INTRODUCTION
The infant's tendency to devote more fixation to a novel than to a previously exposed target is an operational definition of visual recognition memory. Infants, from birth, are able to differentiate among highly discriminable targets on a recognition test. Successively finer distinctions are made with increasing maturational level. The infant, at least from 5 months of age, requires relatively little study of a target for subsequent recognition. Also by 5 months of age, the infant's recognition memory is long lasting and is not easily disrupted. The stimulus or temporal context in which a stimulus is presented for study may facilitate the later recognition of that stimulus. Finally, it appears that variations in early recognition memory may be predictive of later intellectual functioning.

The most important implication to draw from the study of infant recognition memory is that such tests of recognition provide information on the perceptual - cognitive world of the infant. It is also possible to discover whether specific features of a target are perceived as invariant by an infant.
Fagan (1977 a) found that infants were able to encode either the invariant form or colour of a target as a basis for later recognition. Many experiments have demonstrated that infants are able to detect features of a stimulus which remain invariant from study to test.

Mc Gurk (1972), Cornell (1975), and Fagan (1979) found that infants between 4 and 6 months of age recognize a pattern even though its orientation has been changed, and studies by Fagan (1976), Cohen and Strauss (1979), Fagan and Singer (1979), Nelson et al (1979) and Strauss (1979) indicate that infants from 7 months of age recognize invariant aspects of faces. Infants, by 5 months of age, are also able to recognize information common to an object and to a picture of that object (Dirks & Gibson, 1977; Rose, 1977; Deloache, Strauss & Maynard, 1979) and by 1 year, can employ information gained by study in one modality to solve a recognition test given in another modality (Gottfried, Rose, & Bridger, 1977, 1978).

Much of the infant behaviour is dependent upon infant memory, but that the investigation of infant memory, particularly recognition memory, is best served at this time by concentrating on either of two
Experimental paradigms. In both, the infant is familiarized to one stimulus and then tested with one or more novel stimuli. One paradigm involves simultaneous pairing of two stimuli (the paired-comparison method), while the other involves successive exposures of a single stimulus (the habituation method).

Research on infant memory has tended to show that infants can recognize a pattern up to 2 weeks later, and that under certain specified conditions recognition can be interfered with. In general, it has been found that the more novel a stimulus the more the infant will prefer it; but this conclusion must be qualified in at least two respects. There is evidence that at approximately 8 weeks of age infants may actually prefer familiar stimuli. Also, other evidence indicates that if the novel stimulus differs from the familiar one in arrangement or rotation of elements the most novel stimulus may not be the most preferred.

Age, sex and other individual differences occur in habituation and preferences for novelty, and it has usually been assumed that the more advanced an infant is cognitively, the more marked his novelty preference or
the more rapid his rate of habituation. However, no one has yet provided an adequate rationale for the use of any one particular measure of habituation rate, and different measures can lead to different conclusions regarding who is a fast and who is a slow habituator.

Recent evidence from backward habituation curves may mark a transition in the study of infant habituation and memory. Instead of indicating, as most investigators believed, that habituation involves a gradual decrease in responding, the data have shown that under certain conditions, habituation may be all or none, occurring on a single trial, and that just preceding this sudden decrease the infant may exhibit an increase or peak in his response.

By 2 to 4 months of age, infant perception is much more sophisticated. Simple figures are perceived as organized wholes whether they are constructed from connected line segments or discrete elements arranged in a simple pattern. Infants begin to respond to the relationship among the elements rather than to the elements as independent units. Colours tend to be perceived categorically rather than along a gradually
changing continuum. Complex patterns, such as checker-boards or pictures of the human face, are looked at more than simple ones, and infants are able to traverse an external boundary in order to perceive an internal figure or feature. They still have some difficulty integrating component features such as a square within a circle or a colour and a form, but even this integration appears possibly by 4 or 5 months of age. It is also at this age infants are able to integrate the features of a face and recognize the identity of an individual face despite changes of pose and facial expressions.

Perceptual constancies do not make their appearance until somewhat later, about 7 to 13 months of age. Very little research has examined the development of constancies, and new procedures such as the use of multiple stimuli during habituation could show the existence of perceptual constancies within the first 6 months of life.

