

# Tech Mirages, The Worship of Innovation, The Open Office and Creative Destruction: The End of Value

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## Abstract

Claims that an open office plan is the most efficient and can promote the greatest amount of innovation and creativity over all other designs of workspaces has become common place. An examination of the basis of this claim finds little objective or empirical evidence to support it. Most innovations and inventions over the past 2000 years have been reported by single individuals working alone. The modern laboratory is often seen as the evolution of the medieval artist/chemist's workshop as is the modern factory. The link here is spurious as the modernity of the workplace replaces the innovator's presence with the supervisor or overseer. It is tied to the transformation in values that promote mass participation in virtual media but sacrifices real community and stable incomes. The ideology of the tech culture dominates and forms the nature of work and expectations of career and achievement. The way people live, establish living and working spaces is defined by this culture.

**Keywords:** Open office; Work place organization; Productivity; Group size; Dunbar's number

## Introduction

Gillian Tett's new book, *The Silo Effect*, an extract of which appears in the *Financial Times* (22/23 August 2015, "Go mingle, have fun") examines the culture of Facebook [1]. As one would expect of an anthropologist, Dr. Tett interviews and observes the denizens of Facebook's hacker ideology. The idea that groups of workers who interact on a routine are more efficient at producing innovations is a current narrative that has reached mythic proportions. A number of books have appeared purporting to justify the claims for open work places and an interactive workforce, e.g. Michael Stallard's *Connection Culture* [2]. But quantifying the output of an open office as opposed to the traditional cube or the lone researcher in the basement laboratory is quite another thing as we find in Nikil Saval's comprehensive attempt at defining the evolution of the workplace [3] (*Cubed: A Secret History of the Workplace*).

Beyond the specific nature of work we also need to consider the imagined communities and new forms of kinship that information work is producing, as Appadurai [4] has addressed in a number of recent works. These changes in perception of reality he has called *ethnoscapes*, *technoscapes*, *finance-scapes* and *ideoscapes*. These conceptions of life produce variations of satisfactory realities in much the same way that Dilthey [5] described a century ago and the ethnographies of Anthropology gave rise to imaginative worlds outside of European familiarity. If the rituals of modernity, as Appadurai argues, create locality and kinship anywhere, then the sense of belonging that has typified community for millenia may not be compared with the nature of being human before the information age. The secret of the individual to Dilthey, was revealed in the process of social interaction, what is described as social interaction and intimacy, yet the authenticity of the personality today is more an expression of the means of technology than the sum of familiar interactions that made up face to face meetings in the past.

While Tett argues that Facebook has found "silos" of groups of workers to be bad for creativity but necessary for functionality (yet as Google has just accomplished, organizational segmentation of a corporation may also be a first step to divestment of units in a future sell off), we find a terror of size that has grasped onto the "Dunbar number" as an optimal unit maximum number of employees. This is remarkable as Dunbar [6] has yet to explain how this number (140) is related to his claim that it has an evolutionary relationship with our big brain. This is of interest since the number of members of a typical human group did not reach 140 until about 10,000 years ago [7] yet our genus had reached a brain twice the size of any other primate by 1 million years ago! [8]. It continued to increase until about 50,000 years ago and has been slightly decreasing since. One would expect logically that as human society increased in numbers so would the brain, but the opposite has been the case.

## Background

So what is the data on the open office? Is it a fashion fetish or a route to increased productivity? Anthonia Akitunde in a March 2014 article [9], "The open office backlash," has questioned the wisdom of this mode of office design, and the idea of mass involvement, as a noisy and confused environment. Isaacson's [10] biography of Steve Jobs focuses on "Jobs's intensity was also evident in his ability to focus." Certainly difficult to do in a noisy office, but Jobs and Wosniak [11] were not creating Apple in an open designed office. Sweeping reviews of creativity like Williams [12] focus on men (to the exclusion of women) and not as much on design or collaboration. Cipolla's [13] discussion of the innovations that led to the mechanical clock certainly finds the work of the individual at the apex of advancement. This is supported by Ezioni's survey of studies demonstrating the often superior and more efficient decision making of individuals over groups [14]. Maria Konnikova, in a January 2014 article in the *New Yorker* [15], documents how this plan type, originating in a 1950 design in Germany, creates distraction and cites work by organizational psychologist Matthew Davis [16] who surveyed over 100 studies of

open plan workplaces and found no association with improvement of productivity and instead the opposite. Another researcher (Perham, et al., 2013) found noise distractions significant in open plan offices [17].

