



life (D)

flee (C) (sniff_predator \top)

freeze (see_predator \top) (covered \top)
(hawk \top)

hold_still

run_away (see_predator \top)

pick_safe_dir go_fast

look

observe_predator

mate (C) (sniff_mate \top)

inseminate (courted_mate_here \top)

copulate

court (mate_here \top)

strut

pursue

pick_dir_mate go

triangulate (getting_lost \top)

pick_dir_home go

home [1::5] (late \top) (at_home \perp)

pick_dir_home go

check [1::5]

look_around

exploit (C) (day_time \top)

use_resource (needed_res_avail \top)

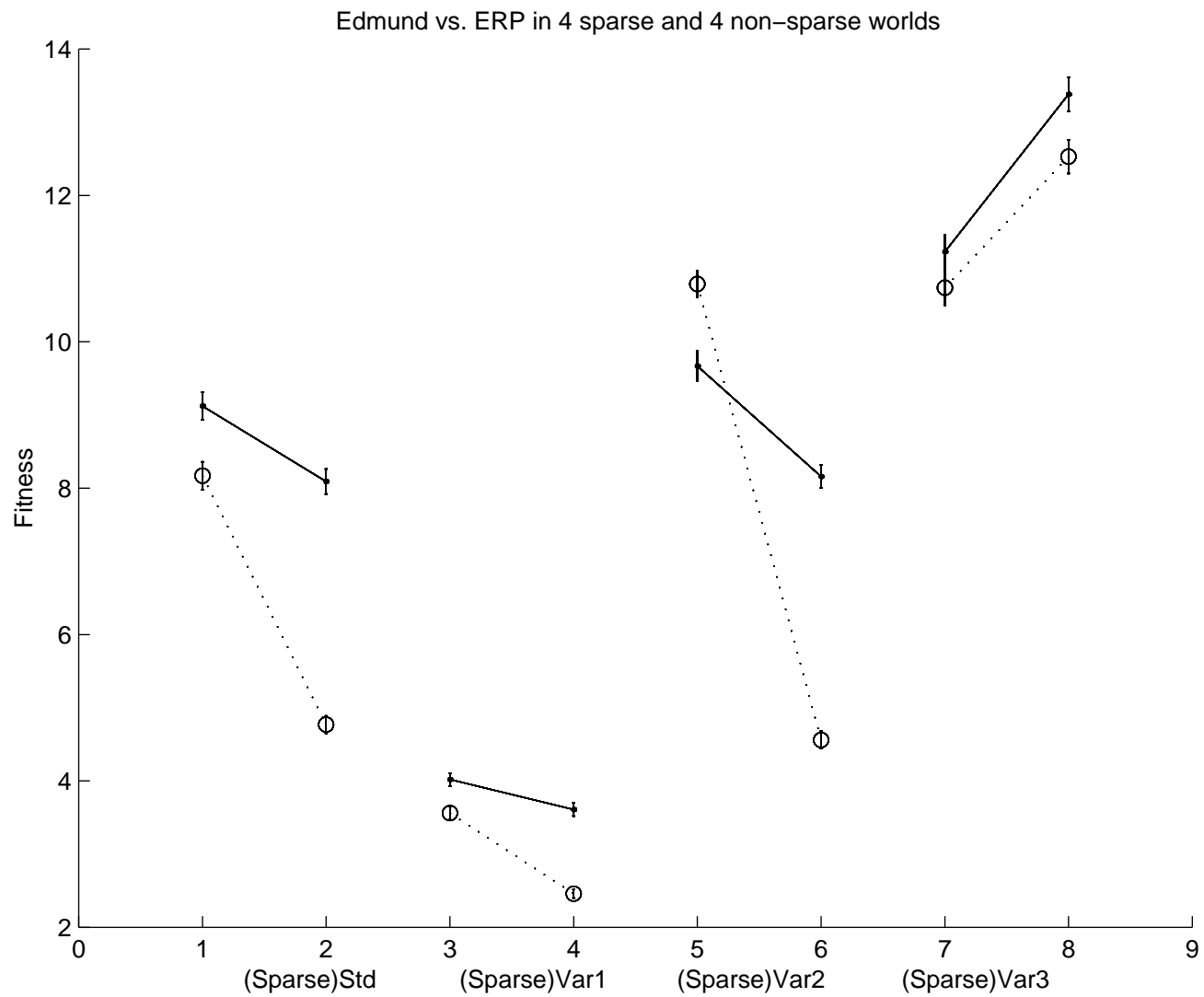
exploit_resource

leave

pick_dir go

sleep_at_home (at_home \top) (day_time \perp)

sleep



From (Bryson SAB 2000)

life (D)

talk [1/120 Hz]
(worth_talking T)

speak

sense (C) [7 Hz]

bump (bumped T)

yelp reg_bump back_off clear_bump lose_direction

look

compound_sense

halt (has_direction T)
(move_view 'blocked)

lose_direction

walk (C)

start (has_direction ⊥)

pick_open_dir

continue

move narrow (move_view 'clear) correct_dir

wait

snore sleep

walk (C)

halt (has_direction \top)
(move_view 'blocked)

lose_direction

cogitate_route (C)

enter_dp (in_dp \perp)
(entered_dp \perp)

lose_direction greet_dp

leave_dp (in_dp \top)
(entered_dp \top)

dismiss_dp

pick_direction (C)

look_up
(untried_near_neighbor
 \top)

pick_near_neighbor

keep_going
(continue_untried \top)

pick_previous_direction

desperate_look_up
(untried_far_neighbor
 \top)

pick_further_neighbor

start (has_direction \perp)

ask_directions

continue

move_narrow (move_view 'clear) correct_dir

1 Best,

2 second,

3 third,

4 fourth,

5 worst.

