COMP 47740 “Guided Reading” or Interdisciplinary Challenges

Cognitive science, as a term, arose in the 1970’s with the explicit goal of providing a central locus for the consideration of topics which arise in many distinct disciplines, but which demand consideration beyond the boundaries of any one of those disciplines. The original propsal that accompanied the foundation of the Cognitive Science Society listed the following disciplines: “Philosophy, Psychology, Anthropology, Artificial Intelligence, Education, Linguistics, Neuroscience.” Clearly some of these topics fit the idea of a defined scientific specialism better than others. Education and Anthropology are notable inclusions which do not usually market themselves as scientific fields. Both are more obviously steeped in political and cultural issues, and thus lie at some distance from any purist notion of a “hard” science, untainted by subjectivity.

But the perceived division between “hard” and “soft” (or human, or social) sciences is an illusion that has damaged science as inquiry. The construction of any scientific field can only be done in the context of a broader awareness of our collective inquiry into our own being, and our “world.” Philsophy and, indeed, Religious Studies thus clearly provide additional resources for integrating the ideas that arise within more narrowly circumscribed fields.

No scientific field has clear boundaries. Any field will change over time, and the list of disciplines originally adduced should be considered incomplete at its origin, and capable of continual renewal and reconsideration. The term “Artificial Intelligence” is a case in point. This was a relatively new coinage in the 1970’s which arose from early cybernetic work. It’s motivation and aspirations have developed vastly since, so that the current use of the term, which has by no means gone away, is incommensurable with the field as it originally arose.

Beyond the challenging issue of discussing, or even understanding, science that originates in different fields with different technical constructions, methods, assumptions, and aspirations, science is also the stuff of public debate, of collective understanding, and collective fantasies and nightmares, as well as the guidance of legislators, institutions, and social norms. The pandemic that arose in 2020 made obvious the complexities of public discussion to which science must contribute, and made it starkly clear that “science” does not, and cannot, speak with one voice, or produce pronouncements that are universally valid without any reservation.

In this module we will dive into this territory and jointly consider the challenges that result.

We will inquire into the sources of scientific pronouncements, considering the distinct roles of scientific journals, monographs, and textbooks, alongside the form in which these are produced, distributed and consumed.

We will consider also the way in which scientific work appears in the popular press, in newspaper articles, and as topics within the choppy waters of blogs and social media.

We will introduce some key ideas from the relatively young field of Science and Technology Studies (STS) which examines the production of scientific knowledge itself.

We will recognize the economics of science as an important shaping force that is rarely acknowledged. The role of scienctific work in relation to industry and to the military will be taken into account.

We will meet disagreements, conflicting claims, brash pronouncements, misunderstandings, and poitically divisive issues. We will also be keen to recognize the aspirations, hopes, and motivations underlying the work of many kinds of researchers and thinkers.

We will pay particular attention to the construction of the clinical domain, which is concerned with bodily health, and the shadowy domain of mental health that arises by analogy (though without a body to keep it grounded).

Classes will be strongly particpatory. Students will be asked to collect materials around a give topic for presentation and discussion in class. The topics chosen will respond to student interest and concern, and will not be fixed in advance.