

Study Questions for Chang (2004) *Inventing Temperature*.

Chapter 5.

1. According to Chang, what is the basic problem that faces empirical science informed by empiricist philosophy?
2. What is *foundationalism*? What problems does it face?
3. What is *coherentism*? Why is the metaphor of erecting a building on firm ground more appropriate for coherentism than foundationalism?
4. Why does Chang think coherentism should be taken as a philosophy of progress, rather than justification?
5. What is Chang's notion of "epistemic iteration"?
6. How can the degree of progress achieved by epistemic iteration be judged?
7. According to Chang, is truth an epistemic virtue?
8. According to Chang, what are the two modes of progress enabled by iteration?
9. How is the "Bridge Street Bridge" story an example of enrichment?
10. How is Chang's scratched up glasses story an example of self-correction?
11. In what sense is epistemic iteration conservative?
12. In what sense is epistemic iteration pluralistic?
13. Why should we be careful not to equate epistemic iteration with the "scientific method"?

Chapter 6.

1. According to Chang, what is the *complementary* function of history and philosophy of science?
2. What is the acute dilemma Chang associates with normal science?
3. Why can't specialist science afford to be completely open? What is a potential problem with this?
4. What is the role of philosophy of science, according to Chang?
5. According to Chang, in what sense is the role of history of science similar to that of philosophy of science?
6. What are two methods that history and philosophy of science employs in its complementary mode?
7. According to Chang, how can any knowledge of nature be generated by historical or philosophical studies?
8. How is HPS in its complementary mode different from the following: sociology of scientific knowledge, internalist history of science, methodology of science, naturalistic epistemology?
9. In what sense is HPS in its complementary mode (i.e., "complementary science") *critical* but not *prescriptive* in relation to specialist science?