Responding to Konnikova's article, Hosey [18] produces anecdotal evidence that companies can save on the costs of space by eliminating dedicated offices, desks, and walls. Here the benefit is not productivity in ideas or inventions, but in company savings. It is not the future income from new innovations, but the present costs of the drudge workers in offices that counts. In fact, most responses to questions about the detrimental effects of open office design on creativity and productivity focus on savings in operation costs. It seems as if companies are not concerned with creativity and that the image of open plan as innovative has nothing to do with the reality.

Robert Gordon [19] who has studied innovation over the past two centuries notes that it is related to a variety of factors, education, clear agendas, research and development investments and when there have been depressions innovation falls. He charts innovations from computers to handheld devices and finds that productivity has not followed since the 1970s due to the way these products have changed people lives and affected the nature of jobs and work [20]. This lack of productivity is often argued to be there but just not measured. A study by McKinsey Global Institute [21], however, found that measurement was not the likely problem, but a lack of application and integration of technology in productive ends. I see also an association between the drop in income and wages beginning in the 1970s and the leveling or drop in productivity. In this regard it is interesting that one of the chief proponents of the new "sharing economy," Arun Sundararajan (2016) argues that the new way of working will look like the self-employment of late Middle Ages, cottage industry, so instead of moving into new forms we will have an "ancient future" of past forms of oppression. Cottage industry was characterized by marginal incomes often by underemployed rural and semi-rural populations [22].

But clearly some of the propaganda about new "tech" firms is rather trapped in contemporary dogma, as in the "disruptive idea," when examined in detail we find that there is little that is truly due to technology. When we look, for example, at Uber over radio cabs the only advantage is that Uber is not burdened with the cost of upkeep of cabs, the drivers have to supply the vehicle. On this note, one wonders Dr. Tett's theoretical approach since she studied the financial industry that produced the "disruptive technology" of derivatives [23] and yet that innovation did cause a major disruption of the economy but perhaps not in a positive way. Unless the destruction of billions of dollars in assets in peoples' retirement accounts and loss of millions of jobs and thousands of companies and banks is the kind of "disruption" and "destruction" they had in mind.

What we have to keep before us is the image of the dot com boom where the ideas of young men in their twenties with skate boards were seen as genius instead of the fruit of inexperience and ignorance. The essential fact we must remind ourselves of is that most of what the "tech giants" like Facebook and Twitter produce is advertising revenue and once a new fad comes about they may very well go the way of many of the dot com boomers. A sad but noisy tale of woe that I am sure will be recorded on Youtube.

## Open Office, Creativity and Bureaucracy

David Graeber [24] has recently written on the destructive role of bureaucracies that leaves one confused concerning what he is criticizing. He begins his discussion without a definition of what is a

bureaucracy and then seems to be focused on state systems of management, but slips back and forth between private examples. All management in his estimation appears to be bureaucratic and self-serving. To someone who has done dozens of studies of business and government organizations, his argument is rather naive at best. He asserts that bureaucracies exist to allow one to engage in interactions without having to deal with people directly but then describes transactions with a cashier or librarian that are no different than those one would have with a small businessperson like a shopkeeper or even a ritual exchange as in the Melanesian Kula.

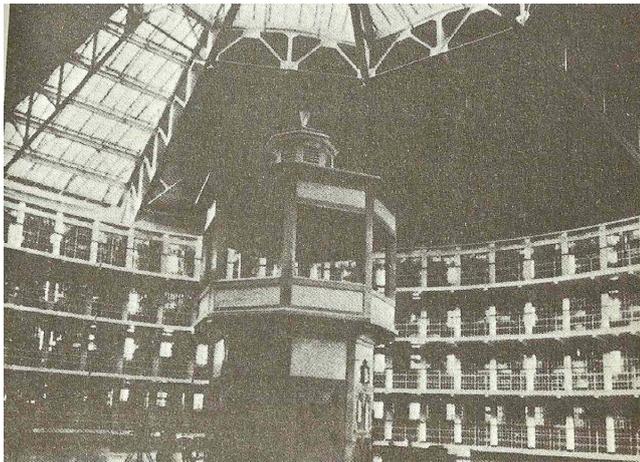
Most absurd is his thesis about the role of the German post office in creating the terrors of the 20th century. The central idea here being the form of efficiency delivered by the system, yet such claims were made by different authors for things as disparate as the machine [25] prisons [26] capitalism (Marx) and industrialism [27]. Still, the massacres of Native Americans, especially the organized concentration camps of the Amazon cacao and rubber boom of the 16th and 17th centuries certainly owed nothing to the German post office of the 19th century.

