Supplementary Material

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Dissecting the Groove Experience: The Role of Instrumentation, Low-Level Audio Features, and Personal Musical Background

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A. Supplementary Tables

Table S1

Stimuli Used in Selected Previous Groove Studies

Source	Stimuli	Duration in seconds	Experimental focus (target variables)
(Madison, 2006)	64 songs from different music cultures	8	Definition of groove
(Madison et al., 2011)	100 songs from five different popular and traditional music genres	9.06-14.55	Beat salience, metrical levels, event density, un-/systematic microtiming
(Janata et al., 2012)	148 Songs from popular music genres + 20 drum breaks	20	Genre, tempo, familiarity, tapping
(Davies et al., 2013)	Three synthetic drum and percussion patterns in Samba, funk and jazz style	n. a.	Genre, microtiming, expertise
(Frühauf et al., 2013)	One synthetic drum pattern in five different timing styles	8	Microtiming, expertise, instrument
(Stupacher et al., 2013)	Eight songs grouped into high- and low-groove (Janata et al., 2012)	20–30	EMG recordings, familiarity, liking
(Madison & Sioros, 2014)	12 monophonic melodies performed in three different versions	16–25	Groove performance, syncopation, microtiming, event density
(Sioros et al., 2014)	12 synthetic piano melodies in five versions	4–8	Microtiming, syncopation, event density, familiarity, preferences
(Witek et al., 2014)	50 synthetic drum patterns	16	Syncopation, expertise, entropy

Source	Stimuli	Duration in seconds	Experimental focus (target variables)
(Labbé & Grandjean, 2014)	10 pieces for solo violin in three different versions	59–244	Subjective entrainment
(Matsushita & Nomura, 2016)	One synthetic bass and drum pattern	8	Microtiming, point of subjective equality
(Senn et al., 2016)	Two excerpts from a funk and jazz jam session (converted to MIDI) in 12 different versions	20	Microtiming, musical styles, expertise, personality
(Stupacher et al., 2016)	(1) 128 songs from Janata et al. (2012) (2) 48 songs from Janata et al. (2012) categorized into high-, mid- and low-groove (3) synthetic drum, bass and keyboard pattern performed at five different tempi	20–30	Beat salience, spectral flux, event density, RMS energy, attack, loudness, tempo
(Wesolowski & Hofmann, 2016)	198 songs from 11 different EDM genres	15	Low-level audio descriptors, musical preferences
(Etani et al., 2018)	Five synthetic drum-breaks in six different tempi	40	Tempo, rhythmic patterns
(Senn et al., 2018)	252 drum patterns (converted to MIDI)	8 bars	Style bias, expertise, familiarity, low- and high-level audio descriptors (e.g., syncopation, event density, tempo, etc.)
(Cameron et al., 2019)	One percussion piece in two versions	351	Microtiming, EEG recordings

Source	Stimuli	Duration in seconds	Experimental focus (target variables)
(Eaves et al., 2019)	10 songs from Janata et al. (2012) categorized into high-, and low-groove	20	Visual performances of groove
(Lustig & Tan, 2020)	Four synthetic bass and drum loops in four versions	15	Audio filtering, musical preferences, sub-band flux
(Matthews et al., 2019)	54 synthetic drum and piano pattern	10	Rhythmic/harmonic complexity, expertise
(Senn et al., 2020)	Eight songs from eight different genres	(1) 120 (2) 30	Questionnaire validation
(Matthews et al., 2020)	36 synthetic drum and piano pattern	10	Rhythmic/harmonic complexity, expertise
(Witek et al., 2020)	15 synthetic drum patterns	16	Syncopation, groove experience across cultures
(Düvel et al., 2021)	Eight songs from eight different genres, same as in Senn et al. (2020)	30	Questionnaire validation (German)

Table S2

Discographic Information of the 36 Stimuli

ID	Artist	Title	Album	Time section	Duration (s)[a]
Source: Senn et al. (2018)					
BarT_3	blink-182	Down	blink-182	0.10-0.32	22
BlaH_1	The 5th Dimension	Aquarius/Let the Sunshine In	The Age of Aquarius	0.38-0.51	13
ChaD_4	Dennis Chambers	Roll Call	Outbreak	0.34-0.53	19
ChaD_5	Maceo Parker	Shake Everything You Got	Roots & Grooves	1.52-2.16	24
ClaM_3	Herbie Hancock	Watermelon Man	Head Hunters	0.26-0.54	28
CobB_4	Billy Cobham	Now That You've Gone	Drums 'n' Voice	4.09-4.29	20
ColV_4	Jeff Beck	Nadia	Performing This Week ... Live at Ronnie Scott's	1.32-1.45	13
DavC_2	Ed Sheeran	Bloodstream	X	2.16-2.39	23
DavC_4	Me'Shell Ndegeocello	Come Smoke My Herb	Comfort Woman	1.15-1.41	26
DeiA_4	The Jon Scofield Band	Ideofunk	Überjam	2.30-2.54	24
ErsP_3	Steps Ahead	Beirut	Magnetic	4.17-4.36	19
FonD_3	Elvis Presley	Hound Dog	Hound Dog/Don't Be Cruel (Single)	0.17-0.31	14
FreJ_3	Guns N' Roses	Street Of Dreams	Chinese Democracy	1.13-1.38	25
GadJ_4	Bill Withers	Use Me	Still Bill	2.53-3.20	27

ID	Artist	Title	Album	Time section	Duration (s)[a]
GarD_3	Tower Of Power	Soul Vaccination	Soul Vaccination: Live	0.55-1.15	20
HakO_2	The Omar Hakim Experience	Listen Up!	We Are One	1.54-2.17	23
JacA_2	Otis Redding	(Sittin' On) The Dock of the Bay	The Dock of the Bay	0.28-0.49	21
JacA_5	Otis Redding	634-5789 (Soulsville, USA)	The Soul Album	1.49-2.08	19
JorS_3	The Blues Brothers	Soul Man	Briefcase Full of Blues	0.21-0.39	18
MarB_4	Medeski, Martin & Wood	Jelly Belly	Shack-Man	0.20-0.41	21
MayJ_4	Nerve	Mindwash	Live in Europe	0.43-1.14	31
MooS_5	Stanton Moore	Blues for Ben	All Kooked Out!	1.16-1.27	11
PhiS_1	Derek Sherinian	Phantom Shuffle	Blood of the Snake	1.02-1.13	11
PhiS_5	Jeff Beck	The Pump	There & Back	4.02-4.26	24
PurB_2	Steely Dan	Home at Last	Aja	0.15-0.47	32
StaR_1	The Beatles	Come Together	Abbey Road	2.03-2.28	25
SteB_1	Maceo Parker	Southwick	Mo' Roots	0.13-0.37	24
TayR_5	Queen	Bohemian Rhapsody	A Night at The Opera	4.30-4.46	16
ThoA_5	D'Angelo	Chicken Grease	Voodoo	0.17-0.40	23
WarB_3	Black Sabbath	Psycho Man	Reunion	2.28-3.02	34

Source: Musdb18-HQ-Dataset (Rafii et al., 2019)

F69	The Easton Ellises	Falcon 69	Nightwavs	0.31-0.46	15

ID	Artist	Title	Album	Time section	Duration (s)[a]
WFM	Clara Berry and Wooldog	Waltz for My Victims	The Magician's Wife	1.19-1.34	15
YLM	Sweet Lights	You Let Me Down	You Let Me Down - Single	0.50-1.05	15
Source: Native Instruments (2020b)					
NG	Native Instruments	No Gravity	-	1.50-2.05	15
StSt	Native Instruments	Stutter Stepp	-	1.11-1.26	15
StSy	Native Instruments	Stockholm Syndrome	-	0.38-0.53	15

Note. [a]This is the original length of the stimuli. In a second step, all stimuli were edited to a length of 15 s including one second fade-in and fade-out, as reported in the paper.

