Online Appendix

From Metallica to Mozart:
Mapping the Cultural Hierarchy of Lifestyle Activities

Introduction

This online appendix presents results from supplementary analyses from the article "From Metallica to Mozart: Mapping the Cultural Hierarchy of Lifestyle Activities". If you are mainly interested in the results from the supplementary analysis, you can simply go through this document. If you wish to reproduce the empirical results, you can access the dataset and accompanying R code at https://osf.io/x6ybt/. Please be aware that we provide the dataset solely for the purpose of replicating the empirical results we present in this paper. You may not use the dataset for any other purpose without written consent from the authors.

Appendix A: Summary Statistics

Table A1 presents summary statistics for the variables we include in the empirical analysis.

Table A1. Summary Statistics

Covariate	Mean/%	SD	N
Female	55		1,471
Male	45		1,471
Age in years	50.03	18.45	2,697
University degree	31		824
No university degree	69		1,873
In the labor market	55		1,475
Not in the labor market	45		1,222
Income (DKK 1000s)	29.82	33.50	2,629[a]
Lives in capital region	31		844
Does not live in capital region	69		1,853
Ethnic Dane	78		2,107
Immigrant origin	22		590
Own perceived social rank	6.02	1.60	2,697
Status anxiety	3.02	1.43	2,697

Notes: Means/% for continuous/categorical covariates [a] excluding missing values and truncating the variable at DKK 1 million per month (ca. $153,000).

Table A2 presents summary statistics for the implied social rank of the 60 lifestyle activities.

Table A2. Means and Standard Deviations (in parenthesis) of the Implied Social Rank of 60 Lifestyle Activities

Variables	Mean (SD)		Mean (SD)
Music		*Leisure*	
Opera	7.25 (2.03)	Wine tasting	7.04 (1.69)
Classical music	6.99 (1.82)	Art museum	6.76 (1.66)
Jazz	6.23 (1.67)	Horseback riding	6.71 (1.83)
Rock/pop	5.40 (1.39)	Yoga	5.98 (1.55)
RnB	5.20 (1.35)	Cinema	5.44 (1.32)
Country/singer-songwriter	4.88 (1.38)	Gardening	5.26 (1.41)
Electronic dance music (EDM)	4.75 (1.40)	Amusement park	5.25 (1.38)
Rap/hiphop	4.45 (1.47)	Live sports	5.11 (1.54)
Schlager/Folk music	4.43 (1.61)	Flea market	4.61 (1.50)
Heavy metal	4.31 (1.46)	Camping	4.54 (1.52)
Food		*Sports*	
Caviar	8.14 (1.88)	Golf	7.32 (1.89)
Oysters	7.84 (1.99)	Tennis	6.82 (1.68)
Salmon	6.40 (1.54)	Fencing	6.59 (2.04)
Almond milk	6.15 (1.81)	Athletics	5.66 (1.39)
Avocado	6.08 (1.48)	Swimming	5.53 (1.30)
Sourdough bread	6.08 (1.53)	Handball	5.42 (1.43)
Almonds	5.84 (1.34)	Football	5.29 (1.63)
Meatballs	4.93 (1.43)	Bowling	4.56 (1.45)
Cheeseburger	4.32 (1.49)	Weight lifting	4.55 (1.41)
Chicken nuggets	4.11 (1.57)	Boxing	4.40 (1.51)
Performing arts		*Literature*	
Ballet	7.32 (1.91)	Philosophy	7.02 (1.84)
Classical music concert	7.06 (1.85)	Poetry	6.55 (1.80)
Theater	6.20 (1.47)	History	6.36 (1.54)
Musical	5.79 (1.46)	Play	6.13 (1.55)
Rock/pop concert	5.37 (1.38)	Biography	6.03 (1.51)
Standup comedy	5.16 (1.42)	Crime	5.45 (1.41)
Circus	4.70 (1.36)	Comedy	5.32 (1.35)
Puppet theater	4.70 (1.47)	Romance	5.13 (1.40)
Magician show	4.66 (1.31)	Science Fiction	5.02 (1.36)
Folk dance	4.63 (1.45)	Cartoon	4.71 (1.38)

Appendix B: Pairwise *t*-tests

The heatmap in Figure B1 summarizes results from pairwise *t*-tests of mean differences in the implied social rank of the lifestyle activities within each domain. Grey squares indicate statistically significant *p*-values (at $p < 0.05$), whereas green squares indicate statistically insignificant *p*-values. A darker green color indicates a higher *p*-value. The *p*-values are adjusted for multiple comparisons using the false discovery rate.

Figure B1. Heatmap of Pairwise *T*-Tests by Lifestyle Domain
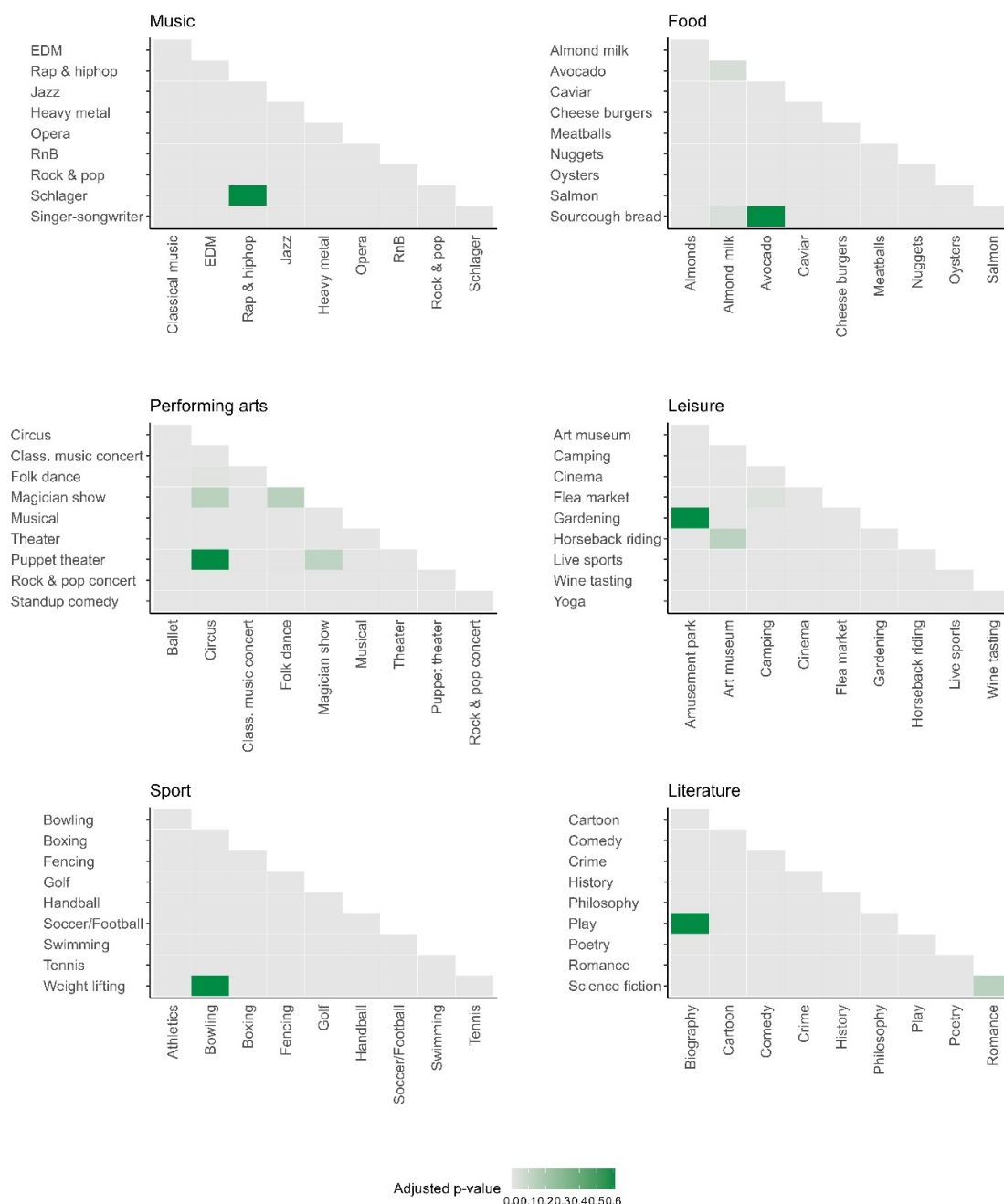
Appendix C: Mean Social Rank across Subgroups

In this appendix, we present results from subgroup analyses. We estimate the mean implied rank of lifestyle activities across subgroups in the data defined by respondents' objective- and subjective socioeconomic position (SEP) and socio-demographic characteristics.

