

Cognitive Psychology Perceptual Set

Can we predict our participants' perception of an ambiguous figure?

The key concept we are investigating is perceptual set. For years psychologists have studied this subject meticulously. Our aim is to test whether perceptual set can influence the interpretation of an ambiguous image. Overall perception from which perceptual set is derived from has left a multitude of psychologists in disarray as to whether there was any real answer to the nature vs. nurture argument, which remains inconclusive due to ethical and methodological problems.

However Perceptual set is a debate which has already received many investigations and therefore a platform in which to discover the inner workings of experiments in all concepts of psychology.

A renowned study by Bugelski and Alampay (1961) is frequently used to as an archetype of the influence of what psychologists call, "Perceptual Set: A predisposition to perceive something in relation to prior perceptual experiences." (Murch 1973, 300-301). They also in this experiment indicated the importance of situational context, which is less broader than perceptual set as perceptual set generally involves long term prior experience (for instance cultural stereotypes), or short term or situational factors.

In 1973 Bugelski and Alampay developed an experiment in which groups of observers; were shown a basic line drawing, which was designed to be open to interpretation, (ambiguous), this ambiguous drawing can be construed either as a rat or man wearing spectacles. The participants were shown, in advance one to four drawings on a similar style. One group was shown drawings of human faces and the second group was shown drawings of various animals. Also a control group was shown just the ambiguous figure with no "...prior perceptual experiences." I.e. no images were shown beforehand. The majority of the control group, reported interpreting the ambiguous figure as a man rather than a rat. In fact 81% of these interpreted the image as man, compared to the group who were shown four animal pictures prior to the ambiguous image, in which 100% of the group saw a rat. Subsequently 73%-80% of the group who saw in advance the human faces, saw a man rather than a rat.



Robert Leeper adapted a chauvinistically labeled picture ‘The wife and the mother in law’.



Leeper had the image redrawn in two biased forms in order to study the role of perceptual set.



old woman

young woman

In one of the ‘biased forms’ he emphasized the old woman and in the other he emphasized the young woman.

He varied conditions in viewing for the five groups. A control group was shown the ambiguous figure only. This group precipitately described the image of the young woman, 65% of the group in fact. However the second and third group was given verbal explanations of the old woman and the young woman in advance. Also the fourth and fifth groups were shown the ‘old’ version and the ‘young’ version respectively. Subsequent to these “perceptual experiences” groups two to five, were shown the original ambiguous image. Leeper found that each of the primed groups was ‘Locked-in’ to their previous interpretation. In truth 100% of group 5, which had seen the young version first deciphered the ambiguous figure as a young woman. In addition 94% of group 4, which had seen the old version first, reported seeing the old woman in the ambiguous figure. The percentages opting for each interpretation amongst those given verbal descriptions were much the same as for the control group. Gerald Murch (1973, 305) was unable to replicate these findings(94% of his control group first saw the young woman) and suggested that the image was so well-known by then that this may have influenced these results.