Table S3

Averaged Responses to the Items of the EGQ-Factor Urge to Move *for Each of the 108 Stimuli (0* = Strongly Disagree*, 6* = Strongly Agree*)*

Stimulus	*M*	*SD*	Lower CI[a]	Upper CI
Source: Senn et al. (2018)				
BarT_3_A	4.361111	1.4596134	3.555556	5.138889
BarT_3_D	3.444444	1.4337209	2.555556	4.333333
BarT_3_O	4.250000	1.4983156	3.416667	5.083333
BlaH_1_A	4.358974	1.1821319	3.743590	4.948718
BlaH_1_D	3.433333	1.0663194	2.833333	4.066667
BlaH_1_O	4.875000	1.4395215	4.187500	5.541667
ChaD_4_A	3.577778	1.0872031	3.022222	4.111111
ChaD_4_D	5.058824	1.2651048	4.450980	5.607843
ChaD_4_O	4.955556	0.7752794	4.600000	5.377778
ChaD_5_A	3.916667	1.4063349	3.229167	4.562500
ChaD_5_D	3.833333	1.3203735	3.303030	4.364015
ChaD_5_O	4.833333	1.4473325	4.148148	5.462963
ClaM_3_A	3.150000	1.3742622	2.566667	3.750000
ClaM_3_D	3.298246	1.5943370	2.631579	4.035088
ClaM_3_O	3.196078	1.5368566	2.490196	3.901961
CobB_4_A	4.533333	1.4408992	3.777778	5.200000
CobB_4_D	4.809524	1.3379043	4.095238	5.452381
CobB_4_O	4.777778	1.2258244	4.177778	5.355556
ColV_4_A	2.840580	1.1886227	2.391304	3.318841
ColV_4_D	4.736111	1.2432588	4.236111	5.222222
ColV_4_O	3.606061	1.1061940	3.166667	4.060606
DavC_2_B	3.479167	1.2290843	2.916667	4.062500
DavC_2_D	3.404762	1.3020600	2.761905	4.071429
DavC_2_O	3.717949	1.0078043	3.179487	4.230769
DavC_4_A	2.473684	0.9048279	2.122807	2.912281
DavC_4_D	3.125000	1.5158184	2.541667	3.750000

Stimulus	*M*	*SD*	Lower CI[a]	Upper CI
DavC_4_O	3.000000	1.2881224	2.375000	3.604167
DeiA_4_A	3.962963	1.4090691	3.351852	4.592593
DeiA_4_D	3.833333	1.5250987	3.145313	4.562500
DeiA_4_O	3.333333	1.8559215	2.362879	4.393939
ErsP_3_A	3.620690	1.2870667	3.160920	4.080460
ErsP_3_D	4.600000	1.2914473	4.066667	5.133333
ErsP_3_O	4.196078	1.0610452	3.686275	4.686275
FonD_3_A	5.282051	1.4000407	4.563462	5.974359
FonD_3_D	3.636364	1.3203917	2.878788	4.363636
FonD_3_O	5.696970	1.2243324	4.909091	6.303788
FreJ_3_A	4.083333	1.4478592	3.395833	4.770833
FreJ_3_D	4.104167	1.5041609	3.416667	4.791667
FreJ_3_O	4.027778	1.3886869	3.222222	4.722222
GadJ_4_A	4.588235	1.2721887	4.000000	5.156863
GadJ_4_D	3.947368	1.3800302	3.333333	4.543860
GadJ_4_O	4.512821	1.4116931	3.743590	5.230769
GarD_3_A	4.861111	1.1142632	4.277778	5.500000
GarD_3_D	3.904762	1.4931672	3.190476	4.714286
GarD_3_O	4.848485	1.9169631	3.727273	5.878788
HakO_2_A	2.685185	1.0319866	2.203704	3.148148
HakO_2_D	4.894737	1.3196176	4.280702	5.438596
HakO_2_O	4.277778	1.1962343	3.527778	4.833333
JacA_2_A	3.363636	1.0898985	2.757576	3.969697
JacA_2_D	3.185185	1.3653562	2.333333	4.000000
JacA_2_O	3.600000	1.7543596	2.400000	5.133333
JacA_5_A	3.155556	1.6612611	2.377778	4.000000
JacA_5_D	2.770833	1.5949864	2.041667	3.562500
JacA_5_O	5.018519	1.1852703	4.462963	5.537037
JorS_3_A	5.452381	1.0894718	5.047619	5.845238
JorS_3_D	4.666667	1.2099803	4.129630	5.222222

Stimulus	*M*	*SD*	Lower CI[a]	Upper CI
JorS_3_O	5.681818	1.0464213	5.227273	6.090909
MarB_4_A	3.377778	1.6849788	2.555556	4.177778
MarB_4_D	4.461538	1.2659242	3.794872	5.102564
MarB_4_O	4.229167	1.3969212	3.541667	4.854167
MayJ_4_A	1.705882	0.8809902	1.333333	2.156863
MayJ_4_D	3.157895	1.1296696	2.684211	3.649123
MayJ_4_O	2.962963	1.0141450	2.592593	3.333642
MooS_5_A	3.939394	1.2544869	3.212121	4.606818
MooS_5_D	4.844444	1.2901745	4.200000	5.466667
MooS_5_O	4.518519	1.2895874	3.944444	5.074074
PhiS_1_A	2.722222	1.0981267	2.222222	3.222685
PhiS_1_D	4.437500	1.2335961	3.854167	5.020833
PhiS_1_O	4.058824	1.2540783	3.470588	4.627451
PhiS_5_A	2.733333	1.0496913	2.333333	3.133333
PhiS_5_D	4.000000	0.9878489	3.611111	4.388889
PhiS_5_O	3.615385	1.2389684	3.141026	4.089744
PurB_2_A	3.317460	1.1473457	2.841270	3.825397
PurB_2_D	3.746032	1.2644927	3.174603	4.238492
PurB_2_O	3.850000	1.4285109	3.233333	4.450000
StaR_1_A	3.309524	1.3926810	2.619048	4.047619
StaR_1_D	3.354167	0.7248882	3.000000	3.687500
StaR_1_O	4.714286	1.4667666	3.952381	5.428571
SteB_1_A	3.866667	1.5725825	3.111111	4.644444
SteB_1_D	3.606061	1.4165924	3.060606	4.196970
SteB_1_O	3.833333	1.5248288	3.273810	4.380952
TayR_5_A	4.972222	1.5728655	4.111111	5.777778
TayR_5_D	3.352941	1.7339365	2.568627	4.156863
TayR_5_O	5.166667	1.3868239	4.590909	5.712121
ThoA_5_A	2.333333	1.3685817	1.541667	3.291667
ThoA_5_D	4.296296	1.5041096	3.296296	5.185185

