Todorov
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policy: stimulus-response rules; how to go from one state to another
reward function: goal in a reinforcement learning problem. Maps state to goal
value function: if I start in this state, what is my long term average reward if I
follow the policy
model: specifies how states change.

Johnson
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We can train a chimpanzee to associate arbitrary symbols (e.g. numerals) with
aspects of its environment (e.g. quantities)
- Once associations established, without further training they can correctly sum
multiple sets of (up to ~10) objects
  (e.g. 3 oranges + 2 oranges = "5") OR multiple numerals (e.g. "3" + "2" = "5")
This proficiency with symbols also affects their performance on other cognitive
tasks - e.g. the “Greedy Giveaway Task”
- Chimp is shown 2 diff size piles of M&Ms. The first pile they point to is given to
other chimp, they get remaining pile.
- Chimps cannot seem to resist pointing to bigger pile first (even though repeatedly
  frustrated when it is given away!)
- BUT, if numerals are associated with the two piles, they CAN point to the smaller
  numeral (and get the bigger pile!)
- So, the symbolic representation of the size of the piles seems to provide the
  opportunity to “think twice”, be strategic

Prospective Encoding e.g. in Pigeons
Train: Present color, remove, pause, present vertical and horizontal lines
Reinforce for pecking Vertical after Blue, Horizontal after Red. Repeat until
response is highly reliable
Test: On Blue trial, if briefly present Red immediately after Blue, disrupts
performance (pigeon often pecks Horiz).
But, if briefly present Red after pause (just before present lines) does NOT
 disrupt performance (pecks Vertical).
If briefly present Horizontal lines immediately after Blue, does NOT disrupt
performance (pecks Vertical).
But, if briefly present Horizontal after pause (just before choice lines) does
 disrupt performance (often pecks Horiz)
So, Color disrupts performance early in pause but Lines disrupt it later.
Interpretation: First, pigeon holds representation of color in active memory but
then it generates a representation of the
line stimulus it is expecting (i.e. the one it is “prospecting for” - thus
“Prospective Encoding”)

Hollan
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Paper affordances good for:
  reading, understanding, critical thinking, annotating, summarizing,
  elaborating, linking, writing, organizing, sharing (active reading tasks)
Morphable Model
Context-aware Image Resizing
Multi-touch
VisionMaker desk -
IBM: Everywhere displays project
"for good & ill"
Augmented Surfaces
PADD / PapierCraft
XLibris
Replacing paper with digital
Augmented Paper
Proofrite

Gorodnitsky
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hippocampal theta: representations, episodic memory?
cortical theta(4-7): dreamy, unfocused, sadness?
alpha(8-12): occipito-parietal (visual; alpha), central (motor; mu), midtemporal
(auditory; tau)
  awake but calm
beta: 13-30 attentive, possibly remote
gamma: possibly local