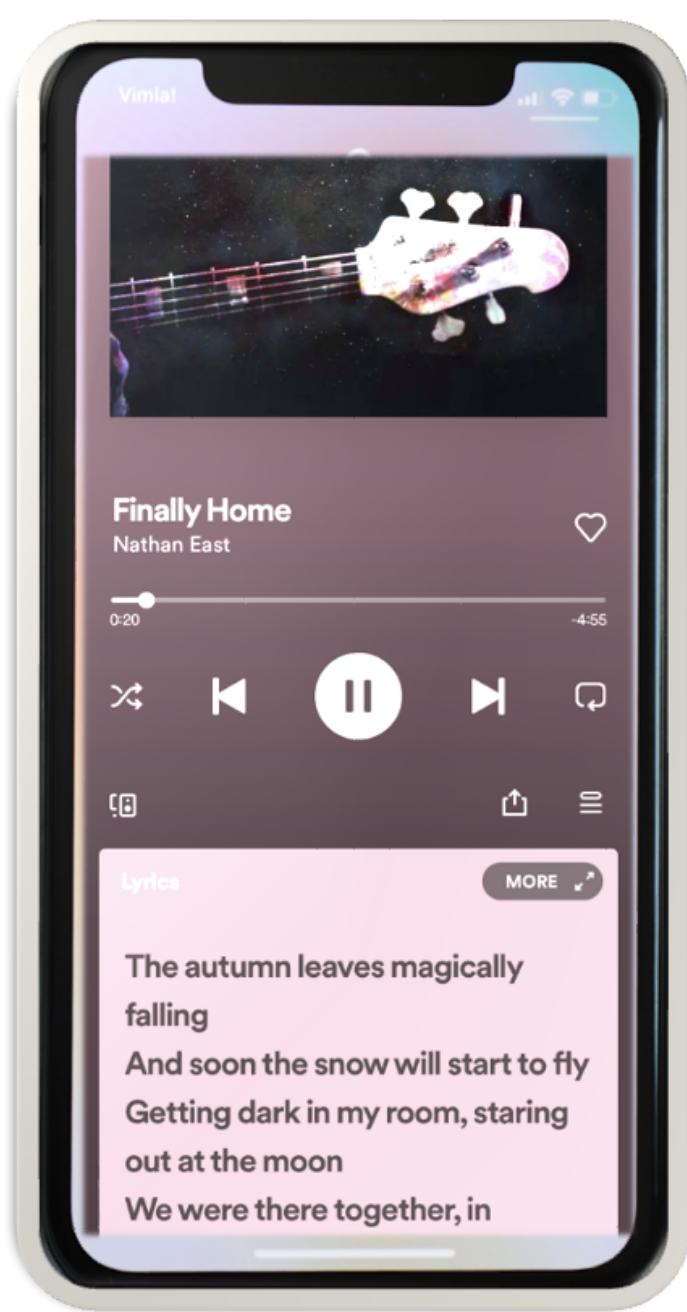
# "MORE THAN WORDS": LINKING MUSIC PREFERENCES AND MORAL VALUES THROUGH LYRICS

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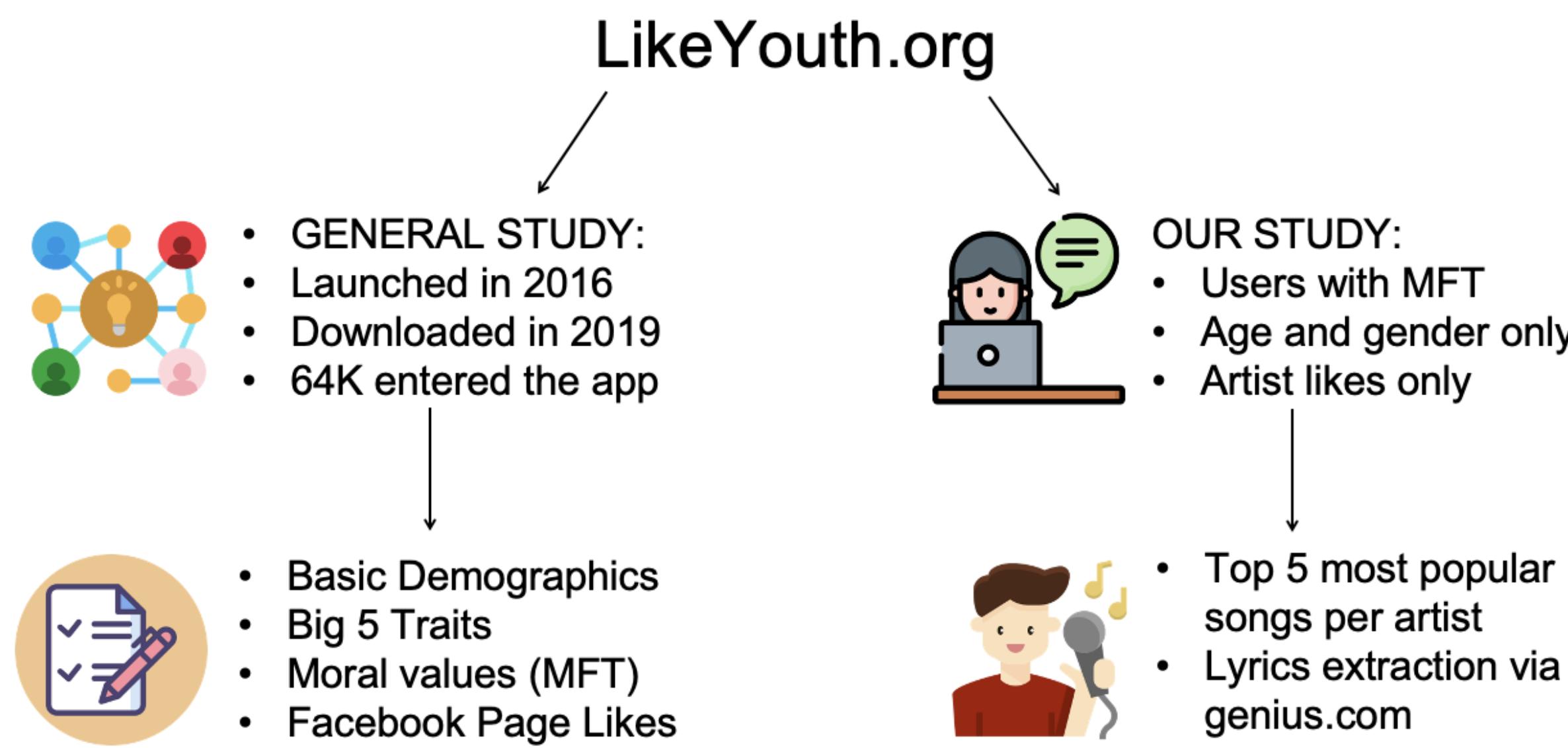
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## MUSIC, LYRICS AND MORALITY

We explore the link between **moral values** and **music preferences** utilising lyrics content words. We present new ideas with direct implications for tailoring **recommendation systems** [2], and improving communications for **social campaigns** [1].



