

Mixed effects of mean per cluster

Tuesday, January 19, 2021 6:11 PM

Call:

```
bpmme(pred.I = y ~ age + gender + hand + region + (1 | writer),  
data = mean_per_cluster, its = 5000, burn = 500)
```

MCMC:

iterations = 5000

burn-in = 500

lag = 1

Model Fit:

	Statistic	Parameters
lppd	-2434.628	18.0000
DIC	5111.352	105.4678
DIC.alt	5207.194	153.3888
WAIC	5142.512	136.6280
WAIC2	5152.927	141.8355

Fixed Effects

Linear Coefficients

Component I:

	mean	mode	sd	LB HPD	UB HPD
(Intercept)	-2.02278452	-2.0439944936	0.2323439	-2.49413653	-1.5778008
age25-40	0.03584861	0.0484678183	0.2048913	-0.38843661	0.4255947
age41-60	0.54001667	0.5301284094	0.1802419	0.20018100	0.9081158
age61+	0.65991359	0.6753790424	0.2757463	0.08589151	1.1790758
gendermale	0.16871868	0.1369022864	0.1531280	-0.11756497	0.4790904
handright	0.02785714	-0.0063521230	0.2134275	-0.38468772	0.4501925
regionnortheast	0.48124481	0.6022053804	0.6354319	-0.73830216	1.7292132
regionsouth	0.04675476	0.0001662767	0.2370659	-0.39991944	0.5321997
regionwest	-0.29770078	-0.1877419987	0.3960179	-1.10479742	0.4449936

Component II:

	mean	mode	sd	LB HPD	UB HPD
(Intercept)	-0.4171117	-0.43730337	0.3461630	-1.08458676	0.2739833
age25-40	-0.1141514	-0.04374489	0.3064659	-0.77101438	0.4304906
age41-60	0.8535248	0.85700750	0.2737539	0.33659755	1.4059309
age61+	1.3184562	1.35034179	0.4263944	0.52952707	2.1931066
gendermale	0.4866803	0.44008646	0.2247733	0.05019025	0.9250895
handright	0.4101486	0.40111135	0.3295551	-0.24773112	1.0538554
regionnortheast	-0.9835776	-0.75673171	0.9619843	-2.88361540	0.8940702
regionsouth	0.3694926	0.49098622	0.3532946	-0.28092020	1.1052407
regionwest	-0.1513993	-0.06582680	0.5936600	-1.30918361	1.0126683

Circular Coefficients

Continuous variables:

[1] "There are no numeric predictors in the model"

Categorical variables:

Means:

	mean	mode	sd	LB	UB
(Intercept)	-2.941370	-2.887908	0.1649637	3.024140	3.671210
age25-40	-2.884101	-2.882263	0.1766350	3.070665	3.757635
age41-60	2.862359	2.807438	0.2175290	2.452423	3.297373
age61+	2.579549	2.500920	0.2812852	2.094135	3.176358
gendermale	3.104380	3.114933	0.1895180	2.720959	3.466319
handright	-3.138109	-3.123019	0.1163022	2.917888	3.368504
regionnortheast	-2.455267	-2.248827	0.4569684	2.795948	4.623941
regionsouth	-3.118444	3.082848	0.2394871	2.711773	3.646234
regionwest	-2.910836	-2.908668	0.2895488	2.801286	3.919368
age25-40age41-60	2.933101	2.939730	0.3030892	2.329582	3.506252
age25-40age61+	2.636159	2.492479	0.3604289	1.971276	3.373422
age25-40gendermale	-3.117658	3.145044	0.2116882	2.725023	3.552647
age25-40handright	-3.080193	-3.053941	0.1346400	2.938576	3.465000
age25-40regionnortheast	-2.403628	-2.260742	0.4636915	2.854233	4.698717
age25-40regionsouth	-3.059988	-3.015283	0.2264080	2.777199	3.660490
age25-40regionwest	-2.861239	-2.824637	0.2682028	2.919421	3.950427
age41-60age61+	2.028189	1.952522	0.2408173	1.585605	2.513179
age41-60gendermale	2.542587	2.520560	0.2168428	2.141778	2.978621
age41-60handright	2.617879	2.611287	0.1098158	2.408228	2.831520
age41-60regionnortheast	-2.711279	-2.503529	0.8389851	1.610863	4.917286

