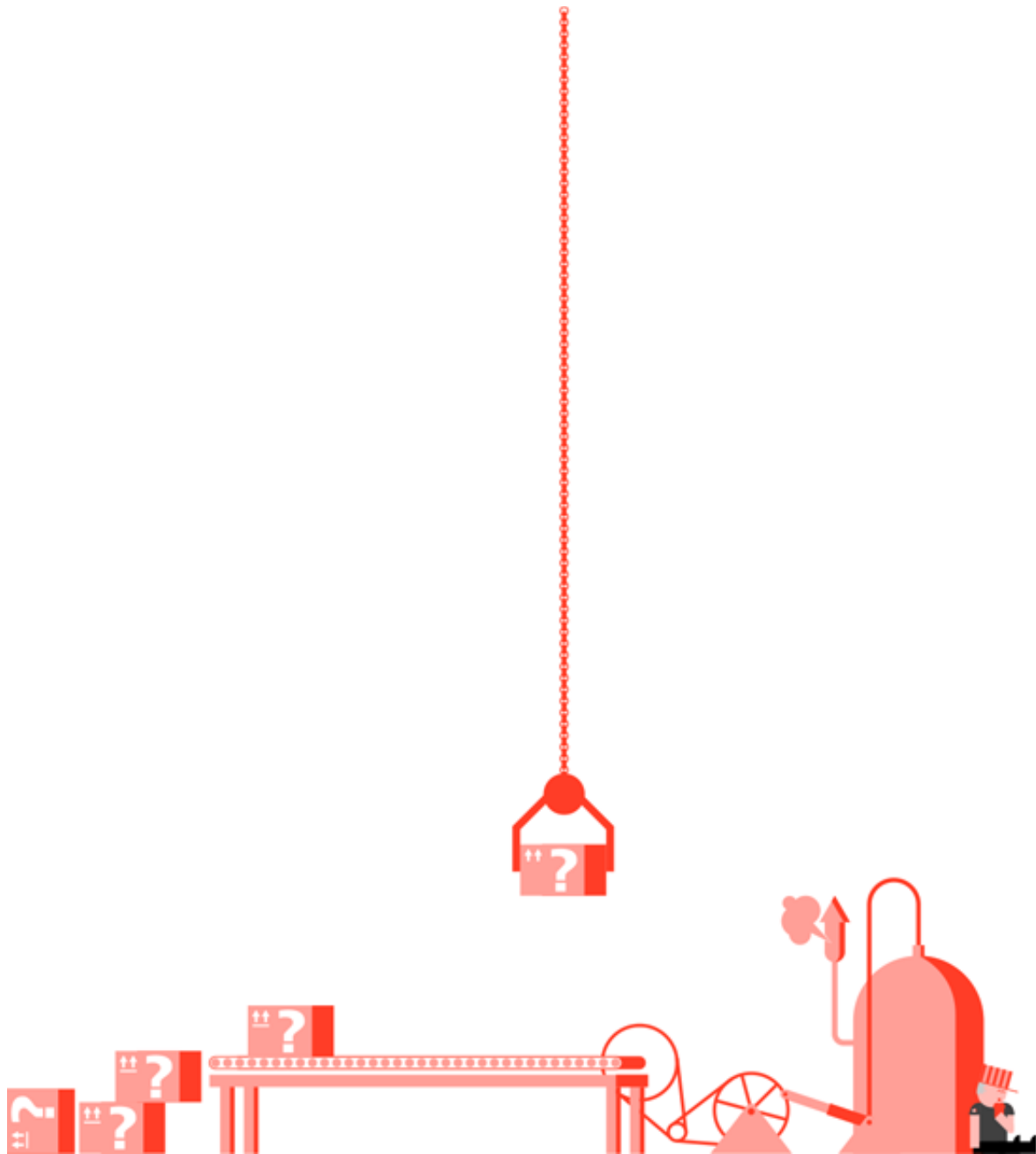# CHAPTER 1 — The Phenomenon

1.1 HISTORY OF CHANGE

Throughout time we've used different ways to deal with change. Someone in the nineteenth century for instance would probably have responded to change very differently from the way you do. Back then, traditions, religion, national identities and simply distance and time were constraints to all that was new; changes took place slowly. Today's world is totally different, the filters used to constrain cultures from being exposed to external influences are more porous, gaining access to knowledge is easier, and the patterns of time demand that we respond almost instantaneously to the ever increasing stimuli we face. All this makes it difficult for us to realize what exactly is changing today.

