

# Phase 8 — Post-Training Analysis Report

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Results folder: phase8\_results\_20251118\_050009

Weights sampled: 40

Episodes/weight: 50

Pareto points found (by mean): 5

Mean/std not found in summary.

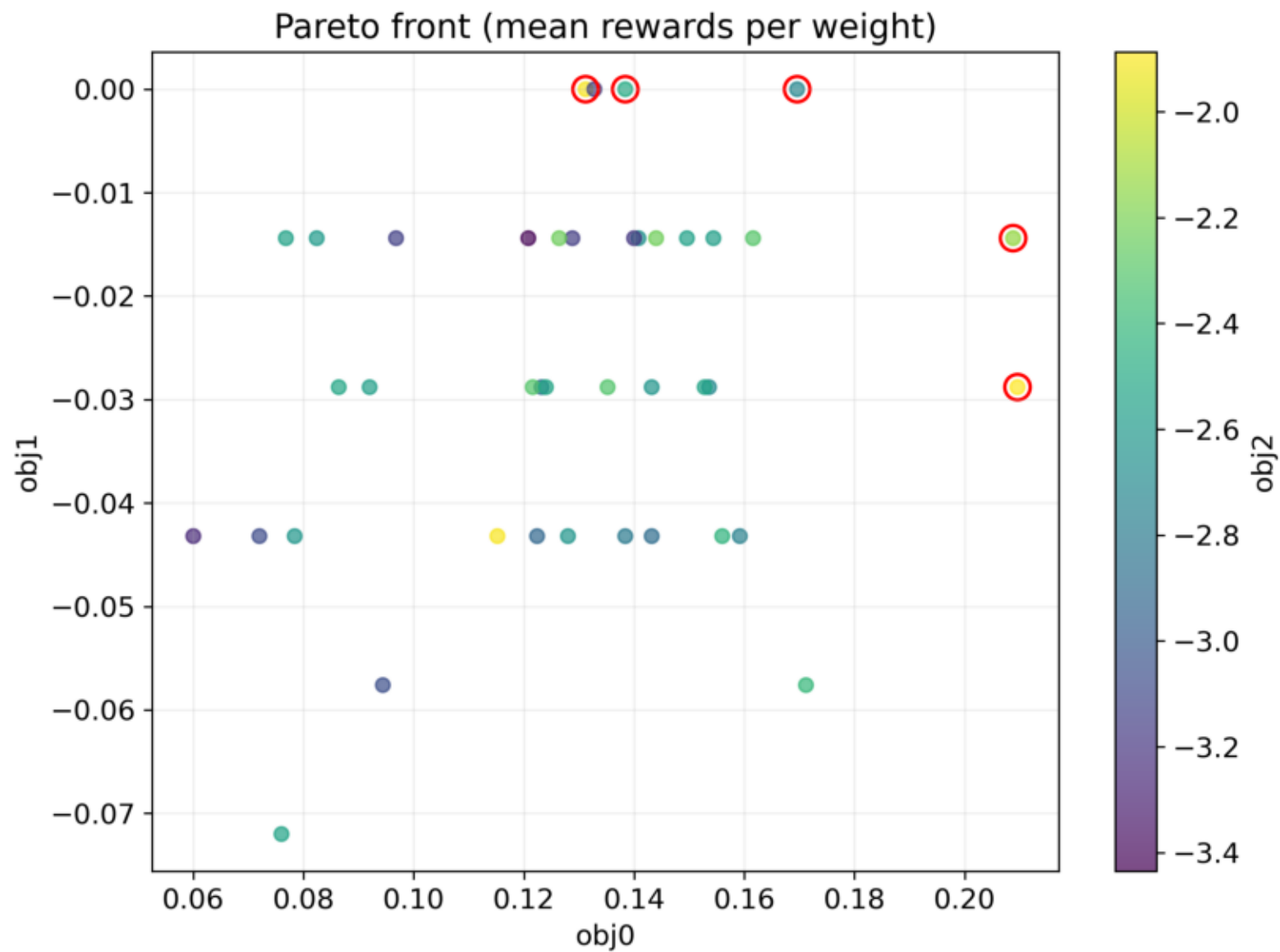
Interpretation (auto-generated):

- The Pareto plot shows trade-offs between objectives across sampled weight vectors.
- The action-frequency heatmap highlights which actions (drugs) are preferred under different weights.
- Radar plots summarize per-weight tradeoffs; correlation matrix shows objective correlations.

