Supplemental Information

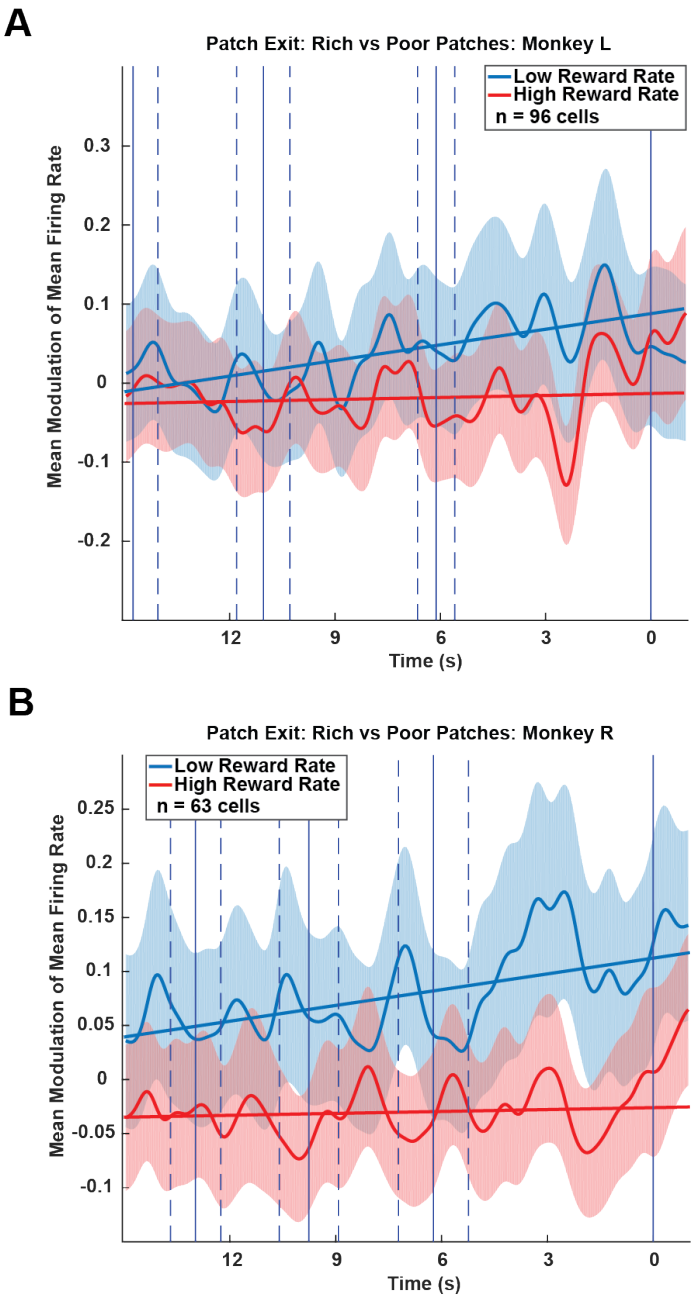

Figure S1. Related to Figure 2. Individual monkey results showing ramping activity prior to patch leaving in poor (z-scored reward rate < 0; blue traces) but not in rich (z-scored reward rate ≥ 0; red traces) patches. **A**. Monkey L, 96 neurons, 16 (17%) of 96 cells significant (patch-by-patch vs. z-scored reward rate linear regression, $p < 0.05$). Slope for poor environments was significant (linear regression, $p < 1x10^{-6}$) but not for rich ($p > 0.48$), and was significantly steeper than rich (ANCOVA, $p < 0.005$, $F(1,596) = 10.5810$). **B**. Monkey R, 63 neurons, 4 (6%) of 63

cells significant. Slope for poor patches was significant ($p < 0.05$) but not for rich ($p > 0.9$), though there was not a significant difference between the two slopes ($p > 0.1$, $F(1,596) = 2.6541$).