Stimulus	*M*	*SD*	Lower CI[a]	Upper CI
ThoA_5_O	3.947368	1.5918898	3.263158	4.649123
WarB_3_A	3.177778	1.0302309	2.666667	3.644444
WarB_3_D	2.595238	0.9972490	2.095238	3.119048
WarB_3_O	3.809524	1.7032613	2.952381	4.666667
Source: Musdb18-HQ-Dataset (Rafii et al., 2019)				
F69_A	3.627451	1.3823435	3.156863	4.078431
F69_D	4.961240	1.2811398	4.588953	5.333333
F69_O	4.266667	1.2545075	3.883125	4.650000
WFM_A	2.849206	1.6216730	2.373016	3.333333
WFM_D	2.375000	0.8910145	2.072917	2.687500
WFM_O	3.081081	1.4345933	2.666667	3.558559
YLM_A	3.055556	1.1422617	2.703704	3.435185
YLM_D	2.204301	1.1504505	1.817204	2.612903
YLM_O	3.066667	1.3426148	2.609524	3.533333
Source: Native Instruments (2020b)				
NG_A	2.310345	1.4252013	1.816092	2.839080
NG_D	4.068627	1.5758690	3.549020	4.598039
NG_O	3.752688	1.8337732	3.107527	4.376613
StSt_A	1.982906	0.9851195	1.666667	2.307692
StSt_D	3.368421	1.4679549	2.921053	3.833333
StSt_O[b]	2.686275	1.3778947	2.245098	3.156863
StSy_A	4.343434	1.7588760	3.747475	4.909091
StSy_D	5.114286	1.2806832	4.685714	5.523810
StSy_O	5.046296	1.2975013	4.629630	5.453704

Note. [a]Non-parametric 95% confidence interval. [b]This stimulus was excluded from analyses (see Data Diagnostics and Analytic Strategy in the paper). The last character of the stimulus name denotes the version: A = without drums (A for "accompaniment"), D = drums only, O = original version.

Table S4

Averaged Responses to the Items of the EGQ-Factor Pleasure *for Each of the 108 Stimuli (0* = Strongly Disagree*, 6* = Strongly Agree*)*

Stimulus	*M*	*SD*	Lower-CI[a]	Upper-CI
Source: Senn et al. (2018)				
BarT_3_A	4.694444	1.3740623	3.944444	5.416667
BarT_3_D	3.037037	1.2521586	2.295370	3.851852
BarT_3_O	5.111111	1.3877773	4.305556	5.805556
BlaH_1_A	5.153846	1.0148470	4.641026	5.666667
BlaH_1_D	2.966667	1.0357797	2.400000	3.600000
BlaH_1_O	5.375000	1.5389992	4.582813	6.062500
ChaD_4_A	4.311111	1.5195377	3.555556	5.000000
ChaD_4_D	5.490196	0.9654996	5.000000	5.882353
ChaD_4_O	5.177778	0.9160532	4.755556	5.644444
ChaD_5_A	4.791667	1.5196247	4.041667	5.437500
ChaD_5_D	3.878788	1.6152234	3.226894	4.545455
ChaD_5_O	5.333333	1.3382263	4.703704	5.888889
ClaM_3_A	3.916667	1.4342306	3.316667	4.533333
ClaM_3_D	3.631579	1.6363718	2.929825	4.368421
ClaM_3_O	3.588235	1.7698455	2.764706	4.431373
CobB_4_A	4.977778	1.5037871	4.200000	5.688889
CobB_4_D	4.928571	1.4686384	4.166667	5.642857
CobB_4_O	5.600000	1.1697239	5.000000	6.133333
ColV_4_A	4.275362	1.3358014	3.724638	4.797101
ColV_4_D	4.611111	1.2575056	4.125000	5.097222
ColV_4_O	4.833333	1.1626916	4.318182	5.272727
DavC_2_A	4.791667	1.5389992	4.020833	5.479167
DavC_2_D	3.547619	1.2513729	2.904762	4.142857
DavC_2_O	5.076923	0.8182394	4.666667	5.538462
DavC_4_A	3.649123	1.6081340	2.947368	4.333333
DavC_4_D	3.819444	1.5572153	3.208333	4.403125

Stimulus	*M*	*SD*	Lower-CI[a]	Upper-CI
DavC_4_O	4.062500	1.3008188	3.458333	4.687500
DeiA_4_A	4.777778	1.5466599	4.074074	5.481481
DeiA_4_D	4.333333	1.5299480	3.625000	5.062500
DeiA_4_O	4.212121	2.0616753	3.000000	5.363636
ErsP_3_A	4.183908	1.4186574	3.666667	4.666667
ErsP_3_D	4.766667	1.2800768	4.233333	5.300000
ErsP_3_O	4.725490	1.0944005	4.196078	5.215686
FonD_3_A	5.435897	1.3566340	4.666667	6.102564
FonD_3_D	3.909091	1.6267958	2.969697	4.787879
FonD_3_O	5.484848	0.8989331	4.969697	5.939394
FreJ_3_A	4.833333	1.3662601	4.187500	5.458333
FreJ_3_D	4.645833	1.0503527	4.166667	5.145833
FreJ_3_O	5.138889	1.5005611	4.250000	5.805556
GadJ_4_A	5.549020	0.8493558	5.156863	5.960784
GadJ_4_D	4.561404	1.0426263	4.105263	5.000000
GadJ_4_O	5.333333	1.4272481	4.564103	6.025641
GarD_3_A	5.083333	1.0648185	4.500000	5.638889
GarD_3_D	4.119048	1.3935575	3.404762	4.809524
GarD_3_O	5.272727	1.3150258	4.545455	6.000000
HakO_2_A	4.370370	1.5419574	3.666667	5.037037
HakO_2_D	5.052632	1.1928965	4.508772	5.543860
HakO_2_O	4.777778	0.9983151	4.194444	5.305556
JacA_2_A	5.969697	0.7371800	5.545455	6.393939
JacA_2_D	3.777778	1.3642255	2.925926	4.592593
JacA_2_O	5.666667	1.0274023	4.866667	6.400000
JacA_5_A	4.488889	1.8553512	3.577778	5.378333
JacA_5_D	3.020833	1.4166667	2.375000	3.687500
JacA_5_O	5.666667	1.1771240	5.074074	6.148148
JorS_3_A	5.773810	0.8844964	5.428571	6.095238
JorS_3_D	4.629630	1.0346221	4.166667	5.074537

