

Cognitive Science as a field of interest is sometimes distinguished from 'cognitivism' as a theoretical commitment to quasi-linguistic representation and computational mechanisms. In that case I hope that this work might be considered as a contribution to Cognitive Science, but it is fundamentally opposed to 'cognitivism'.

34. Something which Zenon Pylyshyn [1973, 1978, 1979a,b,c, 1980, 1981, 1984] would still like to deny.

35. See e.g. Anderson [1983] or Fodor [1975 p.191].

36. Whose pioneering textbook *Cognitive Psychology* [Neisser, 1967], which is universally regarded as "seminal", discusses imagery at some length.

Notes to §II.A.1.

1. Galton, 1880, 1883 pp.83ff.. See §I.B.2 above.

2. E.g. Coleridge, 1817; Keats, 1817; Shelley, 1821.

3. See e.g. Coleridge, 1817 chap.13 p.167.

4. Key references would be: Pylyshyn, 1973, 1978, 1981; Kosslyn & Pomerantz, 1977; Kosslyn, Pinker, Smith & Shwartz, 1979a,b; Kosslyn, 1981; Shepard, 1975, 1978b; Anderson & Bower, 1973 pp.499ff..

5. 1978, 1979. The first of these papers has become one of the most frequently cited works in all of cognitive psychology [White, 1983].

6. 1978.

7. Palmer [1978 p.298+n] does think that the theories in question should eventually be distinguishable by neurophysiological evidence, or perhaps on "pragmatic or esthetic" grounds. Anderson [1978], however, seems to doubt even these possibilities.

8. It should be added that many who do seem to see the issue as directly between 'analog' and 'propositional' nevertheless continue to believe that there can be good reasons for preferring one theory to the other. Hayes-Roth [1979] and Pylyshyn [1979c] reply to Anderson's [1978] arguments from 'analog' and 'propositional' viewpoints respectively. Anderson [1979] provides a reply to them. (Also on this issue see Keenan & Moore [1979].)

9. Morris & Hampson, 1983 chap.6. Also Hampson & Morris, 1979 p.11. Kaufmann [1980, 1986] gives a similar taxonomy but rejects all three types of theory and proposes

a fourth type of his own. However, it is not at all clear to me that Kaufmann's theory addresses the same issues as do the three types of theory he rejects. It seems to deal with the functions rather than with the nature of imagery. Even with regard to functional issues Kaufmann's views have had little influence, although Kolers & Smythe [1979] seem to have independently taken a related position.

10. Hampson & Morris [1978]. This is a critique of the most developed of such theories, that of Neisser [1976 chap.7; 1978a]. Kaufmann's [1980 pp.92-5; 1986 pp.186-8] critical remarks on Neisser lean heavily on Hampson & Morris. Kolers & Smythe [1979] make some briefer critical remarks on Neisser.

11. Although the survey results of Denis & Carfantan [1985] are rather ambiguous on this point.

12. 1949.

13. Derived from the Latin "imago". According to Williams [1976 p.130] both the English and the Latin word originally meant "a physical figure or likeness", but in both languages "developed the senses of phantom [I take it he means mental image (phantasma)] and of conception or idea". Furlong [1961 p.24] suggests that the relevant sense of imago is "a copy".

14. See Lucretius, De Rerum Natura, Liber IV - Bailey, 1947.

15. See e.g. Locke, 1700 Bk.II Ch.II 17 - Pringle-Pattison, 1924 p.91.

16. §I.B.4 above.

17. Koffka, 1935 p.65.

18. Shepard, 1981.

19. Shepard, 1984a.

20. Shepard & Chipman, 1970; Shepard, 1975, 1981.

21. Köhler, 1971 pp. 241, 245 - orig. 1930.

22. 1975 pp.91,104-5.

23. 1981 pp.281, 282.

24. Shepard, 1984b.

25. Rey, 1981.

26. 1978a.

27. 1978a p.223n.

28. E.g. 1974; 1980; 1983.

29. 1979; Morris & Hampson, 1983.

Notes to §II.A.2.

1. Beare, 1906 p.251; Rees, 1971 p.503n7.

2. 1906 chap.1.

3. 1970 p.57; Sarbin, 1972.

4. *De Sensibus* - trans. Stratton, 1917 pp.109-111.

5. Theophrastus - trans. Stratton, 1917 p.111. This seems to be a direct quote from Democritus.

6. In fact some ancient accounts ascribe this position to Democritus himself, as well as to Leucippus and Epicurus [Beare, 1906 pp.29-31] and this is supported by Aristotle's critical mention of Democritus's opinion that vision would be much clearer through pure void than through air [*De Anima* Bk. II. 7 419a 15]. Perhaps the air imprint notion was intended to explain why the intervening air does not prevent vision.

7. *De Rerum Natura Liber IV* lns.722-48 -- trans. Bailey, 1947.

8. Theophrastus, *De Sensibus* 39 - trans. Stratton 1917.

9. *De Sensibus* 42.

10. *De Sensibus* 40-41 - Stratton, 1917 p.101; see Beare, 1906 p.41-2.

11. Beare, 1906 pp.105,210,258-60.

12. 191 c,d.

13. *Timaeus* 45.

14. 1971 p.51.

15. *Republic* 533d.

16. *Republic* 518c.

17. 38c-39b.

18. *De Memoria et Reminiscentia* 450a,b.

19. See Juhasz, 1971 p.54.