age41-60regionsouth	2.648860	2.559753	0.2785212	2.145369	3.230310
age41-60regionwest	2.992797	2.953099	0.3776247	2.298567	3.750935
age61+gendermale	2.302339	2.291755	0.2400015	1.840382	2.772945
age61+handright	2.377065	2.274497	0.1765769	2.053379	2.736028
age61+regionnortheast	-3.068825	-2.548251	1.0345247	1.151285	5.042690
age61+regionsouth	2.402157	2.270171	0.3021587	1.879392	3.054032
age61+regionwest	2.744936	2.711624	0.3810196	2.035556	3.484882
gendermalehandright	2.887176	2.862832	0.1255472	2.653532	3.136386
gendermaleregionnortheast	-2.611428	-2.433841	0.5725868	2.408073	4.644082
gendermaleregionsouth	2.910872	2.851119	0.2568321	2.424229	3.428070
gendermaleregionwest	-3.105209	3.155407	0.3151650	2.576164	3.799001
handrightregionnortheast	-2.610618	-2.455314	0.5001884	2.585303	4.544681
handrightregionsouth	2.961168	2.928919	0.1931884	2.588815	3.343548
handrightregionwest	-3.074652	3.141558	0.2727184	2.679836	3.745708
regionnortheastregionsouth	-2.593560	-2.385495	0.5653857	2.428054	4.628677
regionnortheastregionwest	-2.490983	-2.294837	0.4711025	2.777314	4.604493
regionsouthregionwest	-3.058626	-3.006545	0.3488131	2.505388	3.854862

Differences:

	mean	mode	sd	LB	UB
age25-40	-0.05715585	-0.054214784	0.1465110	-0.357386424	0.2145924
age41-60	0.47890161	0.456807537	0.1680561	0.170442836	0.8359069
age61+	0.76071989	0.758876737	0.2528024	0.257653398	1.2485834
gendermale	0.23731310	0.225218424	0.1188587	0.005305822	0.4710248
handright	0.19669850	0.211015833	0.1587259	-0.107498327	0.5172518
regionnortheast	-0.48290930	-0.679348261	0.4399954	-1.294194588	0.4768252
regionsouth	0.17689462	0.113838758	0.1771491	-0.170301587	0.5323998
regionwest	-0.03024337	0.007995218	0.2415265	-0.495297259	0.4586482
age25-40age41-60	0.40836318	0.473983005	0.3049054	-0.176985754	1.0186533
age25-40age61+	0.70388665	0.777393870	0.3597277	-0.049564045	1.3714863
age25-40gendermale	0.17625099	0.197991592	0.2036274	-0.210433386	0.5861476
age25-40handright	0.13882855	0.115300232	0.2179949	-0.306737624	0.5472362
age25-40regionnortheast	-0.53526544	-0.689223524	0.4633653	-1.367347695	0.5017961
age25-40regionsouth	0.11857941	0.144014865	0.2062373	-0.273145552	0.5363467
age25-40regionwest	-0.07996495	-0.071702688	0.2472966	-0.557967156	0.4121843
age41-60age61+	1.31221311	1.359658453	0.2743860	0.785072548	1.8597691
age41-60gendermale	0.79847915	0.734084682	0.2150197	0.384377354	1.2192059
age41-60handright	0.72399216	0.753731433	0.2038740	0.333210902	1.1416167
age41-60regionnortheast	-0.22492232	-0.473493080	0.8238155	-1.633679772	1.6687429
age41-60regionsouth	0.69171228	0.700300192	0.2619628	0.171249409	1.1946177
age41-60regionwest	0.34795974	0.343990037	0.3491333	-0.339526170	1.0170193
age61+gendermale	1.03826124	0.951912559	0.2497344	0.526098753	1.5014981
age61+handright	0.96459621	0.932775725	0.2378558	0.484848644	1.4201934
age61+regionnortheast	0.12668325	-0.258094146	1.0104469	-1.702782200	2.1603427
age61+regionsouth	0.93747526	0.941308637	0.2962612	0.352200143	1.5179247
age61+regionwest	0.59484329	0.660838998	0.3525854	-0.113153998	1.2691421
gendermalehandright	0.45460132	0.455727272	0.1936695	0.070806899	0.8316737
gendermaleregionnortheast	-0.32605659	-0.455469958	0.5559942	-1.286131826	0.8898167
gendermaleregionsouth	0.43033691	0.459916652	0.2230454	-0.009840276	0.8797220
gendermaleregionwest	0.16378394	0.191559612	0.2787906	-0.357560292	0.7437720
handrightregionnortheast	-0.33054921	-0.522029506	0.5144390	-1.251779059	0.7783909
handrightregionsouth	0.38055981	0.408377419	0.2289163	-0.069972560	0.8231009
handrightregionwest	0.13314333	0.211295559	0.2854076	-0.417661666	0.7105253
regionnortheastregionsouth	-0.34411465	-0.528172580	0.5474456	-1.353634455	0.8359759
regionnortheastregionwest	-0.44698412	-0.562274229	0.4534073	-1.256822772	0.5274590
regionsouthregionwest	0.11715001	0.042140227	0.3109199	-0.494055429	0.7226675

Random Effects

Linear Coefficients

Component I:

	mean	mode	sd	LB	HPD	UB	HPD
RI	0.3383982	0.3178435	0.06903219	0.2166695	0.481815		

Component II:

	mean	mode	sd	LB	HPD	UB	HPD
RI	0.8506605	0.7689126	0.1569244	0.5625021	1.149025		

Circular Coefficients

	mean	mode	sd	LB	UB
RI	0.9050144	0.9070303	0.02171656	0.8615156	0.9442461