Readings for the Meeting of September 22, 2016

The readings for this week are two pieces about the work of Karl Pearson, a British academic who is often referred to as “The Father of Statistics.” You may have come across his name in statistics classes in dealing with the *Person’s product-moment correlation* and *Pearson’s chi-squared*.

Of course you will note that these pieces relate to things that went on before Popper produced his major works on falsification, but this is an interesting case of where earlier work relates to problems and concepts that are later put forward. In this case, particularly, the question of how theories [and hypotheses] are falsified. You will recall that Popper told us that a good theory [or hypothesis] had to include “directions” about how it could be falsified. Pearson and his colleagues give us an idea of how this could be done in many (but certainly not all) cases.

The first piece, *Karl Pearson and Statistics: The Social Origins of Scientific Innovation*, describes how Pearson and his predecessors were influenced by the social beliefs of middle class elite in Victorian and Edwardian England and by the events following the end of the First World War. I often wonder what our statistical theories and procedures would have looked like if Galton, Pearson, and Fisher had lived in China at the end of the 20th and beginning of the 21st century.

The second piece, *Karl Pearson and Eugenics: Personal Opinions and Scientific Rigor* demonstrates how even the great statistician could make serious errors if he failed to follow the guidelines for research designs. In this example the statistics are fine, but the design lacks vigor. Clearly, there is a difference between statistics and research design.

Now, think about how Pearson may be thought to have anticipated some of Popper’s ideas and how we can make a connection between the early statistician and the philosopher of science.

LBB