- Friday, May 5, 1995
  Categorical Perception of Faces

2.1 The talk this week was of face recognition by Vinod Goel of the Psychology Dept. here at York. He was primarily interested in the question of whether face recognition could be regarded as an example of categorical perception.

2.2 If it WAS categorical, then that implies, as I understand it, as sort of quantal coding, in which as a face undergoes some kind of distortion it will continue to be identified as person 'a' until some kind of threshold is reached whereupon it will be identified as person 'b'. Presumably there would be some kind of hysteresis on this, but this was not discussed.

2.3 The experimental approach was to fade one face (a photograph in front view of a US president) into another similar face (same size, same pose, also a US president). And then follow the perception of the transition.

2.4 The fading was done by a morphing programme which simply averaged the luminance of each pixel with a variable weighting (from 0-100%).

3 By varying the weighting and looking at the percentage estimates of face 'a' and face 'b', it was argued that it should be possible to identify a boundary between the two faces IF their perception was categorical. By comparing faces separated by various amounts (10%a, 90%b with 20%a, 80%b for example) it was hoped to identify a discrete boundary.

4 The data turned out to be a little non-obvious to interpret, although similar to the outcome of other experiments in the literature that have been interpretted as indicating categorical perception.

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