Objective Socioeconomic Position

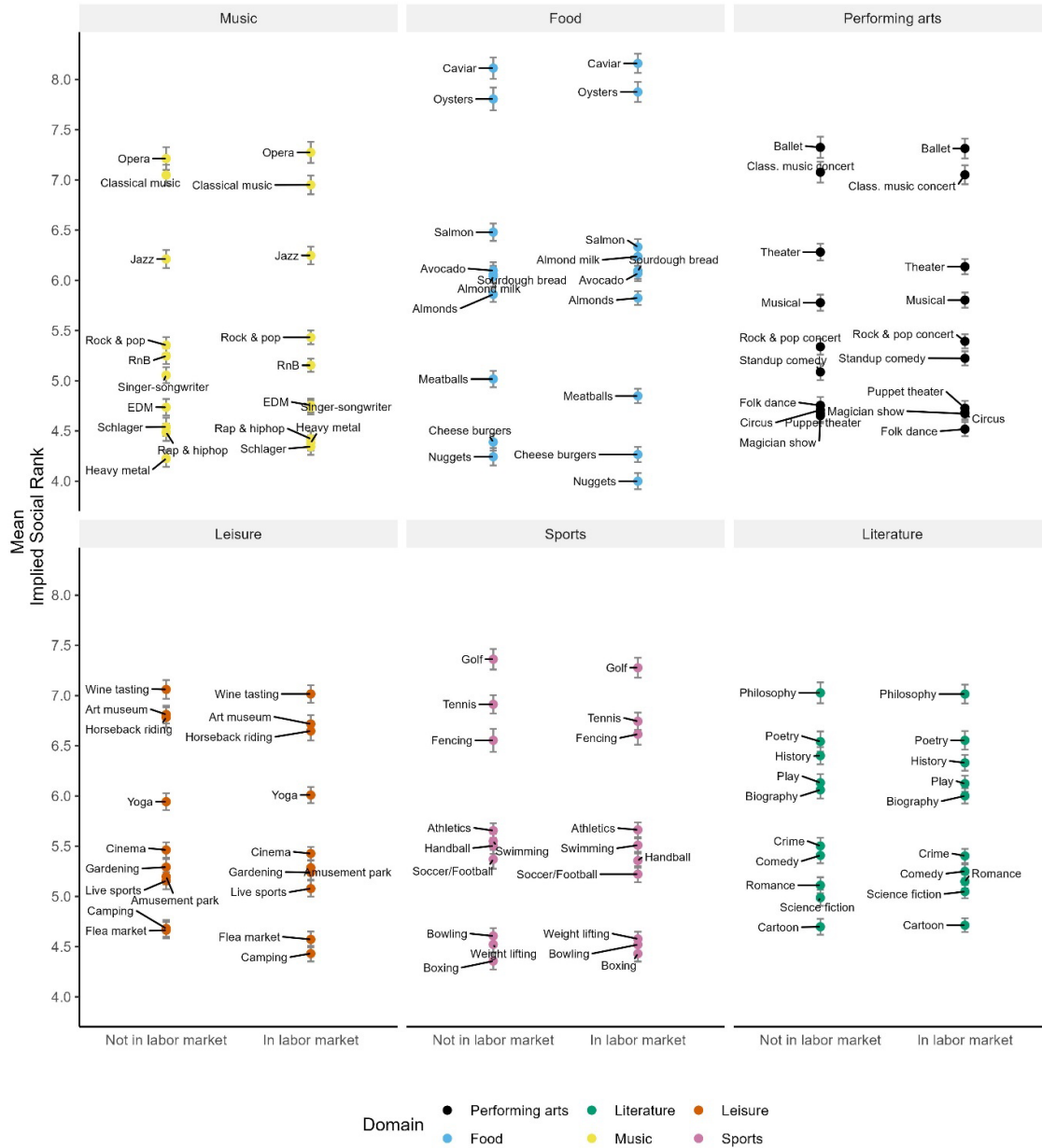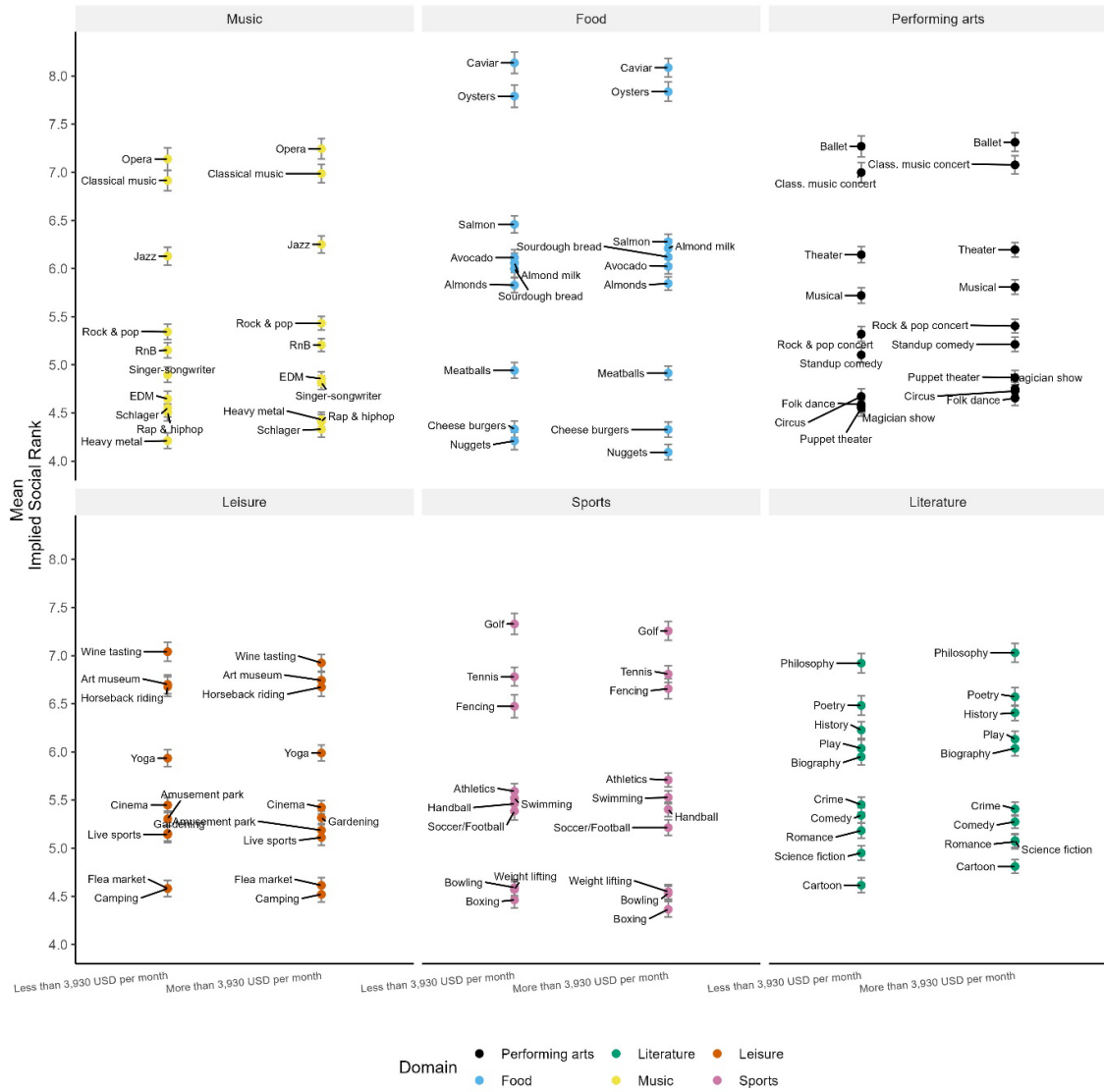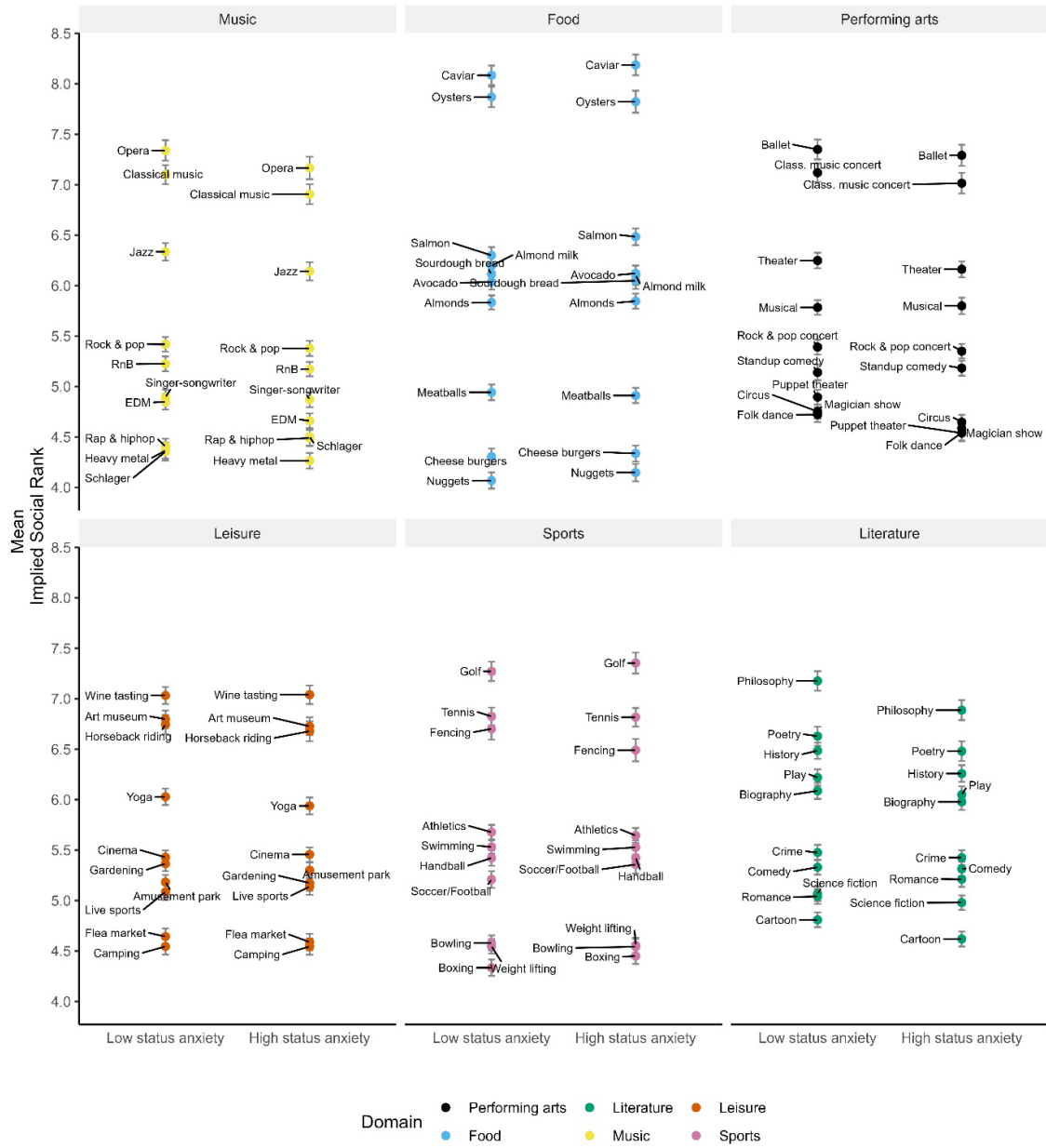**Figure C1a.** Mean Implied Rank of Lifestyle Activities, by Employment Status