Piaget's theory agrees with the later development of perceptual constancies, but stresses a much more active role of motor behaviour in perception
than would seem to be indicated by the evidence for early perceptual organisation of colours and forms. Despite the absence of a viable, global theory, the area of infant visual perception has made continual progress. Most new experiments tend to confirm and extend the results of earlier ones rather than contradict them. The infant's perceptual abilities gradually develop throughout the 1st year of life.

Newborn infants' sensory capacities, although limited, are adequate to allow responding to a wide range of available information. Not only are infants capable of detecting stimuli in many modalities, but their response to these inputs is far from chaotic and disorganized. For example, young infants exhibit organized patterns of response when dealing with the visual aspects of the world. Beginning with Berlyne (1958) and Fantz's (1958) early observations indicating that infants look longer at some patterns than at others, it has repeatedly been shown that even very young infants discriminate between patterns which differ with regard to a number of features.

When infants discriminate between patterns or objects they do so on a different basis from adults, and
the apparent similarities in differentiation are therefore superficial. With regard to human sensory and perceptual behaviour, comparable differences in mechanism might also underlie differential responding during different periods of development.

There are important differences between adults and infants in the nature of their sensory or perceptual functioning. Young infants are likely to respond to the amount, rather than the kind, of stimulation which they receive, whereas adults are likely to respond to both amount and kind of stimulation.

According to Schneirla (1965), early in development all organisms respond to stimuli in terms of the amount of stimulation provided, i.e., effective intensity. He saw young human infants as similarly responding to only quantitative aspects of the world, and older infants and adults as responding to qualitative, as well as quantitative aspects of their environment.

There is ample evidence from studies of visual behaviour in young infants which indicate that they are,
in fact, responsive to a variety of quantitative attributes of stimulation such as brightness (Hershenson, 1964; Lewkowicz and Turkewitz, 1981), amount of contour (Berlyne, 1958; Brennan, Ames and Moore, 1966; Greenberg & O' Donnell, 1972), contour density (Karmel, 1969; Karmel, Hoffmann & Fegy, 1974; Maisel & Karmel, 1978), size (Fantz & Fagan, 1975; Maisel & Karmel, 1978; Ruff & Turkewitz 1975, 1979), number of angles (Hershenson, Munsinger & Kessen, 1965), number of elements (Fantz & Fagan, 1975; Gardner & Turkewitz, in press), and rate of change (Gardner & Karmel, 1981; Karmel, Lester, Mc Carvill, Brown & Hoffman, 1977; Volkmann & Dobson, 1976). Such findings indicate that infants are responsive to these various dimensions as separate and distinct attributes of stimulation.

In the early 1960s, the first American investigators explored habituation systematically in human infants, and since that time the amount of information on infant habituation has expanded considerably. By 2 or 3 months of age, however, habituation of orienting behaviour is clearly observable in a variety of modalities.
Several studies have demonstrated that the more complex the stimulation, the less rapid the habituation. The possibility of spontaneous recovery has also been explored by several investigators i.e., the familiarized stimulus has been withheld for a period of time and then presented again.

Habitation and recovery can also provide useful tools for investigating information processing ability of infants and memory or storage capacity. As Sokolov (1963) and Lewis (1967) have pointed out, habituation must involve some type of retention mechanism. The nature of this mechanism however, and how it develops with age are almost totally unknown. Only a few studies have attempted to assess with sufficient precision the kind of environmental information that is assimilated and retained by young infants. Investigations of how long and under what conditions this information will be retained are also beginning to appear in the literature (Pancratz & Cohen, 1970).

Although in the past verbal skills have been considered to form the strongest basis for memory for
colour (Brown and Lenneberg, 1954; Lenneberg, 1967), contemporary researchers (Berlin & Kay, 1969; Bornstein, 1973, 1974) have suggested that colour coding and colour memory may in many cases operate independently of language levels. Indeed, Bornstein, Kessen, and Weiskopf (1976) have recently shown that by about 4 months of age infants already possess a categorical structure for the perception and differentiation of chromatic surface qualities. That is, preverbal infants tend to see the continuous spectrum of wavelength as naturally categorized into hues.

A detailed review of literature is presented below in support of the above observations on the memory development and habituation of children.