Stimulus	*M*	*SD*	Lower-CI[a]	Upper-CI
JorS_3_O	6.045455	0.9500513	5.651515	6.409091
MarB_4_A	4.400000	1.5996031	3.577778	5.111111
MarB_4_D	4.923077	0.8405669	4.461538	5.358974
MarB_4_O	4.645833	1.5984657	3.854167	5.375000
MayJ_4_A	2.215686	1.2300699	1.686275	2.803922
MayJ_4_D	3.929825	1.3406233	3.350877	4.508772
MayJ_4_O	3.506173	1.3377183	3.012346	4.012346
MooS_5_A	4.545455	1.5222259	3.666667	5.363636
MooS_5_D	4.577778	1.5809715	3.822222	5.333889
MooS_5_O	5.277778	1.3098421	4.684722	5.851852
PhiS_1_A	4.092593	1.4453240	3.444444	4.703704
PhiS_1_D	4.500000	1.2171612	3.895833	5.062500
PhiS_1_O	4.921569	1.2333863	4.333333	5.490196
PhiS_5_A	3.973333	1.3841698	3.440000	4.493333
PhiS_5_D	4.111111	0.8882848	3.763542	4.444444
PhiS_5_O	4.961538	1.2412428	4.474359	5.410256
PurB_2_A	5.000000	1.1972190	4.492063	5.476190
PurB_2_D	4.238095	1.2567279	3.682540	4.730159
PurB_2_O	5.250000	1.2836124	4.683333	5.766667
StaR_1_A	4.166667	1.6984156	3.309524	5.000000
StaR_1_D	3.416667	1.0073802	2.937500	3.896354
StaR_1_O	5.571429	1.0894096	4.976190	6.095238
SteB_1_A	4.244444	1.6058755	3.422222	4.977778
SteB_1_D	3.984848	1.0614818	3.560606	4.439394
SteB_1_O	4.250000	1.4131219	3.726190	4.738095
TayR_5_A	5.500000	1.5142422	4.611111	6.222222
TayR_5_D	3.372549	1.5893847	2.666667	4.117647
TayR_5_O	5.530303	1.1015097	5.060606	5.969697
ThoA_5_A	3.250000	1.8580584	2.041667	4.416667
ThoA_5_D	4.111111	1.7795130	3.000000	5.185185

Stimulus	*M*	*SD*	Lower-CI[a]	Upper-CI
ThoA_5_O	4.280702	1.6713385	3.578947	5.017544
WarB_3_A	4.622222	1.1468844	4.044444	5.155556
WarB_3_D	2.880952	1.0986172	2.333333	3.405357
WarB_3_O	4.761905	1.7659097	3.833333	5.642857
Source: Musdb18-HQ-Dataset (Rafii et al., 2019)				
F69_A	4.549020	1.3850631	4.068627	5.009804
F69_D	4.775194	1.3127799	4.387597	5.155039
F69_O	4.666667	1.3877773	4.233333	5.083333
WFM_A	5.214286	1.1729134	4.849206	5.571429
WFM_D	3.364583	1.4252193	2.875000	3.833594
WFM_O	4.846847	1.3757032	4.414189	5.279279
YLM_A	5.064815	1.0655335	4.694444	5.407407
YLM_D	3.139785	1.5747409	2.602151	3.698925
YLM_O	5.076190	1.2075084	4.666429	5.447619
Source: Native Instruments (2020b)				
NG_A	2.873563	1.6724039	2.275862	3.471264
NG_D	3.745098	1.7447542	3.186275	4.323529
NG_O	3.333333	1.6974927	2.741935	3.935484
StSt_A	3.512821	1.4726476	3.042735	3.974359
StSt_D	3.570175	1.6401639	3.026316	4.087719
StSt_O[b]	3.500000	1.6417327	2.970588	4.039216
StSy_A	3.757576	1.6164792	3.212121	4.293182
StSy_D	4.485714	1.3917189	4.038095	4.942857
StSy_O	4.148148	1.6201988	3.611111	4.657407
StSt_A	3.512821	1.4726476	3.042735	3.974359

Note. [a]Non-parametric 95% confidence interval. [b]This stimulus was excluded from analyses (see Data Diagnostics and Analytic Strategy in the paper). The last character of the stimulus name denotes the version: A = without drums (A for "accompaniment"), D = drums only, O = original version.

Table S5

Descriptive Data of the Exploratory Questionnaire Regarding the Perception of the Drums-Only Stimuli

Just hearing the drum track, …	Answers in %					
	never	rarely	occa-sionally	some-times	often	always
automatically made me imagine an accompaniment to it	12.5	27.5	17.5	22.5	20	-
was interesting	2.5	12.5	10	40	32.5	2.5
was a new experience for me	20	10	27.5	17.5	17.5	7.5
did not trigger any feelings in me	15	22.5	25	15	17.5	5
was more difficult to evaluate than the accompaniment or the entire song	10.3	12.8	12.8	15.4	33.3	15.4

Note. $N = 40$, except for item 5 ($N = 39$).

Table S6

Descriptive Data of the Exploratory Questionnaire Regarding the Perception of the Without-Drums Stimuli

Just hearing the accompaniment track,	Answers in %					
	never	rarely	occa-sionally	some-times	often	always
automatically made me imagine a drum track to it	25	21.9	15.6	18.8	18.8	-
was interesting	-	9.4	15.6	46.9	18.8	9.4
was a new experience for me	3.3	16.7	20	23.3	26.7	10
did not trigger any feelings in me	15.6	25	18.8	21.9	18.8	-
was more difficult to evaluate than the drum track or the entire song	6.3	15.6	9.4	31.3	25	12.5
had the effect that I didn't even notice the absence of the drum track	12.5	12.5	18.8	34.4	21.9	-

Note. $N = 32$.

Table S7

Descriptive Results of Urge to Move and Pleasure for the Three Stimulus Version

M (*SD*)		Stimulus version		
		Original	Without drums	Drums only
EGQ factor	Urge to Move	3.047 (1.556)	2.433 (1.569)	2.866 (1.536)
	Pleasure	3.738 (1.517)	3.453 (1.574)	2.866 (1.536)

B. Supplementary Figures

Figure S1

Scatterplot for Average Urge to Move Ratings Per Song vs. the STOMP-R Dimension Reflective & Complex (RC)