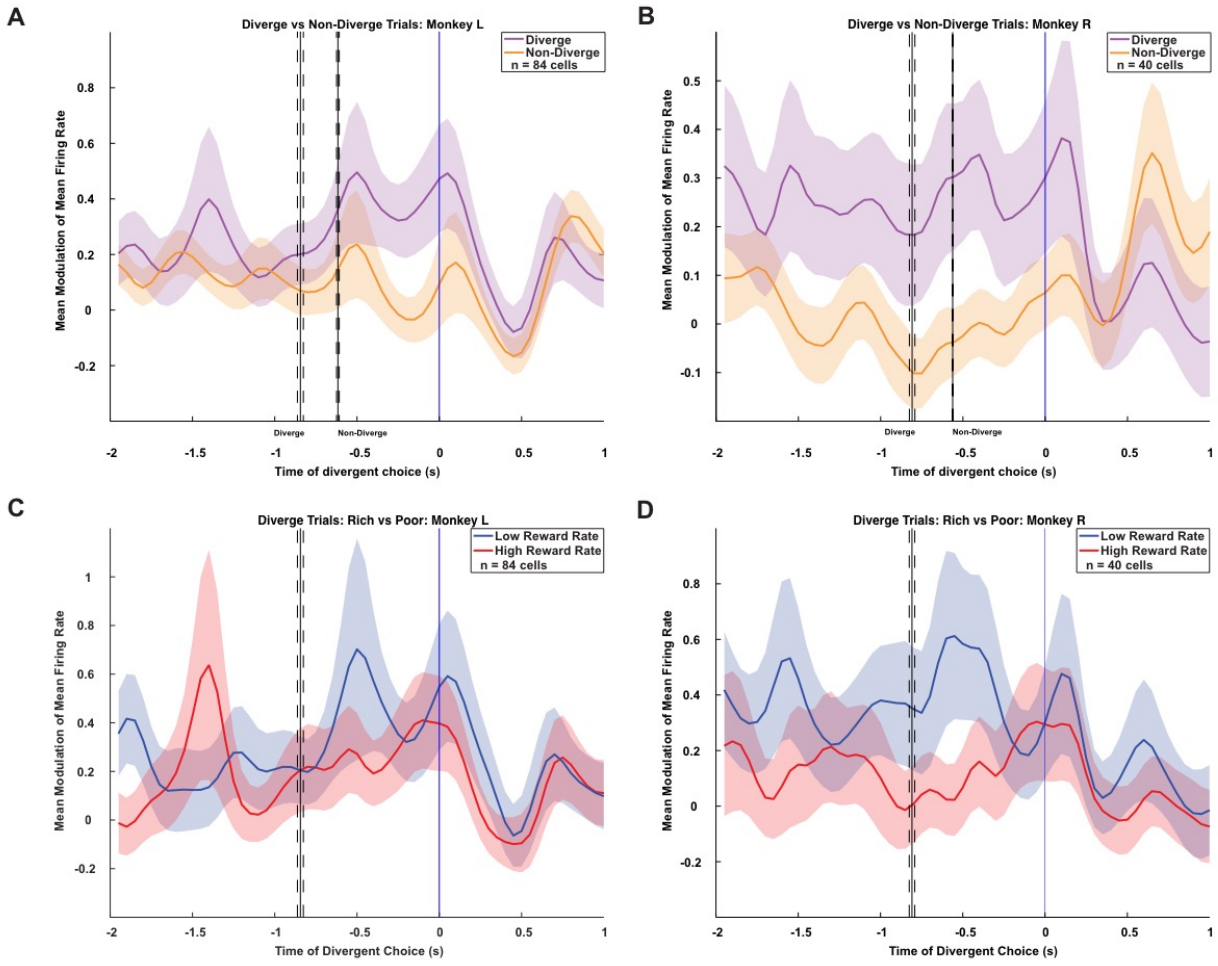

Figure S2. Related to Figure 4. **A**. Population plot for diverge (purple trace) and non-diverge (orange trace) trials for Monkey L. 43 (51%) of 84 neurons signaled diverge choices, and 40 (48%) of 84 neurons predicted divergences one choice in advance, with 33 (39%) of 84 neurons signaling both for Monkey L. 39 (46%) of 84 cells predicted diverge choices in the 1 s preceding a decision to diverge from the trapline. **B**. Population plot for diverge (purple trace) and non-diverge (orange trace) trials for Monkey R. 16 (40%) of 40 neurons signaled diverge choices, and 14 (35%) of 40 neurons predicted divergences one choice in advanced, with 11 (28%) of 40 neurons signaling both for Monkey R. 20 (50%) of 40 cells predicted diverge choices in the 1 s before a divergence. **C**. Population plot for rich and poor environments on diverge trials only for Monkey L. The activity of 14 (17%) of 84 cells correlated with reward rate. Rich contexts (red