Figure C1b. Mean Implied Rank of Lifestyle Activities, by Income Group

Subjective Socioeconomic Position

Figure C1c. Mean Implied Rank of Lifestyle Activities, by Status Anxiety

Socio-Demographic Characteristics

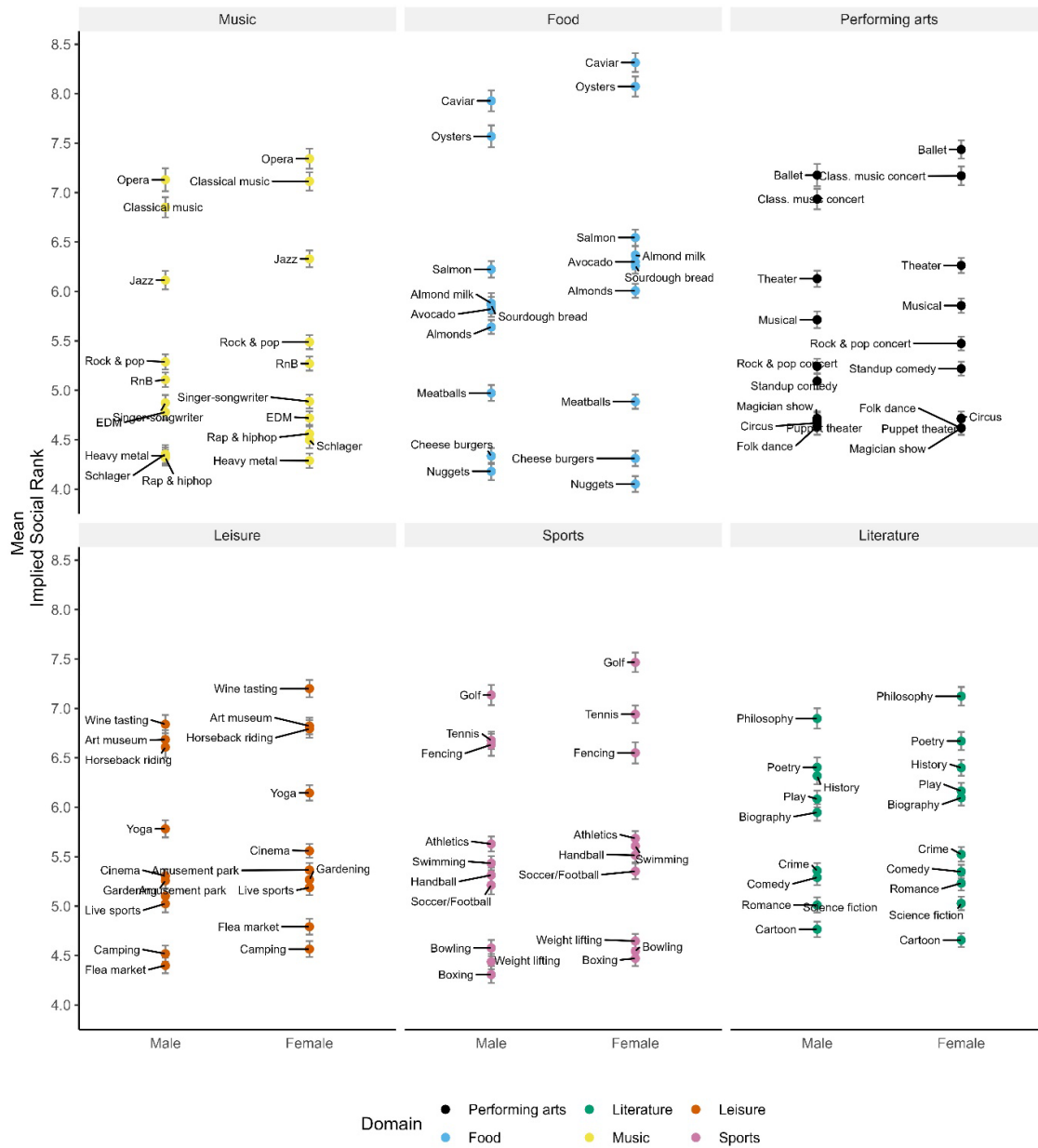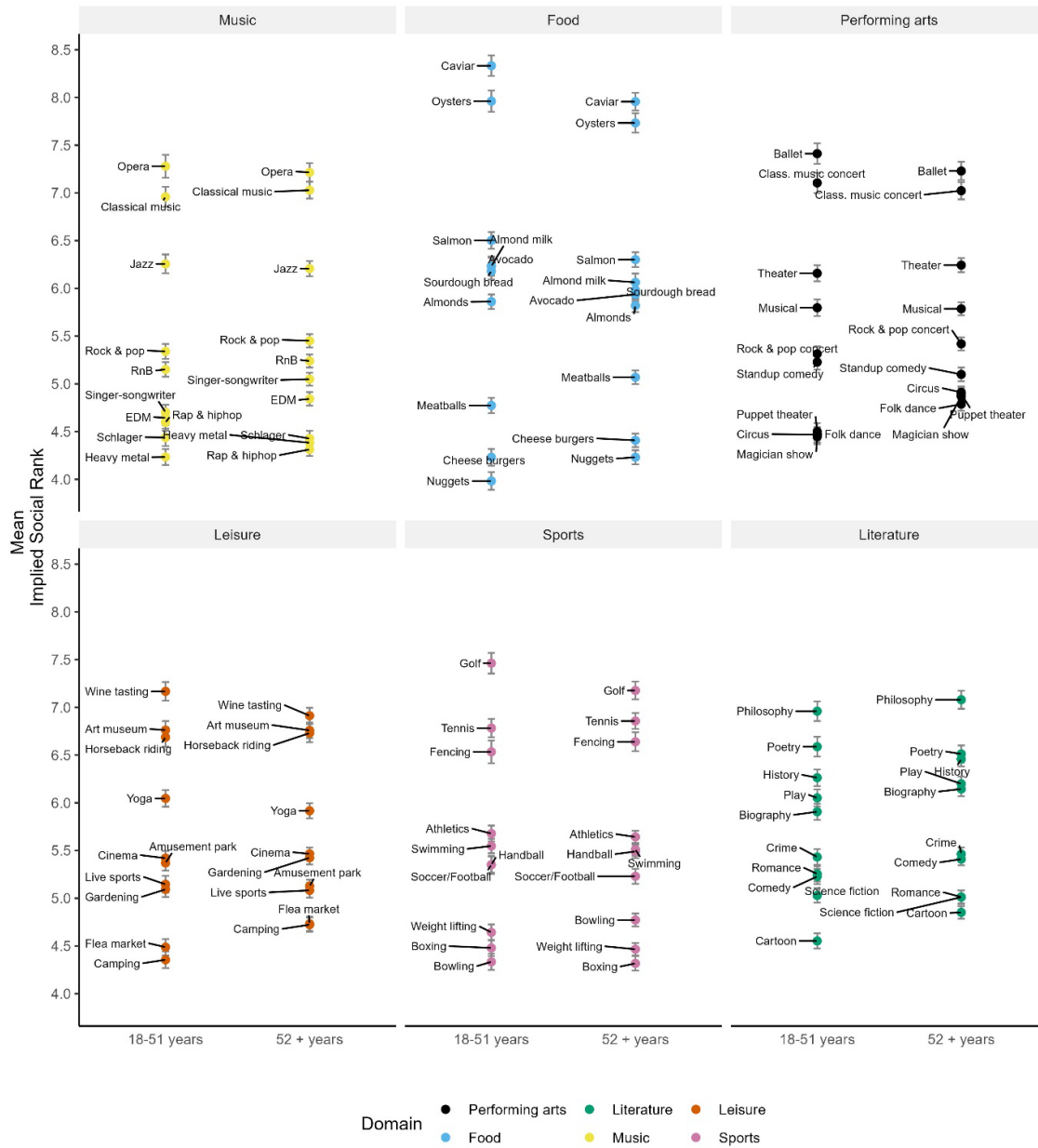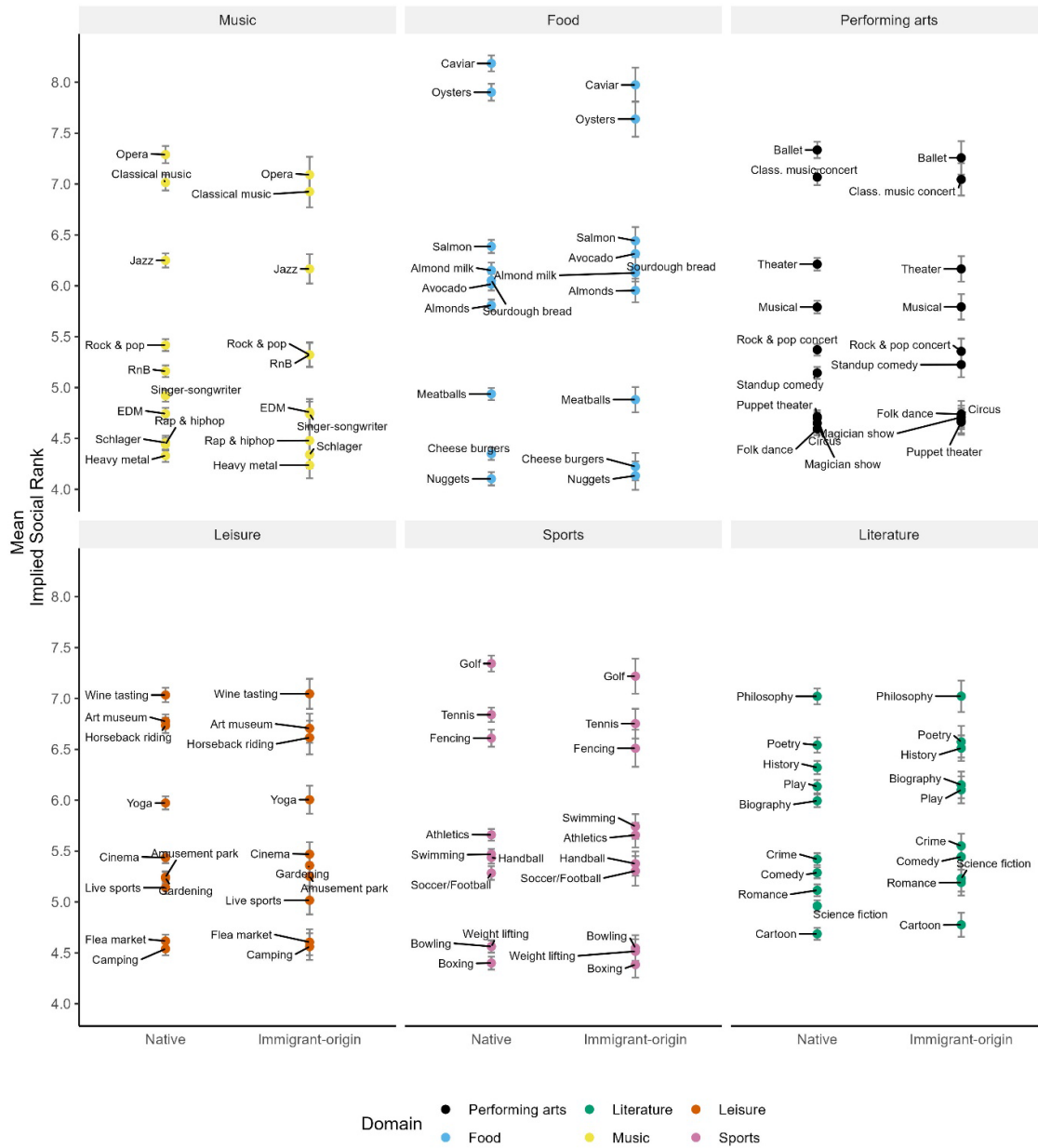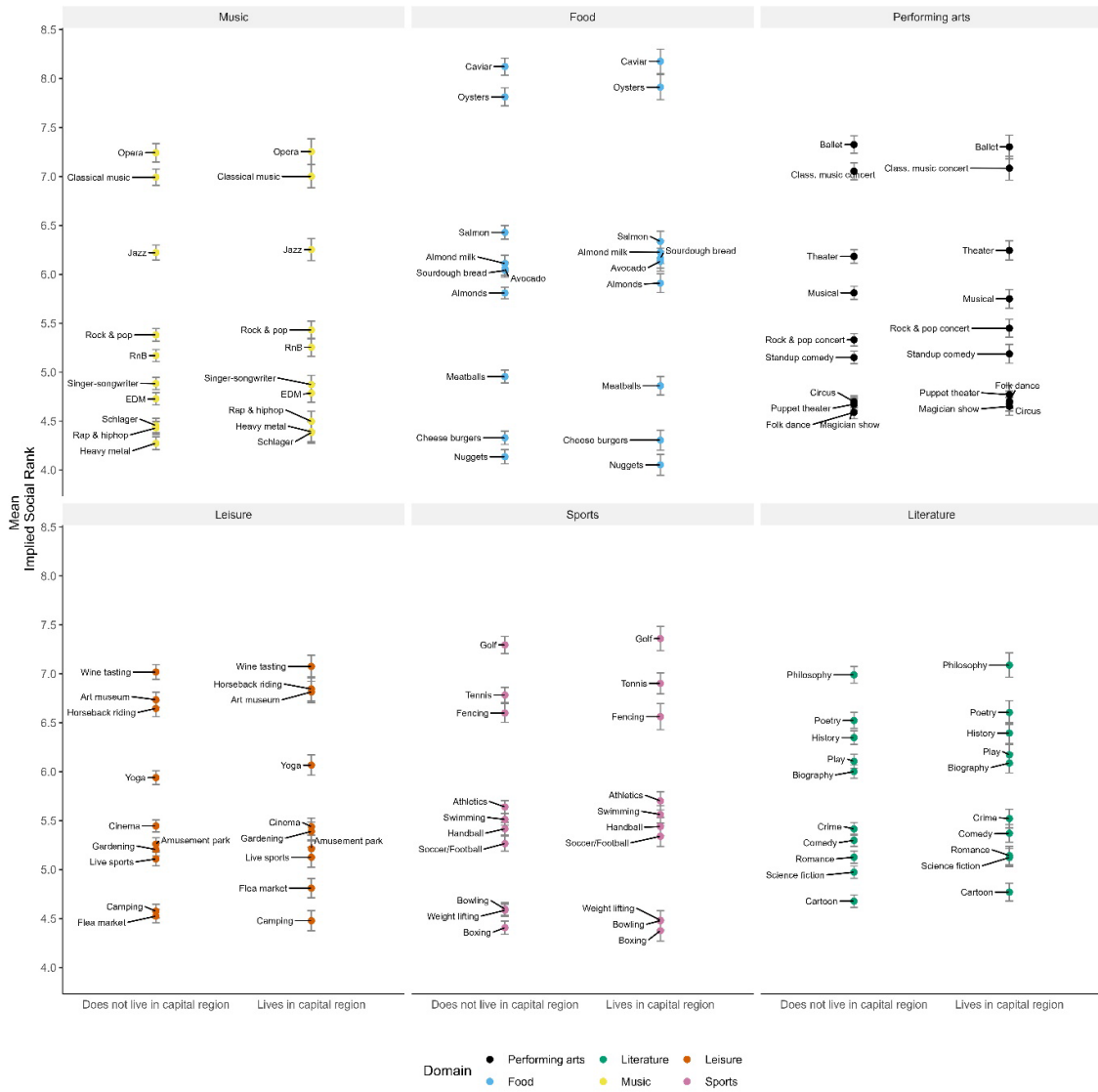**Figure C1d.** Mean Implied Rank of Lifestyle Activities, by Gender