Graeber's claim that the post office is derived from military communications is overstated, not just in his 18th century examples, but in the need for communication in commerce as even his reference to Herodotus supports. He argues that the German Post office was a government creation and then admits it was created by the Thurn and Taxis family entrepreneurs and the Prussian government bought them out in 1867. But it is clearly wrong for him to argue that the German post office was "one of the first attempts to apply top-down, military forms of organization to the public good." This depends on what is a public good. Were Roman roads a public good, was the Inquisition a public good by ridding society of the confusion of heretics? As Rostovtzeff shows in his *The Social and Economic History of the Roman Empire* (1926), the government provided food transportation and distribution over the empire, certainly a "public good." But then, the Pony Express was not a government program created by a bureaucracy either, though Graeber seems to believe so. The Pony Express was a mail-delivery system of the Leavenworth and Pike's Peak Express Company of 1859, which in 1860 became the Central Overland California and Pikes Peak Express Company. This firm was founded by William H. Russell, Alexander Majors, and William B. Waddell all of whom were notable in the freighting business. Sometimes, as in Prof. Graeber's case, overarching theories get lost in the detail. What is of interest in Graeber's discussion is allusions to order and here we find Foucault's insights about the prison and the Panopticon so valuable, for it was this overarching view of the prison and factory that was a defining principle of modernity. It ended the cottage and workshop manufactures and made all behavior subject to the order of supervision which is surely the model of the open plan office (Figure 1).

## Profits, the Dotcom Boom and Social Media Firms

The power of the technology giants to do harm to the commons is illustrated by their control of ad insert in the internet. Robert Cookson [28] tells how tech firms have been able to stop firms who developed ad blocking technology from employing it. This would be like cell phone companies being able to stop the laws passed by congress to allow people to be put on "do not call lists." It is also like the situation in Grenoble France where the city will ban ads on streets and replace them with trees, or Los Angeles, California where the City Council will ban ads for alcohol on city buses and property. In both cases, the internet and streets, it is the general public that has paid for the

infrastructure, and it seems it should be the citizens who have the say in how ads can clutter up that commons. Citizens should be able to traverse the internet without seeing ads if they desire, it is not the tech giants that provided the internet, yet they act as if they own it. Yet creating the Panopticon in prisons is like creating the open office and the NSA overview of all calls citizens make. We have entered a time of complete surveillance.



**Figure 1:** The Panopticon where every prison cell can be seen at once.

## Investing, Profits and Ownership

Richard Waters and Stephen Foley's recent articles [29-31], describe clearly the process by which investors have manipulated the value creation system regarding the idea of the firm and the mechanics of finance. The central problem is the creation of value and its manipulation, thus value equals wealth via the production of an entity that appears to be a potential means to business through the market, yet the creation of these tech entities takes on the aspect of promotion of magical irrationalism that plagued the subprime housing market after 2000 [23,32]. Valuations of tech companies today, like those in the Dotcom run up in the late 1990s, are products of professionals whose expertise gives belief to the value ( \$50bn for Uber which is not profitable, like Chemdex.com in the 1990s) is like the appraisals of properties in the 2000s that were not realistic but drove the magical thinking of the boom. Hook [33] has listed the contradictions and conflicts of interest in the interactions of financial advisors, promoters in the media and underwriters. "Projections" are the means to this end today (see for Twitter from \$40 bn in 2013 to some \$10 bn in 2016 for example).

