Perception and Multimedia Computing

Ambiguity

Friday 13th Oct 2017

This lab sheet covers the blind spot, and encourages you to develop a sketch illustrating one particular aspect of ambiguity.

1. **This part of the lab guides you in constructing a P5 sketch which allows you to investigate for yourself the blind spot in your eyes.**

   (a) Write a P5 sketch to display something like the following image, covering most of the screen (in a window of 1000×480 pixels)

   (b) Run your sketch, align your position so that your right eye is in front of the blue square, and cover your left eye. Then slowly move your head towards and away from the screen. What do you observe?

   (c) Alter your sketch so that the picture can be drawn the other way round (with the circle on the left). Repeat the above with the new image. Under what circumstances do you see the same effect with the new picture?

2. **This part of the lab is about constructing an interactive sketch to illustrate a specific aspect of visual ambiguity.**

   (a) Some of the images illustrating ambiguity shown in the lecture have the property of *bistability* – there being two equally valid (but contradictory) interpretations of the image. Search and read about the phenomenon of bistability on the Internet, and write a P5 sketch to display a bistable image.

   (b) Extend your sketch so that, when the user presses a key, the two possible interpretations of the image are made explicit, by showing the user disambiguated versions of the image.

(c) Write about your choice of image and your sketch, explaining the choices you made, and how well you think you have illustrated the effect of bistability. (no more than one page of A4)

Further Reading:

- Gregory, Richard L., Eye and Brain: The Psychology of Seeing, Princeton University Press (1966 [1st ed.], 1997 [5th ed.])
- Thompson, P. (1980). Margaret Thatcher: A new illusion. Perception, 9(4), 483–484 (also http://www.bbc.co.uk/bang/article_thatcher.shtml)