Reading:Colin Ware - Visual Thinking for DesignChapter 1 and Chapter 2.Question:Ware describes bottom up and top down processing of visual information in the brain.Give a concrete and detailed example of how bottom up processing is influenced bytop down processing, leading to a potentially wrong interpretation of “reality” bythe viewer. Your example can include a screenshot, photo, or web site URL to referto the scene that is being viewed.

https://www.youtube.com/watch?v=vJG698U2Mvo

There is a famous video that is always used in psychology lectures of a group of

people playing basketball and the viewer is asked to count how many passes are

made by the people in white shirts.

Afterwards, the viewer is asked if he/she saw a person in a gorilla suit pass

through the scene. Most people don't.

According to Ware, we only sample the world on a need to know basis therefore making

the allocation of attention central to visual thinking

He described two waves of neural activity:

- An information-driven wave that passes information first to the back of the brain

(the visual cortex) and then sweeps forward to the forebrain where it is further

processed. Information arrives and gets processed: patterns are formed

from elementary features, which in turn are recognised as objects. Three of

these objects at a time are held in attention by the visual working memory system.

- And an attention-driven wave that originates in the attention control centers of

the forebrain and sweeps back, enhancing the most relevant information and

suppressing less relevant information.

In the case of the example given, the attention of the viewer is directed towards basketball

and the amount of passes that are made. Due to the limited capacity of visual working

memory, this causes an attention bias in favour of the object we are looking for:

the basketball and the people in white shirts. When we're looking for something,

we use a scanning strategy to get the eye in the vicinity of the target.

This focus means that all other objects, i.e. the people in black shirts and the gorilla

don't get much attention. This results in the biased interpretation of the "reality"

as shown in the video.