OBIWAN BEHAVIORAL ANALYSIS

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2020-12-03

Setup

May I suggest running `repro::automate()`? This will create a `Dockerfile` & `Makefile` based on every RMarkdown in this folder and the special yamls in them. add ENV DEBIAN_FRONTEND=noninteractive If you are unsure weather or not you have `git` `make` & `docker`.

```
## v Git is installed, don't worry.
```

```
## v Make is installed, don't worry.
```

```
## v Docker is installed, don't worry.
```

Demographics

Summary statistics:

Table 1: AGE

intervention	mean	sd	min	max
Placebo	0.04	1.07	-1.69	1.84
Liraglutide	-0.04	0.93	-1.37	2.00

Table 2: BMI

intervention	mean	sd	min	max
Placebo	35.02	2.97	30.5	41.0
Liraglutide	35.74	2.90	31.8	43.5

Table 3: GENDER

gender	intervention	n
Men	Placebo	9
Men	Liraglutide	7
Women	Placebo	16
Women	Liraglutide	16

Table 4: Group

intervention	n
Placebo	25
Liraglutide	23

Description

Pavlvovian Conditioning Task (Analysis: Latency)

Formula = Latency ~ condition*intervention + age + gender + thirsty + hungry + BMI_t1 + diff_base_RT + Error(id/condition)
Latency = time to detect the target (ms) & condition = CS+ or CS-
diff_base = baseline latency differences (mean(CS-) - mean(CS+))

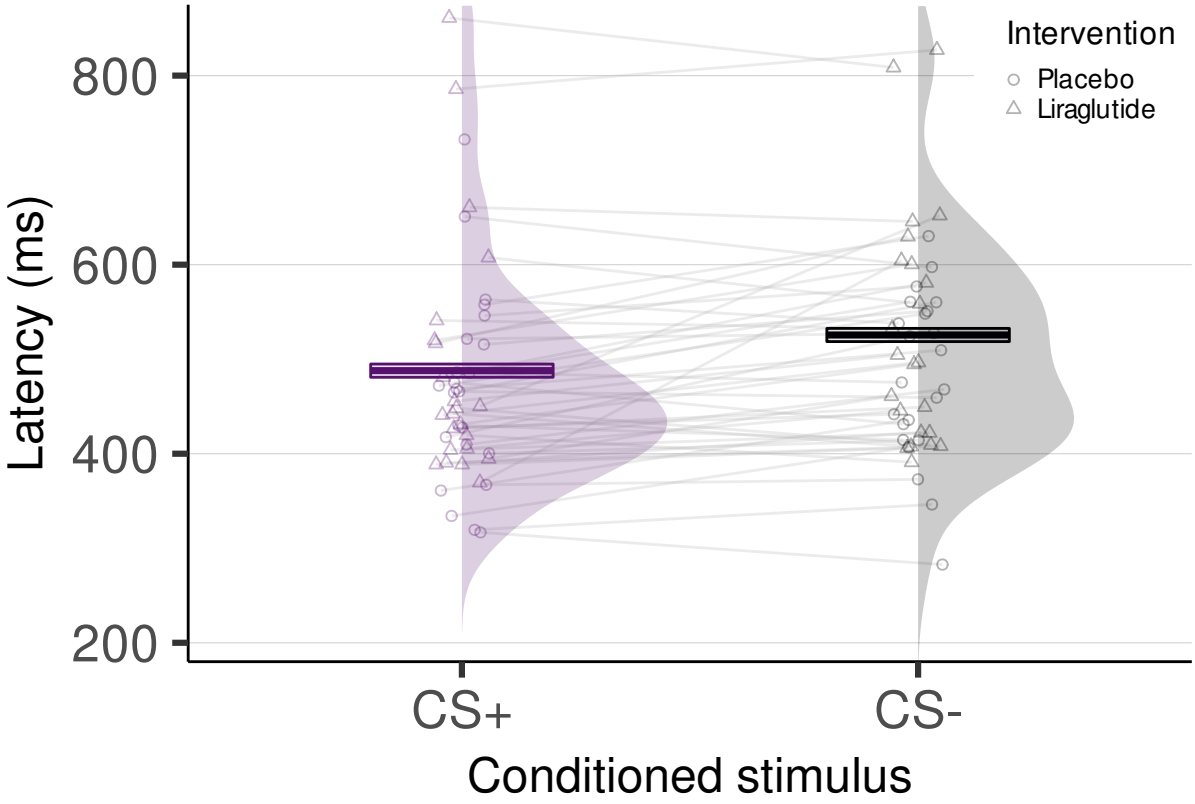
Table 5: Latency (ms)

