

Planned Obsolescence : Case of Apple & Epson

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Planned Obsolescence, which can be used interchangeably with programmed obsolescence, and can be either product obsolescence or technology obsolescence, is the intentionally producing goods and services with short economic lives and that stimulates consumers to repeat purchases in a shorter period of time. Few decades ago, there was a strong debate about its ethicality and now it is back on the radar again due to the short cycle times of products coming to the market. With little academic works written on the subject, information available was slim. Choosing information that was critical to the work was difficult, but one book called *Made to Break* by Giles Slade was influential in one's understanding of the topic.

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INTRODUCTION

Planned Obsolescence is the production of goods with uneconomically short useful lives so that customers will have to make repeat purchases. However rational customers will pay for only the present value of the future services of a product. Planned obsolescence involves a design plan that is intended to hasten existing products to become undesirable (not necessarily below that of competitive offerings) either functionally or psychologically and consequently to be replaced by new products. Many manufacturing companies since the last decade have adopted the policy of planned obsolescence in their products. Their main objective is to cut costs, increase profits and secure continuous consumption and production. When this policy is abused, however, so that customers are not getting products which can perform adequately and safely for a reasonable amount of time, the end result may prove to be more detrimental than beneficial, not only to producers and consumers but to the nation as a whole. In this age of scarce resources, energy shortages and new challenges, this paper re-examines planned obsolescence and searches for quality in today's products.

Even before the Second World War, Whiteley writes, some businesses began to embrace what one influential 1932 book termed "creative waste"—the idea that throwing things away and buying new ones could fuel a strong economy. Its authors, Roy Sheldon and Egmont Arens, identified the desire for ever-more-modern consumer goods as something unique to America, with its "enormous natural resources." In the 1930s, Whiteley writes, many families were still saving for their first refrigerator or car. But, with the

economic boom of the war years, Sheldon and Arens' arguments quickly became more relevant. Average family incomes doubled in real terms between 1939 and 1945. Soon, middle-class families had all the televisions, cars, and home appliances they wanted. In the 1930s, consumerist pioneer Sears Roebuck began introducing a new refrigerator model each year. Though they were all essentially the same machine, "visual trappings of progress desired by consumers" kept sales up. By the mid-1950s, the average length of car ownership had dropped from five years in 1934 down to just two. The problem for businesses now became continually "stimulating the urge to buy," as J. Gordon Lippincott argued in the book *Design for Business*. "Any method that can motivate the flow of merchandise to new buyers will create jobs and work for industry, and hence national prosperity," Lippincott wrote. "Our custom of trading in our automobiles every year, of having a new refrigerator, vacuum cleaner or electric iron every three or four years is economically sound."

Whiteley notes that, for a rising middle class in the 1950s, possessions—particularly *cars*—became a way to advertise a family's social position. The industry obligingly produced a range of designs in different price ranges, from Chevrolets to Cadillacs, and by noticeably changing the cars' appearance every year or two. In 1955, Harley J. Earl, who led General Motors' head of design, announced that the average length of car ownership had dropped from five years in 1934 down to just two. "When it is one year, we will have a perfect score," he said. As the '50s came to an end, a critical response emerged to planned obsolescence. In three popular books, author Vance

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Packard depicted marketers psychologically manipulating consumers into buying inferior, unnecessary products.

Consumers sometimes see planned obsolescence as a sinister plot by manufacturers to fleece them. But Philip Kotler, a marketing guru, says: “Much so-called planned obsolescence is the working of the competitive and technological forces in a free society—forces that lead to ever-improving goods and services.”

A classic case of planned obsolescence was the nylon stocking. The inevitable “laddering” of stockings made consumers buy new ones and for years discouraged manufacturers from looking for a fibre that did not ladder. The garment industry in any case is not inclined to such innovation. Fashion of any sort is, by definition, deeply committed to built-in obsolescence. Last year’s skirts, for example, are designed to be replaced by this year’s new models.

The strategy of planned obsolescence is common in the computer industry too. New software is often carefully calculated to reduce the value to consumers of the previous version. This is achieved by making programs upwardly compatible only; in other words, the new versions can read all the files of the old versions, but not the other way round. Someone holding the old version can communicate only with others using the old version. It is as if every generation of children came into the world speaking a completely different language from their parents. While they could understand their parents’ language, their parents could not understand theirs.

