# WE ARE WHAT WE LISTEN TO
## HOW MORAL VALUES REFLECT ON MUSICAL PREFERENCES

**Vjosa Preniqi[1], Kyriaki Kalimeri[2], and Charalampos Saitis[1]**
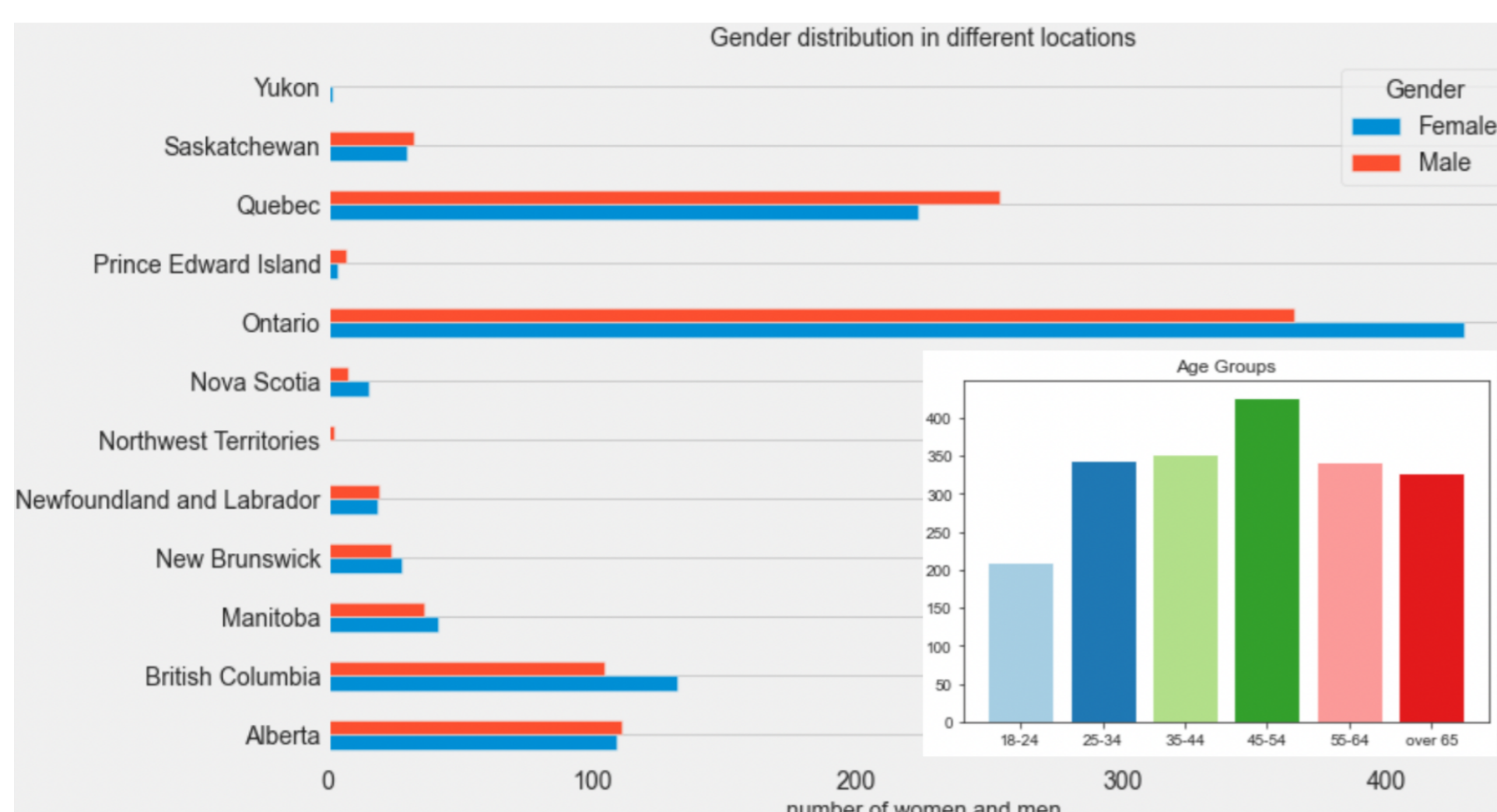[1]Queen Mary University of London, [2]ISI Foundation.

## MUSIC AND MORALITY

Henry Wadsworth Longfellow wrote, *"Music is the universal language of mankind."* Modern research has found converging evidence that people listen to music that reflects their psychological traits, needs and help express emotions, cultures, values and personalities [3, 1]. Here we explore the less attended link between music and moral values [2] based on Moral Foundations Theory [4].