The upshot is that people can set up a company and hype potential earnings, be able to attract investors to the tune of hundreds of millions of dollars and those pledges of invested dollars can be used to gain more loans and leverage and maybe also go to an IPO all without any solid profits. The idea, also, that needs to be considered is that while a company like Uber might destroy or weaken the profits of a traditional industry like taxis that is not disruptive technology. The ability to achieve that was due to Uber and Airbnb being able to sneak in under regulation (Uber now has to pay drivers as employees and a new court decision may require them to be responsible for accidents of drivers as Airbnb was able to avoid hotel taxes, but in places like San

Francisco, they now must do this). While Uber may disappear tomorrow due to this loss of advantage, the use of cell phones by taxi companies will likely to continue, but it is not a qualitative difference from taxis using radios, no more than the delivery of groceries by computer was a qualitative innovation over food stores offering food deliveries using the phone in the 1950s. It is largely a novelty. The innovation is the ability to convince people that it is disruptive, new and profitable.

Waters [29-31] points out that between 1998 and 2000 \$175 bn in venture capital was wasted yet the process of funding a startup, carrying it through the hype created by seasoned venture capitalists like Marc Andreessen, to an IPO where they make a killing in selling stock, is all that matters. If other investors buy an IPO of a company that has no profits but only the glamour of tech (like pension funds) and lose money when the stock flattens or the company goes belly up, well that is business. Waters has described the way these startup "unicorns" have come to dominate the narrative of the 21st century investor. Valuations are made within a limited community, but it really is a new form of pyramid scheme.

A "steroid era" of investing has arrived where a reality check is less possible due to the way information is withheld or manufactured [33]. A good example of a hyped company is Theranos [34] where a promised new technology in biological testing was fabricated and hoisted onto the investment community.

## Savings Debt and Normality

In a prescient paper published before the collapse in 2000, J. Bradford DeLong ("The triumph of monetarism" 1999) summarized the problem of monetary policy. Given the dilemma of our current economic situation (recovery, recession, etc.), it is interesting to revisit his comments. Sam Fleming [35] addresses concerns over the poor start up density participation rate and we find investment (CAPEX) unresponsive while debt is rising along with M&A and bonds, while there is little change in wages. This is reflected in DeLong's assessment where he states, "The proposition that the most policy can aim for is stabilization rather than gap-closing was the principal message of Friedman (1968)." Thus Friedman would be happy to see that his observation plagues us today, while central banks have been able to stabilize the world economy by producing vast amounts of liquidity, this has not created an "out" and "growth" has only been financial and has left unaffected the gap in productivity and consumption.

Mr. Jason Thomas' (Letters, Financial Times, 20 July 2015, "Higher rates cannot possibly be a solution to too much savings") response to Scott Miner's article (FT Insight, July 15, 2015) making a case for interest rate normalization in the USA is correct, it is not the amount of money that cannot find investments, but the nature of that money and the attitude of the investors.

Much of the money that corporations have on hand is being borrowed at ultra-low interest rates and used to buy back stock or in M&A (see James Fontanella-Khan and Robin Wigglesworth, "US deal making smashes records set in dot com and debt booms," Financial Times June 2nd 2015). Debt issuance has been rising since records began to be broken in 2012 (Vivianne Rodrigues and Stephen Foley and Michael Stothard, "Corporates rush to issue \$21 bn debt, Financial Times 9/11/12). While loans and investments are being made, the quality is deteriorating as in the case of reinsurance (Alistair Gray, "Catastrophe deal threaten reinsurance sector 'collapse'" Financial

Times April 29, 2015), yet treasury debt is over \$12 tn, 3 times of what it was in 2007.

In reading Martin Wolf's warnings ("An economic future that may never brighten" *Financial Times* April 15th 2015) on debt and productivity for predictions on the future, he does not emphasize that the debt imbalance was due to little domestic investment in the USA and at the same time a tremendous increase in debt to China, and other "Brics." In 1992 Van Doorn Ooms, (then senior vice president and director of research of the Committee for Economic Development in Washington, D.C.) published an article in *Science* ("Budget Priorities of the Nation" 11 December v. 258, pp. 1742-7) that argued fiscal policy was encouraging short-term private investments, and low national saving. This was in the midst of the saving and loan crisis (1986-1995). He argued that saving and investments needed to be directed to domestic infrastructure and real business priorities. That would produce future revenue. This failed and one can see that the cycle of speculation and cheap money as a means of "weathering" busts is nothing more than a prescription for continued public bailouts of a banking industry and corporate culture that is hooked on seeing debt as income and the government as a constant savior. As Wolf notes the future is not bright and yet our creativity to solve problems, as in Greece and Puerto Rico now demonstrate, is bankrupt.

