



References Vision



-) Wine tasting experiment

Gottfried J & Dolan R (2003)
The nose smells what the eye sees:
crossmodal visual facilitation of
human olfactory perception
Neuron 39: 375 - 386

Morrot, G *et al* (2001)
The color of odors
Brain & Lang 79: 309 - 320

- Information about the visual system can be found in a wide variety of textbooks. Here are three I used a lot

Carlson, NR (2007)
Physiology of Behavior (Ninth Edition)
Pearson (NY)
pp. 168 - 209

Wolfe, JM *et al* (2006)
Sensation and Perception
Sinauer Assoc, Inc (Baltimore, Md)
pp. 76 - 154

Principles of Neural Science, 4th edition

-) “Movies” and the retina

Roska, B *et al* (2006)

Parallel processing in retinal ganglion cells: how integration of space-time patterns of excitation and inhibition form the spiking output
J. Neurophys 95: 3810 - 3822

Fried, SI *et al* (2005)
Directional selectivity is formed at multiple levels by laterally offset inhibition in the rabbit retina
Neuron 46: 117 - 127

-) Motion blindness story

Ramachandran, VS & Blakeslee, S (1998)
Phantoms in the Brain
HarperCollins (NY)
p. 72

-) Blind spot description

Komatsu, H. (2006)
The neural mechanisms of perceptual filling-in
Nature Reviews Neuroscience 7: 220 - 231

-) Charles Bonnet syndrome

Ramachandran, VS & Blakeslee, S (1998)
Phantoms in the Brain
HarperCollins (NY)
p. 72

Plummer, C (2007)
Of Roman Chariots and goats in overcoats: the syndrome of Charles Bonnet
J. Clin Neurosci Apr 9 (in press at time of writing)

Menkhous, S *et al* (2003)
Charles-Bonnet Syndrome
Ophthalmology 100: 736 - 739

-) Interpolating binocular images

Poggio GF & Poggio T (1984)

The analysis of stereopsis
Ann Rev of Neurosci 7: 379 - 412

Devlin, K. (2005)
The Math Instinct
Thunder’s Mouth Press (NY)
pp. 128 - 132

-) Interpolating binocular images

Poggio GF & Poggio T (1984)
The analysis of stereopsis
Ann Rev of Neurosci 7: 379 - 412

-) We can hold about 4 objects in visual working memory, though object complexity is a confounder.

Narain, C (2006)
Total Recall
Nat Neurosci 9: 302

Xu, Y & Chun, MM C (2006)
Dissociable neural mechanisms supporting visual short-term memory for objects
Nature 440: 91 - 95

-) Recognition for 2,500 pictures

Standing, L *et al* (1970)
Perception and memory for pictures - single-trial learning of 2,500 visual stimuli
Psychon. Sci 19: 73 - 74

-) 63% accuracy a year later
Nickerson, RS (1968)
A note on long-term recognition memory for pictorial material
Psychon. Sci 11(2): 58

-) Still recognizable 3 decades later

Read JD & Barnsley RH (1977)
Remember Dick & Jane?
Memory for elementary school readers
Canadian Journal of Behavioral Science 9(4): 361 - 370

-) Pictures better than words
 - Stenberg, G (2006)
Conceptual and perceptual factors in the picture superiority effect
Eur J. of Cog Psych 18(6): 813 - 847
 - Endestad, T et al (2003)
Memory for pictures and words following literal and metaphorical decisions
Imagination, Cognition and Personality 23 (2,3): 209 - 216
 - McBride, DM & Doshier, AB (2002)
A comparison of conscious and automatic memory processes for picture and word stimuli: a process dissociation analysis
Cons Cogn 11(3): 423 -460
-) Identifying letters as opposed to individual words
 - Pelli, DG et al (2003)
The remarkable inefficiency of word recognition
Nature 423: 752 - 756
-) All references to infant information processing
 - Gopnik, A. et al (2000)
The Scientist in the Crib
William Morrow
-) Olfactory genes and color vision
 - Holden, C (quoting N Dominy) (2004)
An Eye for a Nose
Science 303: 621
 - Gilad, Y. et al (2004)
Loss of olfactory receptor genes coincides with the acquisition of full trichromatic vision in primates
PloS Biol 2: E5
-) Olfactory genes and four-fold rate
 - over any other creature
Gilad, Y et al (2003)
Human specific loss of olfactory receptor genes
Proc Natl Acad Sci USA 100: 3324 - 3327
 -) Cola experiment
Sakai, N et al (2005)
The effect of visual images on perception of odors
Chem Senses 30 (suppl 1): i244 – i250
 -) Animation and graphics references
Najjar, LJ
Principles from the Behavioral and Cognitive Sciences
Educational Technology Publications, Englewood, Cliffs (NJ), pp. 55 - 126
 - Najjar, LJ (1998)
Principles of educational multimedia user interface design
Human Factors 40(2): 311 - 323
 -) The characteristics of the learning materials can significantly affect how people learn things
Bransford, JD (1978)
Contextual prerequisites for understanding: some investigation of comprehension and recalls
J Verb Learn & Verb Behav 11: 717 – 726
 -) Limited evidence suggests that some media are better at communicating some types of information than others
Nugent, GC (1982)
Pictures, audio and print: symbolic representation and effect on learning
*Educ Com & Tech J.*30: 163 – 167
-) PSE gets wiped out if the pictures are too conceptually similar
Nelson, DL (1979)
Pictorial superiority effect.
J of Exp Psych: Hum Learning & Memory 2: 523 – 528
-) Pictures seem to work best for people who do not have a lot of background (are naïve learners) or are of low aptitude. This seems to be true of all ages and a broad variety of students.
 - automobile mechanics (college age)
Mayer, RE & Gallini, JK (When is a picture worth a thousand words?)
J. of Educ Psych 82: 715 – 726
 - natural science (fifth graders)
Kraft ME (1961)
A study of information and vocabulary achievement from teaching of natural science by television in the fifth grade
Unpublished dissertation, Boston University
 - Basic training information to army recruits (high school)
Kanner JM & Rosenstein, AJ (1990)
Television in army training: color vs. black and white
AV Comm Rev 8: 243 - 252
 -) Pictures seem to work better for older audiences than younger audiences. Seven year olds did better than three year olds. Adults did better than seven year olds.
 - Shown with TV commercials
Stoneman, Z & Brodyg GH (1983)
Immediate and long-term recognition and generalization of advertised products as a function of age and presentation mode
Dev Psych 19: 56 - 61
 - Shown with picture recognition

Hoffman CD & Dick SA (1976)
A developmental investigation of
recognition memory
Child Dev 47: 794 - 799

•) Print media research

Pieters, R & Wedel, M. (2004)
Attention capture and transfer in
advertising: brand, pictorial, and
text-size effects
J. of Marketing 68(2): 36 -50

•) Tufte references

Shermer, M (2005)
The Feynman-Tufte Principle
Scientific American, April, 2005
p. 38

Tufte, E (2003)
PowerPoint is Evil
Wired 11(9): September, 2003

•) PowerPoint History and facts

Park, I (2001)
Absolute PowerPoint
New Yorker, May 28, 2001
p. 76