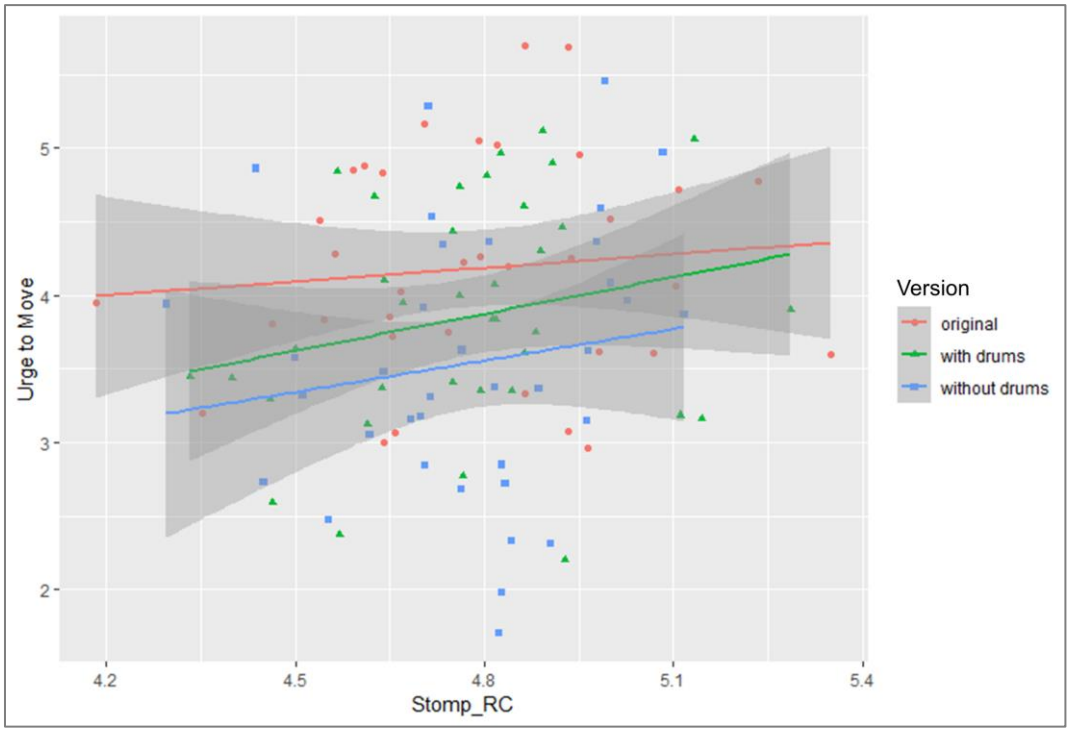


Figure S2

Scatterplot for Average Urge to Move Ratings Per Song vs. the STOMP-R Dimension Intense & Rebellious (IR)

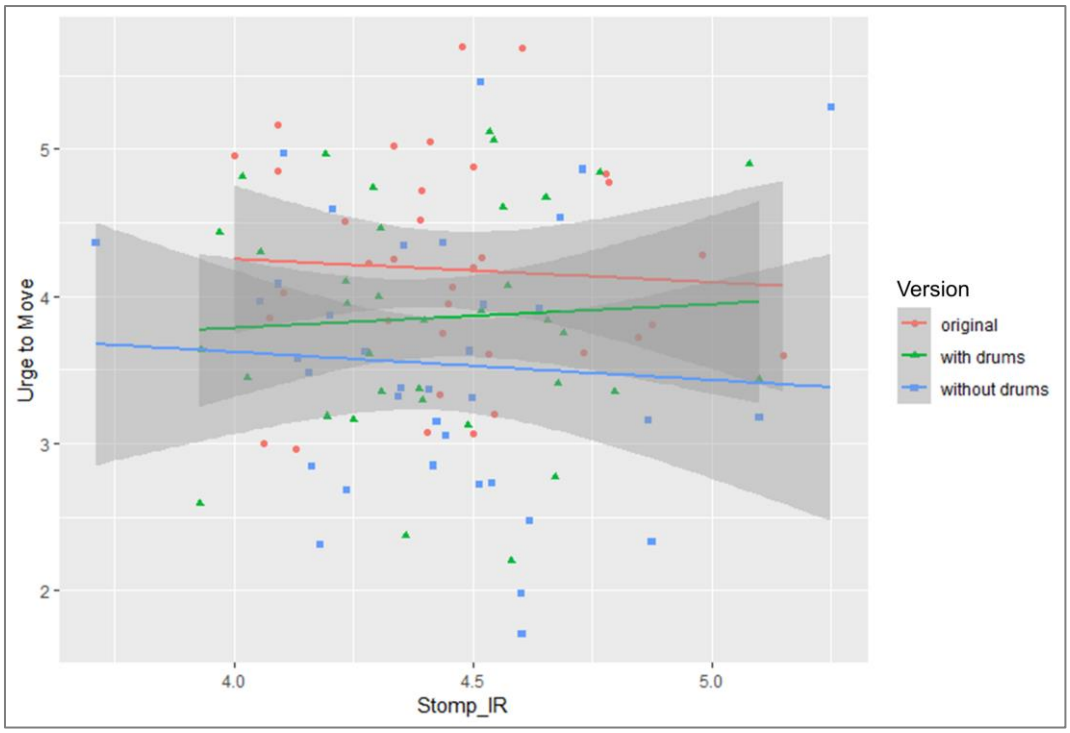


Figure S3

Scatterplot for Average Urge to Move Ratings Per Song vs. the STOMP-R Dimension Upbeat & Conventional (UC)

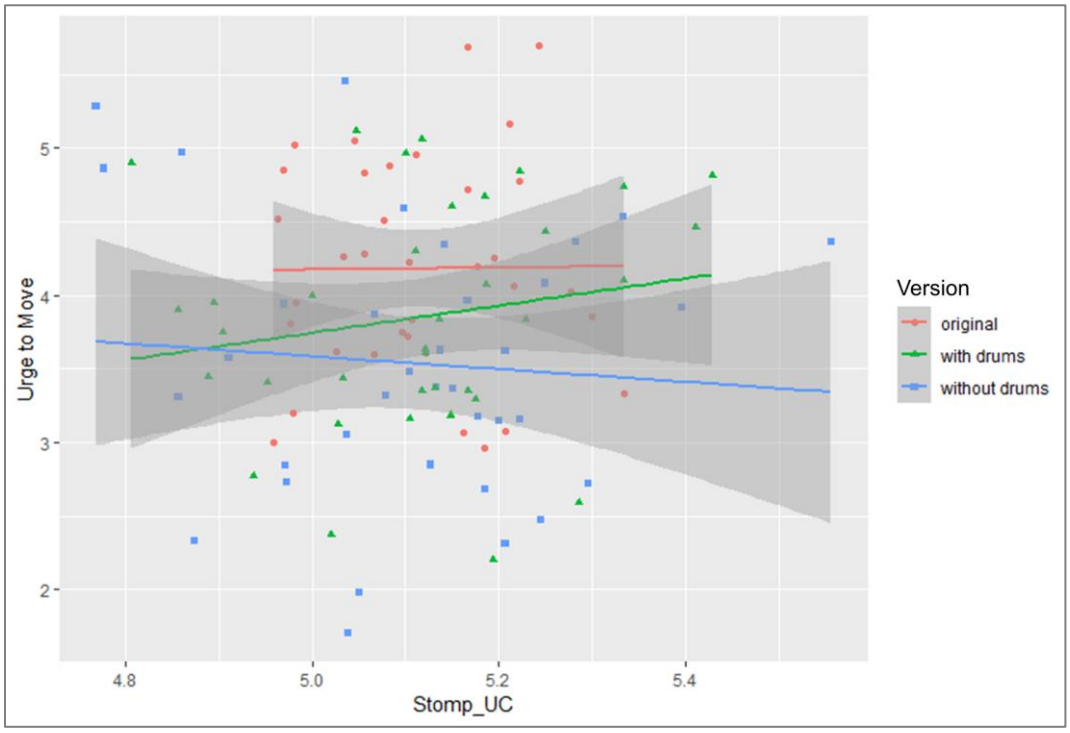


Figure S4

Scatterplot for Average Urge to Move Ratings Per Song vs. the STOMP-R Dimension Energetic & Rhythmic (ER)

