

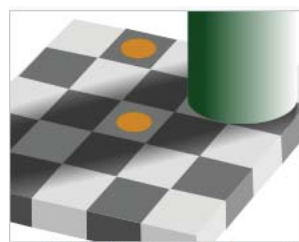
## Program Summary (21 February 2013)

At 7:00 p.m., President Wade welcomed the membership and reminded that the centennial year is fast approaching. Wade gave a brief introduction of tonight's after-dinner speaker and a preview of his remarks.

At 7:58 p.m., President Wade alerted the membership that the evening's presentation would begin shortly.

At 8:10 p.m., visitors were introduced by the members. Wade introduced the evening's speaker **Dr. Jim Pomerantz**, Professor of Psychology and former Dean of Social Sciences at Rice University. For a period, Jim was Provost and Acting President at Brown University. Wade also introduced Mary McIntire, Dean of the Continuing Studies School, and Jim's wife.

The title of this evening's talk was **The Meaning of Visual Illusions: Things Are Not What They Seem To Be!** The membership warmly welcomed Professor Pomerantz. This is the 656th meeting of the Houston Philosophical Society.



In this illusion, the coloured regions appear rather different, roughly orange and brown. In fact they are the same colour, and in identical immediate surrounds, but the brain changes its assumption about colour due to the global interpretation of the surrounding image. Also, the white tiles that are shadowed are the same colour as the grey tiles outside the shadow.

Jim begin by recalling that he last addressed the HPS in 1993. In 1969-1970, Jim worked at Bell Labs on a visual phone that today is like Skype. This project was an important step in his early study of vision and understanding of visual illusions.

Jim's talk presented a series of visual animations and an attempt to briefly discuss how our brain decodes images but can be tricked; see pictures.

Among the ideas shared included a sequence of thirteen ways to make an object invisible, at least to the visual system.

After this fascinating sequence, Jim turned to discussing the color visual system and its properties. Color is a very complex three-system process in the cortex. Jim showed examples of how fixing on a strange-looking image and then looking at a blank screen or a black-and-white image will appear to be in color for a short period of time. Experiments of this type help one understand the components of the human visual system. One of the more surprising illusions demonstrated included black objects that looked black at one moment and white at the next; see figure above. The brain has a number of sophisticated systems that process images to sharpen perception. These circuits can be tricked.

Finally, Jim turned to the visual perception of motion, and associated illusions. Jim concluded with a classic illusion of relative size from the first doctoral student in psychology at Johns Hopkins many years ago.

Jim wrapped up his comments at 9:08 and the audience warmly thanked the speaker. Many in the audience no longer were certain of anything they were seeing. Questions were entertained. How do athletes perceive high-speed events so well? Jim suggested that one search for videos on You Tube that display many of these illusions in a manner that cannot be duplicated in a large lecture room.

Jim received another round of applause, and we adjourned at 9:19 p.m.

David W. Scott  
Recording Secretary