$$\mathbf{elvis} \Rightarrow \left\langle \begin{array}{l} (\text{see-red}) \Rightarrow \text{grasp-seen} \\ (\text{see-black}) \Rightarrow \text{grasp-seen} \\ (\text{see-blue}) \Rightarrow \text{grasp-seen} \\ (\text{see-green}) \Rightarrow \text{grasp-seen} \end{array} \right\rangle \quad (1)$$

$$\begin{aligned}
 & \text{(no-test)} \Rightarrow \text{new-test} \\
 \textit{life} \Rightarrow & \left\langle \left\langle \begin{array}{l} \text{(grasping)} \Rightarrow \text{finish-test} \\ \text{(no-test } \perp) \Rightarrow \mathbf{elvis-choice} \end{array} \right\rangle \right\rangle \\
 & \Rightarrow \text{hoot}
 \end{aligned}
 \tag{2}$$

$$\begin{aligned}
 & \text{(see-red)} \Rightarrow \mathbf{noisy-grasp} \\
 \mathbf{elvis-choice} \Rightarrow & \left\langle \begin{array}{l} \text{(see-black)} \Rightarrow \text{grasp-seen} \\ \text{(see-blue)} \Rightarrow \text{grasp-seen} \end{array} \right\rangle \\
 & \text{(see-green)} \Rightarrow \text{grasp-seen} \\
 \mathbf{noisy-grasp} \Rightarrow & \langle \text{screech} \rightarrow \text{grasp-seen} \rangle
 \end{aligned}$$

$$\begin{aligned}
& \text{(no-test)} \Rightarrow \text{new-test} \\
\text{life} \Rightarrow & \left\langle \left\langle \begin{array}{l} \text{(rewarded)} \Rightarrow \text{end-of-test} \\ \text{(grasping)} \Rightarrow \text{reward-monkey} \\ \text{(no-test } \perp) \Rightarrow \text{educated-grasp} \end{array} \right\rangle \right\rangle \\
& \Rightarrow \text{hoot}
\end{aligned} \tag{3}$$

$$\begin{aligned}
& \text{(find-red)} \Rightarrow \text{reward-found} \\
\text{reward-monkey} \Rightarrow & \left\langle \begin{array}{l} \text{(find-black)} \Rightarrow \text{reward-found} \\ \text{(find-blue)} \Rightarrow \text{reward-found} \end{array} \right\rangle \\
& \text{(find-green)} \Rightarrow \text{reward-found}
\end{aligned}$$

$$\text{educated-grasp} \Rightarrow \langle \text{adaptive-choice} \rightarrow \text{grasp-seen} \rangle$$

$$\text{end-of-test} \Rightarrow \langle \text{consider-reward} \rightarrow \text{save-result} \rightarrow \text{finish-test} \rangle$$

$$\begin{aligned}
 & \text{(no-test)} \Rightarrow \text{new-test} \\
 \text{life} \Rightarrow & \left\langle \left\langle \begin{array}{l} \text{(rewarded)} \Rightarrow \mathbf{end-of-test} \\ \text{(grasping)} \Rightarrow \mathbf{reward-monkey} \end{array} \right\rangle \right\rangle \\
 & \Rightarrow \mathbf{educated-grasp}
 \end{aligned} \tag{4}$$

$$\begin{aligned}
 & \text{(find-red)} \Rightarrow \text{reward-found} \\
 \mathbf{reward-monkey} \Rightarrow & \left\langle \begin{array}{l} \text{(find-black)} \Rightarrow \text{reward-found} \\ \text{(find-blue)} \Rightarrow \text{reward-found} \end{array} \right\rangle \\
 & \text{(find-green)} \Rightarrow \text{reward-found}
 \end{aligned}$$

$$\begin{aligned}
 & \text{(target-chosen)} \Rightarrow \text{grasp-seen} \\
 \mathbf{educated-grasp} \Rightarrow & \left\langle \begin{array}{l} \text{(focus-rule 'avoid)} \Rightarrow \text{pick-other} \\ \text{(focus-rule 'select)} \Rightarrow \text{pick-this} \end{array} \right\rangle \\
 & \Rightarrow \text{priority-focus}
 \end{aligned}$$

$$\mathbf{end-of-test} \Rightarrow \langle \text{rules-from-reward} \rightarrow \text{save-rule-result} \rightarrow \text{finish-test} \rangle$$