In any case, whether centuries ago or today, people's aspirations are the drivers of change. The dictionary definition of aspiration is: a strong desire to have or achieve something. Moreover, our aspirations change as we accomplish change. Change is the end point of fulfilling aspirations and the starting point for building new ones. How exactly these aspirations are created in our minds and in the fibres of our society is a rich recipe with many ingredients. The geographical context and the available resources, the ideologies, the religious fundaments, basic human instincts, serendipity and so on — all these ingredients combined in various ways lead to building our aspirations and are therefore what drive us to change our world. But not everybody's aspirations have led to major change throughout history. We have seen how the impact of the aspirations of emperors, of the clergy, of aristocrats, of the educated classes and, today, of almost everybody, has changed throughout time.

Designers also have an impact on the future as they are constantly looking ahead. If you are one, you probably focus on what motivates people to adopt change. You are constantly identifying aspirations even before people become aware of them. You will be continually busy trying to foresee people's reactions to the things you design while you look at history through a design lens. Historians for instance mostly focus on the methodical narrative and research of what has happened. But you try to identify patterns from the past to understand the present and then discover an opportunity for change (and you can do this very quickly!). Actually you want to 'break' patterns to find new ways of doing things. You use history as a means to find empathy with the present and to help you delineate 'the box' you want to get out of. As a result, the vision you get about the future can help you to question and confront

the present so that your intuitive powers are intensified and your synthesizing skills enhanced. You do all this as a reflective practice that enables you to translate people's aspirations, increasing the chance for your design skills to hit an innovation spot. The main purposes of this chapter are to begin putting into practice your reflective skills and to gain an understanding of how people build aspirations that drive change. You will then be able to define your own criteria about the Meta Product phenomenon. The last part of this chapter contains a more technical, or hands-on, perspective of the phenomenon.

Let's use our design lens to look at some of the major changes that have occurred in history and reflect on the many combinations of ingredients that have led to them. Let's travel through history for the next few pages and try to focus on how human aspirations were intricately built to drive change. For instance, Francis Bacon (1561 - 1626) forecast that natural philosophy (science) could be applied to the solution of all practical problems. Bacon's aspirations were a reflection of the Age of Reason. In his view, machines would liberate mankind and they would save labour, which could then be utilized elsewhere. It was just a matter of time (and serendipity), before scientific effort and intellectual aspirations combined to produce something revolutionary. This happened in 1750, with the patenting of the steam engine. It was not just an invention but a platform of knowledge, ideas and techniques, allowing established industries and new ventures to grow exponentially, affecting people's lives all over the world. In fact, a new idea of progress was born: machines would produce a better society. In fact the aspirations behind the industrial revolution were humanitarian. How wonderful it sounded to be free from all the labour we don't want to carry out… let machines do it!

LET MACHINES DO IT

This aspiration caused people to look for ways to make the industrial society flourish. One way was by finding faster, easier and standardized production processes. In the heat of pursuing progress at a fast pace, an abundance of products and industrial processes appeared almost everywhere. Industries strove for unlimited economic growth and improvement that provided novel products to people on the one hand, and the first negative repercussions on the other hand, such as poor labour conditions. Now the new products were in the hands of the majority instead of the elites and a new industrial labour force behind these products rendered new social interactions and new ways of learning and building new aspirations.

FORD T-MODEL ASSEMBLY LINE (courtesy of Ford Motor Company)

Can you imagine the unrestrained optimism of the time? How would the world look today without the steam engine?