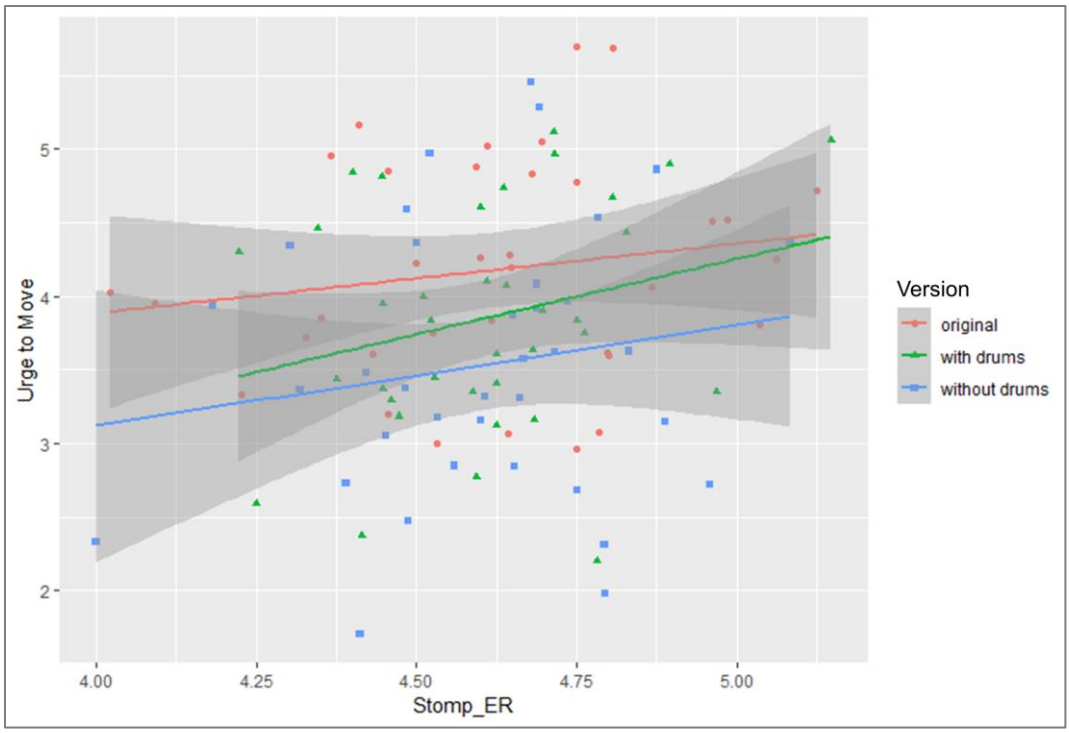


Figure S5

Scatterplot for Average Urge to Move Ratings Per Song vs. the Gold-MSI General Factor

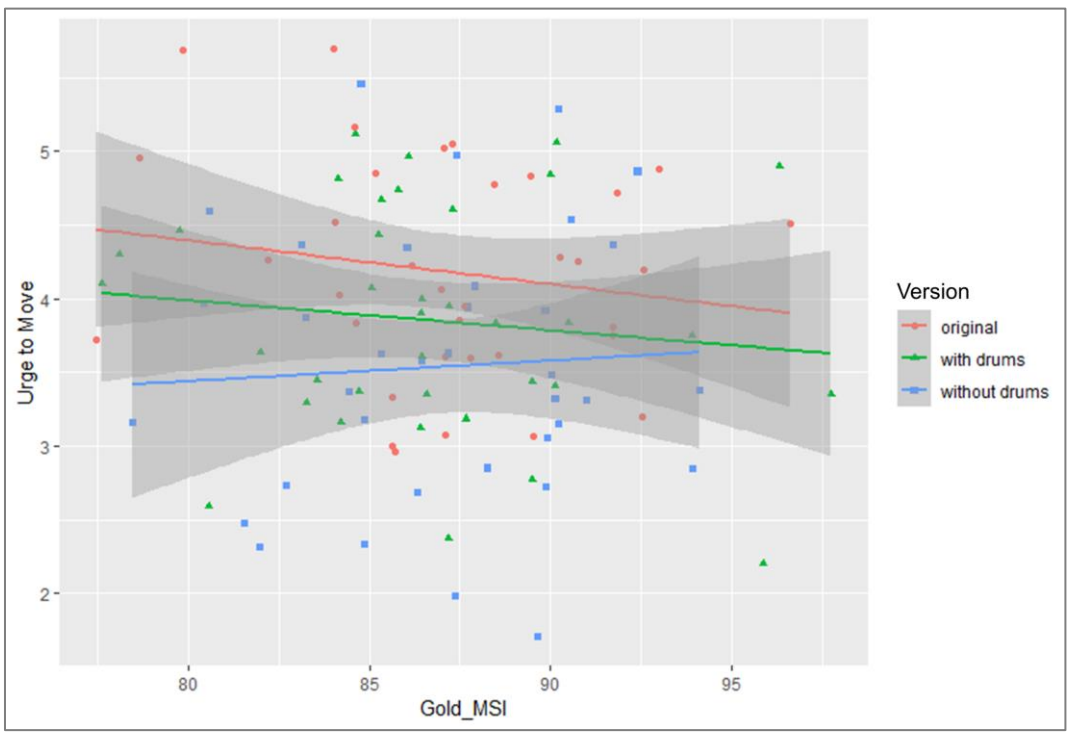


Figure S6

Scatterplot for Average Urge to Move Ratings Per Song vs. the Squared Tempo

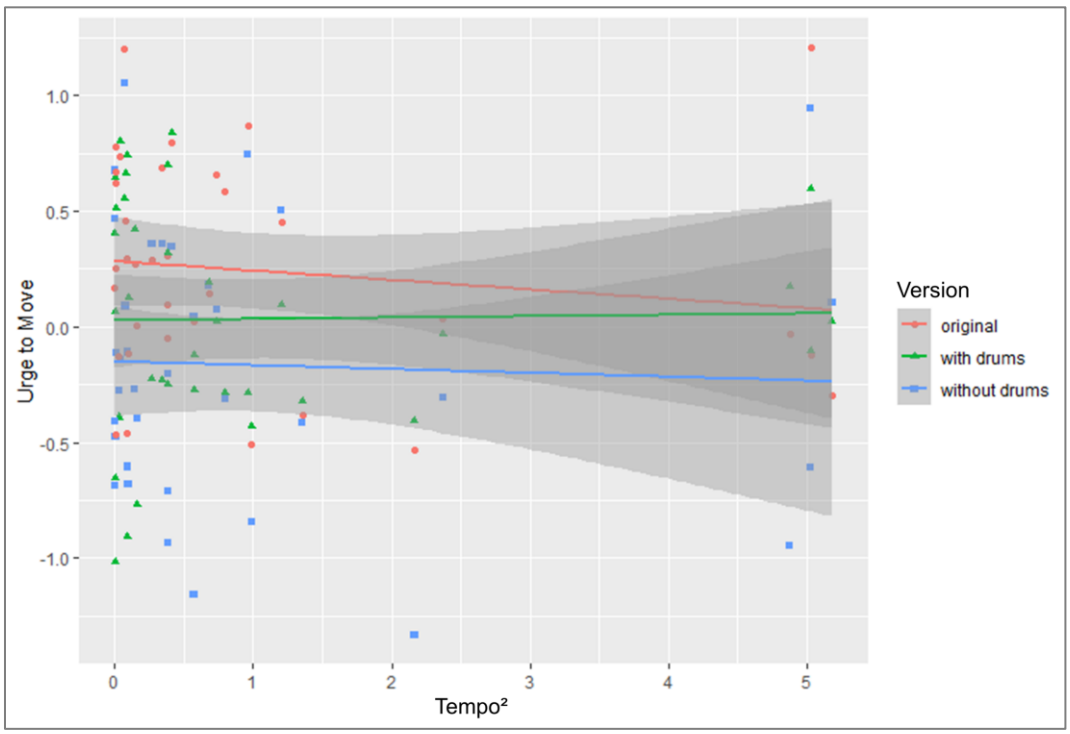


Figure S7

Scatterplot for Average Urge to Move Ratings Per Song vs. Sub-Band-Flux in the 50–100 Hz Range (SBF2)