Limitations:

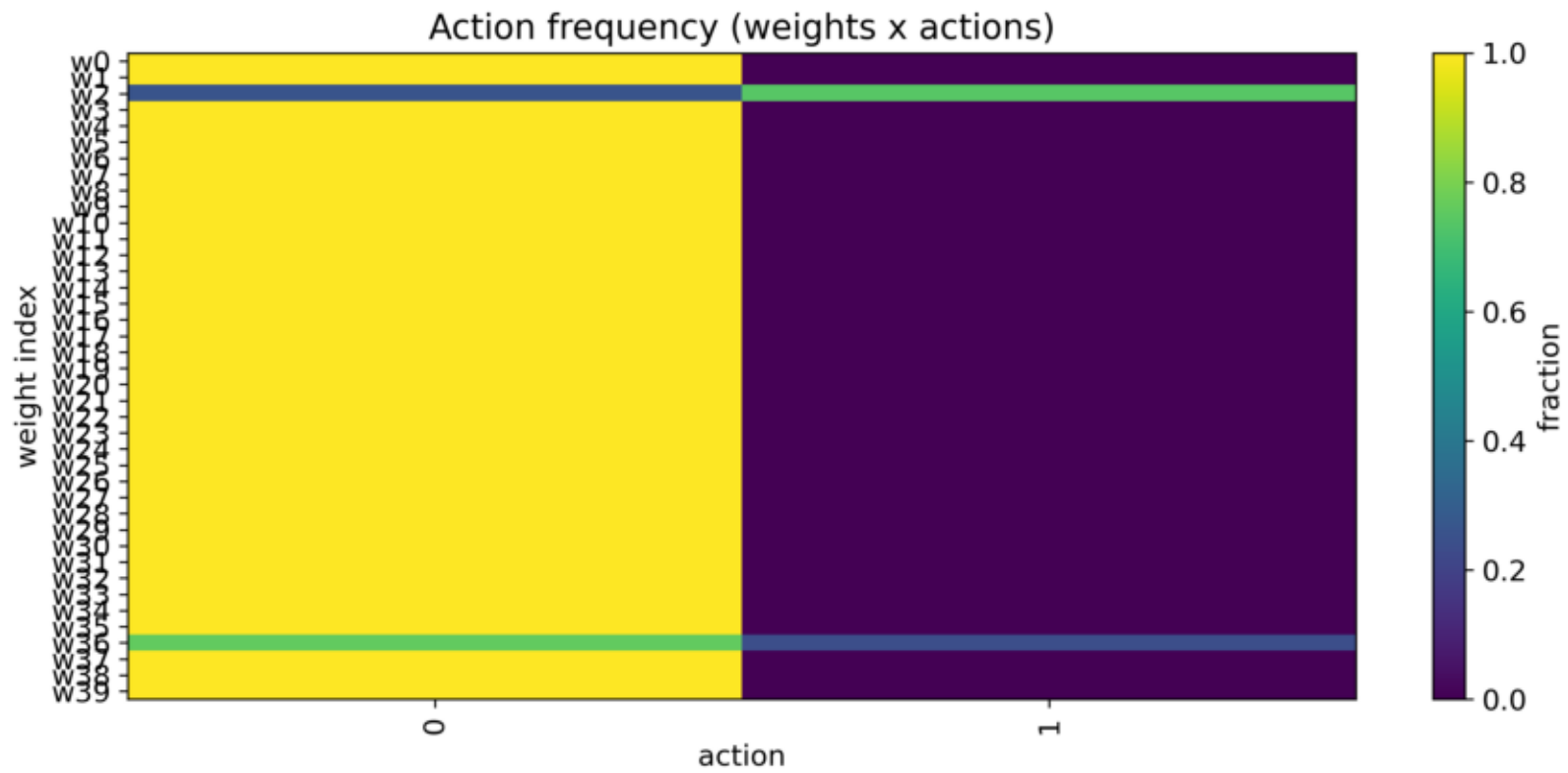
- Evaluation uses agent.eval() with per-weight greedy selection — may not capture stochasticity.
- Clinical interpretation requires mapping actions → drug names and domain expert review.