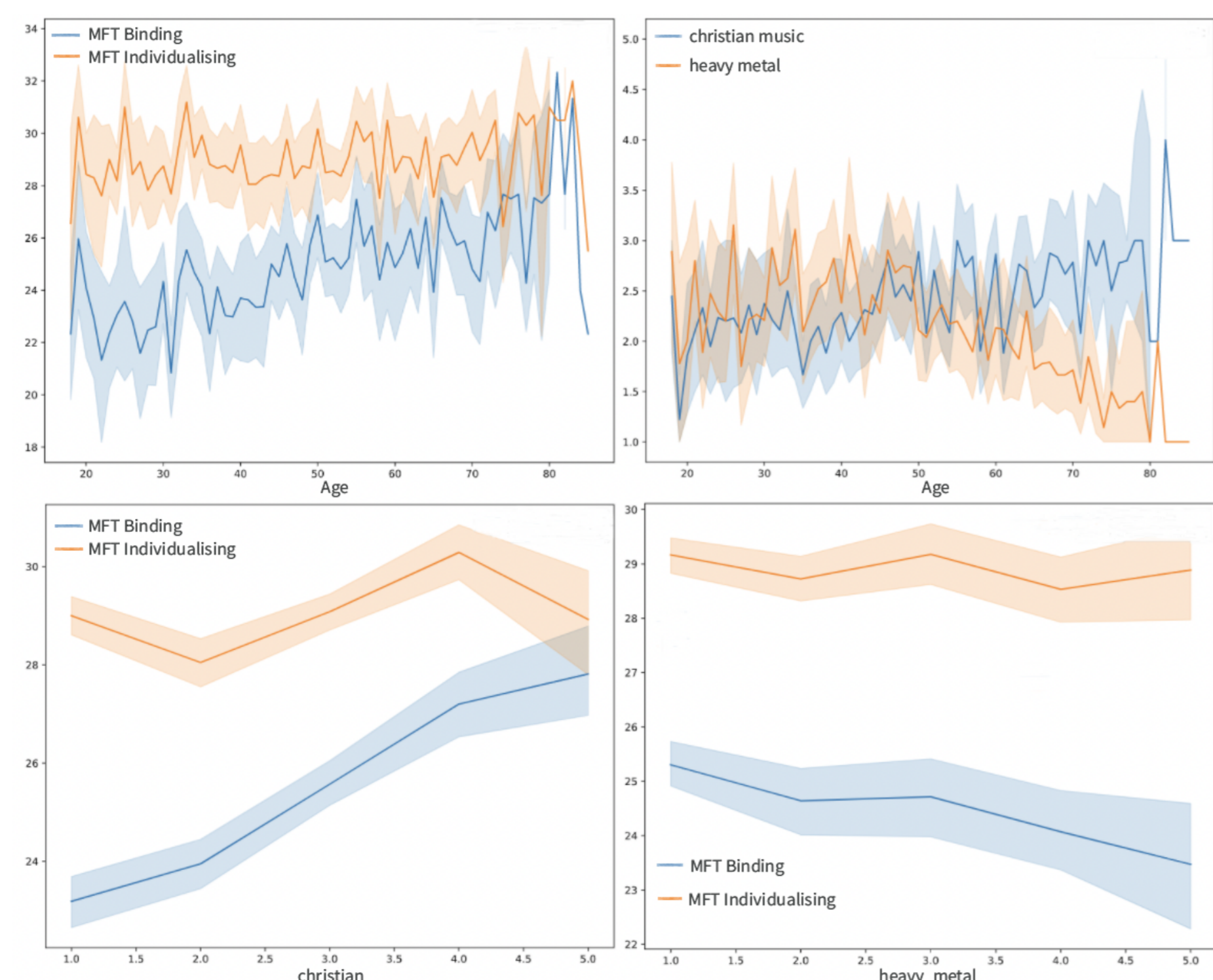| Super classes | MFT | Description |
|---|---|---|
| Individualising | Care Fairness | Asserts that basic constructs of society are individuals and focuses on their protection and fair treatment. |
| Binding | Purity Authority Loyalty | Represent foundations based on respect, leadership and tradition. |

## DATA COLLECTION

► Administered online survey with 2,000 participants (51% females) from 12 different regions in Canada.

► Participants' filled in, among other items, music preference and the Moral Foundations Questionnaire [4].

► They scored preferences on 13 genres: *alternative pop/rock, christian, classical, country, folk, heavy metal, rap/hip-hop, jazz, latin, pop, punk, R&B, and rock.*



## CORRELATIONS WITH MORAL TRAITS AND AGE

► Christian music was found positively correlated with Purity ($r = .38$), Authority (.26), and Loyalty (.18), as was country (.21, .2 and .17, respectively).