### Blindness of Ideology

What we are left with is a mirage, both one produced by advertising for tech CEOs and for venture capital investors to hype the image of innovation and creativity where people can invest but no profits be produced, where they can work and be under constant supervision being called "creativity," and be listened to on their phones and the internet to be in constant stimulation as B.F. Skinner predicted for a future without privacy. It is not 1984 we live in but a mirage of one that has no real future but a screen of enjoyment reproducing what once was satisfaction in the process of a virtual reality.

Mr. Henry Paulson addresses China's recent stock market "correction" and the resulting government intervention (*Financial Times* 22 July 2015, "Let China's markets speak truth to power") with a remarkable lack of self-reflection. He lists a number of problems with China's market system under the Communist Party's guidelines and yet he does not realize that his criticisms are assumptions.

He begins by noting that all equity markets are prone to boom and bust cycles but that problems arise when capital markets are underdeveloped. One wonders if he does not consider the Savings and Loan crisis of the late 1980s and early 1990s a problem, or the dot com crash of the late 1990s or the financial meltdown of 2008? He then makes the remarkable statement that the Chinese are protecting investors and that doing so is not the "best way to create a modern capital market." Does he suggest that the market crashes of the 19th and 20th centuries, including 1907, 1929 and 2008 did not create a "modern" capital market or does he mean the process is ongoing?

He assumes that the Chinese "closed" financial system misallocates and misprices capital. But then he argues that "If China is to have a well-functioning and stable capital market - which can also help protect investors..." thus suggesting that intervention always creates dysfunctional markets and a lack of intervention results in "stable markets." Does he forget his substantial and unprecedented interventions as Treasury Secretary or those of Alan Greenspan, Bernanke and now Yellen? He also argues paternalistically that the

Chinese need more foreign talent to serve their investors, as if western talent was immune to booms and busts in their experience and advice.

He seems confused concerning the need to protect investors, as he states, "Beijing can further protect investors by establishing a well enforced regulatory regime designed to minimize accounting fraud and market manipulation." One wonders why Paulson feels it is the role of government to protect investors, but also where does he expect them to look to develop such a regulatory regime, does he forget the Enron scandal, the demolition of Glass-Steagell and the Worldcom and more recent Libor, London Whale, and other scandals? He also recommends "transparent accounting and disclosure standards" but must have forgotten the Arthur Anderson and Lehman accounting scandals?

Chastising the Chinese by stating they should be "letting the market be the decisive factor" in July of 2015 seems like telling someone not to yell fire while standing in a burned out theater. Perhaps it is better for the Chinese to learn from our mistakes and illusions and for Mr. Paulson to reflect more on the current remains of his work that we are all living with and might have turned out better had he taken his own advice in 2008 and let "the market" have been the decisive factor then.

### The Real vs. the Ideology

The "Explainer" column in the *Financial Times* (FT "The key factors behind China's investment rout") produces a chart that purports to show how drastic the fall in investment growth in China has been. The author attempts to explain the recent stock market drop in China with the quality of investments in the last few years. This is certainly a useful task and parallels explanations of the US crash in 2008. The author picks FAI readings in China as a central metric hiding what they believe are inflated data. This also finds echo in studies of western audits of investments and earnings that were manipulated as in derivatives, or the tranches of loans in the subprime markets by a number of US banks that have paid significant fines, as well as balance sheet fraud as in Lehman Bros and the Arthur Anderson audit fraud.

However, if one compares the accompanying chart for China with a chart for world GFCF we find they are almost the same across the period covered. From 2012 to 2015 is missing from the World Bank chart I have provided, yet published data would indicate a similar slope. China may be not so bad as the article asserts, or the world is in a parallel decline.

It is not strange that we can find the banks that were responsible for the credit crisis complaining about regulation. But now that they are making a profit, as Lex notes (*Financial Times* 1 August 2015, "Lloyds banking group: horse play") one wonders why governments in both the US and UK are so squeamish about the taxpaying public receiving a share of the profits (Figure 2).

### Conclusions

The banks have been shifting debt onto the government and as Dr. Richard Koo has argued we are in a "balance sheet recession" where the private sector is saving too much instead of investing. Banks wrote off or shifted bad debt to the government under then Secretaries Paulson and Geitner and Fed Chairman Bernanke. They also received billions of dollars in government loans and credit in various forms of "bail out" funds and support.

