Expanding the Boundaries of Science during the Late Nineteenth and Early Twentieth Centuries. 1. This week's readings show us both some highly significant scientific results (like the laws of thermodynamics) and some "science" that was arguably pretty bad (like the application of the conservation of energy to physiology via "nerve force"). Although science is understood as being a powerful engine for creating knowledge it is hardly a flawless one. What factors best account for success or failure (choose one) in the nineteenth century sciences, according to you own definition of scientific success or failure? In other words, can we see any social and/or intellectual commonalities that successful scientific outcomes share in this period or that failed scientific outcomes share? Make sure to define success or failure immediately after the introduction to the paper. There are a lot of ways to think about success or failure in science so work from your own thinking as to what that means. Try to consider both social and intellectual dimensions of the success or failure. For example, good scientific outcomes might result from social factors, like the ways that scientists interacted with each other, as much as intellectual factors, like previous developments that could set the stage for successful work. For example, in the first week of class we saw that scientific interactions were more productive when scientists followed Boyle's ideas about how to be collegial and constructive. That's a social factor that helps to explain some scientific success stories. Likewise, although scientific failures might result from social biases, they might also be the result of problems built-in to their intellectual understanding of how things work.