► Liking punk, on the other hand, showed negative correlations with Purity ($-.21$) and Authority ($-.18$).
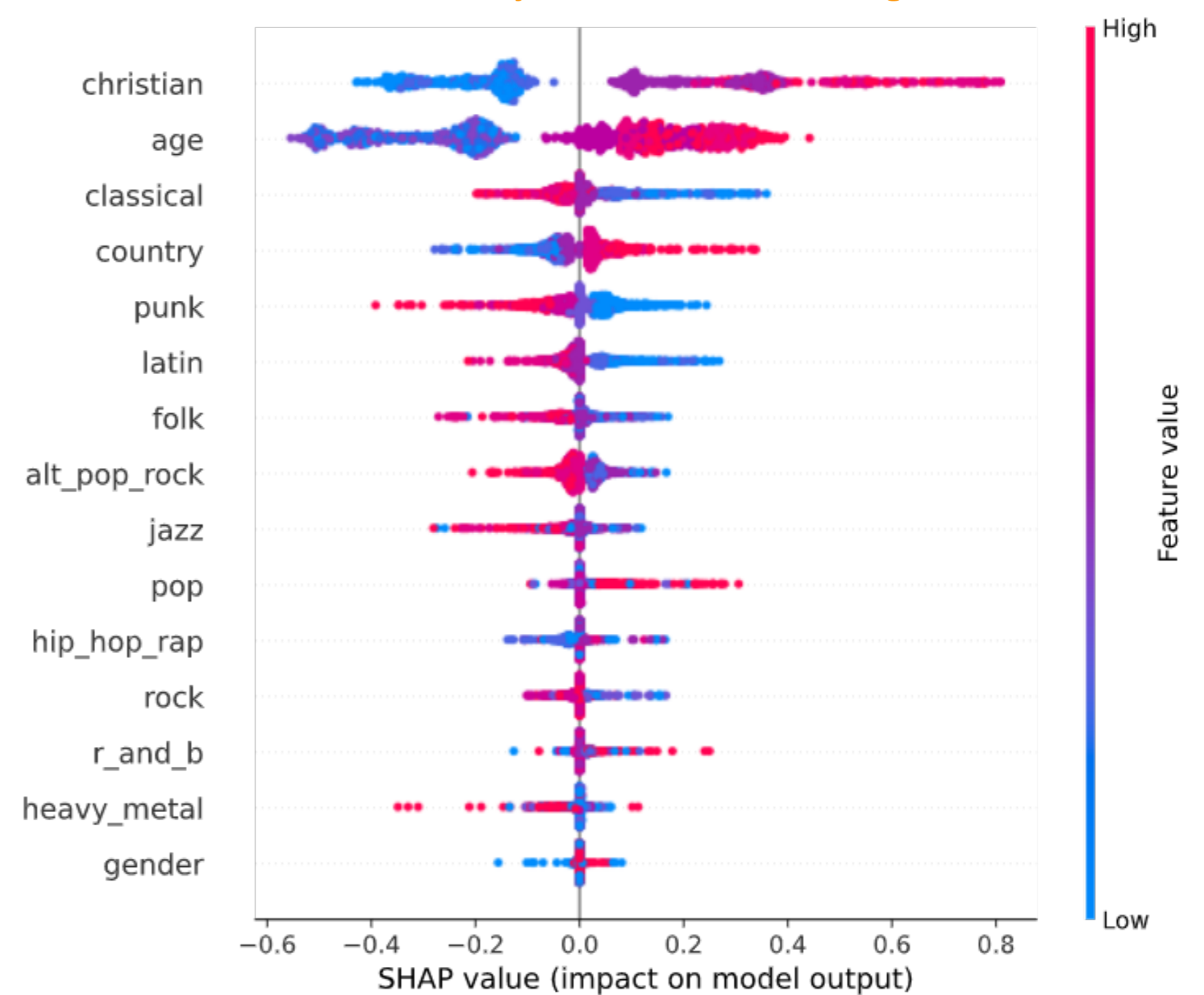


## MORAL TRAITS PREDICTION

► We predicted whether a respondent belonged to the **"low"** or **"high"** end of each moral foundation with thresholds at a median value.

► We considered 3 types of predictors: all 13 music genres, **5 latent factors** (EFA), & a **generalist-specialist (GS) score**.

► We used **XGBoost** with 5-fold cross-validation.

| Music Preference and Demographics | | | |
|---|---|---|---|
| | 13 Genres | 5 Factors | GS-Score |
| Care | **.62 (3.2)** | .59 (2.1) | .58 (1.6) |
| Fairness | **.58 (2.5)** | .54 (1.5) | .51 (2.6) |
| Authority | **.64 (1.6)** | .62 (1.2) | .58 (2.1) |
| Purity | **.71 (3.0)** | .68 (3.0) | .65 (2.5) |
| Loyalty | **.67 (3.5)** | .64 (3.3) | .59 (0.8) |
| Individ. | **.59 (2.4)** | .56 (1.7) | .55 (1.7) |
| Binding | **.71 (3.2)** | .68 (2.4) | .63 (1.4)) |

### SHAP Analysis for MFT Binding



In the future we will delve deeper into the relation between music, morality, and universal human values, using also passively collected digital traits of music listening behaviours.

## REFERENCES

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Find us 🐦 @vjosa_preniqi, @KyriakiKalimeri & @noindent

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