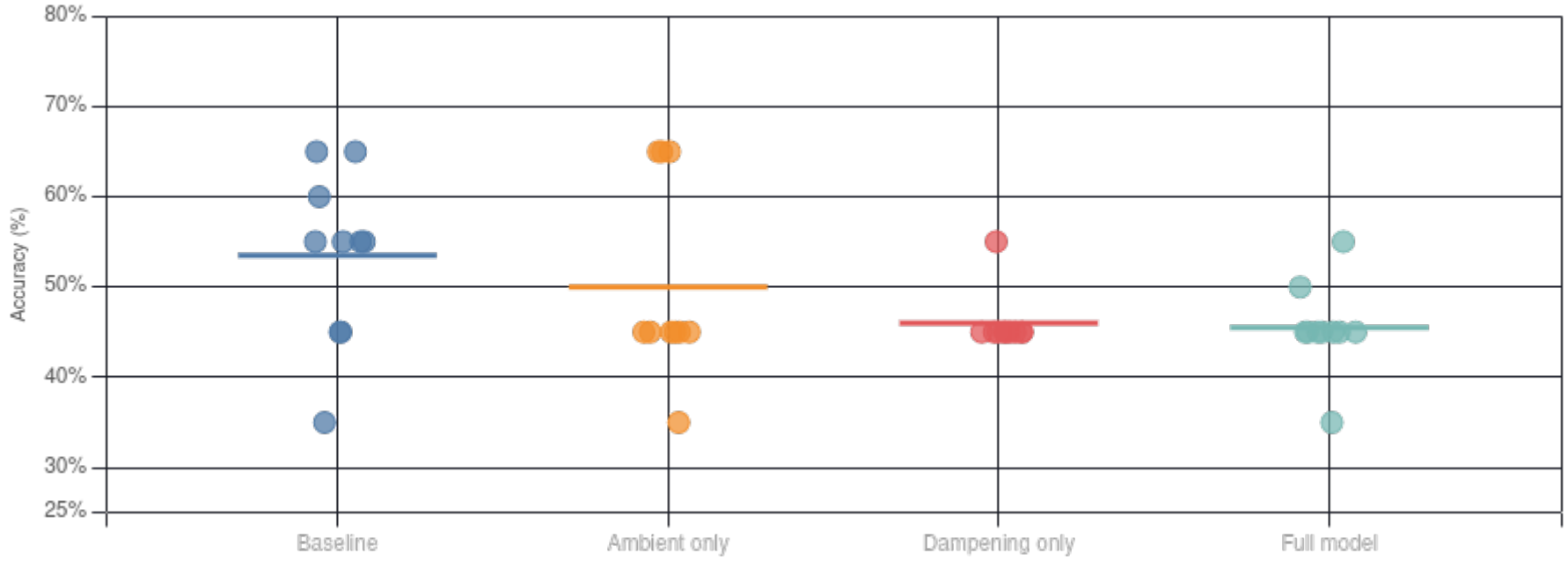
mcfeedback — Multi-seed Experiment

N = 10 seeds · Seeds: 42, 137, 271, 314, 500, 618, 777, 888, 999, 1234 · 1000 training episodes · Frozen-weight evaluation · Random chance = 50%

Verdict: no reliable learning detected.
No condition beats random chance (50%) consistently across seeds. Dampening only and Full model are statistically *significantly worse* than Baseline ($p<0.05$, $p<0.01$). The novel components are hurting, not helping, in the current parameter regime. Results are highly seed-dependent (Baseline std = 9.4%), indicating the network is settling into different fixed-output biases rather than learning the associations.

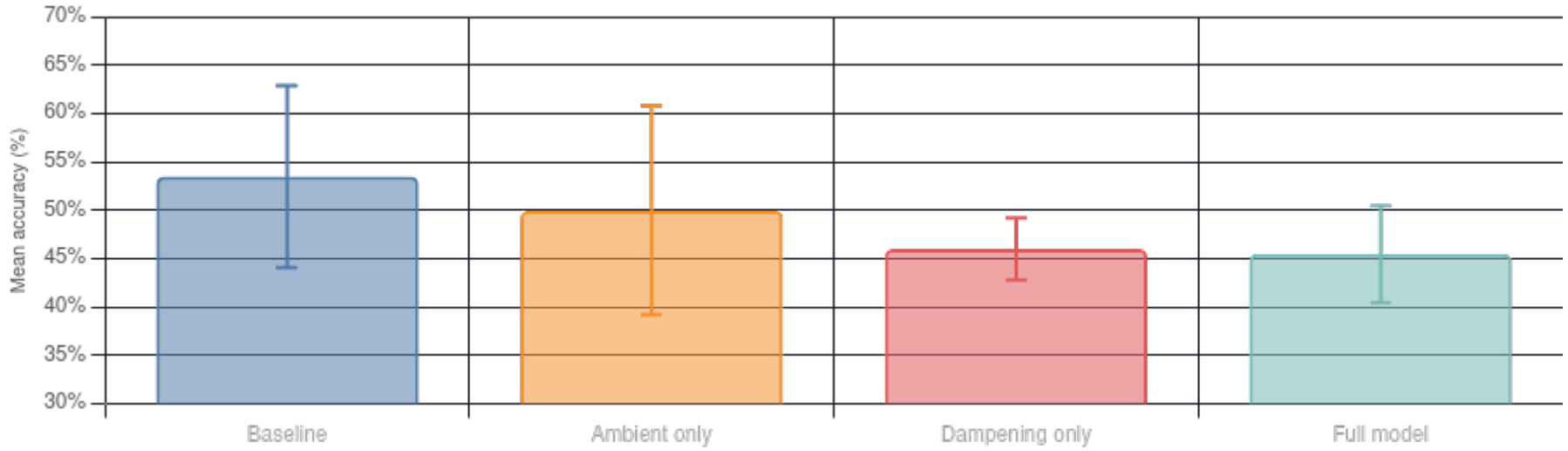
Baseline Ambient only Dampening only Full model