The production processes required for such a strategy are illustrated by Intel. This American semiconductor firm is working on the production of the next generation of PC chips before it has begun to market the last one.

A strategy of planned obsolescence can backfire. If a manufacturer produces new products to replace old ones too often, consumer resistance may set in. This has occurred at times in the computer industry when consumers have been unconvinced that a new wave of replacement products is giving sufficient extra value for switching to be worth their while.

As the life cycle of products has increased—largely because of their greater technical excellence—firms have found that they need to plan for those products’

obsolescence more carefully. Take, for instance, the example of the automobile. Its greater durability has made consumers reluctant to change their models as frequently as they used to. As the useful life of the car has been extended, manufacturers have focused on shortening its fashionable life. By adding styling and cosmetic changes to their vehicles, they have subtly attempted to make their older models look outdated, thus persuading consumers to trade them in for new ones.

Planned obsolescence is obviously not a strategy for the luxury car market. Marques such as Rolls-Royce rely on propagating the idea that they may (like antiques) one day be worth more than the price that was first paid for them; Patek Philippe advertises its watches as being something that the owner merely conserves for the next generation. At the same time as the useful life of consumer goods becomes shorter, consumers hanker after goods that endure.

Here’s the truth about the ‘planned obsolescence’ of tech.

“They don’t make ‘em like they used to,” as the idiom goes. So it would seem for the Centennial Light. An astonishing, record-setting 115 years after someone first flipped it on, this light bulb is still faintly shining in a fire station in Livermore, California. (You can see it for yourself on a **webcam that refreshes every 30 seconds.**)

For the multiple generations of us who have since swapped out more burned-out light bulbs than we can remember, the Centennial Bulb’s longevity must seem like a slap in the face. Surely, if an incandescent bulb made with 19th Century technology can last so long, why not new-fangled, 20th and even 21st Century bulbs?

The Centennial Light is often pointed to as evidence for the supposedly sinister business strategy known as planned obsolescence. Lightbulbs and various other technologies could easily last for decades, many believe, but it’s more profitable to introduce artificial lifespans so that companies get repeat sales. “That’s sort of the conspiracy theory of planned obsolescence,” says Mohanbir Sawhney, a professor of marketing at Northwestern University.

So is this conspiracy theory true? Does planned obsolescence really exist?

The answer: yes, but with caveats. Beyond the crude caricature of greedy companies wantonly fleecing their customers, the practice does have silver linings. To an extent, planned obsolescence is an inevitable consequence of sustainable businesses giving people goods they desire. In this way, planned obsolescence serves as a reflection of a ravenous, consumer culture which industries did create for their benefit, yet were hardly alone in doing so.

“Fundamentally, firms are reacting to the tastes of the consumers,” says Judith Chevalier, a professor of finance and economics at Yale University. “I think there are some avenues where [businesses] are kind of tricking the consumer, but I think there are also situations where I might put the fault on the consumer.”

An illuminating example

Sticking with light bulbs as a product, they provide amongst the most emblematic case studies of planned obsolescence. Thomas Edison invented commercially viable light bulbs circa 1880. These early, incandescent bulbs – the Centennial Light included – relied on carbon filaments rather than the tungsten that came into widespread use almost 30 years later. (Part of the reason the Centennial Light has persevered so long, scientists speculate, is because its carbon filament is eight times thicker and thus more durable than the thin, metal wires in later incandescent bulbs.)

Initially, companies installed and maintained whole electrical systems to support bulb-based lighting in the dwellings of the new technology’s rich, early adopters. Seeing as consumers were not on the hook to pay for replacement units, lighting companies therefore sought to produce light bulbs which lasted as long as possible. As the light bulb customer base grew more mass-market, the business model that supported long-life bulbs disappeared. *Greater sums of money could be reaped, companies figured, by making bulbs disposable*

The business model changed, however, as the light bulb customer base grew more mass-market. Greater sums of money could be reaped, companies figured, by making bulbs disposable and putting replacement costs onto customers. Thus was born the infamous “Phoebus cartel” in the 1920s, wherein representatives from top light bulb manufacturers worldwide, such as Germany’s Osram, the United Kingdom’s Associated

Electrical Industries, and General Electric (GE) in the United States (via a British subsidiary), colluded to artificially reduce bulbs’ lifetimes to 1,000 hours. The details of the scam emerged decades later in governmental and **journalistic investigations**.

