Colin Ware, Information Visualization, Chapter 1 Questions

1. Colin Ware argues against science writer John Hargon’s theory that ‘science is finished’ by contrasting psychology with other scientific fields in terms of remaining challenges to be solved. Which scientific fields does he contrast with psychology?
2. According to Hutchins, the process of thinking is involves more than just the head. What additional tools do you use?
3. How many neurons are dedicated to visual processing? What % is the of the total neurons in the average human brain?
4. List some advantages of visualization by giving examples from Figure 1.1.
5. List the stages of visualization and provide examples of each.
6. What is semiotics?
7. Is a garbage can icon universally effective? Explain.
8. How does Herskovits 1948 study support the ‘pictures are arbitrary’ theory? Describe an alternative explanation.
9. In Figure 1.4, why is the left image easier to interpret than the right?
10. List three characteristics of arbitrary representations.
11. What is affordance? Provide an example.
12. Broadly speaking, what are the three stages of visual information processing?
13. Steven’s lists four levels of measurement \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_. In practice, what three classes are typically used?