trace): reward rate z-score > 0; poor contexts (blue trace): reward rate z-score ≤ 0. **D**. Population plot for rich and poor environments on diverge trials only for Monkey R. The activity of 5 (13%) of 40 cells correlated with reward rate.

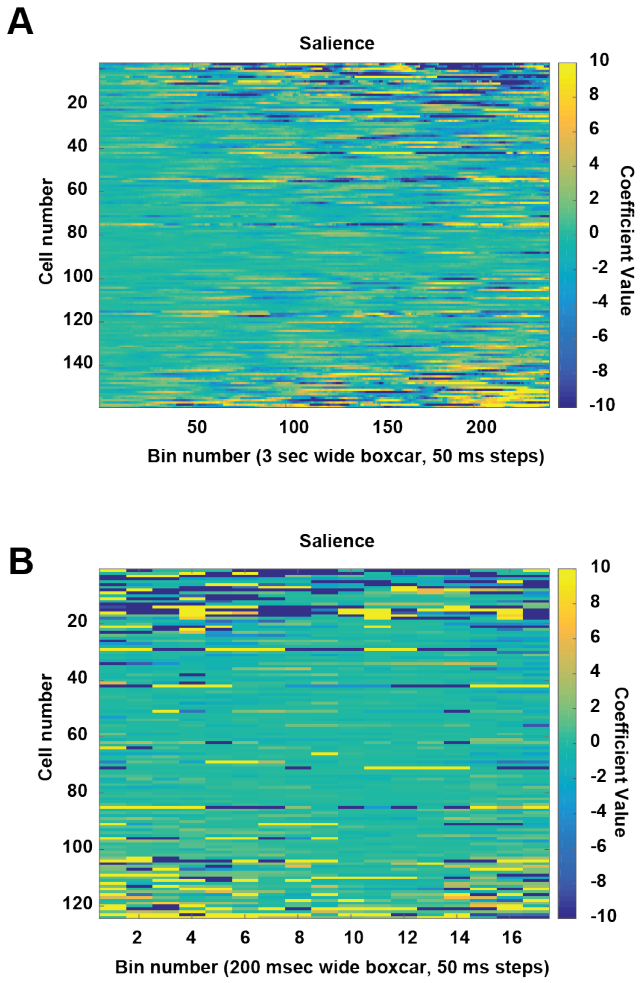

Figure S3. Related to Figures 2 and 4. Dynamic signaling of salience preceding the decision to disengage. **A**. Heatmap of regression coefficients from sliding boxcar analysis (3 s wide boxcar, 50 ms steps) starting 15 s before patch leave during patch leaving task. For display purposes, coefficients were thresholded at ±10. A sinusoidal pattern in the strengths of the coefficients, roughly matching on-trial and off-trial (i.e., start of intertrial interval) times, can be seen for positively coding (bottom of heatmap) and negatively coding (top) cells. **B**. Heatmap of regression coefficients from sliding boxcar analysis (200 ms wide boxcar, 50 ms steps) starting 1 s before diverging during traveling salesman task. For display purposes, coefficients were thresholded at ±10. The sinusoidal pattern observed in PCC neurons prior to leaving a patch (Figure S1A) is weakly evident at best.