1 — ACCURACY DISTRIBUTION ACROSS SEEDS



Each dot = one seed. Horizontal line = mean. Dashed line = 50% random chance.

2 — MEAN ± 1 STD



Error bars show ±1 standard deviation across 10 seeds.

3 — PAIRED T-TESTS VS BASELINE

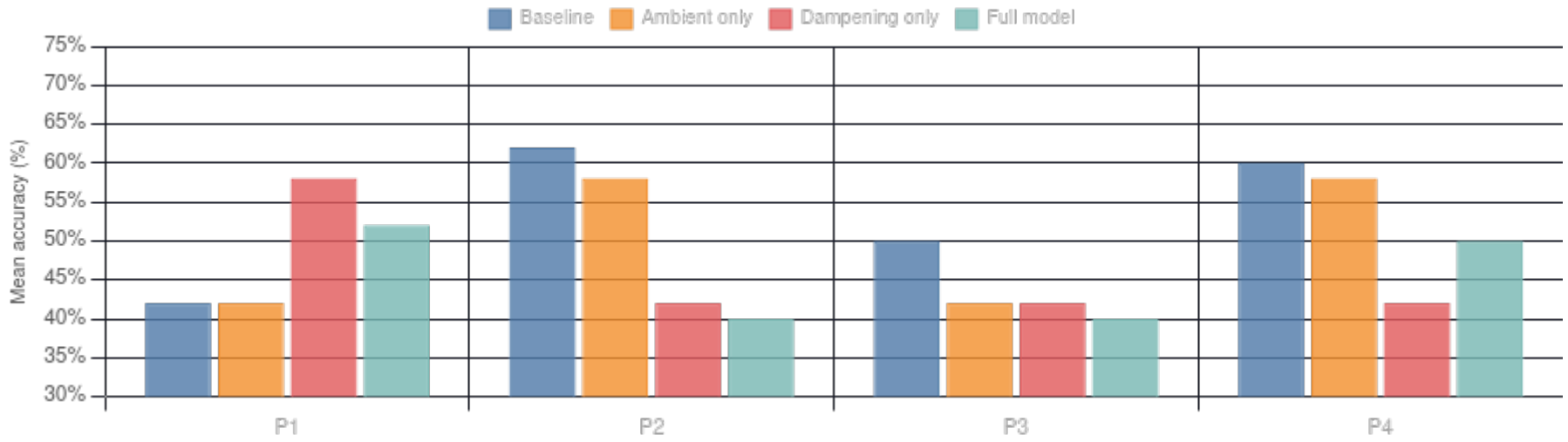
Comparison	Mean diff	t	p	Result
Ambient only vs Baseline	-3.5%	-1.105	0.2197	**ns**
Dampening only vs Baseline	-7.5%	-2.764	0.0162	***p<0.05**
Full model vs Baseline	-8.0%	-3.361	0.0062	****p<0.01**

Two-tailed paired t-test, df=9. ** p<0.01 * p<0.05 ns = not significant.

4 — RAW DATA (ALL SEEDS)

Seed	Baseline	Ambient	Dampening	Full
42	45%	45%	45%	45%
137	65%	65%	45%	45%
271	45%	45%	45%	45%
314	55%	35%	45%	50%
500	55%	45%	45%	45%
618	35%	45%	45%	35%
777	65%	65%	55%	45%
888	60%	45%	45%	55%
999	55%	65%	45%	45%
1234	55%	45%	45%	45%
Mean	**53.5%**	**50.0%**	**46.0%**	**45.5%**
Std	±9.4%	±10.8%	±3.2%	±5.0%

5 — PER-PATTERN ACCURACY (MEAN ACROSS SEEDS)



If the network learned the associations, each condition would show consistent accuracy per pattern. Uneven bars indicate the network is outputting a fixed bias rather than responding to input.

What the per-pattern data shows:

Each condition does well on different patterns — there is no single pattern all conditions agree on. This is the signature of a *fixed output bias*: the network picks one output vector and sticks with it, which happens to match some patterns better than others depending on the random seed. A genuinely learning network would show uniform or systematically high accuracy across all patterns.