Enough is Enough: Humans Were Not Meant to be Efficient [1]

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If I were to say the title "Cheaper by the Dozen", most people will likely think of the 2003 movie featuring Steve Martin: a comedy about the chaos of a family with twelve children. Few people may know, though, that the story is (very!) loosely based on a 1948 book about a real family of twelve children and their parents, Frank and Lillian Gilbreth. Far from the slapstick of the 2003 film1, it was a warm hearted memoir of an interesting and sometimes eccentric family, with genuine humorous anecdotes.

My reason for mentioning Frank Gilbreth, is that he had an interesting profession and was a prominent figure in it: he worked in the studies of time and motion, and how it relates to human work. Essentially, he studied how humans could work more efficiently. Gilbreth would watch labourers such as builders and factory workers perform their work, study their methods, analyse their environment, and come up with ways of improving efficiency. This would allow more products to be produced in the same amount of time; ideally without incurring more effort on the part of the labourer. For example, in a film about Gilbreth's work [2], by improving the work style of a particular set of bricklayers, the number of motions required to lay one brick was reduced to less that a third originally, leading to to the number of bricks which could be laid in an hour being doubled2.

I must to confess at being a fan of efficiency. Whether it is making and packing lunch in the mornings in an optimal way3, hitting the perfect line in a racing simulator, or automating repetitive tasks at work with scripts. I also must confess at getting endlessly frustrated for being cut off on my drive by a red traffic light without there being any traffic at all coming from the sides: that is nothing but wasted time, wasted fuel from the idling engine, and wasted wear-and-tear on the engine and brakes.

Efficiency is great for many reasons. At my work we employ software engineers: people who graduated with a degree in computer science or engineering (or equivalent), and who passed a tricky interview process. These are intelligent and talented people. It is an absolute shame to waste their time doing repetitive and mindless tasks which take their focus away from solving abstract problems and producing high quality software. These could often be automated away, to everyone's benefit. Efficiency is also great in manufacturing and process engineering: if a cure is developed for a deadly disease next month, that should ideally be produced and distributed *worldwide* before the end of the year to save as many lives as possible. One hundred years ago this was not possible; two hundred years ago, barely imaginable. And, of course, what a gift it is to be able to travel to the other side of the world in a matter of hours instead of weeks, or to be able to communicate with a loved one on the other side of the country as if they were in the room next to you. These are all positive outcomes of systems which were developed over decades in a quest to cut down on (time and energy) waste and to be able to do things quicker and with less effort4.

But there is also be a dark side to efficiency. In the first half of the twentieth century, amazing new devices were invented: automobiles, refrigerators, deep freezers, vacuum cleaners, electric irons, washing machines, dishwashers, microwaves; these were items themselves of efficiency, and freed up people from having to unnecessarily spend time on travel and household chores. It was an exciting time indeed: *everyone in the world* needed these things, and improvements in technology led to better versions of these being made, necessitating the replacement of the old models. But in a brave new age of efficiency, something incredible happened: at some point, everyone in the world (who could afford them), had these things. And without having to resort to gimmickry, one can only improve upon a deep freezer and vacuum cleaner so much. With the market saturated, sales dropped. But factories were still producing, workers still needed to be paid, and investors still demanded a profit. And so a dubious practice was born: intentionally designing products to fail after some time, forcing it to be replaced (or repaired, but because of economy of scale, this is not always cheaper than replacing something completely). Indeed, I recall a friend once showing me a device for which he invested in the patent. It was really clever and I was excited about this new invention; that is, until I found out that it was designed (choice of particular plastics and shape) to fail after approximately a certain number of uses. And so something which easily could have been a permanent solution for a buyer became a consumable item; all for the pursuit of profits.

And what not to say about how efficient we have become at making machines of war. Or the grey area of public surveillance [3], which can catch genuine criminals, but also far more easily suppress dissidents.

