Cmpt 320 Assignment 1

The article *web design first 100 years* uses the parable of the construction and development of air travel as an analogy for how the landscape of computer hardware and software would develop in the future. Through the parable the author suggests that the reason why the exponential development of aircraft and space travel stopped was because of the diminishing returns, the economic viability and, a "good enough" mentality. The author then compares this to the development of computer hardware and software and states that we are reaching a plateau to the exponential development and that in 40 years the technological landscape would look like todays.

Some of the reasons for the slowing growth of technology seem to be reasonable however when isolated some reasons don't hold up. Mostly the "good enough" arguments as it is highly subjective, what is good enough for one person could not be good enough for another. For example, if the SST did not cause a massive sonic boom and was economically viable, there doesn't seem to be a reason why we would stop development there and say that the Boeing 787 was "good enough". As such it seems the development of aircraft was fueled more by the economic viability compared to the diminishing returns that were mentioned earlier in the article. This is like the industrial revolution in that it was fueled by economic growth. So, the comparison of airplanes and computers then has a flaw, the thought that we shouldn't continue to develop more advanced technology not because of hard limits, but because the stuff that we developed is already "good enough". The reason this is a flaw is because the improvement and creation of better computer parts can have vast impacts on other fields such as medicine and chemistry with the advent of quantum computing.

Although the article is right in pointing out that some aspects of computers seem to have reached their physical limits, eg. Transistors being nanometers in width, other technologies have yet to hit that limit. The article states that companies are holding onto less developed fields of technology as an excuse to keep their "toys". This is a contentious point as technological revolutions are started by people making discoveries in fields which other businesses see as economically profitable and invest in it starting a snowball effect of more discoveries and more investment that leads to exponential growth. This is very comparable to the industrial revolutions that have occurred in the past. The first industrial revolution started with the advent of steam power and the inventions that came along with it such as the steam engine. The second industrial revolution happened around electricity, chemical petroleum industries and many new creations replacing old ones as improvements. A breakthrough in quantum computing or another field of technology could catapult us into a third industrial revolution. The article concludes with 3 possible directions that technology can head, connecting the world, eating the world or ending the world. The first option the article touts as the "right choice" and advocates for stagnation asking, "is this not enough". The second option, which seems most realistic, advocates for progression and seems to be what's most economically profitable as machines are cheaper than people. The third option states the internet is only the first wrung on the ladder to be followed by much more. Regardless of which way the article thinks the right way for technology to advance is, it will advance in the way that is most economically viable.