Figure C1e. Mean Implied Rank of Lifestyle Activities, by Age Group

Figure C1f. Mean Implied Rank of Lifestyle Activities, by Ethnic Minority Status

Figure C1g. Mean Implied Rank of Lifestyle Activities, by Place of Residence

Appendix D: Factor Analysis

In this appendix, we report supplementary results from the factor analysis we conducted to test *H3*. Formally, the factor analysis model can be expressed as:

$$\widehat{\text{Cov}(x)} = \hat{L}\hat{L}' + \hat{\Psi} \ (2),$$

where $\widehat{\text{Cov}(x)}$ is an estimate of the correlation matrix of the implied social rank of the 60 cultural activities, $\hat{L}$ is the loading matrix, and $\hat{\Psi}$ is factor uniqueness (Gorsuch 2014). The factor loadings $\hat{L}$ range from -1 to 1. A high absolute value indicates that a specific rating correlates highly with a latent factor. Uniqueness $\hat{\Psi}$ ranges from 0 to 1 and captures how well each rating is explained by the factor model. A low uniqueness indicates that the factor model explains the specific rating well.

Figure D1 summarizes results of parallel analysis used to determine the number of factors that should be retained (Horn 1965; Lim and Jahng 2019). Three factors have eigenvalues above 2, which indicates that they explain a non-trivial part of the variance in the ratings of implied social rank. Consequently, we keep these three factors. Tables D1a-c display the loadings and uniqueness of each rating for each of the three factors. The tables capture the same information as Figure 3 but include additional information. Additionally, Table D2 displays summary statistics from the factor analysis. The table shows that the first latent factor explains about one-fifth of the total explained variance; the second factor explains around 11 percent; and the third factor explains about eight percent. Furthermore, the second and third factors are moderately positively correlated ($\rho = 0.48$). As such, we opt for oblique factor rotation, which allows the factors to be correlated (Abdi 2003).

Figure D1. Parallel Analysis scree plot based on Factor Analysis of 60 Lifestyle Activities
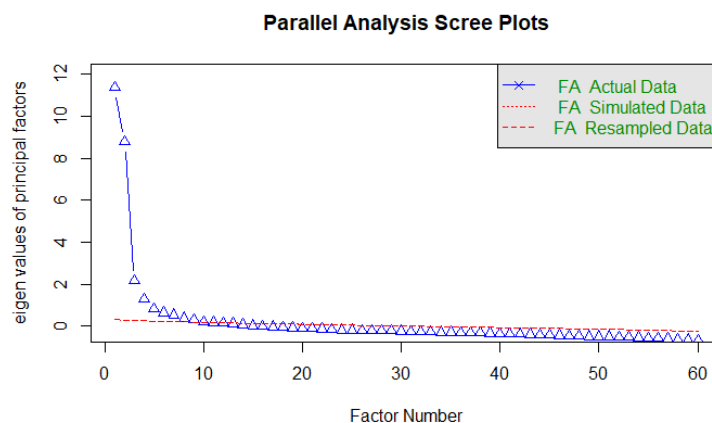
Table D1a. Factor Loadings for Highbrow Lifestyle

Cultural activity	Loadings	Uniqueness	Domain
Class. music	0.82	0.35	Music
Opera	0.89	0.27	Music
Jazz	0.69	0.55	Music
Singer-songwriter	0.03	0.76	Music
RnB	0.25	0.78	Music
Rock/pop	-0.10	0.68	Music
Schlager	-0.22	0.71	Music
EDM	0.16	0.77	Music
Rap/hiphop	-0.08	0.70	Music
Heavy metal	0.12	0.72	Music
Caviar	0.68	0.50	Food
Oysters	0.73	0.46	Food
Almond milk	0.59	0.63	Food
Sourdough bread	0.31	0.67	Food
Avocado	0.17	0.64	Food
Salmon	0.16	0.60	Food
Almonds	0.15	0.70	Food
Meatballs	-0.40	0.60	Food
Cheeseburgers	-0.31	0.58	Food
Nuggets	-0.37	0.60	Food
Ballet	0.85	0.31	Performing arts
Class. music concert	0.84	0.33	Performing arts
Theater	0.44	0.64	Performing arts
Musical	0.32	0.75	Performing arts
Rock/pop concert	-0.02	0.67	Performing arts
Puppet theater	0.42	0.63	Performing arts
Magician show	0.11	0.56	Performing arts
Folk dance	0.26	0.71	Performing arts
Circus	0.01	0.61	Performing arts
Standup comedy	-0.04	0.71	Performing arts
Wine tasting	0.63	0.49	Leisure
Art museum	0.72	0.46	Leisure
Horseback riding	0.65	0.57	Leisure
Yoga	0.57	0.61	Leisure
Gardening	0.04	0.83	Leisure
Flea market	-0.19	0.74	Leisure
Live sports	-0.08	0.64	Leisure
Cinema	-0.13	0.58	Leisure
Camping	-0.14	0.65	Leisure
Amusement Park	-0.22	0.56	Leisure
Golf	0.73	0.45	Sports
Tennis	0.63	0.52	Sports
Fencing	0.76	0.47	Sports
Athletics	0.42	0.71	Sports
Swimming	0.25	0.68	Sports
Handball	-0.02	0.55	Sports
Football	-0.16	0.60	Sports
Bowling	0.03	0.69	Sports
Weightlifting	0.10	0.74	Sports
Boxing	-0.04	0.74	Sports
Poetry	0.72	0.51	Literature
Philosophy	0.74	0.48	Literature
Play	0.46	0.69	Literature
Biography	0.24	0.76	Literature
History	0.45	0.70	Literature
Science fiction	0.08	0.79	Literature
Crime	-0.11	0.65	Literature
Comedy	-0.18	0.66	Literature
Cartoon	-0.09	0.65	Literature
Romance	-0.09	0.72	Literature

Table D1b. Factor Loadings for Middlebrow Lifestyle

Cultural activity	Loadings	Uniqueness	Domain
Class. music	-0.11	0.35	Music
Opera	-0.23	0.27	Music
Jazz	-0.1	0.55	Music
Singer-songwriter	0.14	0.76	Music
RnB	0.15	0.78	Music
Rock/pop	0.51	0.68	Music
Schlager	0.31	0.71	Music
EDM	-0.08	0.77	Music
Rap/hiphop	0.2	0.7	Music
Heavy metal	-0.19	0.72	Music
Caviar	0.04	0.5	Food
Oysters	-0.01	0.46	Food
Almond milk	0.06	0.63	Food
Sourdough bread	0.46	0.67	Food
Avocado	0.61	0.64	Food
Salmon	0.64	0.6	Food
Almonds	0.54	0.7	Food
Meatballs	0.39	0.6	Food
Cheeseburgers	0.18	0.58	Food
Nuggets	0.17	0.6	Food
Ballet	-0.14	0.31	Performing arts
Class. music concert	-0.14	0.33	Performing arts
Theater	0.32	0.64	Performing arts
Musical	0.29	0.75	Performing arts
Rock/pop concert	0.46	0.67	Performing arts
Puppet theater	-0.33	0.63	Performing arts
Magician show	-0.09	0.56	Performing arts
Folk dance	-0.15	0.71	Performing arts
Circus	0.02	0.61	Performing arts
Standup comedy	0.36	0.71	Performing arts
Wine tasting	0.23	0.49	Leisure
Art museum	0.07	0.46	Leisure
Horseback riding	0.02	0.57	Leisure
Yoga	0.16	0.61	Leisure
Gardening	0.27	0.83	Leisure
Flea market	0.22	0.74	Leisure
Live sports	0.52	0.64	Leisure
Cinema	0.63	0.58	Leisure
Camping	0.24	0.65	Leisure
Amusement Park	0.58	0.56	Leisure
Golf	0.04	0.45	Sports
Tennis	0.18	0.52	Sports
Fencing	-0.3	0.47	Sports
Athletics	0.22	0.71	Sports
Swimming	0.4	0.68	Sports
Handball	0.64	0.55	Sports
Football	0.62	0.6	Sports
Bowling	0.09	0.69	Sports
Weightlifting	0.14	0.74	Sports
Boxing	0.21	0.74	Sports
Poetry	-0.09	0.51	Literature
Philosophy	-0.09	0.48	Literature
Play	0.2	0.69	Literature
Biography	0.38	0.76	Literature
History	0.25	0.7	Literature
Science fiction	0.13	0.79	Literature
Crime	0.59	0.65	Literature
Comedy	0.5	0.66	Literature
Cartoon	0.13	0.65	Literature
Romance	0.5	0.72	Literature

