

42611 - Theory of science in engineering



DTU - Technical University of Denmark

Date of submission: 12. aug. 2022

Assignment 6

Omissions and the History of Science and Technology

Daniel F. Hauge (s201186)
Group 46

Assignment 6a: water closets

Debate

The theory of miasma was the main theory of medical science in the 19th century. In the theory of miasma, it is believed that odors, smells and noxious air was the primary driver of diseases. As a result of increasingly crowded urban development in conjunction with an excrement disposal method that increases miasma, sanitary and health conditions decrease. Not only are the consequences of a less than ideal excrement disposal method visible by the unsightly dungheaps and pigsties along the streets, but especially also because of health deterioration of the population.

The best argument for water closets is sanitary reasons. The sanitary conditions are way too bad and need conditions to be improved.

Development to provide everyone with sanitary solutions is costly, so costly that it is not affordable for everyone. Poor people have very little money, so little most people were generally in debt at end of the week from living expenses. The people with the resources to provide are not altruistic enough to provide for the poor.

The best argument against water closets is monetary reasons. It is too expensive for anyone but the rich to afford.

The 'best' technology

Technologies serve to provide the means to satisfy the needs of people. The needs can originate from problems in all areas of life, related to things such as health, social, survival et cetera. As life is very complicated, the solutions to the problems that arise are also very complicated. The complications trickle up the chain to the technologies that are developed. From an objective/technical perspective, it is very difficult if not impossible to determine which technology is the best one. Technology affects so many things both directly and indirectly. If a hypothetical extremely simple technology is replaced by another slightly better extremely simple technology, then it could be argued that out of the two, one is the best. Measuring the full effects of a specific technology is very difficult if not impossible in a real scenario, as the world and the technologies within are so complicated.

From a technical perspective, it is also hard to evaluate and compare the effects of a technology that differs in nature. As an example, let solar panel technology be considered. Solar panels provide a green source of energy that can produce energy as long as the sun shines, and this improves negative impacts on the climate. Solar panels do however also require cobalt which is usually mined in third-world countries, and as a result, has shown to increase child labor. Can we compare an improvement in climate action to the deterioration of social standards, and say which is better objectively? The 'best' or better technology is a subjective matter. We as humans, put value and severity on solutions and problems, and from that decide what is more important in the given context. Values and severity are decided by culture, customs, morals, ethics and the agreed-upon facts and knowledge about the world, which all change over time. The 'best' technology might not be the 'best' technology tomorrow, perhaps because of new knowledge from research, a social paradigm shift or perhaps a war breaks out.

Assignment 6b: Revolution

Disclaimer: As I work alone, I will only account for my own experience, but attempt to reflect on more general notions of what I believe is true for others.

In my lifetime, the most impactful domestic technology changes I have observed, have been in computer systems. Although throughout the years, the access to these technologies has only decreased, with parents divorcing and moving out. I have not observed any change in relations as an effect of domestic technology changes, at least not ones that are likely caused by changes to domestic technologies. I believe this to be true for most people in their mid-twenties or younger.

In regards to resonating with the division of labor and social relation structures of Singapore and America, the experiences I've accumulated can barely resonate. I cannot include the relations of my grandparents, as they were unfortunately not alive from a very young age.

In regards to division of labor, my parents both had well-paying and average-hour jobs and did most domestic tasks either together or in turns. As an example, one of my parents would bring and the other would fetch from school. One of my parents would dust off while the other would vacuum et cetera. Although some domestic tasks were primarily carried out by one or the other. More dangerous, or strength-demanding tasks were usually done by my father, whereas 'children enrichment' like playing or story reading was done considerably more by my mother. I believe this to be true for marginally more families in Denmark than elsewhere. I do however still believe that many families in Denmark have more distinct roles and task division in the family construct. This slight division of labor is considered a pretty normal practice considering the history and culture of most places including Denmark. I believe the division is archetypically more divided than what I've observed, as I believe great efforts have been put into the consolidation of the gender roles in Denmark.

In regards to the relational structures, families of Singapore and America but also Science for that matter, seem to be heavily male dominating. Male dominance is not something I've personally experienced, almost all relationships I observe are considerably female-dominated, almost to the point of complete submission of the male. The relationships I observe are those in my family but also relationships of friends. I've observed the male being ordered around to fulfill the needs of the female, and more often than not surrender to the will of the female. I do not believe this is typical or representative of the normal relationship structure in Denmark, but not outlandish either. Denmark is well developed in regards to gender equality, and thus when exceptions to power/gender imbalances are observed it is equally likely to be observed in both directions. I believe my experiences are an anomaly compared to most people, but as a general opinion, I think Denmark is very progressive when it comes to consolidating the roles, norms etc. of genders.