There are also other ways in which efficiency can be detrimental. At the beginning of the twenty first century, we are bombarded by news, data and information. There are indications that this leads to increased stress and anxiety. At a time newspapers were published only twice a day; now we are overwhelmed with a constant stream of doom and gloom. Hyped up and tantalising product launches instil us with needs which we never knew we had, and we work harder and longer to afford the devices and services the world did not know a mere decade ago. And we are so deeply steeped in entertainment and amusement that the basic need for sleep [4] has become loathsome and a liability.

And so while I love efficiency and the benefits which it can bring, we—as humankind—need to be careful to not become the servants of efficiency. Efficiency should, of course, stand in the service of humankind. This is a classic case where we need to ask ourselves what our motivations are for doing something. Plastic packaging is terribly convenient and helps with transporting goods, making the process more efficient; but I am sure we have all (or most of us, at least) have at least at one point felt that the sheer amount of packing we encounter is excessive. And the environmental impact—from production to disposal of these transient things—is not negligible, even though the end result is a "free" plastic fork.

This article has not been about the further future automation with robots [5] and the potential dangers of it to the workforce [6][5]. Instead, it is intended to draw attention more broadly to how people are affected by the question for more, faster and cheaper; whether in the past, present or future.

In Genesis 1, God designed us to subdue the earth. We are by nature workers and labourers. That is good, and even our purpose. But we are not in service of our work; our work is all about the betterment of each other, and the glory of God. If our work is contrary to either of these things, then we are going against our ultimate created purpose [7]. Consequences which follow are adverse effects on health, dehumanisation and unhappiness. Our work should first and foremost be about other people: not profit and convenience.

I offer no easy solutions, because there are none. Instead, we—as individuals—need to think about the consequences of what we do, and how it impacts other people. This is not a commandment from the Bible; it is a consequence of understanding God's will, love, and compassion for all of His creation, and how we were given stewardship of it. Like the parable of the tenants (Matthew 21:33–46; Mark 12:1–12), we will be expected to be good stewards and give account for what we have done with what has been entrusted to us[6].

- 1. There was also a 1950 film based more closely on the book, also called "Cheaper by the Dozen".
- 2. Not all motions require the same effort and amount of energy, of course, which is the reason why the output was not tripled: smaller, more wasteful motions were eliminated or improved upon.
- 3. Which is trickier than it sounds when still trying to wake up.
- 4. I would be remiss to neglect the following anecdote. A friend once told me that he had to help his (German) grandfather move into a retirement home. When he and his siblings arrived on the day of the move, they found that his grandfather had made a scale model of the house and the furniture, and used them to find the most optimal ways of moving the large pieces of furniture. As my friends carried the furniture, their grandfather directed him. My friend said that it was the easiest and quickest move which he ever did! How incredible is that!
- 5. While the future is unknowable and there will definitely be challenges which need to be overcome, I personally believe that the economy will self-correct to some degree: it does not help if you can manufacture cheaper and more efficiently if only a small section of the population can afford to buy your product or service. Creativity also lies beyond the scope of contemporary robots and artificial intelligence. And so while an AI may be able to compose music, it can only do so by looking at the examples of already existing music. Asking AI to produce something which is truly new (such as a new genre of music) is unlikely to produce something which is aesthetically pleasing. In a significant sense, AI can only "monkey see, monkey do". Lastly, the authors of these videos also dismiss substance dualism *a priori*. Finally, looking at a list of 38 obsolete jobs [8] (although some of these are not even completely obsolete), many of them were good to have been made obsolete (because of health or ethical issues). Others adapted (like egglers, who diversified and evolved their trade), and for others, one would have to wonder whether such jobs would pay enough for a decent living (and what it would inflate other prices), or how much satisfaction and fulfilment it would provide the person doing the job.
- 6. I understand that the purpose of the parable was more specifically aimed at corrupt and erring spiritual leaders of Israel, but the analogy holds at least in part for this generalisation.

Categories:

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