Table D1c. Factor Loadings for Lowbrow Lifestyle

| Cultural activity	Loadings	Uniqueness	Domain
Class. music	0.00	0.35	Music
Opera	0.06	0.27	Music
Jazz	0.11	0.55	Music
Singer-songwriter	0.41	0.76	Music
RnB	0.30	0.78	Music
Rock/pop	0.11	0.68	Music
Schlager	0.28	0.71	Music
EDM	0.51	0.77	Music
Rap/hiphop	0.42	0.70	Music
Heavy metal	0.60	0.72	Music
Caviar	-0.09	0.50	Food
Oysters	-0.06	0.46	Food
Almond milk	0.01	0.63	Food
Sourdough bread	-0.19	0.67	Food
Avocado	-0.26	0.64	Food
Salmon	-0.30	0.60	Food
Almonds	-0.19	0.70	Food
Meatballs	0.23	0.60	Food
Cheeseburgers	0.46	0.58	Food
Nuggets	0.42	0.60	Food
Ballet	0.03	0.31	Performing arts
Class. music concert	0.02	0.33	Performing arts
Theater	0.02	0.64	Performing arts
Musical	0.07	0.75	Performing arts
Rock/pop concert	0.19	0.67	Performing arts
Puppet theater	0.62	0.63	Performing arts
Magician show	0.70	0.56	Performing arts
Folk dance	0.56	0.71	Performing arts
Circus	0.62	0.61	Performing arts
Standup comedy	0.27	0.71	Performing arts
Wine tasting	-0.16	0.49	Leisure
Art museum	-0.04	0.46	Leisure
Horseback riding	0.07	0.57	Leisure
Yoga	0.02	0.61	Leisure
Gardening	0.20	0.83	Leisure
Flea market	0.34	0.74	Leisure
Live sports	0.15	0.64	Leisure
Cinema	0.06	0.58	Leisure
Camping	0.42	0.65	Leisure
Amusement Park	0.14	0.56	Leisure
Golf	-0.05	0.45	Sports
Tennis	0.00	0.52	Sports
Fencing	0.22	0.47	Sports
Athletics	0.13	0.71	Sports
Swimming	0.10	0.68	Sports
Handball	0.06	0.55	Sports
Football	0.04	0.60	Sports
Bowling	0.51	0.69	Sports
Weightlifting	0.42	0.74	Sports
Boxing	0.38	0.74	Sports
Poetry	0.05	0.51	Literature
Philosophy	0.04	0.48	Literature
Play	0.06	0.69	Literature
Biography	-0.02	0.76	Literature
History	-0.05	0.70	Literature
Science fiction	0.37	0.79	Literature
Crime	0.03	0.65	Literature
Comedy	0.16	0.66	Literature
Cartoon	0.51	0.65	Literature
Romance	0.07	0.72	Literature

Table D2. Summary Statistics from Factor Analysis

	Factor 1: Highbrow Lifestyle	Factor 2: Middlebrow Lifestyle	Factor 3: Lowbrow Lifestyle
Explained variance	19%	11%	8%
Corr. with factor 1	1	0.21	-0.07
Corr. with factor 2	0.21	1	0.48
Corr. with factor 3	-0.07	0.48	1

Appendix E: Rating of Implied Social Rank Net of Domain Fixed Effects

Figure E1 replicates Figure 1 in the main text but adjusts for domain-specific fixed effects. Specifically, the entries in Figure E1 are ratings of the implied social rank of each activity *relative to* the mean rating of all activities within its domain. The y-axis measures the distance in standard deviations from the domain-specific mean. Thus, the entries are standardized, which makes them easy to compare across domains. The figure shows that differences in ratings across domains are reduced after correcting for domain-specific fixed effects.

Figure E1. Mean Implied Rank of Lifestyle Activities, Net of Domain Fixed-Effects
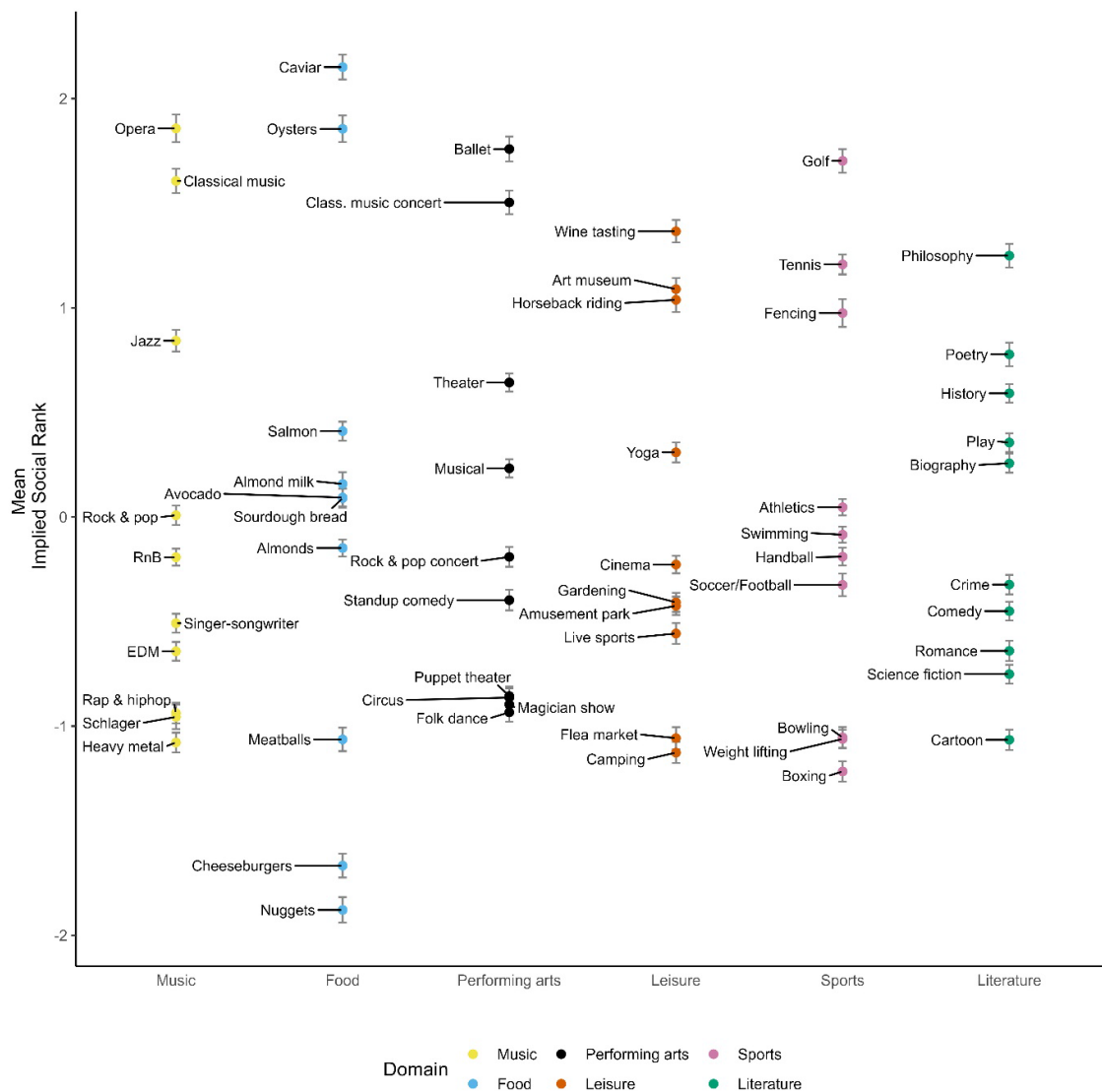
Appendix F: Individual Differences in Implied Social Rank

We argue in the results section and in Appendix C that the rank order of lifestyle activities, in terms of mean implied rank, is similar across subgroups defined by objective/subjective SEP and socio-demographic characteristics. In addition to visual inspection of mean differences across subgroups, we have carried out 540 post-stratification weighted Ordinary Least Squares (OLS) regressions in which we regress the implied social rank of each lifestyle activity on each of the variables capturing respondents' objective/subjective SEP and socio-demographic characteristics. The motivation for these analyses is to test formally if mean implied rank of lifestyle activities differs across subgroups. Because weighting introduces heteroscedasticity, we use robust standard errors (Winship and Radbill 1994) and, like the pairwise t-tests we present in Appendix B, all significance values and confidence bounds correct for multiple comparisons using the false discovery rate. The OLS model we estimate can be written as follows:

$$Rating_{ic} = a_c + \beta_{ic}x_i + \varepsilon_{ic}, (1)$$

Where $Rating_{ic}$ is respondent i's $(i = 1, ..., N)$ rating of the implied social rank of lifestyle activity c $(c = 1, .., 60)$. The rating of activity c is a linear function of one of the indicators of objective/subjective SEP and socio-demographic characteristics, indicated by x_i. The model also contains a constant term for each cultural activity a_c and an error term ε_{ic} that captures the influence of omitted variables.

In line with our interpretation of Figure 2 in the main text, results from the OLS models reveal few statistically significant differences in implied social rank across subgroups. Yet, we do observe some patterns. For example, respondents with a university degree rate highbrow activities higher and lowbrow activities lower than respondents without a university degree. Moreover, women rate a combination of middle- and highbrow activities higher than men, while older respondents rate lowbrow activities higher than younger respondents. However, these differences are minor.
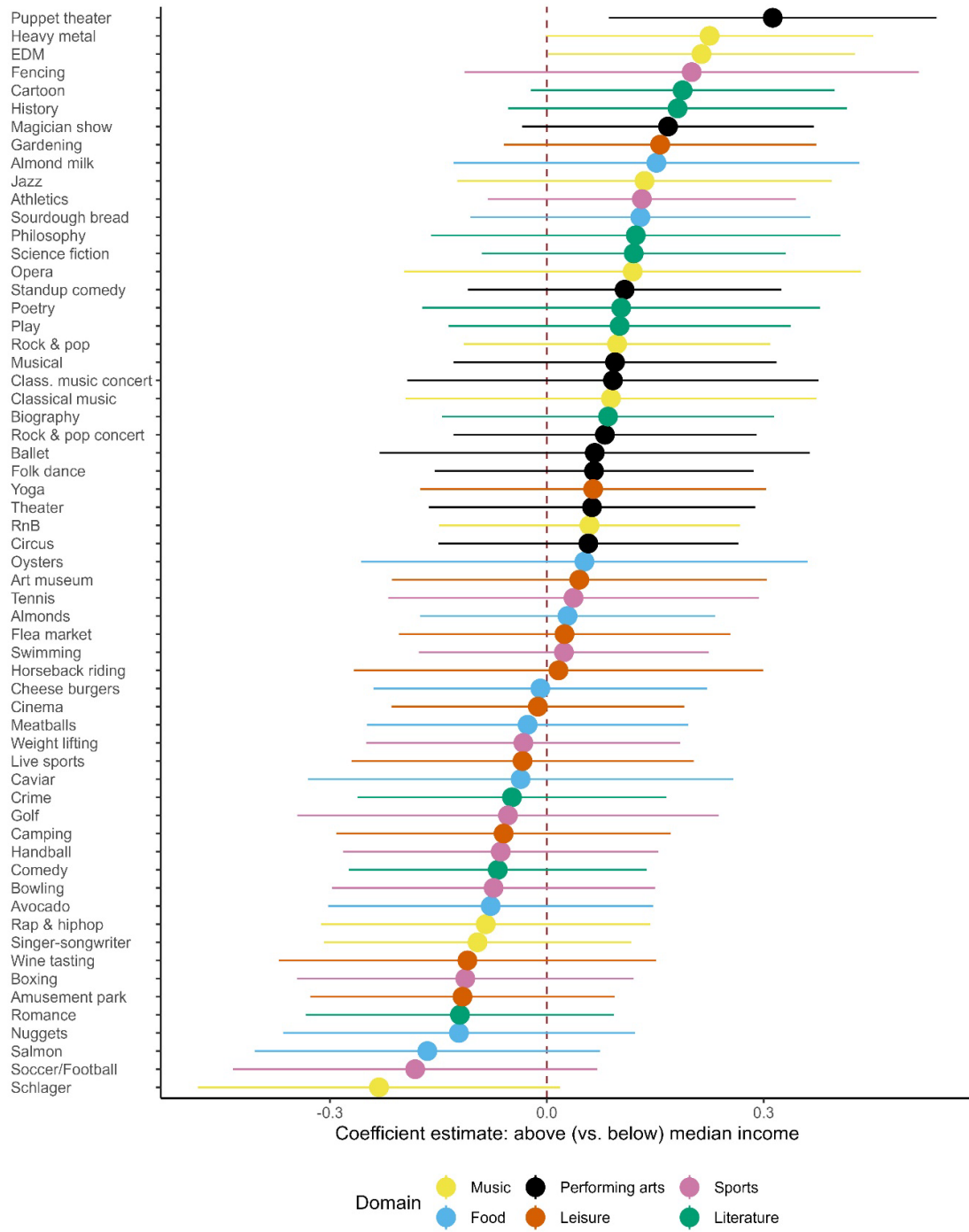
Objective Socioeconomic Position

