What happened to the auteurs of film and engineering?

The decline of auteur funding, save for a few cult favorites, such as Wes Anderson and TSMC geniuses like Liang Mong-song, lead to fewer innovations in film and technology.

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CROSS-POST

Stanley Kubrick. Steve Jobs.

“Creative differences arising from his work with Douglas and the film studios, a dislike of the Hollywood industry, and a growing concern about crime in America prompted Kubrick to move to the United Kingdom in 1961, where he spent most of his remaining life and career. His home at Childwickbury Manor in Hertfordshire, which he shared with his wife Christiane, became his workplace, where he did his writing, research, editing, and management of production details. This allowed him to have almost complete artistic control over his films, but with the rare advantage of having financial support from major Hollywood studios.”

What do you call someone with full creative control and financial support? A really lucky person.

“**Avi:** What was Steve Job's unique contribution to Apple?

Daniel: Between Woz and Jobs, Woz was the innovator, the inventor. Steve Jobs was the marketing person. But, even to look back at the Apple][that was a lot about product design. That was kind of the seeds of Steve Jobs developing his design talents with the lightweight plastic case, even though it was never intended as anything portable.

The Apple I came right out of the Home Brew Computer Club. Woz wanted something he could bring to the computer club and show off to his friends, and portability was not even a factor except that they were comparing it with big machines that were not going to be portable. The previous generation depended on a big, heavy teletype to interface to the computer and there was no way any of that was portable. So that was what was fueling the excitement back in the Seventies. So then it comes to the Apple][and it was definitely Steve Jobs' idea. The Altairs, the Cromemcos, all of that generation were heavy metal boxes. It was brilliant of Steve to find Rod Holt to make a switching power supply, which was a lightweight power supply with no big heavy transformers, and to put the plastic case on it.

So you could actually take the Apple][under your arm and carry it somewhere. We never really advertised that but it was part of the appeal. And Steve never forgot that.

You can trace the portability aspect into the Macintosh, which had a handle built right into it; that was pretty obvious. Steve also paid a lot of attention to and took a lot of inspiration from Hartmut Esslinger, the founder of Frog Design. The mouse for the Lisa was by Frog Design and they were mocking up Macintosh cases for us in 1982. Then Steve left Apple and Apple lost its way into a profusion of beige boxes.

If you remember the history the next big thing on the landscape was the Macintosh IIcx. That was a highly modular, highly manufacturable computer and that was a landmark. But it wasn't about portability and it wasn't about industrial design, it was about manufacturability. At the same time Compaq was a big success making the PC highly manufacturable and highly modular, and so the Mac IIcx was kind of Apple's answer to that.

But then the next wave was when Steve came back to Apple and now it was the iMac, which had the bubble-shaped plastic. And that was designed by Jonathan Ive, and how fortunate for Steve that he had Jonathan Ive. Jonathan Ive was already on the staff at Apple when Steve came to Apple. So Steve just saw a good thing and latched onto it. Steve's a self-taught guy. But Woz didn't have that kind of vision.”

That modular Apple no longer exists in today's products. But I think what a lot of people forget is, without the popularization of the Compaq, and the user friendliness of the Apple, computers would not have been as rapidly adopted in the 1990s. The demand was so high that more portable computers were designed out of necessity. Today, anything heavier than a tablet is not even considered portable. Not even a laptop is considered portable, to some. Nonetheless the focus on smartphones as the epicenter of user-interfaces has narrowed the definition of what counts as creativity to "apps."

Risk averse angel investors, skunkwork black budgets of even the most resourced multinational companies will find it difficult to part ways with large sums of cash for even the most brilliant auteurs without a 50 page grant application and a list of itemized expenditure reports, when before, ideas were probably funded on the spot after being sketched on a napkin. Understandably, many do not lived up to the goal of producing a minimum viable product or making a new discovery (one of my professors once said of a MacArthur grant recipient, "they never heard from him again"). With a thorough search of all the materials, resources and contacts needed, anything is possible.

The phrase "theoretical physicist" is well established. The phrase "theoretical designer" is not. Steve Jobs appeared to be more of a theoretical designer, finding ways for hardware engineers to implement his ideas of minimalism into products, rather than himself. With a budget, of course, he could see those ideas to fruition- a fruit company, that is. But as the above description shows, he never coded anything, never built any hardware. He just found the geniuses who could put it together.