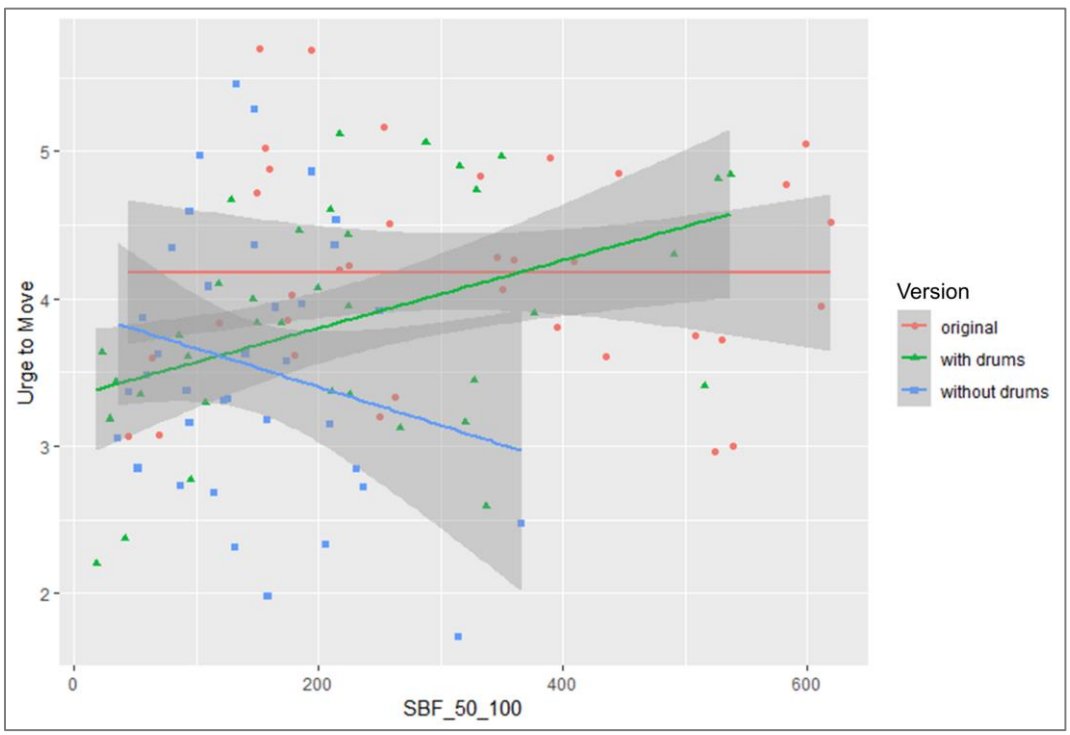


Figure S8

Scatterplot for Average Urge to Move Ratings Per Song vs. Sub-Band-Flux in the 6400–12800 Hz Range (SBF9)