Predictors	Estimates	std. Error	CI
condition [1]	-17.184	14.973	-46.981 – 12.613
intervention [1]	-9.759	14.355	-38.326 – 18.808
age	28.270	14.559	-0.703 – 57.244
gender [1]	-8.178	16.470	-40.955 – 24.598
thirsty	46.969	15.968	15.191 – 78.747
hungry	-19.108	17.270	-53.477 – 15.260
BMI_t1	-15.708	14.599	-44.761 – 13.346
diff_base	-27.466	14.565	-56.451 – 1.518
condition [1] *intervention [1]	-0.198	14.355	-28.765 – 28.369
condition [1] * age	8.022	14.559	-20.951 – 36.995
condition [1] * gender[1]	5.018	16.470	-27.759 – 37.794
condition [1] * thirsty	-5.578	15.968	-37.357 – 26.200
condition [1] * hungry	-2.732	17.270	-37.100 – 31.637
condition [1] * BMI_t1	-6.233	14.599	-35.286 – 22.821
condition [1] * diff_base	0.980	14.565	-28.004 – 29.965

Observations	96
R2 / R2 adjusted	0.220 / 0.074

Effect	df	MSE	F	p.value	PES	Lower CI	Upper CI	BF10
intervention	1, 40	34755.65	0.25	.622	0.01	0.00	0.09	0.57
age	1, 40	34755.65	2.01	.164	0.05	0.00	0.18	1.24
gender	1, 40	34755.65	0.13	.719	0.00	0.00	0.08	0.72
thirsty	1, 40	34755.65	4.61 *	.038	0.10	0.00	0.26	1.52
hungry	1, 40	34755.65	0.65	.424	0.02	0.00	0.12	1.02
BMI_t1	1, 40	34755.65	0.62	.437	0.02	0.00	0.12	0.94
diff_base	1, 40	34755.65	1.90	.176	0.05	0.00	0.18	1.12
condition	1, 40	2310.03	10.57 **	.002	0.21	0.05	0.37	39.60
intervention:condition	1, 40	2310.03	0.00	.969	0.00	0.00	NA	0.31
age:condition	1, 40	2310.03	2.44	.126	0.06	0.00	0.20	1.33
gender:condition	1, 40	2310.03	0.74	.393	0.02	0.00	0.13	0.54
thirsty:condition	1, 40	2310.03	0.98	.328	0.02	0.00	0.14	0.40
hungry:condition	1, 40	2310.03	0.20	.657	0.00	0.00	0.09	0.81
BMI_t1:condition	1, 40	2310.03	1.46	.234	0.04	0.00	0.16	0.88
diff_base:condition	1, 40	2310.03	0.04	.850	0.00	0.00	0.05	0.45

Latency by condition



Analysis: Pleasantness Ratings (Pavlovian Cue)

Formula = Pleasantness ratings ~ condition*intervention + age + gender + thirsty + hungry + BMI_t1 + diff_base_lik + Error(id/condition)
Ratings = how pleasant is the clue (0-100, no repetitions) & condition = CS+ or CS- diff_base_lik = baseline liking differences (mean(CS+) - mean(CS-))