## Pareto Scatter (mean per weight)



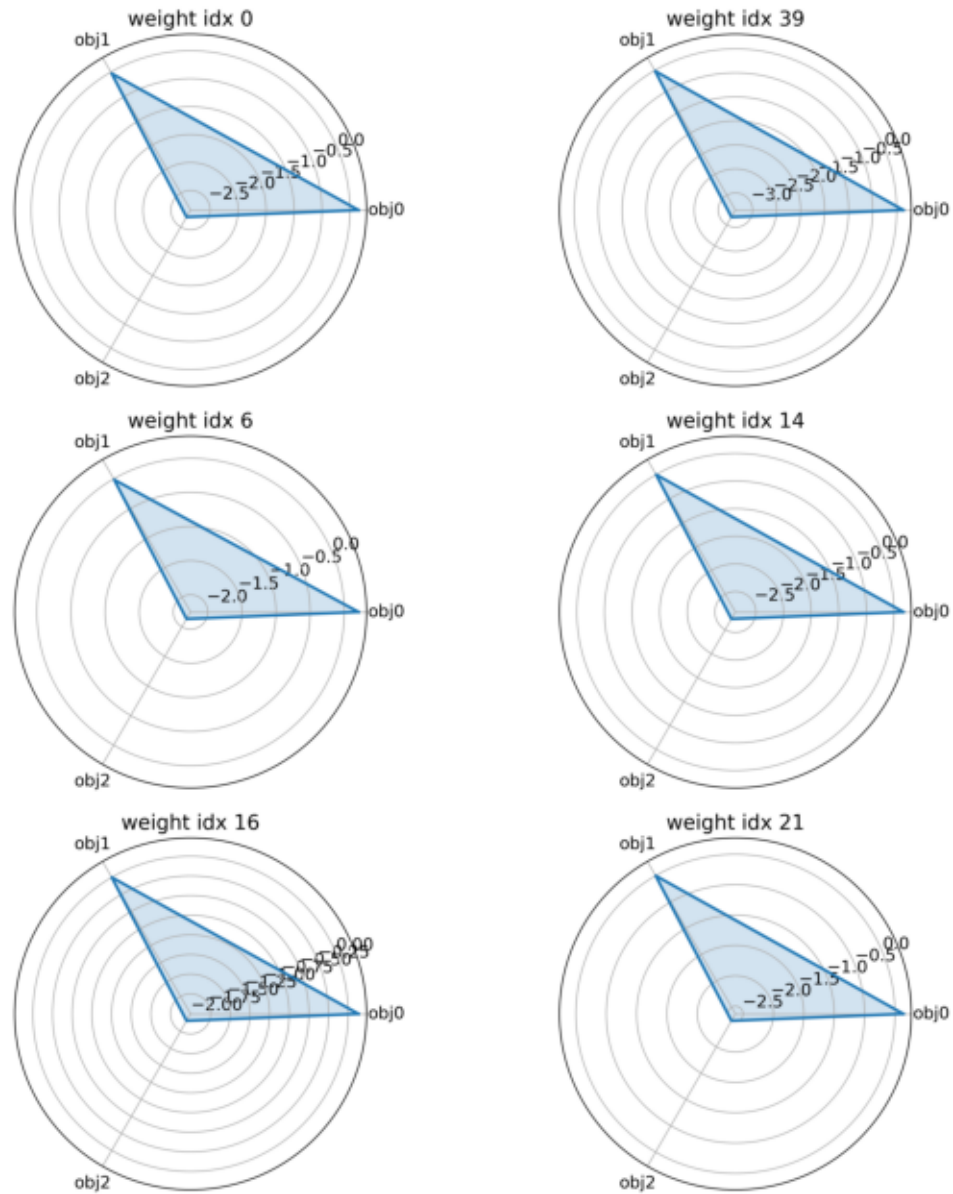
Pareto scatter: mean reward vector for each sampled weight. Red markers indicate estimated Pareto frontier.

