

Compare and contrast gibson's and gregory's theories of perception

[Science](#)



Gibson's and Gregory's theories of perception both suggest that eye-retina is important for perception. The both believe that without eye-retina, a person will not be able to see. This is a common view of both of the theories of perception. The idea is supported by the case of SB. SB was a man who had been blind from birth due to cataracts. When he was 52, he had an operation which restored his sight and hence he could see. Thus, this case has shown the importance of eye-retina for things to be perceived.

And therefore, supports both of theories of perception which eye-retina is essential for perception. Gibson believes in the direct theories of perception which he used the theory of bottom-up processing to explain visual illusions whereas Gregory believes in the indirect theories of perception and he used the theory of top-down processing to explain visual illusions. The bottom-up are based on the assumption that we work upwards in our analysis of the visual world from basic sensory inputs at the bottom level towards the higher, more cognitive levels of the brain.

The top-down processing theories are based on the assumption that we can only perceive our visual world accurately if we use stored knowledge and problem-solving skills. Thus, there are differences between their theories of perception. Gregory's indirect theory of perception and Gibson's direct theory of perception had led to the debate of nature-nurture. This is a big debate in Psychology whether perception is determined by genetics as proposed by Gibson's theory or whether it is learnt or determined by upbringing and social context as proposed by Gregory's theory.

On the one hand, Nativists think that nature is more important factor which people are the products of their genetics and that we are born with certain behaviours. On the other hand, empiricists think that experience and nurture is the more important factor. They think that situational factors and upbringing have a greater influence on outcome. An eclectic approach might show that it is an interaction between nature and nurture and that neither side can tell the full story. It may be that a genetic predisposition to perception exists, but that situational factors also have to be in place for it to develop.

Apart from the above, there are a few more differences between Gibson's and Gregory's theories of perception. Gregory believes that additional processing is required for perception which some forms of background knowledge is needed to make sense of the environment than just the sensory input while Gibson believes that perception is part of an inbuilt adaptive mechanism for survival which does not rely on stored knowledge or past experience. Gregory believes that expectations have an impact on perceptions which Gibson disagrees.

There is empirical evidence supporting the idea of Gregory, and this comes from a study carried out by Simons and Levin. 50% of the participants failed to realise that there was a switch of people. This is probably due to the fact that the participants had not expected a change of person. Hence, they were unable to perceive it. Furthermore, a study carried out by Selfridge also supports the idea of Gregory. Selfridge's study demonstrates that our perceptions are mediated by our expectations as people are able to read the figures as "the cat".

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This is because people have the expectations of the cat as they are words in common usage. These studies have shown that people saw what they have been expecting to see. Thus, the study demonstrates that expectations affect perception. And hence suggest that Gregory's theory of perception might be right instead of Gibson's. Gregory also suggests that we use context for our perceptions which Gibson disagrees. There are supporting evidences for Gregory's assumptions. Selfridge's study has shown context effects on visual perception. This study suggests that context aids perception.

Similarly, Boring has demonstrated the use of top-down processing as well as the fact that context influences visual perception. These two studies demonstrate that visual perception is influenced by context. In addition, Gregory's idea is supported by the study carried out by Warren which context influences auditory perception as well. The participants used context to hear the word in the sentence entirely. This shows the importance of context which helps to fill in the missing words. These findings suggested that it may be true that context is necessary for perception to occur successfully.

These studies support Gregory's theory instead of Gibson's. Furthermore, Gregory's theory explains how we can make errors in perception. For instance, we do not necessarily see spelling errors in our written work as we word- through-context. Besides, Gregory suggests that we use stored knowledge and past experience to make sense of our visual environment which Gibson does not agree. Moreover, Gregory suggested that some forms

of background knowledge, through learning, are needed to make sense of the environment than just the sensory input as suggested by Gibson.

Gregory said that, when looking at the Muller-Lyer figure, the line on the left looks longer than that on the right. He believed that this was because we were using top-down processing and assuming that the figure on the left is like the corner of a room that we are in, while the figure on the right is like the corner of a building seen from the outside. Hence, this suggested that we use context for our perceptions. He also pointed to the idea of the hollow mask. When we see a hollow mask from the inside, we perceive it as pointing outwards, because this is what we are used to.

However, there are problems with Gregory's outlook. Firstly, if we take a derivation of the Muller-Lyer illusion and replace the arrows with circles, we can see that the effect still holds, even though we could not possibly be imagining the corners of rooms or buildings, etc. Thus, Gregory's assumption of the theory of perception might be wrong. Furthermore, Gibson argues that information from visual illusions should not be used because it is a fake stimulus that could not happen in the real world which suggested that the theory cannot be applied in real life situation.

However, visual illusions do happen in real life such as trains and car wash. Even so, Gibson believes in the direct theory of perception which is an opposing theory to Gregory's. He believes that we do not need prior knowledge to perceive objects correctly. Gibson suggests that perception is shaped by biological inheritance instead of what Gregory has suggested. According to Warren and Hannon, participants were able to make

judgements about direction using dots which support Gibson's optic flow patterns.

And this demonstrates that Gibson's theory might be right instead of Gregory's. However, study carried out by Lee and Lishman has shown that adults have more experiences about the world than children and thus has cast doubt upon Gibson's theory. Also, a study carried Hahn, Anderson and Saidpour has demonstrated that regardless of which condition the participants were, they could tell direction and movement. And this finding goes against Gibson's idea of optic flow. Thus, Gibson's theory might not be right, instead, Gregory's theory might be more realistic.