Figure F1a. Difference in Rating of Social Rank of Lifestyle Activities: High vs. Low education (reference group).
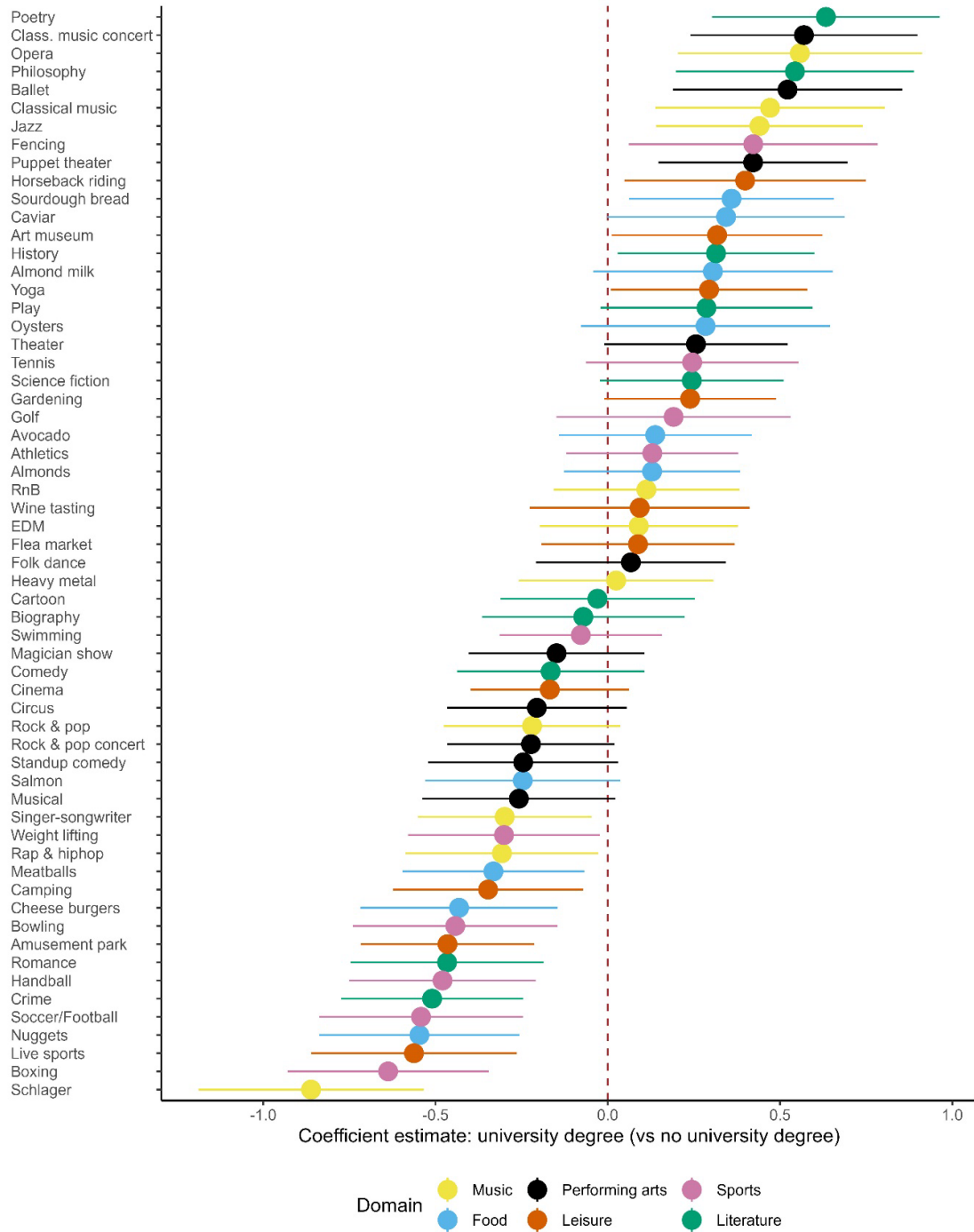
Figure F1b. Difference in Rating of Social Rank of Lifestyle Activities: In the labor market vs. Not (reference group).
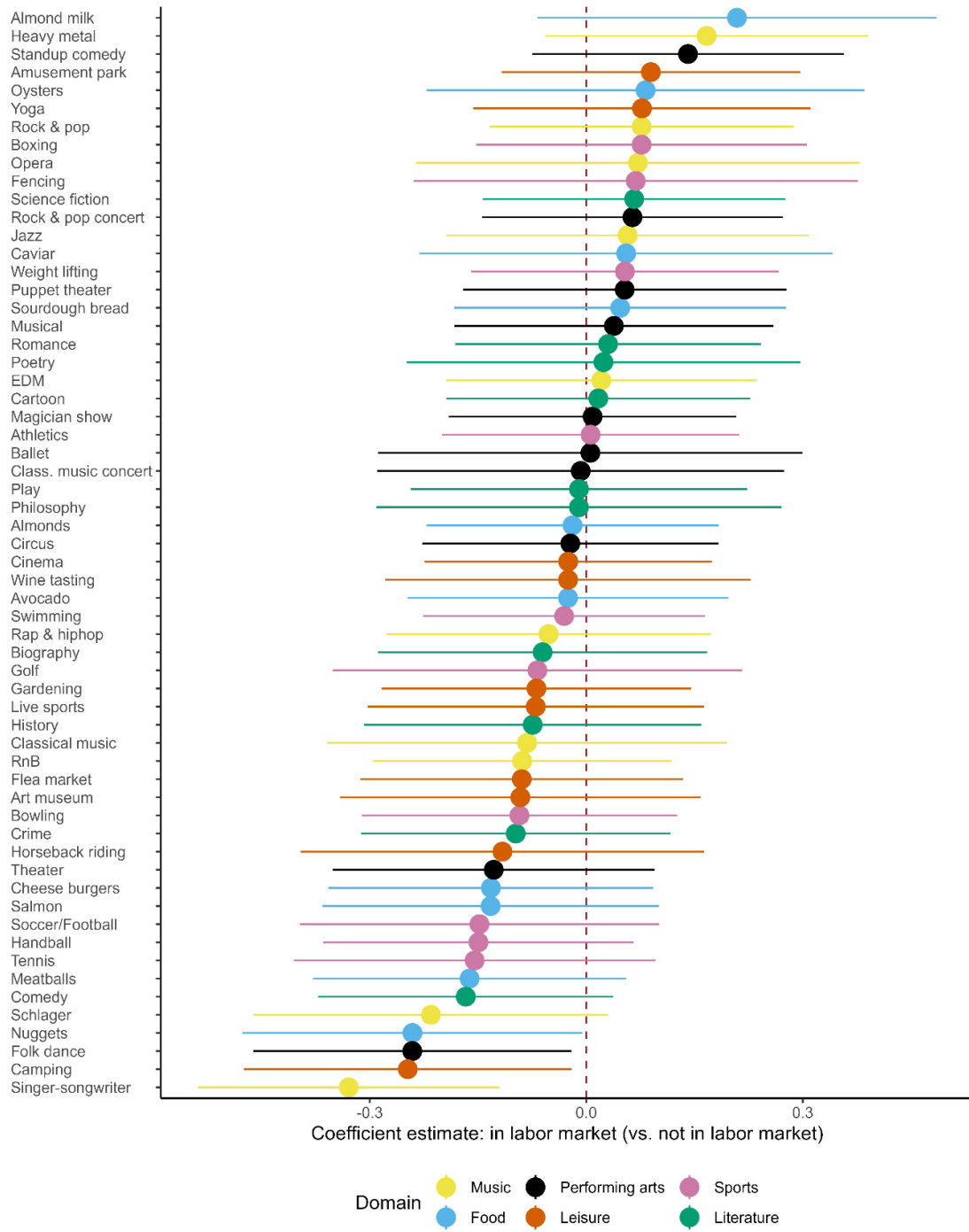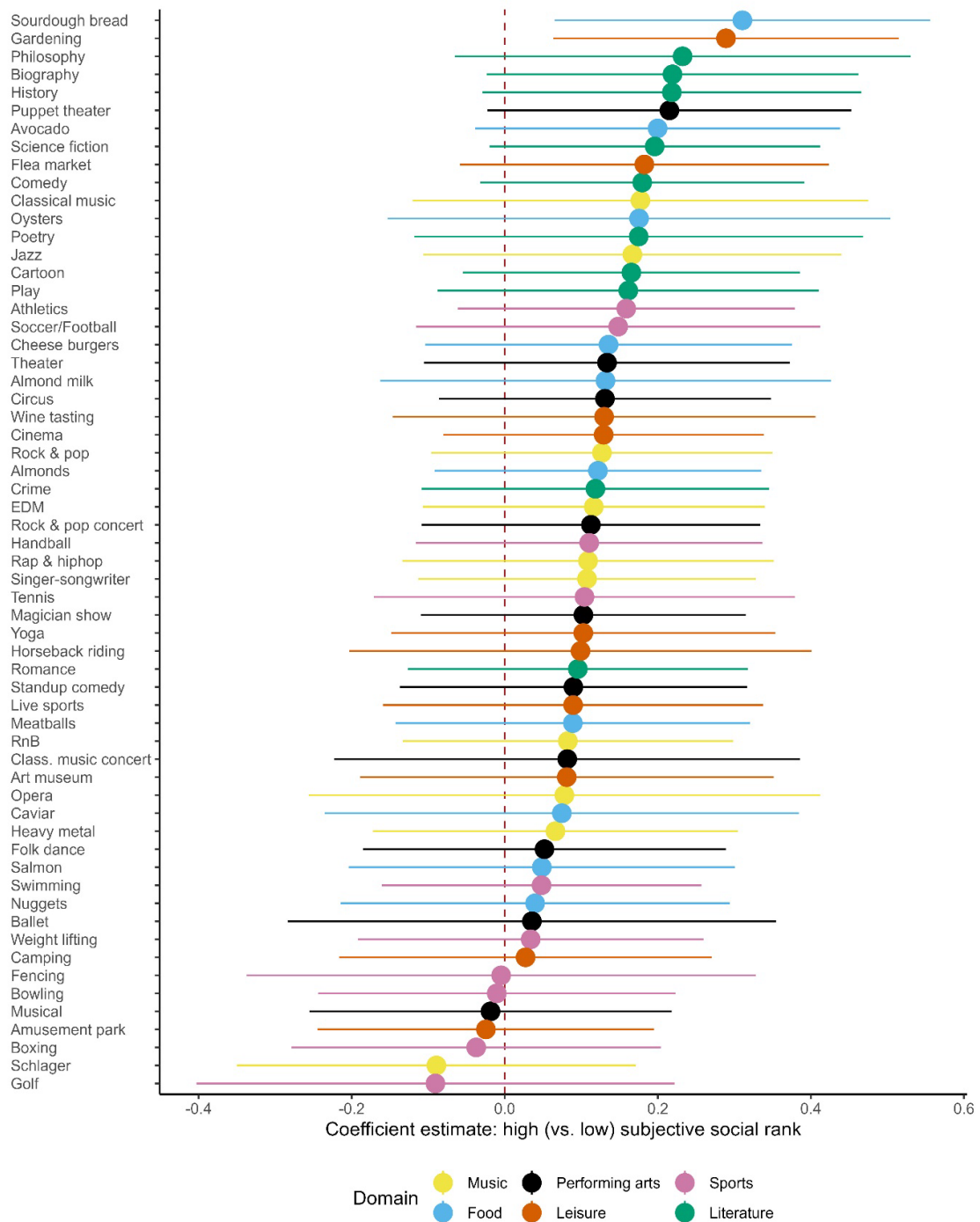
Figure F1c. Difference in Rating of Social Rank of Lifestyle Activities: Above vs. Below median income level (reference group).
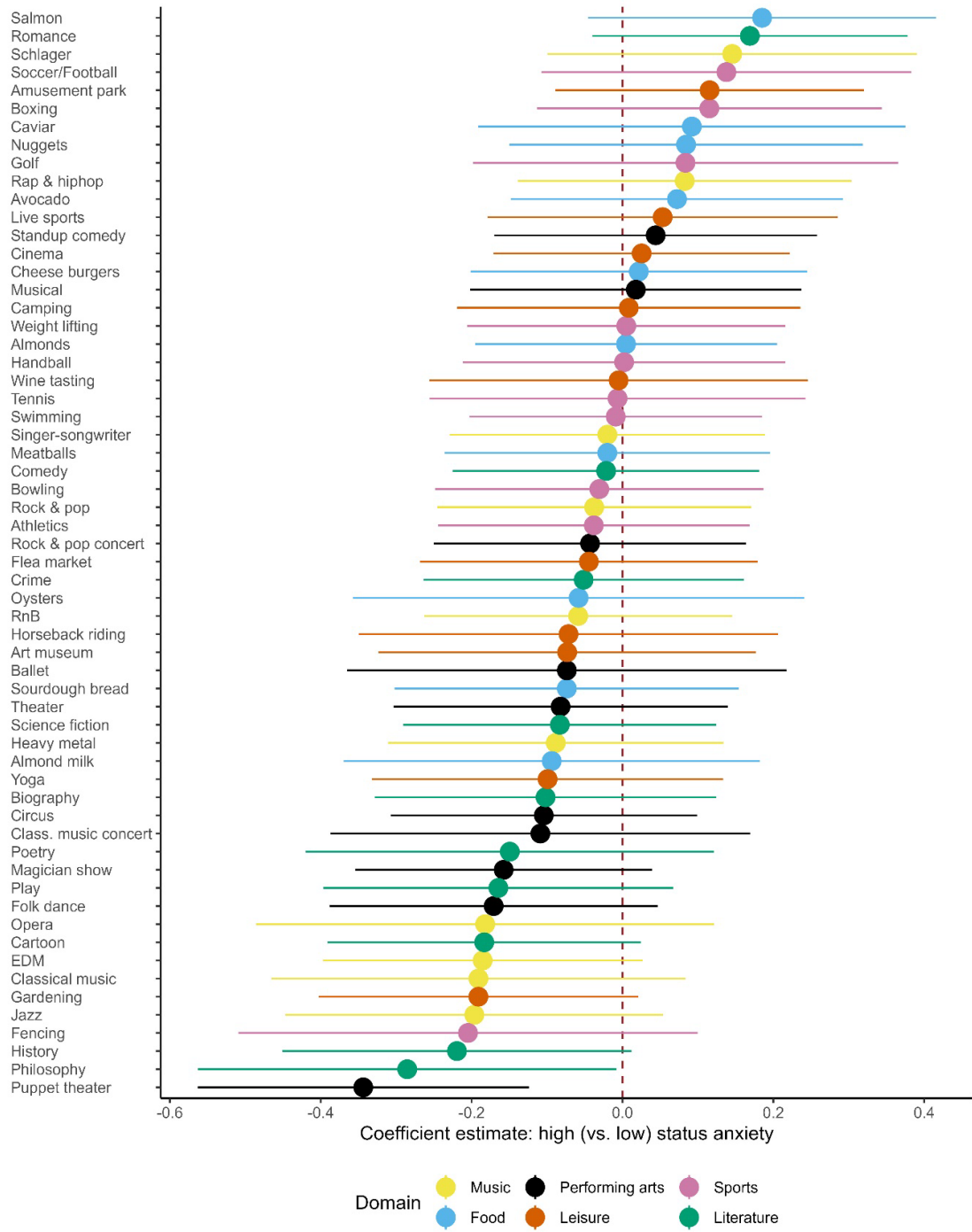
Subjective Socioeconomic Position