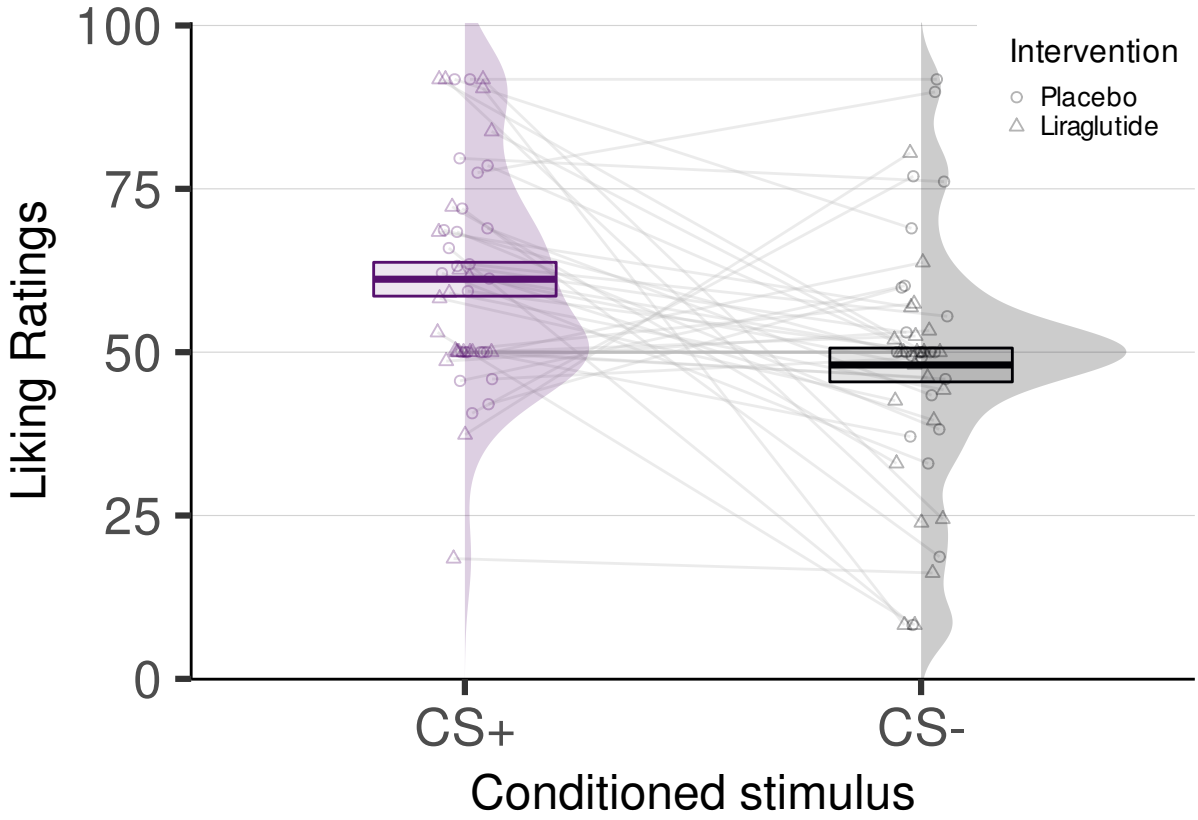
Table 6: Pleasantness Ratings (Pavlovian Cue)

Predictors	Estimates	std. Error	CI
condition [1]	6.254	1.692	2.886 – 9.622
intervention [1]	2.700	1.618	-0.519 – 5.919
age	3.007	1.658	-0.292 – 6.306
gender [1]	1.960	1.868	-1.757 – 5.677
thirsty	1.106	1.817	-2.509 – 4.722
hungry	4.458	1.975	0.528 – 8.389
BMI_t1	0.121	1.647	-3.157 – 3.400
diff_base_lik	1.373	1.661	-1.933 – 4.679
condition [1] *intervention [1]	-1.911	1.618	-5.131 – 1.308
condition [1] * age	-0.316	1.658	-3.615 – 2.983
condition [1] * gender[1]	-1.163	1.868	-4.880 – 2.554

condition [1] * thirsty	0.129
condition [1] * hungry	1.197

Effect	df	MSE	F	p.value	PES	Lower CI	Upper CI	BF10
intervention	1, 40	259.91	2.53	.119	0.06	0.00	0.20	0.646520693993866
age	1, 40	259.91	2.99 +	.091	0.07	0.00	0.22	1.15678674464118
gender	1, 40	259.91	1.00	.323	0.02	0.00	0.14	0.385840850006225
thirsty	1, 40	259.91	0.34	.565	0.01	0.00	0.10	0.457815308580634
hungry	1, 40	259.91	4.63 *	.037	0.10	0.00	0.26	2.23910438070248
BMI_t1	1, 40	259.91	0.00	.944	0.00	0.00	0.00	4.58e-01
diff_base_lik	1, 40	259.91	0.62	.435	0.02	0.00	0.12	0.510897255011384
condition	1, 40	212.57	15.17 ***	<.001	0.28	0.09	0.43	481.73850374306
intervention:condition	1, 40	212.57	1.55	.220	0.04	0.00	0.17	0.502996747503079
age:condition	1, 40	212.57	0.04	.842	0.00	0.00	0.05	0.317613987717268
gender:condition	1, 40	212.57	0.43	.515	0.01	0.00	0.11	0.389046217743082
thirsty:condition	1, 40	212.57	0.01	.941	0.00	0.00	0.01	0.464532799782402
hungry:condition	1, 40	212.57	0.41	.527	0.01	0.00	0.11	0.342885141420828
BMI_t1:condition	1, 40	212.57	0.12	.726	0.00	0.00	0.08	0.351279261296698
diff_base_lik:condition	1, 40	212.57	23.65 ***	<.001	0.37	0.17	0.52	7058.23884394513