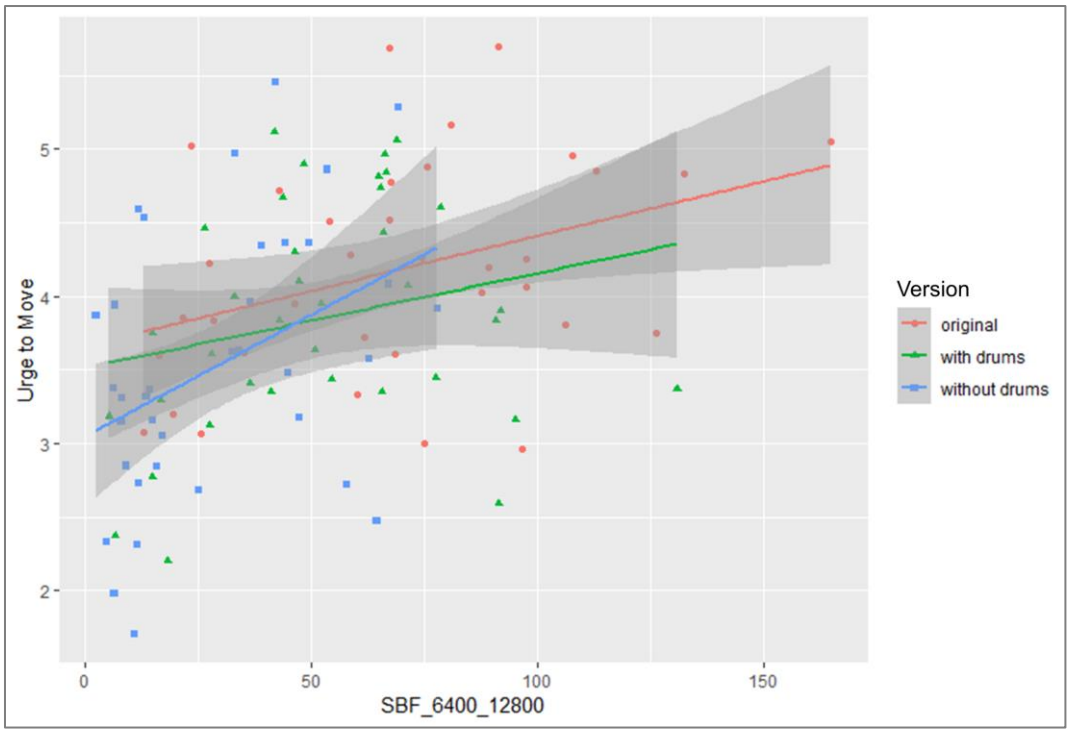


Figure S9

Scatterplot for Average Urge to Move Ratings Per Song vs. Percussiveness

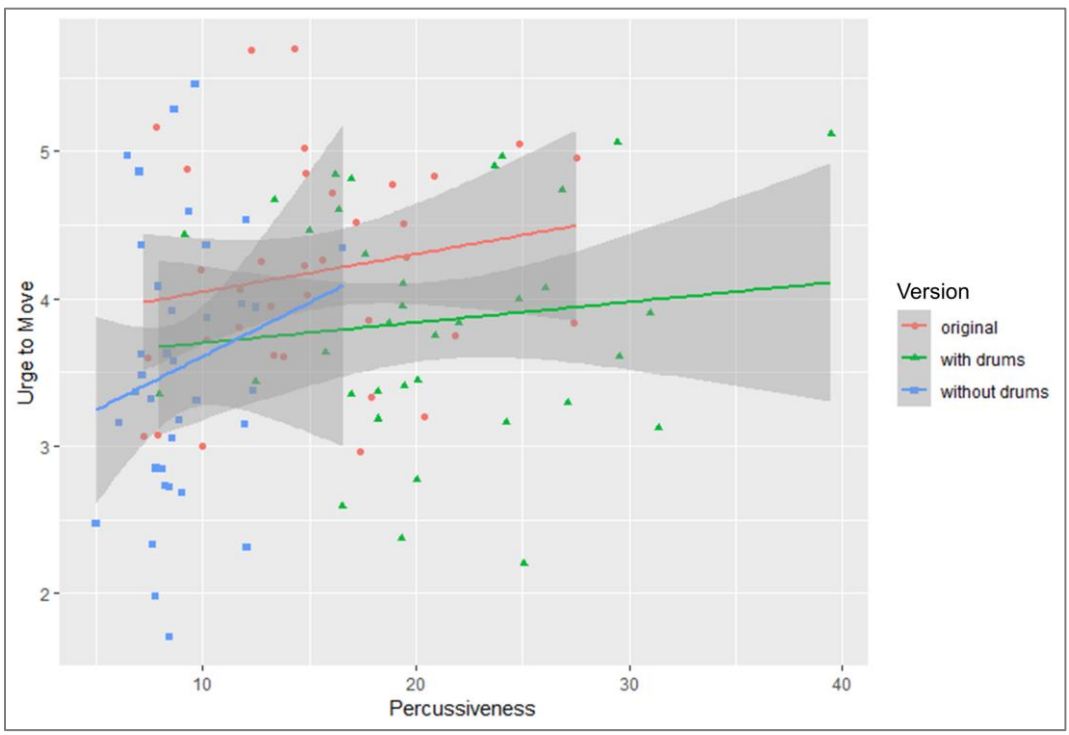


Figure S10

Scatterplot for Average Urge to Move Ratings Per Song vs. Pulse Clarity

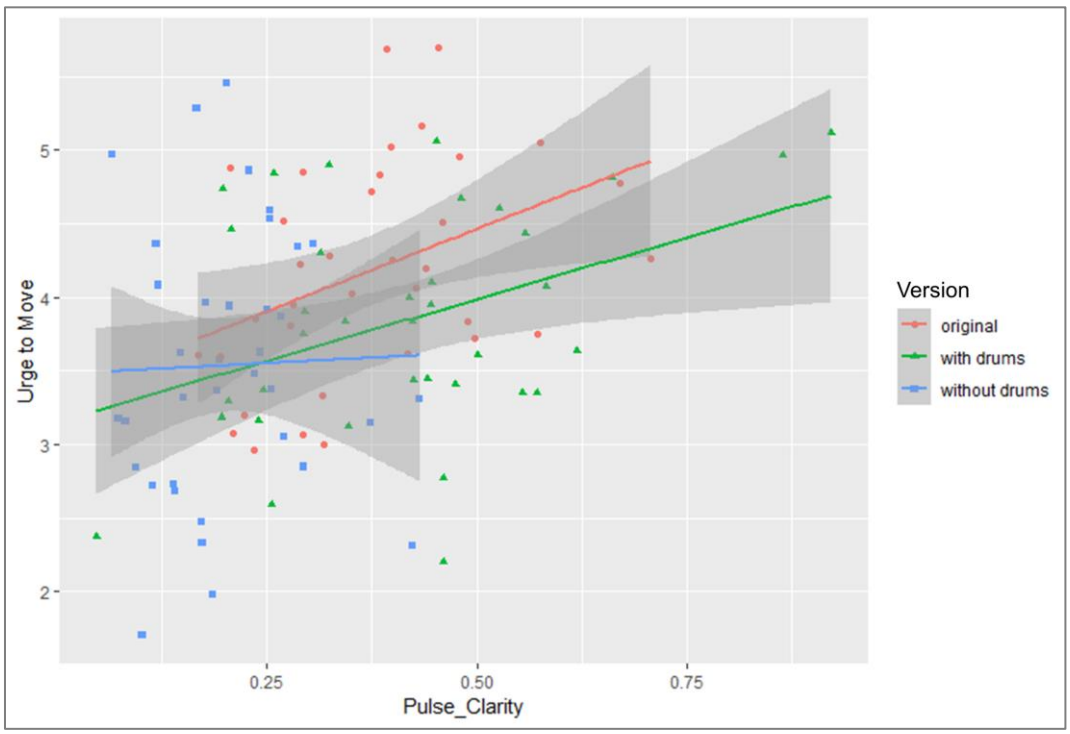
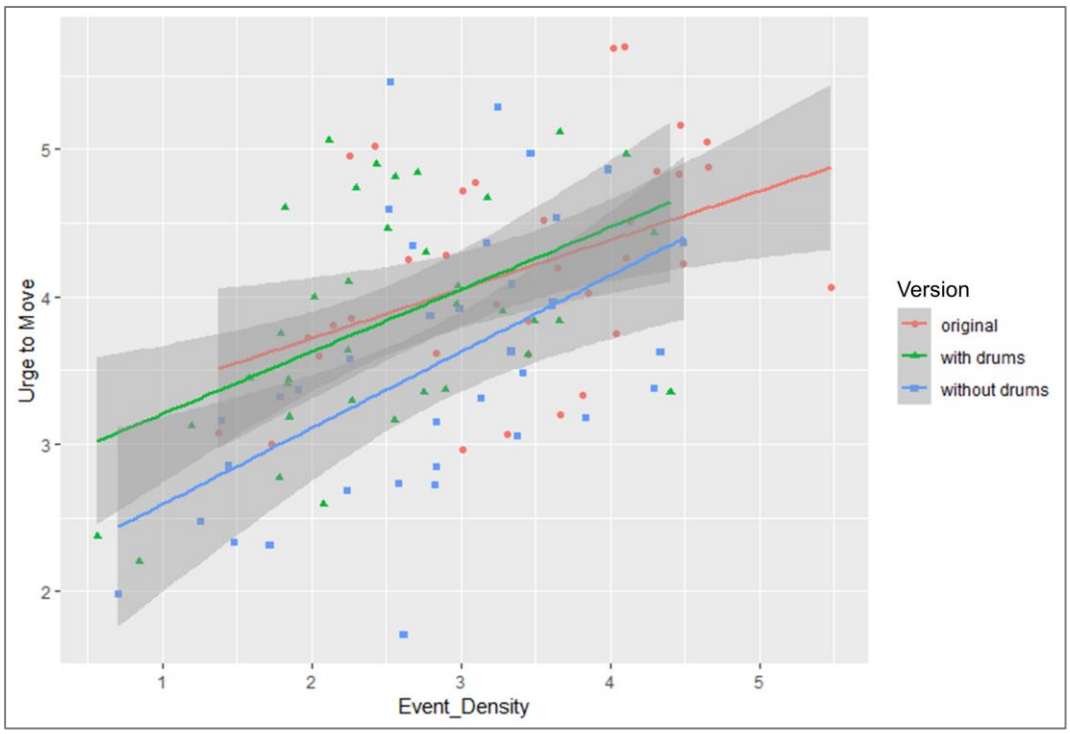


Figure S11

Scatterplot for Average Urge to Move Ratings Per Song vs. Event Density



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