Figure F1d. Difference in Rating of Social Rank of Lifestyle Activities: High vs. Low Subjective Social Rank (reference group).
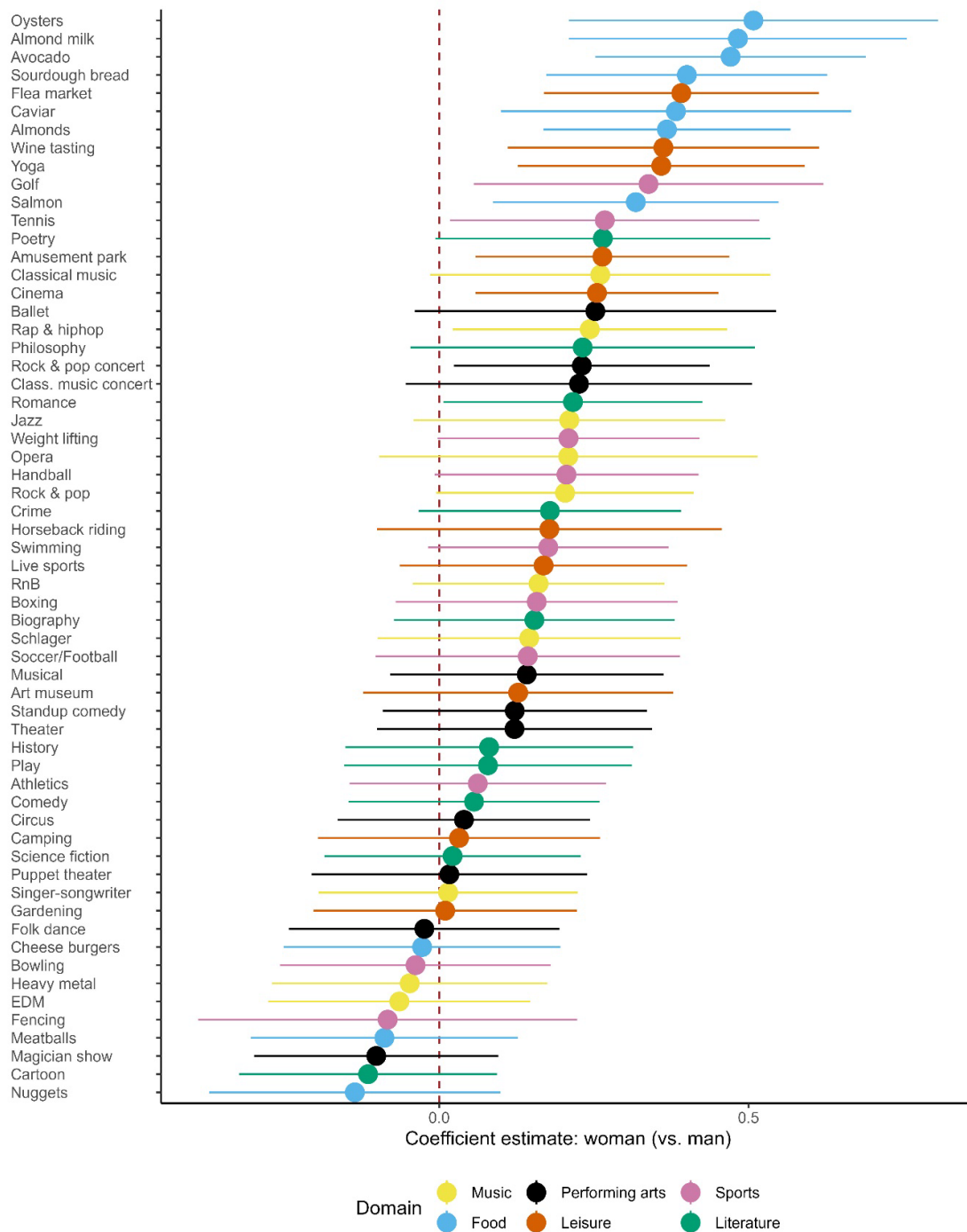
Figure F1e. Difference in Rating of Social Rank of Lifestyle Activities: High vs. Low Status Anxiety (reference group).
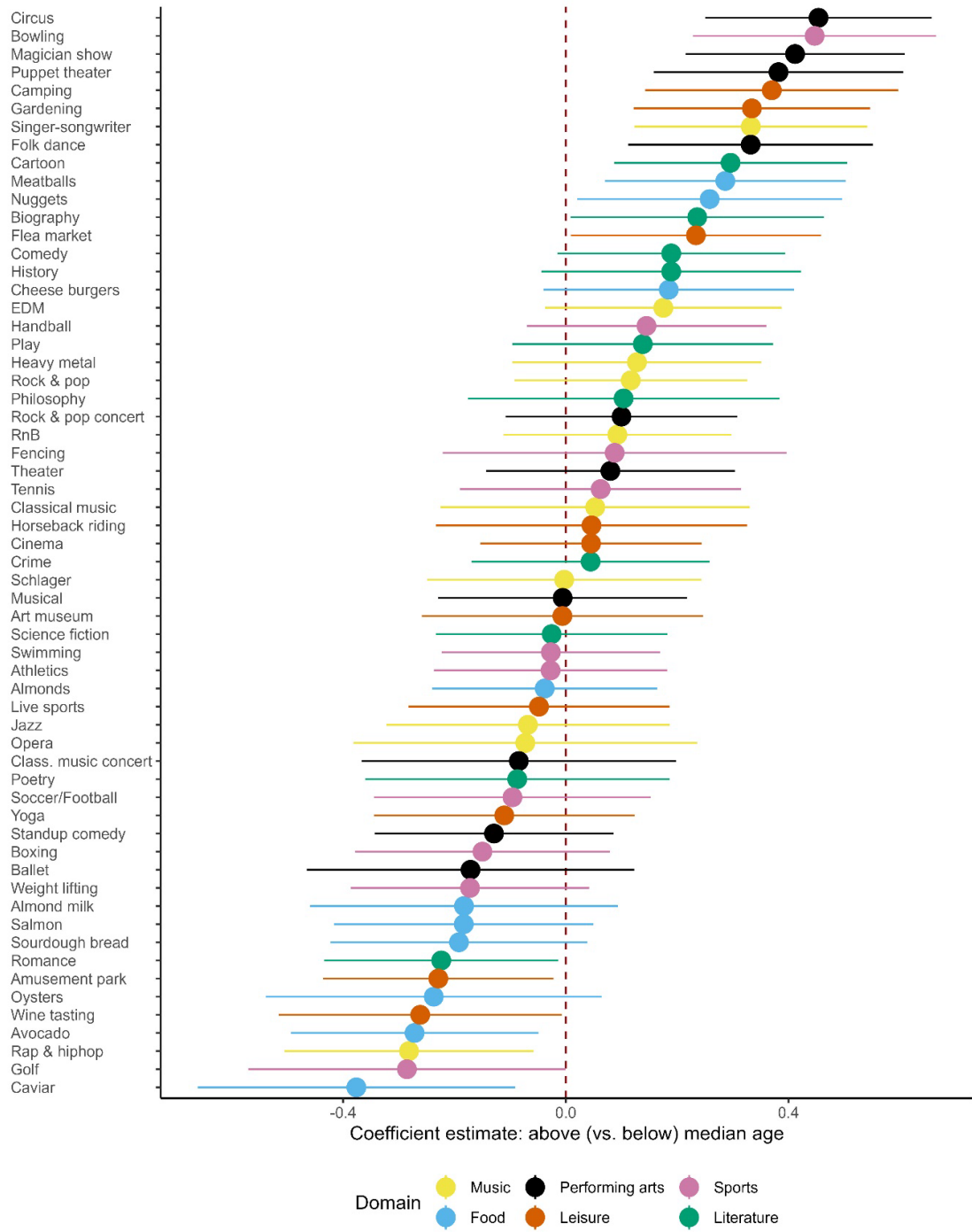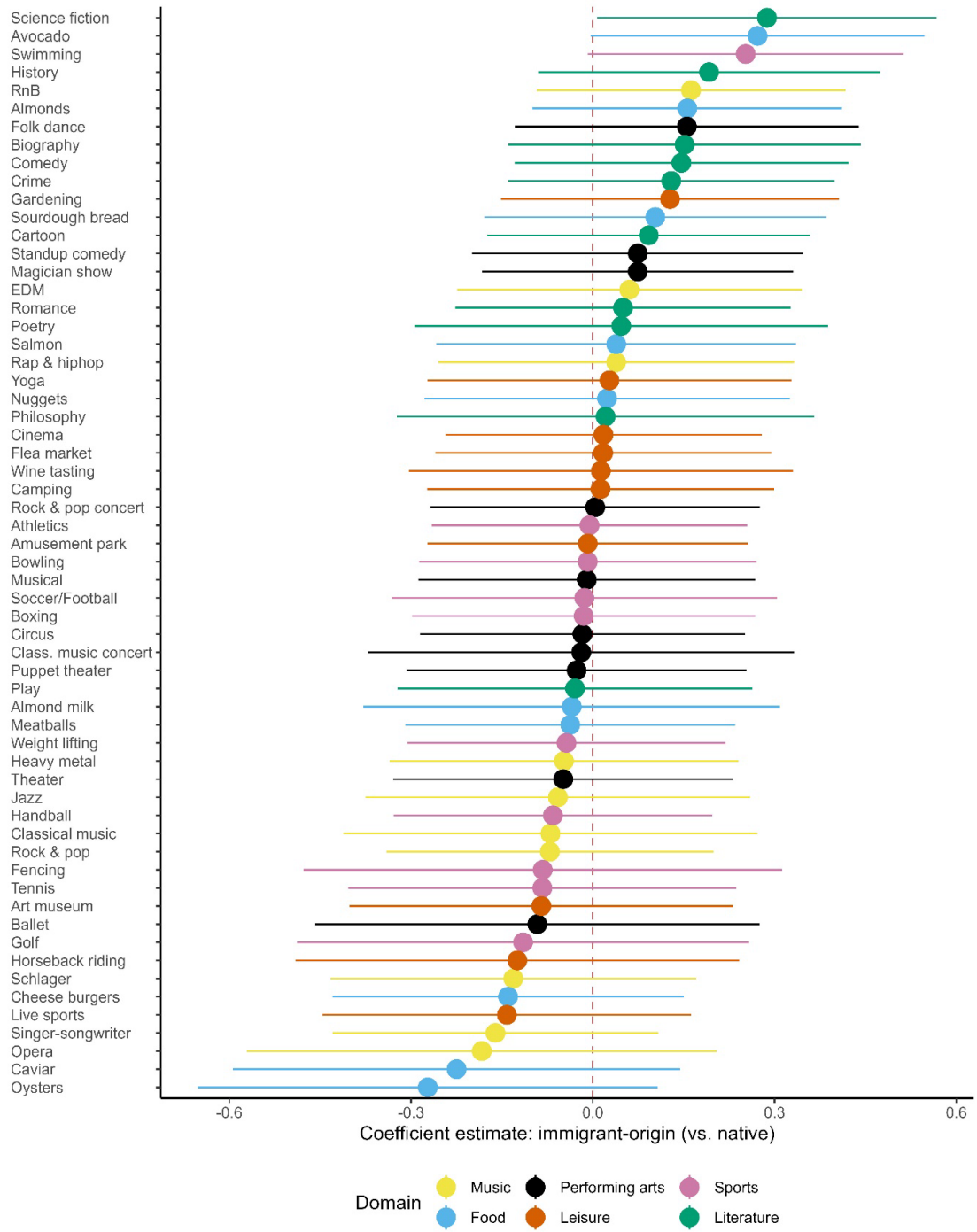
Socio-Demographic Characteristics