Today, geniuses can usually find themselves. But I sometimes geniuses work best in a silo organization. This can be good for helping ensure an organization finds multiple approaches to problem solving and not falling prey to groupthink. In Extraordinary Measures, the lead PI, played by Harrison Ford, complains of a pharmaceutical research company choosing to split R&D into separate labs, as a way to try to look for multiple drug candidates for a specific cure. The factors that can promote innovation can also impede it, such as too few resources (e.g diluting a lab's talent can also cause both approaches to not develop their product, due to lack of advisory roles and technical knowledge). But overall, innovation can prosper in a free market, as long as that market is free and not stagnating through price fixing, which can indirectly lead to stagnation as established market leaders have less competition and only startups with large capital investments can potentially compete, rather than innovation leading to a new product line.

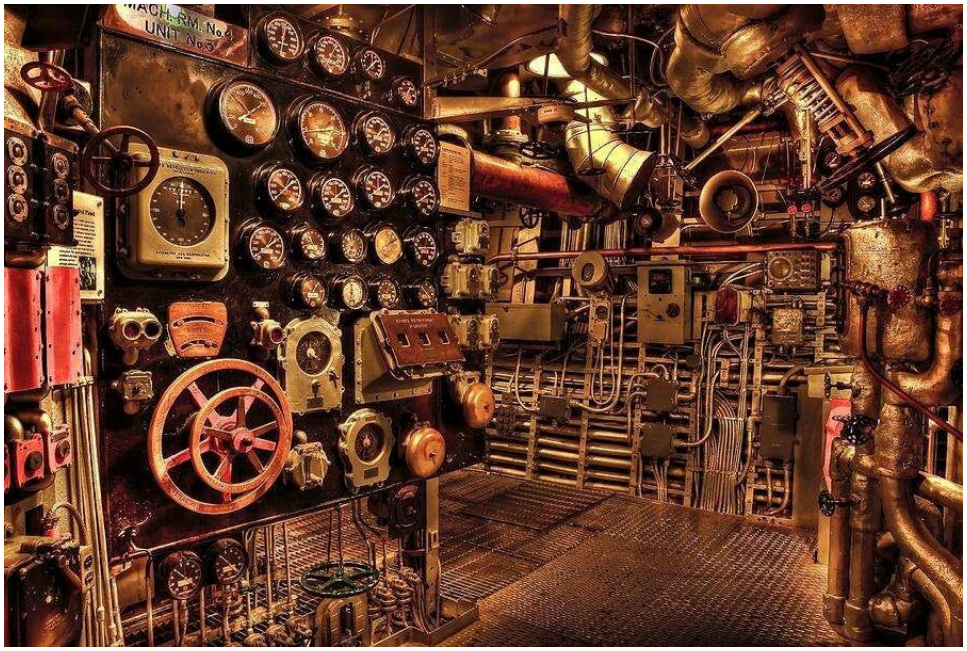
It would be wrong to blame a perceived lack of innovation squarely on companies - consumer demand can be equally a stagnating factor. Too much emphasis on faster refresh rates is due to the desire to have more fluid gaming experiences that can reflect in the high frame rate of powerful graphics cards.

I think of that South Park episode (Season 8, episode 9) “Something Wall-Mart this Way Come), where Walmart opens:

At the 0:46 mark, a DVD of Time Cop is sold for $9.98. Three copies of the *same* film (not a trilogy) is sold for $18. I found this quite hilarious, because often times more purchases of something will be made to have the impression of saving, and one could even make the same argument about transistors. With each new process node, computers are faster, but could run on far less power (Koomey’s Law). To keep the a foundry profitable, it needs to bundle more transistors to offer something more (can play 8k, newer games, stream and multitask) and to justify the cost of buying a completely new chip).

Today, many new products are not the work of auteurs (One Time Cop), but products that are basically Three Time Cops, respun, repainted and sometimes, rehabilitated.

I am drawn to engines, and kernels, are like the engines of operating systems.



According to the Oxford Learner's Dictionary, The Steam Age, or Age of Steam, is 'a phrase sometimes used to refer to the 18th and 19th centuries in Britain, when different types of steam engine were being invented and developed by people such as James Watt and George Stephenson. Steam engines were used as the power for factories, ships and trains. Some people in Britain feel sorry that the age of steam ended because they imagine that life was more pleasant and relaxed then."