“This cartel is the most obvious example” of planned obsolescence’s origins “because those papers have been found,” says Giles Slade, author of the book *Made to Break: Technology and Obsolescence in America*, a history of the strategy and its consequences.

The practice cropped up in all sorts of other industries, too. For instance, competition between General Motors and Ford in the fledging 1920s auto market led the former to introduce the now-familiar model year changes in its vehicles. GM had pioneered a way to entice customers to splurge on the latest, greatest car, to satisfy themselves and impress those in their social circles. “It was a model for all industry,” says Slade.

Although the term “planned obsolescence” didn’t enter common usage until the 1950s, the strategy had by then permeated consumerist societies.

Alive and well

In various forms, from subtle to unsubtle, planned obsolescence still very much exists nowadays. From so-called contrived durability, where brittle parts give out, to having repairs cost more than replacement products, to aesthetic upgrades that frame older product versions as less stylish – goods makers have no shortage of ruses to keep opening customers’ wallets. Smartphones need replacing every couple of years, as battery life fades and software updates change

For a fully modern example, consider smartphones. These handsets often get discarded after a mere couple years’ use. Screens or buttons break, batteries die, or their operating systems, apps, and so on can suddenly no longer be upgraded. Yet a solution is always near at hand: brand new handset models, pumped out every year or so, and touted as “the best ever”.

As another example of seemingly blatant planned obsolescence, Slade mentions printer cartridges. Microchips, light sensors or batteries can **disable a cartridge** well before all its ink is actually used up, forcing owners to go buy entirely new, not-at-all-cheap units. “There’s no real reason for that,” Slade says. “I don’t know why you can’t just go get a bottle of

cyan or black [ink] and, you know, squirt it into a reservoir.”

Taken this way, planned obsolescence looks wasteful. According to Cartridge World, a company that recycles printer cartridges and offers cheaper replacements, in North America alone, 350 million (not even empty) cartridges end up in landfills annually. Beyond waste, all that extra manufacturing can degrade the environment too.

Planned obsolescence still very much exists nowadays, but in different forms (Credit: Getty Images)

As the years go by, though, hallmarks of a luxury version of an item can work their way into the mass market as their production grows cheaper and customers come to expect the perks. Few would argue that the increased availability of safety devices, like air bags in cars, once only found in pricier models, has not been a net positive. So in its admittedly self-interested, halting way, the competition at the heart of planned obsolescence-influenced capitalism can work in looking out for consumer’s interests as well.

The future of obsolescence

Accordingly, though examples clearly exist to the contrary, some business academics feel that it’s a bit over the top to assume many companies sit around plotting how to precisely engineer a product to self-destruct. “If you have a market that’s kind of competitive, then the expected lifespan of the product is certainly something the firms compete over,” says Chevalier. “For a lot of products it’s not like consumers aren’t savvy enough to try to choose products that won’t [soon] be obsolete.” Indeed, there are forces that could encourage manufacturers to lengthen lifespans. In the auto market, Chevalier says “everybody thinks about and looks up how quickly does this car depreciate relative to others”. Indeed, in this arena, cars now stay on the road longer than they once did. *There are forces that could encourage manufacturers to lengthen lifespans.* “The auto industry for years has been sort of a fashion-driven business, where your car had fins and five years later, fins were out of style,” says Tullman. Yet that’s changing: he cites United States Department of Transportation **figures** showing that the average age of a passenger vehicle on the road in that country now stands at 11.4 years; in 1969, the figure was 5.1

years. With internet reviews, it’s easier than ever to find out if your intended purchase has a short lifespan – and that goes for lightbulbs as well as cars.

And as environmental consciousness of the terrible amounts of waste generated by a throwaway culture has risen, consumer goods might become less disposable. Google’s Project Ara, for instance, is developing a smartphone-like device with six slots for swapping out technologically outdated components, versus traditionally binning the entirety of an aging smartphone.