Figure F1f. Difference in Rating of Social Rank of Lifestyle Activities: Woman vs. Man (reference group).
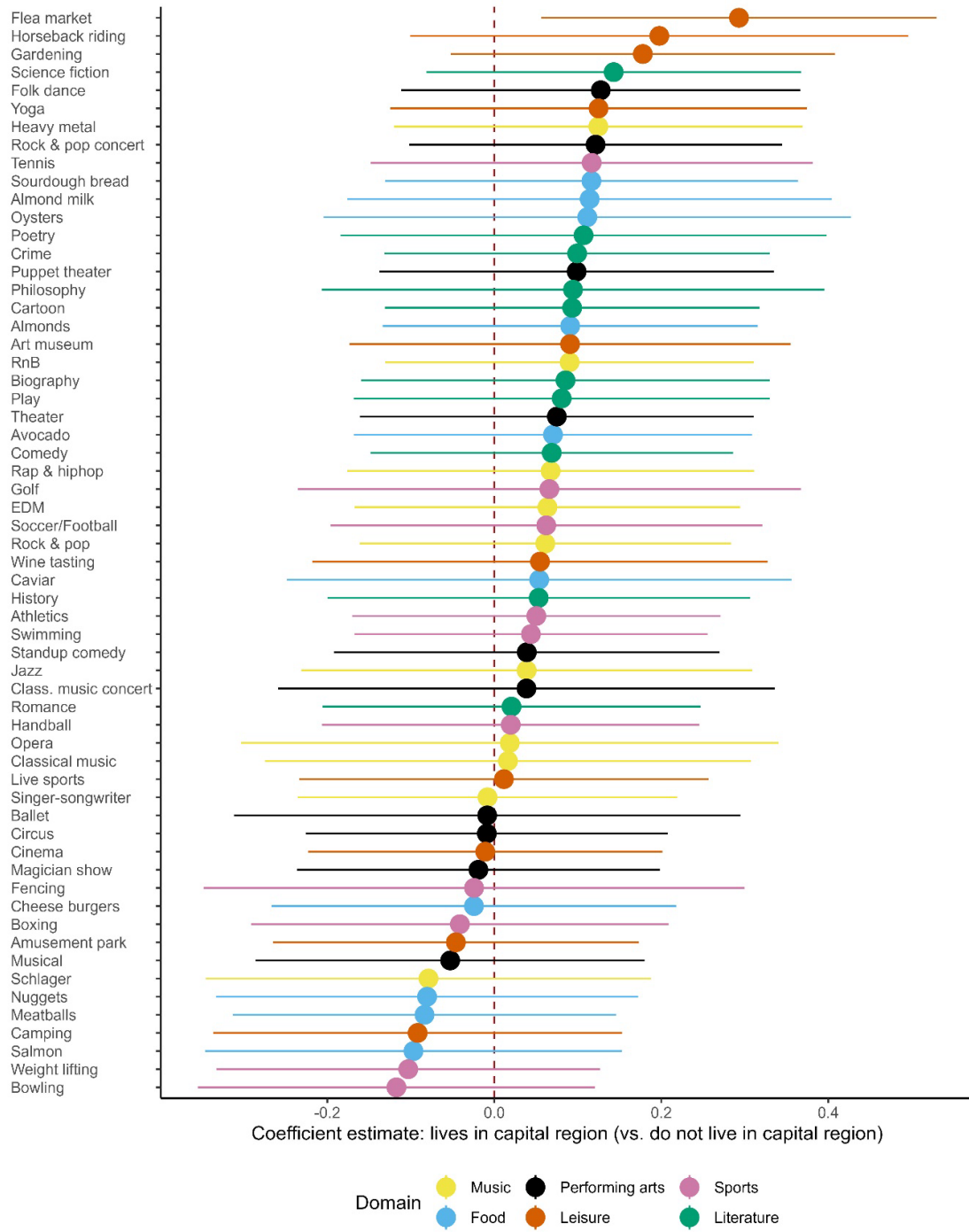
Figure F1g. Difference in Rating of Social Rank of Lifestyle Activities: Age 52+ vs. 18-51 (reference group).

Figure F1h. Difference in Rating of Social Rank of Lifestyle Activities: Native (reference group) vs. Immigrant-origin.

Figure F1i. Difference in Rating of Social Rank of Lifestyle Activities: Lives in Capital Region vs. not (reference group).

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