It may be sound overly romantic to look back at an era that had sooty air and smog in London, and history tends to remember only the winners (although not always, especially if the losers survived and lived to tell the story), and society often times forgets the periods before it. While virtually no one needs

a more efficient steam engine, each new era - the early transistor era, for example, show how many interesting approaches to computers were taken, and, that just because one won out, didn't mean it was always the best quality (for its time) e.g VHS over Betamax.

One growing up in the late 50s, one might have thought that the Space Race was the most important thing in world, even though no one could name a household product that they immediately saw from space shuttle hardware development. By then, the Third Industrial Revolution, the Digital Revolution was well underway.

3D Printing is one of the technologies that has been called "The 4th Industrial Revolution" One of the fundamental shifts in economic balance that 3D printing allows is access to the means of production- one can print replacement parts for many products. Many more supply chains of course, are needed for manufacturing than just a 3D printer, but it certainly makes the digital age more useful in its capability to locally produce physical objects, rather than digital content (which is no small thing, of course).

To rewind a bit, I just found a nice summary of the first three:

"First Industrial Revolution

The First Industrial Revolution was marked by a transition from hand production methods to machines through the use of steam power and water power. The implementation of new technologies took a long time, so the period which this refers to was between 1760 and 1820, or 1840 in Europe and the United States. Its effects had consequences on textile manufacturing, which was first to adopt such changes, as well as iron industry, agriculture, and mining although it also had societal effects with an ever stronger middle class.[15]

Second Industrial Revolution

The Second Industrial Revolution, also known as the Technological Revolution, is the period between 1871 and 1914 that resulted from installations of extensive railroad and telegraph networks, which allowed for faster transfer of people and ideas, as well as electricity. Increasing electrification allowed for factories to develop the modern production line. It was a period of great economic growth, with an increase in productivity, which also caused a surge in unemployment since many factory workers were replaced by machines.[16]

Third Industrial Revolution

The Third Industrial Revolution, also known as the Digital Revolution, occurred in the late 20th century, after the end of the two world wars, resulting from a slowdown of industrialization and technological advancement compared to previous periods. The production of the Z1 computer, which used binary floating-point numbers and Boolean logic, a decade later, was the beginning of more advanced digital developments. The next significant development in communication technologies was the supercomputer, with extensive use of computer and communication technologies in the production process; machinery began to abrogate the need for human power.[17]"

Fourth Industrial Revolution

In essence, the Fourth Industrial Revolution is the trend towards automation and data exchange in manufacturing technologies and processes which include cyber-physical systems (CPS), IoT, industrial internet of things,[18] cloud computing,[19][20][21][22] cognitive computing, and artificial intelligence.[22][23]

The machines cannot replace the deep expertise but they tend to be more efficient than humans in performing repetitive functions, and the combination of machine learning and computational power allows machines to carry out highly complicated tasks.[24]

The Fourth Industrial Revolution (4IR) has been defined as technological developments in cyber-physical systems such as high capacity connectivity; new human-machine interaction modes such as touch interfaces and virtual reality systems; and improvements in transferring digital instructions to the physical world including robotics and 3D printing (additive manufacturing); the Internet of Things (IoT); "big data" and cloud computing; artificial intelligence-based systems; improvements to and uptake of Off-Grid / Stand-Alone Renewable Energy Systems: solar, wind, wave, hydroelectric and the electric batteries (lithium-ion renewable energy storage systems (ESS) and EV).

The Fourth Industrial Revolution marks the beginning of the imagination age.[25]

https://nextconf.eu/2019/06/why-imagination-and-creativity-are-primary-value-creators/

Conclusion

We are living in an age where artists, thinkers, engineers are becoming the leading value creators. While the tools to create new products (content,

tangible goods) are becoming more accessible, the driving force for them will still be imagination. AI does not exactly count. AI may attempt to write all the works of Shakespeare, and lead to a statistical anomaly of sentence fragment from the bard, as the infinite monkey theorem suggests. But why would anyone want to count on a machine to create new works of art, when there is no shortage of real humans that can offer something a little more genuine? Augmented reality will certainly “enhance” ways of life, especially those that need assistive technology. But the auteur needs no AI or augmented technologies to be imaginative. The imagination is the irreducible kernel of the brain. In that way the Fourth Industrial Revolution, like the first, will be powered by the Engines of the Mind.