I think one reason why science and engineering are seen as nearly synonymous, or at least as two sides of the same coin, by the general public is the lack of distinction between an engineer and a scientist. In many cases, people who were known (and continue to be remembered) as scientists functioned principally as engineers.

One example of this can be seen in the reading “Radar: Defense and Offence,” which details the development of radar technology during World War II. According to this reading, radiolocation was developed both from a scientific perspective as well as an engineering perspective at the same time during the war due to the British military’s intense interest in the subject. One example of this rapid development cycle can be seen in how the magnetron was developed “in commercial and university laboratories rather than in service laboratories,” but was nonetheless quickly picked up by the military and “adapted for operational use” (Hartcup 26). The theoretical knowledge of short wave radio and how to generate microwaves and the applications for this new knowledge developed in-step with one another.

The men who applied the knowledge of electromagnetic radiation to the radar in military applications (men who we would today say were acting as engineers) were nonetheless regarded at the time as scientists. For example, the team that developed the use of microwave radar on the coast of Britain “was composed of scientists who would all eventually become Fellows of the Royal Society” (Hartcup 27). Although, scientists by trade, these team were not involved in theoretical work, but rather the application of technology and even used their radar to track a submarine from the coast. Thus, they were acting as engineers. One explanation for this crossover between science and engineering, could be the increased need for applications of technology during the war. If engineers in various fields were not numerous enough—or if there were not any engineers at all in a new field—it would have been necessary to bring in scientists to develop the technology for the war effort.