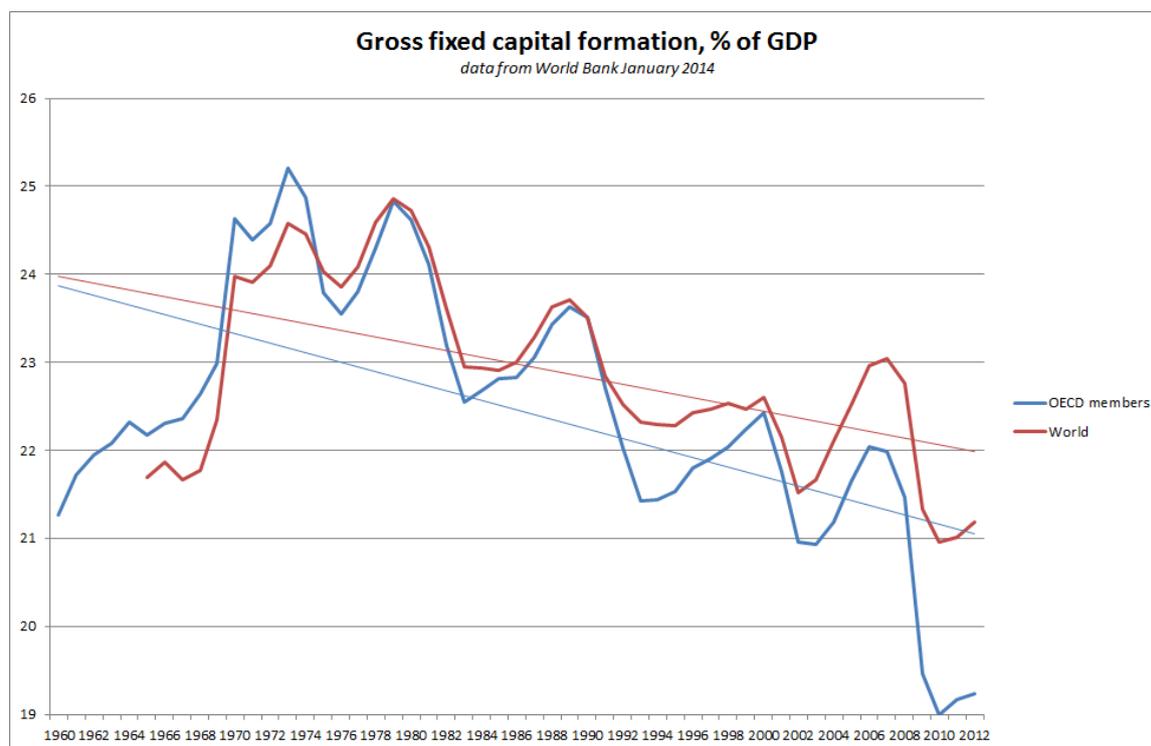


Figure 2: Gross fixed capital formation as a percent of GDP 1960-2012.

The recession was not due to household debt as Mian and Sufi demonstrate in their recent book, *House of Debt*; rather it was the result of financial ignorance, opportunity and fraud. Banks made loans, sold them for tranches of debt and the loans were insured by the GSAs, Freddie Mac and Fannie Mae. As they argue banks had become so imprudent that: They point to academic research by Yuliya Demyanyk and Otto Van Hemert showing the profound consequences: By 2006, loans had become so disconnected from prudent business practices that “an unusually large fraction of subprime mortgages originated in 2006 and 2007 were delinquent or in foreclosure only months later.”

It seems that bank profits should be taxed on the basis of receipt of government support as any borrower would be in a crisis who had caused their own (and others') problems. For the UK government to be selling Lloyds stock without gaining a substantial return is a scandal. The US has done with same with a number of entities who received support, like AIG. This idea is also promoted by Martin Wolf in the *Financial Times* (2015) as he has noted that the corporate saving glut is also a significant factor in the current secular stagnation and that increased tax on profits not employed in research and development would be a powerful motivator to break the current situation. But the lack of productivity growth is related to the manipulation of capital in the formation of “unicorns” and the IPOs that soak up money (as well as mergers and acquisitions) and do not produce profits or viable companies. Though some loss of productivity may be lost due to worker resistance to employment conditions here described and social media, a central product of tech culture may be one major means of this loss [36,37].

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