The mix of ingredients enabled a wider diversity of ideologies than ever before. However, with such a newly born diversity, conflicts between cultures and political geographies arose. Two world wars were sustained through technological capabilities and an old-fashioned militarism, voracious imperialism (hungry for the resources in Africa and parts of Asia) and the nationalistic ideas of the time. After the Second World War, a thriving industrial society continued to reinforce industrial capitalism, feeding the insatiable hunger of progress and the infinite growth of corporations and fast growing populations. In the aftermath of such agitations, people's aspirations for change altered radically; now they had grown aware of the individual's autonomy and the right for truth and happiness. This awareness provoked a much larger explosion of ideologies, particularly in the 1970s. Key movements rose up and flourished, led by a public demanding radical changes in politics and in the distribution of power. But the fast pace of industrial society had already inflicted drastic changes to every aspect of people's lives. Industrialization also enabled and defined relationships between countries. It made people conscious of the concept of global economies and, with this, of the relationship between industrialized countries and the so-called Third World countries (those that were not aligned to the industrialized economies). There was a growing realization of the magnitude of the snowball effects in every corner of the planet. Right at the start of the globalization movement in the 1970s, at a time when Intel introduced the microprocessor, Apollo 17 brought back 250

samples of rock and soil from the moon, Atari produced the first low-priced game console, jumbo jets doubled air passenger capacity, the first test-tube baby was born, the first network email was sent, followed by the first scanned retail barcode, Daniel Bell foresaw that it was no longer the industrial process (at least in industrialized countries) that would dictate social change, but the creation of a service economy in which the technical professionals, information and theoretical knowledge would be the source of innovation, making a self-sustaining technological growth possible. In a world in which almost every single aspect of people's lives was determined by the industrial standardization for mass production and the unlimited use of resources such as oil, Bell was one of the first to express anxiety about air and water pollution, famine, overpopulation, climate change, natural resources and other major global consequences. Back then, Bell saw how knowledge and information would become the strategic resource and the agent of change. And the computer, or any other technology, would be purely instrumental in helping us to deal with the complex interactions he saw coming. At around the same time, there were others, like Weizenbaum, who were worried about the power assigned to the computer and the side effects of the actions based on them[1]. And this was even before the introduction of the first personal computer in 1982. All this conjecture was possible because the United States had gathered all the ingredients together to allow changes to happen faster than anywhere else in the world. On the one hand, the same industrial society with its ideals of progress was politically and financially supporting the development of technologies that would help industries and governments achieve those ideals. On the other hand, in the midst of enormous material abundance, the preoccupation with self-discovery and self-accomplishment became a mass phenomenon, feminist and gay liberation movements flourished, the urge for political openness — as well as many other ingredients resulting from the influences of the industrial processes — were evolving rapidly. Almost imperceptible to the industrialized bureaucratic eye, the internet had already been in the making for a while. It was not one technician's invention but the result of collaboration by many individuals and organizations, originally looking to create ways to deal with information flows in large communication networks. It was in 1991 that the World Wide Web was first introduced to the public. And with this, we witnessed the start of a new society, perhaps one similar to Daniel Bell's vision of post-industrial society: "The post-industrial society… is a 'game between persons,' but a game between persons requires increasing amounts of coordination…"[2]. He believed then that the advances in computers and communication would make such coordination more feasible (although of course he had no idea to what extent we would need to coordinate everything today!). He wasn't far wrong, because he believed that the

crucial decisions to change are of a sociological nature rather than a technological one.

INTERNET OVERCOMES LIMITATIONS OF DISTANCE, TIME & KNOWLEDGE

The introduction of the World Wide Web heralded a new journey. How different were our aspirations now, compared to the age of the industrial society? And whose aspirations were they? One sure thing is that the industrial society's general idea of progress was not able to sustain the new aspirations that had appeared almost unnoticed, but that were growing exponentially as the internet technology advanced, and as people began to be aware of its potential. It was astonishing that anyone (and this time literally anyone) with a computer was able to overcome limitations of distance, time and knowledge to connect with people in far-off countries and in a much more enriching way than any other technology had offered before.

> Technology's greatest benefit is the empowerment of the individual. With smartphones and task-specific software we can instantly make choices about almost anything. — ANNE LISE KJAER