## DATASET



Our final data contains 1,386 users; 3,179 artists and 15,895 songs

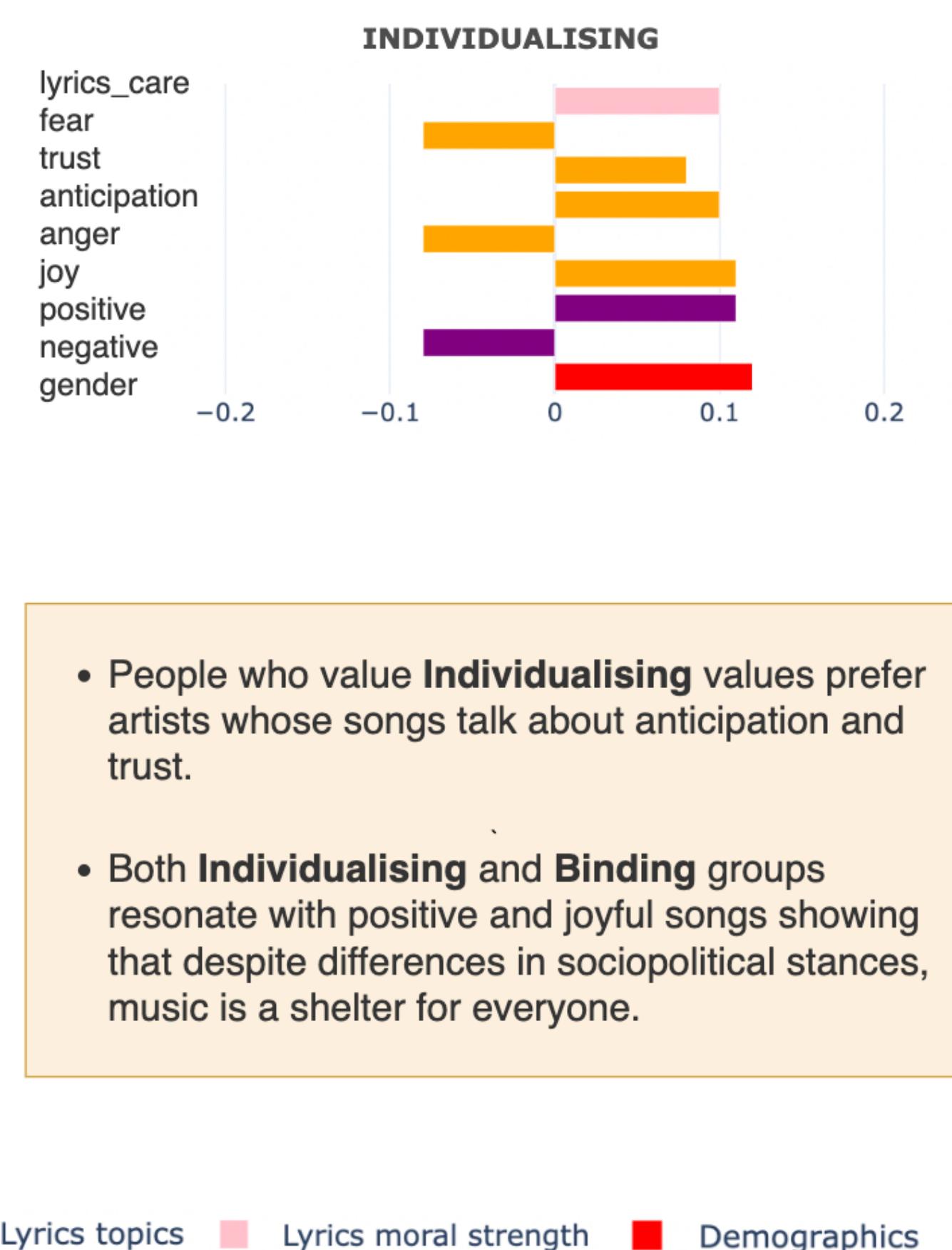
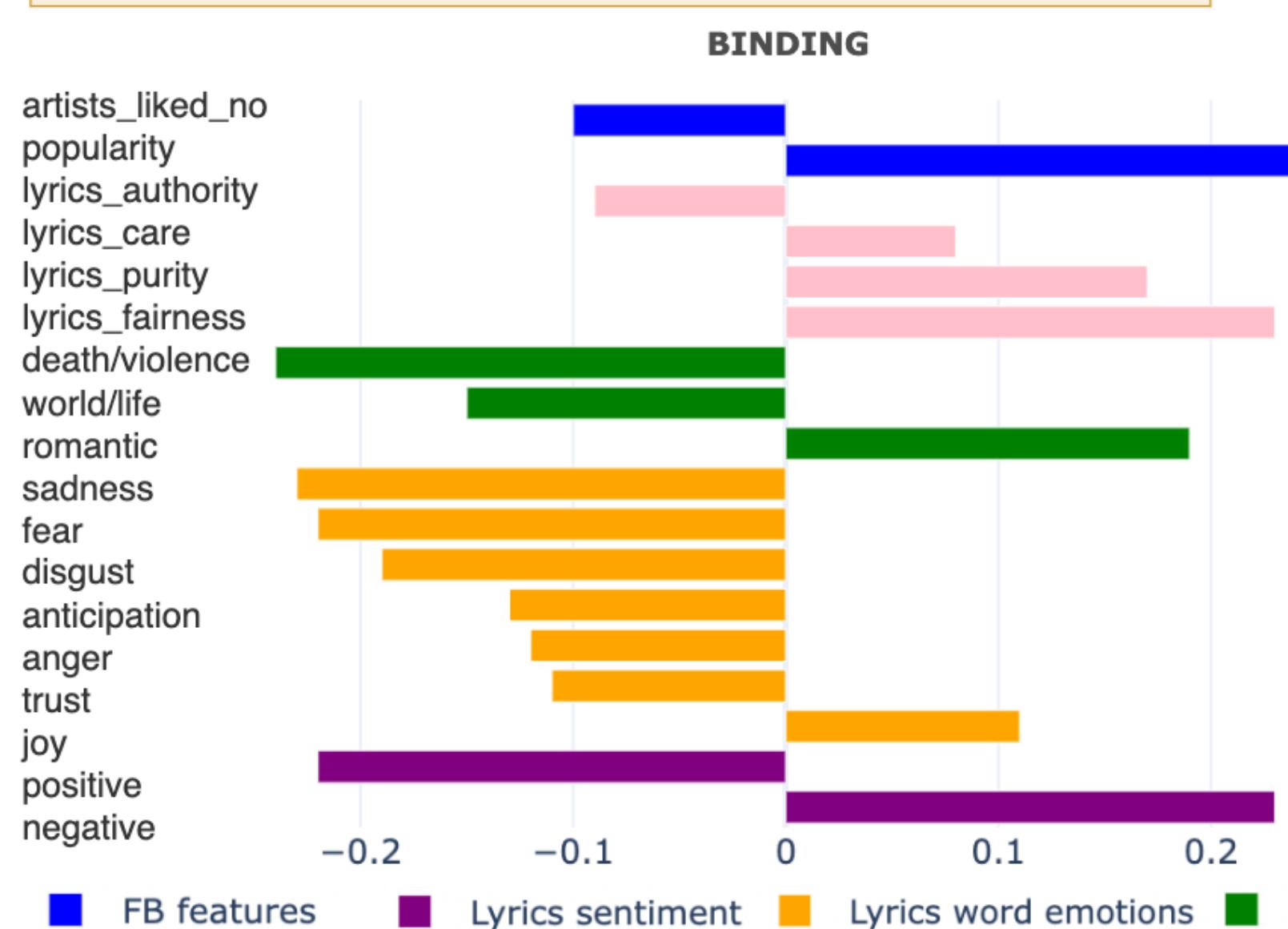
	LDA Death/Fear/Violence; Obscene; Romantic; World/Time/Life.
	MoralStrength Care; Fairness; Loyalty; Authority; Purity.
	Vader Negative; Positive; Neutral; Compound.
	NRC Anger; Disgust; Fear; Sadness; Anticipation; Surprise; Joy; Trust.