Pleasantness Ratings by condition (Pavlvovian Cue)



Instrumental Conditioning Task (Analysis)

Formula = Number of grips ~ spline*intervention + age + gender + thirsty + hungry + BMI_t1 + diff_base + Error(id/spline)
grips = number of times participant exceeded the force threshold to acquire the reward (Milkshake)

Table 7: Number of grips

Predictors	Estimates	std. Error	CI
spline [1]	-0.671	0.707	-2.077 – 0.736
intervention [1]	1.299	0.689	-0.072 – 2.670
age	-0.999	0.701	-2.394 – 0.395
gender [1]	-0.378	0.784	-1.938 – 1.182
thirsty	1.314	0.821	-0.320 – 2.948
hungry	1.173	0.879	-0.576 – 2.922
BMI_t1	-1.105	0.675	-2.447 – 0.237
diff_base	0.279	0.701	-1.115 – 1.673
spline [1] * intervention[1]	-0.019	0.689	-1.390 – 1.352
spline [1] * age	0.000	0.701	-1.394 – 1.394
spline [1] * gender [1]	0.185	0.784	-1.375 – 1.745
spline [1] * thirsty	0.442	0.821	-1.192 – 2.076
spline [1] * hungry	-0.599	0.879	-2.348 – 1.150
spline [1] * BMI_t1	-0.102	0.675	-1.444 – 1.241
spline [1] * diff_base	0.066	0.701	-1.328 – 1.460

Observations	98
R2 / R2 adjusted	0.219 / 0.076

Table 8:

Effect	df	MSE	F	p.value	PES	Lower CI	Upper CI	BF10
intervention	1, 41	78.75	1.95	.170	0.0454093	0.0000000	0.1780798	1.04211123783592
age	1, 41	78.75	1.12	.297	0.0265055	0.0000000	0.1454364	0.898554055603839
gender	1, 41	78.75	0.13	.723	0.0031027	0.0000000	0.0767876	0.559684203574598
thirsty	1, 41	78.75	1.40	.243	0.0331078	0.0000000	0.1575884	1.19662711024202
hungry	1, 41	78.75	0.98	.329	0.0232674	0.0000000	0.1390494	0.895513486059181
BMI_t1	1, 41	78.75	1.47	.232	0.0346591	0.0000000	0.1603074	1.20e+00
diff_base	1, 41	78.75	0.09	.769	0.0021218	0.0000000	0.0682576	1.14032413818551
spline	1, 41	7.71	5.05 *	.030	0.1096246	0.0057339	0.2640659	3.4617966431204
intervention:spline	1, 41	7.71	0.00	.949	0.0001011	0.0000000	0.0009539	0.301659921071036
age:spline	1, 41	7.71	0.00	>.999	0.0000000	0.0000000	NA	0.39599147695659
gender:spline	1, 41	7.71	0.31	.579	0.0075554	0.0000000	0.0989135	0.374188208217407
thirsty:spline	1, 41	7.71	1.62	.210	0.0380901	0.0000000	0.1661690	1.37793132105676
hungry:spline	1, 41	7.71	2.60	.114	0.0596534	0.0000000	0.1995087	0.725459019293097
BMI_t1:spline	1, 41	7.71	0.13	.723	0.0030986	0.0000000	0.0767577	0.482646804849834
diff_base:spline	1, 41	7.71	0.05	.825	0.0012121	0.0000000	0.0560453	0.443978459264142

Number of Grips by learning phasis