A business-minded approach to smarter recycling, reuse and repurposing has arguably made a big dent and will so in future, says Sawhney. For instance, Tesla, the electric automobile manufacturer, has plans to take back the spent batteries in its clients’ cars and repurpose them for home energy storage. The company also auto-downloads and upgrades the software in its clients’ cars as the vehicles charge overnight. Sawhney, who is a Tesla owner, says the company planned ahead for these sorts of upgrades by including “basically future-proof” sensors and hardware in the vehicle.

“Instead of selling model after model of the car to me, [Tesla] just changed the software,” Sawhney says. “So that’s an antidote to planned obsolescence in a way – it makes obsolescence obsolete.”

Apple, Epson Face French Legal Pressure over Planned Obsolescence

The Epson case — if the initial legal inquiry finds enough evidence for a trial — could lead to the first prosecution for planned obsolescence, which lawyers warn is a difficult charge to prove in court. Apple and Japanese printer maker Epson face growing legal pressure in France over alleged planned obsolescence in their products as consumer groups make use of the country’s law against the practice.

The association Stop Planned Obsolescence (Halte à l’Obsolescence Programmée in French, or HOP for short) said it had filed a complaint against Apple after the company admitted to intentionally slowing down its iPhones as they age.

“Apple has put in place a global program of planned obsolescence with a view to increasing its sales,” the association said in a statement issued. The group hailed a breakthrough in a separate case against printer

manufacturers when prosecutors opened a probe into Epson over claims that it was tricking consumers into changing ink cartridges before they were empty.”It’s very good news. For the first time in France — and, to our knowledge, in the world — judicial authorities of a country have taken up a case of planned obsolescence,” the association’s lawyer, Emile Meunier, told AFP.

Planned obsolescence is a widely criticized commercial practice in which manufacturers build in the expiry of their products so that consumers will be forced to replace them. It is decried by consumer groups as being unethical and is suspected of being particularly prevalent in the electronics industry, which produces mountains of unrecyclable waste each year.

‘Hamon’s Law’

To tackle the problem, France passed landmark legislation in 2015 known as “Hamon’s law” which made the practice illegal and — in theory — obliged retailers to say whether replacement parts were available. The law stipulates that a company found to be deliberately shortening the life of its products can be fined up to 5% of its annual sales while executives can face up to two years in jail.

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CONCLUSION

This paper has analyzed the motivation for planned obsolescence, which can be profit motivated from the producer’s perspective and the insatiable demand from the consumer’s perspective. What is not clear and would require further research is the effect on employment and the type of effect it has on innovation. Is the effect on innovation an upward one where products are improved to do more or a downward one where products are improved to do less in order to get more from the consumers?

Reforming planned obsolescence is not enough to solve the problem. We need to rethink our entire economic system and values. We need a cultural change because our culture makes us rely on objects to give self-esteem, happiness, satisfaction and identity. We should not forget that happiness does not depend on consumption. Gandhi once said, “The world is big enough to satisfy everyone’s needs but will always be too small to satisfy individual greed”.

Business and sustainability can go hand in hand if policies set at the government level are enforced, if firms put into consideration the true cost of resources that have been used, the energy consumption, indirect energy consumption such as transportation cost and other costs to the society, and consumers take responsibility for ensuring products are disposed properly.

REFERENCES

- J.F. Alvarez-Cuadrado, G. Monteiro, and S.J. Turnovsky, “Habit Formation, Catching up with the Joneses, and Economic Growth,” *Journal of Economic Growth* 9, pp. 47-80, 2004.
- M. Bagnoli, S. Salant, and J. Swierzbinski, “Durable-Goods Monopoly with Discrete Demand,” *Journal of Political Economy*, vol. 97, pp. 1459–1478, 1989.
- D.K. Benjamin, and R.C. Kormendi, “The Interrelationship between Markets for New and Used Durable Goods,” *The Journal of Law and Economics*, vol. 17, no. 2, pp. 381–401, 1974. M. Boland, “Water and the Environment,” *Forbes*, vol. 168, no. 6, pp. 60–62, 2001
- J. Bulow, “An Economic Theory of Planned Obsolescence,” *The Quarterly Journal of Economics* 1, pp. 729–749, 1986
- Slade, G, “Made to Break: Technology and Obsolescence in America”, Harvard University Press, 2006.