## LYRICS CONTENT ANALYSIS

For each song we extracted sets of textual features including lyrics narrative (topics), moral valence, sentiment and emotions. On average each lyrics contains ~ 273 words and ~ 108 lemmas.

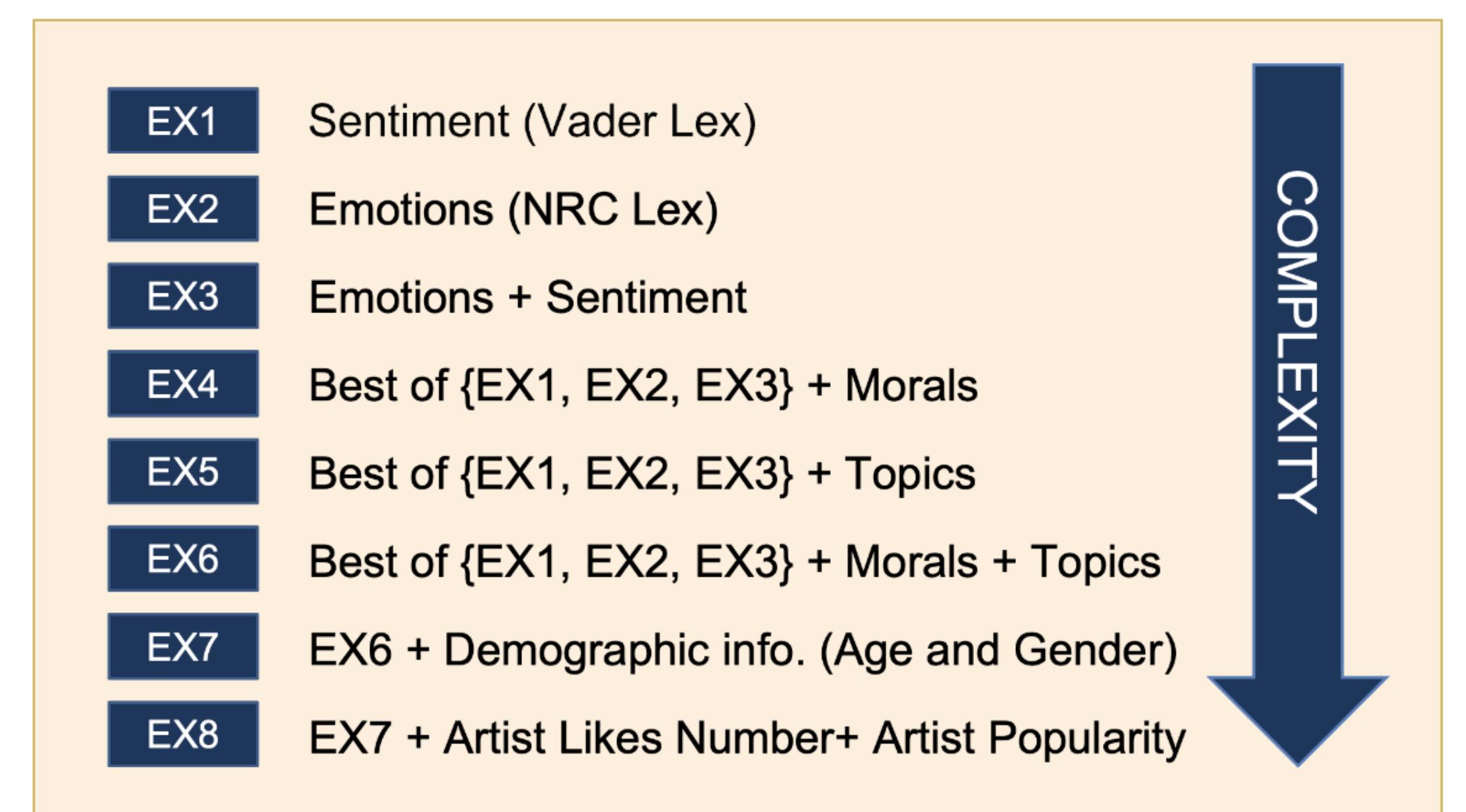
## CORRELATIONS

- People more concerned about **Binding** values, tend to prefer artists, who deal more with romantic topics in their songs.
- Also, **Binders** tend to display a dislike towards songs that convey negative emotions and have vicious content.



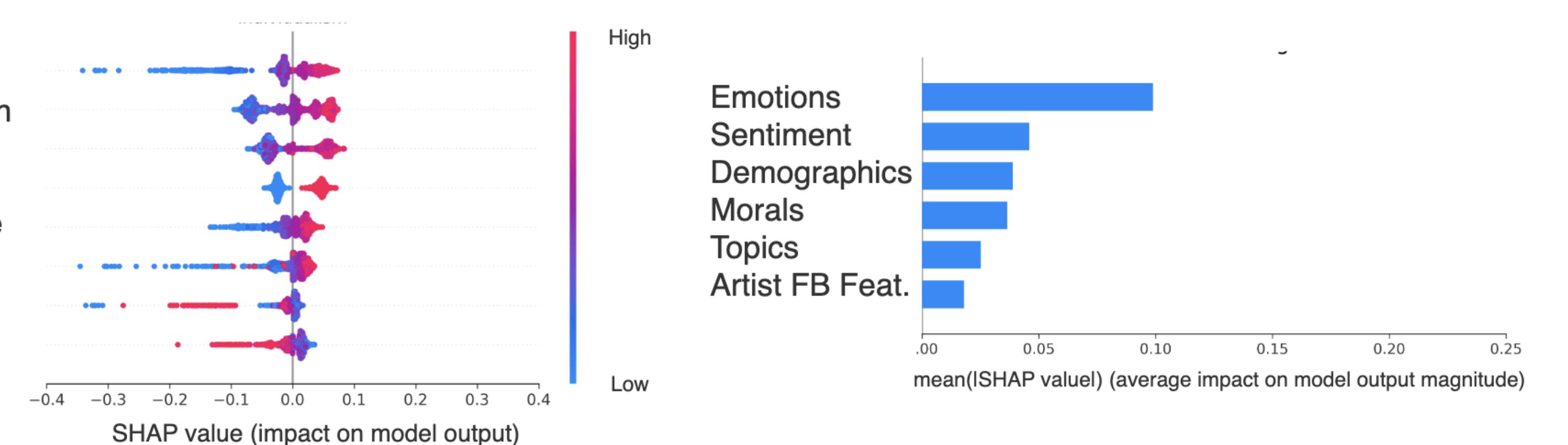
- People who value **Individualising** values prefer artists whose songs talk about anticipation and trust.
- Both **Individualising** and **Binding** groups resonate with positive and joyful songs showing that despite differences in sociopolitical stances, music is a shelter for everyone.