# Action Frequency Heatmap



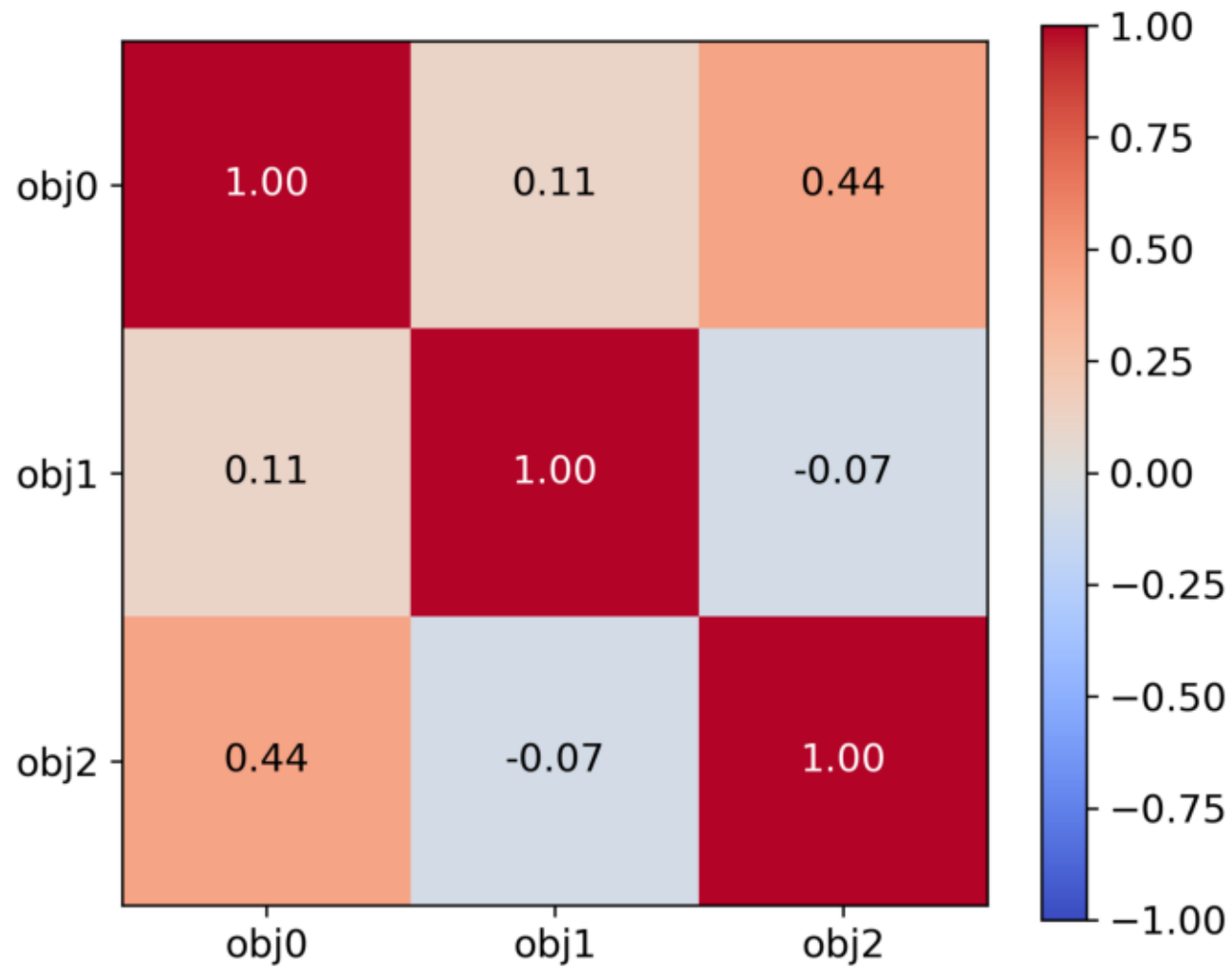
Rows = weight vectors, Columns = action indices. Values = fraction of picks across episodes.

# Tradeoff Radar Plots



Radar plots of mean objective values for representative weight vectors.

## Reward Correlation Matrix



Pearson correlation matrix between objective returns across all evaluated episodes.

Year	Year	Year	Year	Year	Year	Year	Year
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9
10	10	10	10	10	10	10	10
11	11	11	11	11	11	11	11
12	12	12	12	12	12	12	12
13	13	13	13	13	13	13	13
14	14	14	14	14	14	14	14
15	15	15	15	15	15	15	15
16	16	16	16	16	16	16	16
17	17	17	17	17	17	17	17
18	18	18	18	18	18	18	18
19	19	19	19	19	19	19	19
20	20	20	20	20	20	20	20
21	21	21	21	21	21	21	21
22	22	22	22	22	22	22	22
23	23	23	23	23	23	23	23
24	24	24	24	24	24	24	24
25	25	25	25	25	25	25	25
26	26	26	26	26	26	26	26
27	27	27	27	27	27	27	27
28	28	28	28	28	28	28	28
29	29	29	29	29	29	29	29
30	30	30	30	30	30	30	30

## **Next steps (suggested)**

Recommended next steps:

- 1) Map action indices → drug names and produce a clinical interpretation table.
- 2) Run targeted weight sweeps around Pareto regions for higher resolution.
- 3) Build a Streamlit demo to interactively toggle weights and visualize policy actions.
- 4) Prepare a write-up or manuscript with methods, experiments, and clinical validation plan.