## EXPERIMENTAL DESIGN

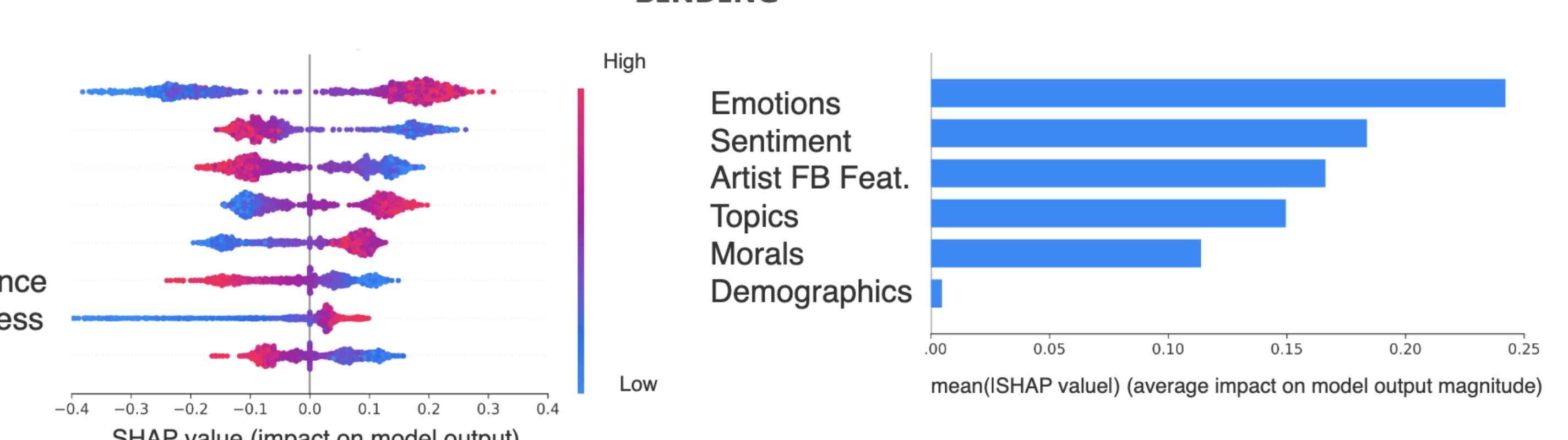


## FEATURE IMPORTANCE

### INDIVIDUALISING



### BINDING



## RESULTS

- Moral foundations were inferred using **Random Forest** regression model. **Pearson's correlation** between predicted and the actual values averaged across 5-fold cross-validation was used as a metric.
- Results suggest that lyrics from top songs of artists people like inform their morality. In line with recent literature [3], **Binding** was easier to predict than **Individualising**.

### Moral Foundations - Best Regression Models

	EX4	EX6	EX7	EX8
C	.11 [.11, .12]	<b>.12 [.11, .12]</b>	<b>.12 [.12, .13]</b>	.11 [.11, .12]
F	.06 [.05, .06]	.05 [.05, .05]	<b>.08 [.07, .08]</b>	.05 [.05, .05]
L	<b>.20 [.20, .21]</b>	.19 [.19, .20]	<b>.20 [.20, .21]</b>	<b>.20 [.20, .21]</b>
A	.26 [.26, .26]	.25 [.25, .26]	.26 [.26, .26]	<b>.27 [.26, .27]</b>
P	.25 [.25, .26]	.25 [.24, .25]	.24 [.24, .25]	<b>.26 [.26, .26]</b>
I	.10 [.09, .10]	.10 [.10, .11]	<b>.11 [.10, .11]</b>	.10 [.10, .11]
B	.28 [.28, .29]	.28 [.27, .28]	.27 [.27, .28]	<b>.30 [.30, .31]</b>

## REFERENCES

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- Gideon Nave et al. "Musical preferences predict personality: evidence from active listening and facebook likes". In: *Psychological science* 29.7 (2018), pp. 1145–1158.
- Vjosa Preniqi, Kyriaki Kalimeri, and Charalampos Saitis. "Modelling Moral Traits with Music Listening Preferences and Demographics". In: *CMMR* (2021), p. 67.

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See the paper's preprint:

