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**THE CULTURE OF PLANNED OBSOLESCENCE IN
TECHNOLOGY COMPANIES**

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ABSTRACT

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The topic of this thesis is planned obsolescence; it is a research based thesis involving no commissioner. The objectives of this thesis was to gain knowledge and understanding of the theory behind obsolescence; to try to understand the broadness of the topic and how it can be extended to work well with a more contemporary approach to consumerism. Research was carried out to answer questions on what psychological methods are adopted to influence consumers to adapt to the model of obsolescence, and what are the side-effects of obsolescence to the environment.

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, however giving no glimpse on how one could improve the current model.

It was decided, that after working with each type of obsolescence, it was the consumers that have become overwhelmingly influential in today's notion of obsolescence. This directed the thesis to extend the current model and update it to now include the chapter 'Consumer led Obsolescence' or CLO.

Social media has created a generation of consumers that now have a voice that the companies have to listen to. This generation is forward with their opinions, and is taking a strong interest in current and next generation goods.

The environmental issues were an important stepping stone to understand what must be done to make obsolescence an acceptable approach to business. It was hypothesized that if companies consider the environment by making products that are safer and greener then obsolescence can prosper, without being considered as a burden to the environment.

Keywords:

Planned obsolescence, Consumer led obsolescence, Apple, E-Waste, Phoebus, CLO, Made to Break.

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1 INTRODUCTION

The topic of this thesis is planned obsolescence. The term, planned obsolescence, was first introduced in 1932, in a short booklet called “Ending the Depression through Planned Obsolescence” (London 1932, 1), written by Bernard London. 22 Years later the phrase was popularized by Brooks Stevens, who titled one of his talks he was due to make on that very topic. There is a famous expression that comes with planned obsolescence, that many people are aware of, that was coined by Brooks Stevens at the same talk; the words “Instilling in the buyer the desire to own something a little newer, a little better, a little sooner than is necessary”(Stevens 1960, 12). This phrase sums up what planned obsolescence means just as much now as it did then.

Planned obsolescence is the practice of limiting the life of a product; subsequently manipulating customers buying behaviour, to benefit the manufacturers. Essentially this means, a product that has been made with poorer or weaker materials so that it will last a predetermined length of time. In exchange for having a product that lasts a year instead of a decade, customers are graced by newer versions of a product more often. Just as fashion changes every year as do products like computers and cars, all with a slightly newer feature; that with the help of marketing, is pressuring consumers to buy. This was not an idea that happens overnight, it took a while for consumers to change their mind sets. Up until 1800's and early 1900 consumers were more accustomed to fixing items that were not fully broken, instead of replacing them. It took years and an influx of manipulating and persuasive marketing to create this fresh capitalist idea as a social norm.

This thesis is written to show that planned obsolescence, although old terminology, is still very much apparent in our highly consumer-driven society. Modern planned obsolescence has taken on many sub-categories as an update; Functional obsolescence, Technical obsolescence, Style obsolescence, Postponement obsolescence and Unplanned obsolescence. Each heading has broadened the somewhat narrow view which was first penned as ‘planned obsolescence’, extending it with an entire new ethos.

These five titles though, are still very relevant today but with considered research the model can be extended to a sixth title that encapsulates the much more consumer minded, modern buyers today.

There will be many questions answered over this complicated and relatively hushed topic of planned obsolescence, ranging from the explanations of the major subheadings and how they can be extended - to the important topic of environmental issues. This thesis will also be discussing the origins of this focus area and how it fits into today's society. The most important question is how obsolescence has changed and what has caused the change?

As Apple has become the leading brand in the technological field, mainly due to their smart phones, this thesis will elaborate on their story of planned obsolescence and how they have played a major part in keeping this phenomenon very much alive in the 21st century. Apple was chosen due to its significance in the market place and its apparent obligation to give the consumers what they want. Working with such a large company proves that planned obsolescence, in whichever form it should take, still has a dominating foothold in the minds of the engineers, marketers and more predominantly the customers.

The evolution of planned obsolescence is really the focal point of this thesis. How it has adapted and changed since the very beginning, when it was a widely known and discussed topic, whereas nowadays the idea is reclusive and yet still very much the driving body of many businesses. In today's modern era, it is more commonly considered as just the product life cycle. But this inconspicuous title does not give away the full philosophy behind it.

2 FROM THE START

The whole idea of a product becoming obsolete due to mechanical interference, which would give a product a designated life span, was first discussed openly in the early 1900's. At this time a sensational and dramatic movement of capitalism was being formed leading to a radical change in mind set by both consumers and companies.

2.1 Automotive industry and General Motors

In the 1900's, America first coined the phrase 'obsolescence', and used it to describe products that were out of date. From this phrase, five categories were created, some with a more sinister personality, these were: Planned obsolescence (The main initiative), Functional obsolescence, Technical obsolescence, Style obsolescence and Postponement obsolescence. In the early 20th century planned obsolescence was not thought of as such a high profile idea as it is today. Planned obsolescence was limited to helpful but basic improvements to kitchen equipment such as "when modern household appliances replaced older stoves and fireplaces, and steel pots replaced iron ones" (Slade 2006, 4). Obsolescence began to take a genuinely real and conscious state when the electronic starter for cars was introduced. This was such an improvement to the automotive industry that quickly made all previous crank handle cars obsolete. This change was welcomed with great delight, as the crank handled predecessors were particularly dangerous to anyone who was not strong or did not have very quick reactions. The kick back from turning the handle was responsible for many people breaking their arms from just starting a car. These early types of obsolescence are called technological obsolescence.

During the early days, or pre 1800's, companies were not in the mind-set of marketing to customers in such an aggressive manor to persuade them to buy newer and newer products. Companies were more interested in technological improvements that were vital to the product.

During the 1920 there was a “decade of unprecedented affluence” (Slade 2006, 5), General Motors (GM) were intelligent, bold and perhaps greedy enough to try a new strategy. Consumers had disposable income and a means to buy for love, and not just need. This interested GM so much that in 1923 they developed a pioneering marketing strategy that would consequently change all future marketers thinking. The Executives of General Motors did not want to wait until they had developed new cars, that just included something new from a technological perspective, but decided they could sell more if they developed cars that were styled “as a way of making new cars more desirable and pulling potential buyers into the showroom” (Slade 2006, 4). This new vision of thinking worked, as GM had sold cars to customers when the customer had no need for such a purchase, they were purely buying a new car because of the visual improvement and not technological. This was a big change in attitude for consumers, as previous to this, consumers only ever bought something new when what they had before was broken and unfixable. Buying for the sake of it was not the commonly held behaviour; however, the great rise before the fall of the depression may have had some influence.

2.2 Phoebus and the light bulb

In relation to the changing of company values, and one of the most famous and most recently talked about change, happened in 1924 in Geneva, with what has been call the ‘first victim of planned obsolescence’. On Christmas Eve a group of individuals from important electrical companies, Philips, Osram and General Electric, got together with a goal to create a worldwide union, known as Phoebus, to control light bulb production. This control was to engineer a light bulb that would last no longer than 1000 hours, in comparison to some that were lasting up to 2500 hours.

The Phoebus document stated:

“The average life of lamps for general lighting service must not be guaranteed, published or offered for another value than 1000 hours. The 1000 hours life on this definition means average life to/burn out on normal laboratory test conditions at rated voltage” (Dannoritzer 2010).

The Phoebus group succeeded with their plan and managed to reduce nearly all the competition in the industry for around 20 years. Later Phoebus was accused of preventing any technological advances that would have aided the production on longer lasting light bulbs.

3 TYPES OF OBSOLESCENCE

In the next few headings we will examine how broad obsolescence is and how it has an effect intentionally, or otherwise, on nearly all electrical companies.

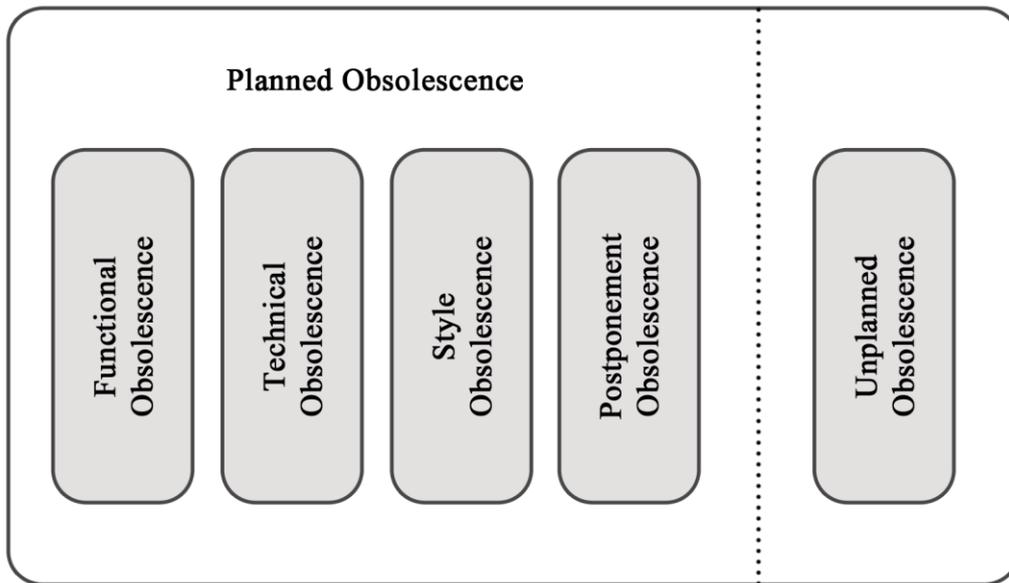


FIGURE 1. The breakdown of Planned obsolescence

Functional, technical, stylistic, postponement and to some degree unplanned obsolescence all stem from planned obsolescence, however each have their own identities that individualise them as separate entities. To appreciate how broad obsolescence is, one must look deeper in to each of the headings to understand their purpose and behaviour in the model.

3.1 Planned obsolescence

Planned obsolescence is a phenomenon widely acknowledged though little discussed, due to its ubiquitous nature and duality of being both good and bad in different ways, makes the topic a curious one to discuss.

Companies calculatingly plan and introduce obsolescence to their products deliberately, and this is why it is known as ‘planned’ obsolescence. The lifecycle of the product is shorten, thus reducing the time that it takes for a customer to buy the next product in their line. If marketing is done well, a consumer will continue to stay with the brand and company benefits from the shortening of the lifecycle. In short, a company’s product with obsolescence built in, have to be smart about how long they would like their products to last; it is no good making a product that will cease to work after just a month if all the other companies are making a comparable product last a year.

Obsolescence has diversified over the years and it is not just due to company involvement dictating when products should expire, but human intellectual development outside the companies which has improved technology. This progress leads to companies appropriating the technology for their new products. Understanding that a change to a product lifecycle is not always in the company plan, allows us to understand that obsolescence needs more headings than just ‘planned’.

Over the years obsolescence has developed and adapted itself to changes in the way consumers purchase goods, concurrently though, it is a big cause of the change too. However, this is a fairly two dimensional view; obsolescence is much broader than the above title and can occur in many other ways, although fundamentally company lead.

3.2 Functional obsolescence

Functional obsolescence, unlike the majority of the following, can be broken down in to two categories; ‘forced’ and ‘natural. The inclusion of the ‘natural’ heading is an important one, as it must be stressed that obsolescence in which ever form it takes, is not always forced by human intervention or manipulation. It can also happen, though arguably, naturally.

Products can become naturally obsolete when the product in question has not been hit by planned obsolescence. This may seem counter intuitive at first glance. The reason for it becoming obsolete is that when the product needs a repair, which it will in due course, one finds that replacements for the product are no longer available, or indeed the

replacement price for the part is to cost more than the item's worth. An example of this may refer to a classic car, parts are not made any more, and so people with the spares can charge huge amounts because people have no choice to pay. The only other alternative is to sell their car.

A product that becomes 'functionally naturally' obsolete refers to the least possible effect engineers and designers could make to a product without manipulating the life of a product for the worse. But ironically, saying a product 'naturally' becomes obsolete can only happen by a company stopping supply of parts and services and the product has no option but to be retired, so even the natural decay is affected by human influence.

The more obvious form of functional obsolescence is 'forced'. This is when the more common planned obsolescence takes over. A company has intentionally decided when they would like a product to wear out or not function correctly. A company can do this by creating a product with poorer components and fitting.

Apple is a primary case for functional obsolescence in the area of forced. They created products that had batteries that were not removable by the customer, and had a shortened life span. This meant that one would have to send the product back to Apple and be charged exuberant prices for the battery to be replaced; this led to many consumers deciding to replace the product with a newer one, instead. This topic will be discussed further on in the chapter 'Apple battery'. One of the first ever cases of Functional obsolescence occurring is in 1924 when the light bulb was limited to a designated lifespan (Dannoritzer 2010). Creating products that are functionally inadequate is occurring as much today as it was in its conception.

3.3 Technical obsolescence

Technical obsolescence is quite possibly the most widespread type of obsolescence used today, and probably the most necessary, when one considers the need for ubiquitous technological improvement.

Technological obsolescence involves the near constant progression of technology. When a company has launched a product they are more than likely finalising the next product that is to take its place. The most common practice with mobile phone companies is to have a new model or an updated model every year. This simultaneously coincides with the year or two year update of a mobile phone contract, allowing people to almost immediately get the newest phone on the market (please read the chapter on ‘mobile phone contracts’ for further reading). Commonly, within the mobile phone market, most companies have a release month or a time of year that they like to release new items, with Apple for example that time of year is around June.

Generally, products that supersede older products are the ones which are fashionable on the technology market; mobile phones and tablets seem to have the fastest turnover of updated models, with televisions having a fast, but longer duration of turnover relative to the mobile market. Consumers are generally expectant that televisions will have a longer shelf life than that of mobile phones. So from this, it is clearly apparent the reasoning for when and how often a technological upgrade should occur. It would make no sense to upgrade a television every 6 months when consumers are more likely only going to change their television every 3 years, minimum.

Creating the next big product that will set the market alight with excitement can often mean creating a product that is revolutionary. Revolutionary goods spark interest from every angle, and when designed well can be hugely talked about and much anticipated. This hype is very much desired by companies and can lead to strong sales figures. Nonetheless, sometimes a company can create a hugely revolutionary item that is so far ahead of its time that it is just not appreciated. In 1983 Microsoft observed and decided that the television was lacking a feature that was slowly taking a foot hold on the world. Microsoft announced a product which incorporated the television and the internet. Unfortunately for Microsoft the internet, at that time, was not the powerhouse it is today. The product failed to make any noticeable sales and thus the idea wilted and Microsoft had to drop the product from production. Consumers were asked to voice their opinions on why they did not feel that the product worked, stating “the TV and computer as mutually exclusive technologies” (Littman 2012).

Microsoft again designed a world's first in 2001, developing the first tablet PC, and again the idea came to fruition, but couldn't sustain any hold on the market as it was 10 years ahead of its time. These products prove that however good a product can be, unless it is an acceptable product for the time, and not superseding other products by too much, then any product can fail.

Changes can be too drastic for some consumers, if the vast majority think the same way then a product designed for mass market will certainly fail. Consumers need to believe that what they are buying holds value to them in some respects, be it psychological or physical. Psychologically value can be met by consumers buying a product that is ahead of the game, with the physical use taking a less necessary placement. Both psychological and physical needs, be it both or alone, are the main purpose for purchasing goods. If a product is ahead of its time, and does not answer to these needs, then the product will predictably be unsuccessful.

Obsolescence of previous models becomes almost predestined, once a customer buys a product with technology that is newer and more equipped. Consumers instantly feel the older model as second rate and quite often incomparable to the newer model, thus, distancing one's self from the older model. For reasoning behind such behaviour, please read the chapter on Psychology.

3.4 Style obsolescence

Stylistic obsolescence occurs when a product becomes less fashionable and unwanted due to trends that are pushing in a different direction. The product is quite often functional and may work in every way, other than aesthetically. Consumers that follow trends have their logic clouded by design, and are far more likely to go out and purchase the product that is 'in style', rather than be seen harbouring older and less attractive technology products. A quote by Neil Maycroft underlines the reason behind the power of style, "consumption decisions are seen to be motivated by aesthetic considerations or for their implications in relation to identity construction" (Maycroft 2009, 5).

Mobile phones have clearly been a subject of fashion; fashion by means of small technical improvements and fashion by means of aesthetics. But ever since Nokia popularized the mobile phones to be available to nearly anyone, obsolescence was sure to raise its head.

A Fashion can only occur when customers believe in the product; they have strong feelings for the product and can make a personal connection to the product. It fits in to their lifestyle or can even go so far as to define them. Nokia began the popularization of mobile phones in the late 90's with very robust phones that were simple to use, featuring tools that were useful. The very important thing about these phones was that they had interchangeable covers. This meant that people were able to personalize their phones to look like their personalities. This at first glance seems a small menial thing, but to just own something or to own something that represents you and your personality are two very different things altogether. One is almost inanimate and the other is an embodiment of something you have feelings for. The personalization and choosing to fit to one's lifestyle has evolved since Nokia but it has become a far more important presence in our lives than ever before. But it is thanks to Nokia and their unselfish design approach allowing the end user to decide the look of the shell that within the mobile phone world style is now king. Nokia may have been unselfish with this decision, but it did just mean another avenue to gain revenue.

Obsolescence did in fact raise its head, and stylistic obsolescence is one of the driving phenomenon that is occurring (particularly) in the mobile phone industry. Apple are and has been for a few years now the prominent player and leader with the use of stylistic obsolescence. With very clever advertising and marketing and a design team that have managed to create a phone that every year becomes a new fashion 'must have'. Apple has built a fan base that follows and supports the brand. The customers of Apple tend to believe that nothing else can come close to the newest model that Apple brings out. More often than not, very little changes to the next phone they bring out apart from a few style tweaks, but enough to render someone with the previous phone wanting the newest version.

The most interesting thing about the Apple style phenomenon is that the people who have not been seduced by the marketing of Apple don't understand what the fuss is

about. In fact the consumers who do not follow Apple have given a label to the followers; they called them 'Apple fan boys', using it in a derogatory term. This may be a jealous repercussion of knowing the power in which Apple have, and the knowledge that the majority of Apple supporters are truly happy with following the brand.

Who do the populace follow if they do not follow Apple? They follow the second biggest player in the market, Android. These 2 'camps' make up the majority of the market, but both with very different views and styles. Apple is known as the style brand, with quite set-in-their-ways innovation. Whereas Android is just an operating system; this operating system has been adopted by many companies, the most famous and strongest being Samsung. Android share some ideas with Apples' iOS yet differ on more. Android is innovative to the point it allows the user the control many of the functionality, Apple on the other hand believe that customers should not tamper with this (Kovach 2013).

Apple and Android sustain 2 very different types of people. Not to read too much in to the subsequent statements, as the following does not account for the fact that Android covers a much broader demographic by means of pricing, A study in America by Hunch reveals some of the attributes:

- "The data found that Android users are more likely to be men between ages 18-34 with an annual household income between \$50,000 and \$100,000, while iPhone/iOS users are more likely to be women over the age of 35 and are 67% more likely to have an annual household of \$200,000 or more." (Murphy 2011)
- "Android users are more likely to be late tech adopters who skew politically conservative, whereas iPhone/iOS users are more likely liberal, outgoing city-dwellers who make more money, take more vacations and enjoy the finer things in life." (Murphy 2011)
- "It also noted that Android users are 80% more likely to have only a high school diploma and iPhone/iOS are 37% more likely to have a graduate degree." (Murphy 2011)

Style and following the fashions of technology clearly cover most demographics. This means, that if the majority of people are influenced by style as an improving factor, then

obsolescence is not far behind. If consumers are particularly partial to owning products that are fashionable, then they can only be too ready to discard items that are passé.

Consumer's affiliation with design and style is significant. If designers of products get the ideas wrong, then the company can fail dramatically. Consumers are particularly fussy when it comes to fashion and making a mistake can prove particularly costly to both consumers and companies. Consumers may suffer due to social circumstances of owning a product that is invariably unfashionable, and companies suffer financially. To overcome this problem, companies need to connect with consumers.

3.5 Postponement obsolescence

In modern day society, new technology is released all the time, with new findings from scientists and engineers that often can be inputted into technological products. For example, High Definition (HD) screens. Mobile phone companies will, the majority of the time, put the best technology available in to their flagship or primary devices but use 2nd rate technology for the cheaper models. This is an obvious decision by the companies and an acceptable one from the consumer point of view. Why would they put HD screens on their cheaper model phones? But if five years' time, when the flagship models have improved with the technology, then the cheaper models will no doubt feature the flagship models technology of 5 years ago.

Postponement obsolescence transpires when, a company has the technology to add to all their products but they choose to only add the best to their flagships. This being the case, consumers have a wider choice; they can move with the times and buy the expensive, full of technology, flagship device, or they can purchase the low end, less technologically developed model.

Many companies follow this exact same model, particularly car manufacturers. Mercedes Benz, places all the newest technology in to their S-Class model cars. The S-Class was the first car to have a sensor built in to it which detected when the driver was feeling drowsy and sleepy. "In the first 20 to 30 minutes of driving, the system monitors the driver's behaviour to adapt itself to individual habits. When it determines you are

too tired to drive safely, the system announces it's time to take a break with an audible warning and a visual message that includes a coffee-cup icon.” (Vanderwerp 2008)

Companies that have created technology that is way ahead of its time, have invariably two choices to make. The first being, risk the technology on the market and incorporate it as a new model; this can lead to the product failing or being hugely successful. Or secondly, they could keep hold of the technology, patent it, and reserve it until they believe the world can appreciate such radical reinvention. The patient approach also has its risks; competitors may come across the same technology and release and it might become exponentially huge, thus making ones decision to withhold the technology worthless.

3.6 Unplanned obsolescence

Unplanned obsolescence is a resulting phenomenon that transpires due to unforeseen circumstances, beyond the control of the company, the engineers, the designers and the marketers. It is the result of a change in legislation perhaps, or new findings that show a substance used in a product is harmful or damaging to consumers or the product itself, it may have even been used unwittingly for maybe generations.

Unplanned obsolescence is exactly what the title suggests, it occurs unknowingly and can be crippling to a company when this type of obsolescence happens. Whole product lines can be taken from the shelf and away from consumer. If a product is found to be harmful, then law suits can be made, crippling companies further.

Products do not always have to be discontinued due to harmful circumstance. A company without good knowledge of the market can make a product but then find out that another company has created a product that makes theirs obsolete. This may sound like technological obsolescence, which it is. But it is also unplanned, from the side of the first company, however naïve, it does happen. Lesser economically sound companies don't have the man power and monetary power to employ the brightest minds, thus not allowing them to find the 'next big thing' and the potential to make these mistakes.

Unplanned obsolescence is not a major aspect of planned obsolescence, but merely a nuisance that can occur at any time through no real fault. Consumers are little affected by it, other than not allowing them to buy the affected product.

4 THE PURPOSE OF PLANNED OBSOLESCENCE

The notion of obsolescence is considered the good side of capitalism; the focus is on the new and looking towards the future with a progressive and not regressive attitude. But since capitalism and the birth of modernistic purchasing, there is a darker side to obsolescence. This side is arguably and predominantly based on profiteering of companies from the consumers that have bought into the whole concept of the innocent obsolescence. The theory at the start was formulated to consumers as a credulous adaptation to life; benefiting the consumers by having new stuff regularly, but predominantly benefiting the companies by increasing profits.

The idea has not changed too dramatically in contemporary society; the only major variation is that the consumers are now openly buying in to the whole idea of obsolescence. Customers are now no longer innocent, they, on the most part, are fully aware. The idea is even praised by the newer generations, who know nothing else but to live in a frivolous and throw-away-when-bored lifestyle. Quite often the only thing that stops consumers buying the newest product every time is their financial situation.

Planned obsolescence was created to boost capitalism. The very idea oozes financial progression for companies. It gets consumers spending money; money that would have remained stagnant. When the money circulates, then more people and companies benefit leading inevitably, at least in a short term, to a prosperous lifestyle.

Planned obsolescence was first written about in the early 1900's however the idea is not one that only surfaced then. It has been identified as far back as 1690 in the fashion industry, with a quote by Nicolas Barbon, "Fashion or the alteration of dress is a great promoter of trade, because it occasions the expense of clothes: it makes a circulation and gives value, by turning to all sorts of commodities: keeps the great body of trade in motion" (Maycroft 2009, 24). Before this, shoddy goods have always been made cheaply to make a quick sale for maximum profit. It has always been in one interest to make money or equivalent as easy as possible, cheaply as possible and as quickly as one can.

Nowadays the idea is just on a more industrial basis, with revenue on a much larger scale. Even premium goods are made obsolete, not always by having shoddy materials but by the consumers' willingness to own the newest product.

Probably the most interesting evolution of the idea of planned obsolescence is that the very phrase itself has become almost archaic, yet features more predominantly than ever before. It has been manipulated in to what is known as a 'product life cycle'. What this means is that obsolescence has become almost a given with no intention of being a hushed topic. It hides proudly behind the expression of product life cycle.

5 PSYCHOLOGY

Psychology is a big part of how planned obsolescence can work so well. The influence of behaviour and changing behaviour does not materialise immediately, but takes time and belief to fully change a method that was previously a very sustainable way of life. By this, one means, the change of customers buying for their needs and not for their wants. Customers now buy to fulfil their wants and internal desire to own the newest product, even if it is not necessary.

There are four psychological ideas that will be covered in this chapter. It must be stressed that these ideas are what aid the obsolescence to continue its hold on society, and not how it began. There will be four methods of psychology discussed, which could be argued to be the most predominant and most influential. These methods are commitment and consistency, social values, scarcity and Ego.

5.1 Commitment and consistency

A study by Rosenfeld, Kennedy and Giacalone in 1986 encompasses the theory of commitment and consistency in its most raw and basic form. The study begins on a racetrack:

“Just after placing a bet, they (people) are more confident of their horse’s chances of winning than they are immediately before laying down that bet. of course nothing about the horse’s chances actually shifts; it’s the same horse , on the same track, in the same field; but in the minds of those bettors, its prospects improve significantly once that ticket is purchased” (Cialdini 2007, 57).

The reason for this shift in behaviour occurs due to “our near obsessive desire to be consistent with what we have already done. Once we have made a choice or taken a stand, we will encounter personal and interpersonal pressures to behave consistently with that commitment” (Cialdini 2007, 57). These pressures are strong enough to validate ones choices.

This psychological idea is especially important when building a brand. Companies who have managed to get customers to purchase their products, must then get them to believe that what they have purchased is principally right. They must also get them to believe that any subsequent product that is made by the company is again indeed the right product for them. One of the most important things for a company is to get customers to stick to their brand and not deviate. Once they have this, they will inevitably gain a following and a fan base. When customers buy products with the same brand continuously this shows consistency. It also shows that they must believe in the brand enough for them to purchase the next item made.

Once a company has built a base of customers that will continuously buy products from their range, the companies can then manipulate the buying behaviour; making the customers want the newest item, make them believe it is better than the last and still make them believe that their brand is better than competitor's. Apple does this phenomenally well. They have a hugely successful brand, with a fan base that religiously follows every movement and change the company does. As Apple have created a brand which is believed to be for the more elite and affluent customers, being a customer to them subsequently strokes the Ego of buyers. This behaviour makes 'consistency' and 'commitment' a very easy progression.

5.2 Social

T.A Nosanchuk and J Lightstone did an experiment on 'canned' laughter, which was and still is placed as a resulting effect of a joke made on many television shows. Canned laughter is very commonly known about and is very often disliked by home audiences. But this is what makes this experiment so revealing. Why would this system of faking an audience with generic laughter be appealing to producers of a television show if home audiences dislike it and are very aware of its existence? The answer to this is interesting. The study showed that when canned laughter was used on a show then home audiences laughter was more sustained and more common. (Cialdini 2007, 115)

How does this relate to obsolescence and how does it relate to technological companies that are prepared to use such a method? The Method in this case, based upon the study, is social pressures, be it by use of a forged social environment or actual. The case of having these pressures to produce an outcome for the benefit of a company is strong. Seeing someone with a product, either someone that one knows, famous people or even people on the street give pressure. Questioning oneself why they do not have this product yet everyone else seems to. But when one does decide to purchase the product one is more likely to feel comforted by the fact that one fits in to the social 'norms'.

This is a difficult method to work with for a marketer with a company that doesn't have a huge following or are bringing out a totally new product idea. Apple again, sophisticatedly, worked with this method with the release of the iPod, which was a revolutionary device that transformed music use forever. Apple, previous to this, had a following but on a very much lower key when it is compared to today. They created an advert which was aired many, many times on television. This advert consisted on bright single coloured backgrounds with black silhouettes dancing and holding the white iPod with the white earphones, swinging around with popular music playing.

This advert covers many of Apples core values, with simplicity being the main one, but predominantly the social aspect. Firstly, as the figures that were dancing was unidentifiable, then one could imagine there self in the advert, they could also imagine their friends in the advert too. When something like that occurs it makes it personal, which is stage one complete, the marketing has drawn them in. Viewers also see many people happy and contented and dancing with the iPod. Seeing people in such a way and also perhaps seeing a imagined image of one's self enjoying the iPod make the desire to own the item occur.

When this social pressure by Apple worked, which inevitably it did; they created a phenomenon that lead to a complete overhaul of the idea of carrying music with you. Someone that owned an iPod could carry many thousands of songs with them at a time in this very small device. Compact Disc players were impacted immediately. Consumers no longer had to take countless CDs with them; they now could have every single album they owned with them at all time in just one device.

Technological obsolescence, takes a very strong hold of the situation. Again, it must be stated that obsolescence, in this case, is not always a bad thing for society; it promotes a healthy idea of change for the better. Sometimes products supersede old and many times not for the benefit of the future, but in some cases this change, although occasionally expensive, can be a huge improvement for a modern lifestyle.

5.3 Scarcity

This is the least causing of obsolescence out of the four that have been discussed, but it does have a place for the few people that are ahead of the game, in term of wanting the newest item. These people are called the innovators and early adaptors, based on the new product diffusion curve. These are the consumers that are affected by the scarcity, due to the fact that scarcity only ever occurs at the beginning of a products life.

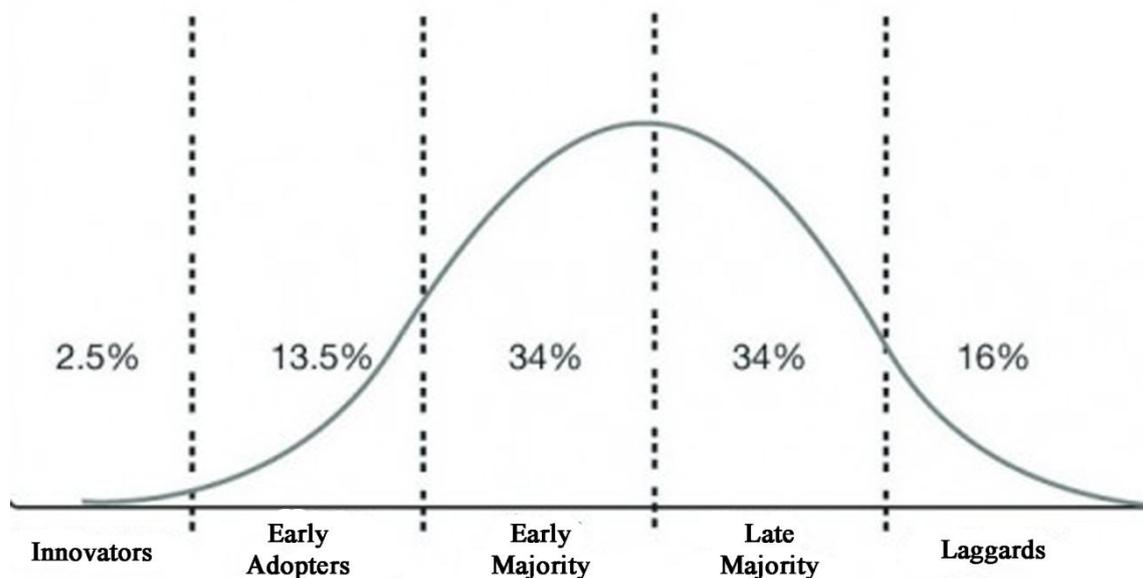


FIGURE 2. The Product Diffusion Curve

Working with scarcity can be a very fragile tool for marketers. It can be very fruitful, if done well, or it can ruin a company. To appreciate this, one needs to understand how exactly scarcity works.

Scarcity works on the basis of limiting a products numbers on the launch, or giving the appearance of limiting a product. The limiting of anything, not just electrical has a big impact on people. When something that people believe they need becomes ‘scarce’ then that need elevates hugely. It can become obsessive. Scarcity creates two personalities; the first being that of a patient personality, this does not occur with people that are innovators and early adaptors. The patient personalities are consumers that come after the early adaptors. These are the early majority, late majority, and laggards. The second personality is the impatient type, the consumers that will try as hard as they can to be one of the people that are not affected by the scarcity. They want to own the product and not have to wait; they want to be the influencers to their companions.

For a company to know whether to create the illusion of scarcity, then the company must first understand the power of the product that it will be releasing. If the company has little strength in the market or are of little value to consumers, then creating scarcity can do more harm than good, as creating this illusion to consumers that feel that the product and company have little value only leads them to an easy decision of changing to a competitor. When a company knows that they are valuable and have a strong footing in the market place then they can really use scarcity to their advantage. But still, the idea of scarcity must be fashioned effectively and intelligently to not deter and annoy consumers.

As mentioned at the start of this subchapter, scarcity can play a part in obsolescence, with Technological and Stylistic obsolescence the main characters in this section. As we now know that scarcity occurs when a company and/or product, with a significantly strong backing from customers, wants to release a new product in to the market, then generating scarcity fuels need. Creating a product that is perhaps more technologically advanced or following stylistic trends of current, to supersede the older product, will effectively makes some consumers think that their older product holds less value in the ever changing world. If a company then states that upon launch of the new ‘more stylish and more advanced’ product, that it will be limited, then customers are driven to want this product more. If a product is limited then consumers that get the product have the title of being one of the exclusive few; a title which is valuable to Early Adaptor and Innovators. Consequently the older product becomes obsolete, and probably still fully functional.

“It should be noted that while the absolute usefulness of an asset may remain constant, if market expectations increase, the property may realize a corresponding reduction in value. Such a loss in value is said to be the result of obsolescence.” (Barreca 1998, 6)

Scarcity is a very effective tool that can bare strong results with marketers that are confident enough to use it and are intelligent enough to use it well.

5.4 Ego

The Ego, as developed by Sigmund Freud in the early 1900's, is very important to why consumers feel the need to go out and buy products that make their previous ones obsolete. The ego, as described in the Princeton's University dictionary as 'an inflated feeling of pride in your superiority to others'. One must feel that any other reason for such frivolous discard of older generation products can only stem from personal gratification, i.e. Ego. An Ego can occur when a consumer buys a product that perhaps is brand new, expensive, in fashion, and/or an item that is looked at by peers as a product with substance. If a person buys said product before a member of one's peer group then generally a certain amount of rivalry will occur, thus an Ego tends to develop in many cases, a sense of pride, that it was bought before anyone one else. This self-satisfaction is primarily the driving force for Early Adaptors and Innovators. (Cherry 2012)

The Ego is a powerful thing which drives many consumers to the point of obsession to be the first to own a product that is coming to market. Many occasions, companies are aware of the value that is held by the product to consumers, and will consequently charge a higher fee for the products that are being released first.

According to Neil Maycroft, consumption and consumerism is driven by a self-conscious pressure and not principally 'material use' stating "consumption and consumerism... is seen to come from private issues of managing self-identity, family

relations, self-esteem and so on or public issues of status, taste or style signification.” (Maycroft 2009, 5).

The Interesting thing is that, there seems to be no place for an Ego in marketing; to create an advertisement that insists upon a product being the ‘best in the world’ or a company expressing that they ‘are the best company to buy from’ is in the eyes of consumers a sin and not believable in any way. “Egoistic brands cannot last long in the competition. And they can even be cut off by new market players as well” (Unknown A 2011).

Consumers coincidentally, do not fall for Egotistical marketing but are more than happy to have an Ego about buying a product that gives self-satisfaction. But for a company to have self-gratification for their own brand is frowned upon. Consumers would rather listen to a company that is more modest in approach, leaving the emotion to the consumers.

6 APPLE

Apple is one of the most powerful brands in the world today that has dominated and competed with the strongest brands in the consumer industry. Apple has not been shy though, in using many of the aforementioned methods of obsolescence. The most documented issue with Apple has been the battery that is immovable by a customer, which can cause a lot of extra expense. Other issues concerning Apple are the speculation of the iPhone 5 features, which are making previously purchased peripheral goods obsolete. Of course Apple is not the only player in the market to cause such media acknowledgment for utilizing methods of obsolescence, but they are one of the biggest.

6.1 Apple battery

New models of mobile phones come out every year; this is a common attribute with many companies in the mobile phone industry and not just Apple. Samsung, HTC, Sony Ericsson, Nokia and nearly every other mobile phone company create a new model or new range every year. This has become common practice with the industry and if they didn't create a new phone every year then many would believe that the company was not innovative enough and lacked ideas and consequently would lack market dominance through saturation.

Before the rise of Apple, in regards to their mobile phones, companies designed phones so that the battery inside can be taken out by any one very easily. This meant that if the owner of the mobile had a problem with the battery, then it could simply be replaced. The other reason batteries were removable was because most of the time the SIM card was hidden behind the battery, thus rendering a battery that was impenetrable an impossible inconvenience if one wanted to access the SIM card, which of course was a necessity. However Apple, when they designed their first iPhone in June 29, 2007, and subsequently all other models to date, saw that they had a 'cult' like following, led them to produce a phone that had an irreplaceable battery. This decision meant that Apple could potentially sell more phones if customers couldn't replace the battery themselves.

This sounds like a strategy that should not work, but it does and has. If the customer couldn't replace the battery themselves, then it prompted them to go out and get the new Apple iPhone once the battery had died. Unfortunately a replacement of the Phone or battery will be fairly imminent, due to the battery having a life span of between 300-500 charges or just over a year.

Apple understands that not everyone is willing to part with their phones once the battery has died, so Apple gives customers the service of replacing the battery for the customers for a price of \$85.95. With this service Apple take your iPhone away for about a week and remove everything that was stored on the phone. This service is intentionally expensive because Apple would prefer the customer to purchase a new phone, rather than repairing the existing one.

If customers are not prepared to buy a new phone once the battery has worn out, then Apple will still profit from the customer purchasing their service. Obviously there are other companies out there that will replace your iPhone battery for you at a smaller price, but Apples policy has made it so that if the customer has tampered with the workings of the product, for example the battery, and replaced it with a unofficial iPhone battery, then the warranty become automatically invalid.

6.2 The iPhone '5'

The iPhone '5' is in the offing, and if rumours are to be believed, then Apple has taken planned obsolescence to a new height. Some may say that what has been proposed is a necessary change for the next generation of devices; however some feel it is becoming an expensive change. Robert Scoble, an ex-employee of Microsoft made this statement: (BBC 2012)

“The new power connector will have a chip on both ends of the cable, giving Apple total control and leaving device manufacturers unable to make unlicensed third-party accessories. It's a similar strategy that was used with the MagSafe connector on the current MacBook line” (Kersey 2012)

What this means is, a microchip will be placed in to both ends of a power adapter that seemingly signals to device that it is in fact the correct device. This will then allow the phone to be changed in the ordinary manor.

But why would Apple spend money placing a chip in each of its power adaptors? The answer to this is simple and quite effective. If we are to believe that Apple has indeed placed this ‘unique to Apple’ chip in to its charging unit, then this will make any unofficial product, i.e. companies that make cheaper versions of the Apple chargers, worthless without the Apple chip. Apple clearly have noticed that there are many companies that make a lot of money from manufacturing unendorsed peripheral products, which are cheaper than the official ones that Apple make. By implanting the chip into its products, then customers will have no choice but to buy official Apple products instead of the previously cheaper alternatives.

The other main rumour that will particularly affect customers that are looking to upgrade from the previous iPhone, to the unreleased iPhone ‘5’, concentrates again on the charging unit. A 19-pin plug instead of the previous 30-pin which it uses to charge and allow data interaction, situated on the base of all of its iPhones, will be the change. This is a change which has been written about all over the internet and verified by New York Times. The International Business Times wrote:

“New York Times say Apple will actually slim down its dock connector to 19 pins across all its iOS devices, including iPhone, as well as the iPad and iPod”
(Smith 2012)

This anticipated change is a form of Technological Obsolescence. This would have not been an easy decision for Apple to make as they rely heavily on customers that follow the brand, and who purchase nearly all upgrades of the iPhone. But this upgrade will make customers think twice about pre-ordering the so far unreleased iPhone. If the consumer has just purchased an often expensive speaker system, then it will not fit the 19-pin slot. Most likely there will be an adaptor that will change a 19-pin to the original 30-pin connector, but if Apple does start blocking out unofficial products then they will be placing a chip in the adaptor too. This will be an added expense to customer and extra profit for Apple.

Why would Apple even consider this fairly radical change? Technical Obsolescence is why. The 19-pin connector “would have to be faster than the 30-pin dock connector” (Smith 2012) and will evidently be cast across the whole future product line. If this is the case, then Apple are beginning to future proof their products; believing that the larger 30-pin will not suffice, with the more powerful updates that are assured to be coming up. The other important factor about the smaller 19-pin connector is the mechanics will be smaller too; in turn making for more space to fit further hardware, or even to reduce the size of the thickness of the device altogether.

Device thickness has never been much of a subject of contention until Apple brought out the beautifully ‘slim’ and architectural iPhone 4 measuring a slight 9.3mm (Monkey Media 2011). However Samsung created, what was preserved by many, to be a thinner phone, the Samsung Galaxy SII, measuring a mere 8.71mm at its thinnest. Samsung tried to take the hypothetical crown from Apple of the ‘world’s thinnest Smartphone’. Apple informed the Advertising Standards Authority (ASA), noting that Samsung were not measuring the device at the thickest part, which was 9.91mm, thus rendering it thicker than the iPhone, and stating that “consumers would not be interested in the thinnest part of the device, but in its overall measurements, as these would, for example, affect whether the device could fit into a pocket or purse.” (Monkey Media 2011). The ASA sided with Apple perspective, announcing “the iPhone 4's thickest point was thinner than the thickest point of the Samsung Galaxy S II” (Monkey Media 2011). Later Samsung created the Samsung Galaxy SIII, and this device measured 8.6mm, consistently. Clearly customers desire phones that are slimmer as companies are prepared to battle over rights to slimmest phone. This is quite possibly one of the other main reasons that Apple has chosen to take up the 19-pin connector; to reduce the width of its device and keep up with competition.

7 THE MOBILE PHONE CONTRACT

In recent times, the mobile phone contract has taken great leaps to become a well-used resource among phone users and has “really proved instrumental in shaping the growth chart of these mobile phones” (Slade 2006, 264). The mobile phone plans or contract phones have become the result of an alliance which has formed between the mobile phone producers and network owners; a partnership which is very beneficial to both parties. The contracts which are offered to customers, at a price, often include a selected amount of free call time which often spans for 1000’s of minutes and regularly includes free messages. Most recently the inclusion of internet data has been a driving force for the success of these contracts. More often than not there will be a mobile phone of the customers choosing. For a customer to get all of these things updated in the next year or two and also to get a brand new phone each time can prove irresistible.

According to Ofcom, the independent regulator and competition authority for the UK communications industries, states that there are 81.6 million active subscriptions to mobile phones. This includes pay as you go and contract phones. A huge 49% of that figure is dedicated to just contracts (Ofcom, 2011). This 49% equates to 39,984,000 mobile phones that are likely to be replaced by a newer model when the contract is to run out. Contracts last between 12 to 24 months which is a very short time span when you consider any other product like a table or fridge.

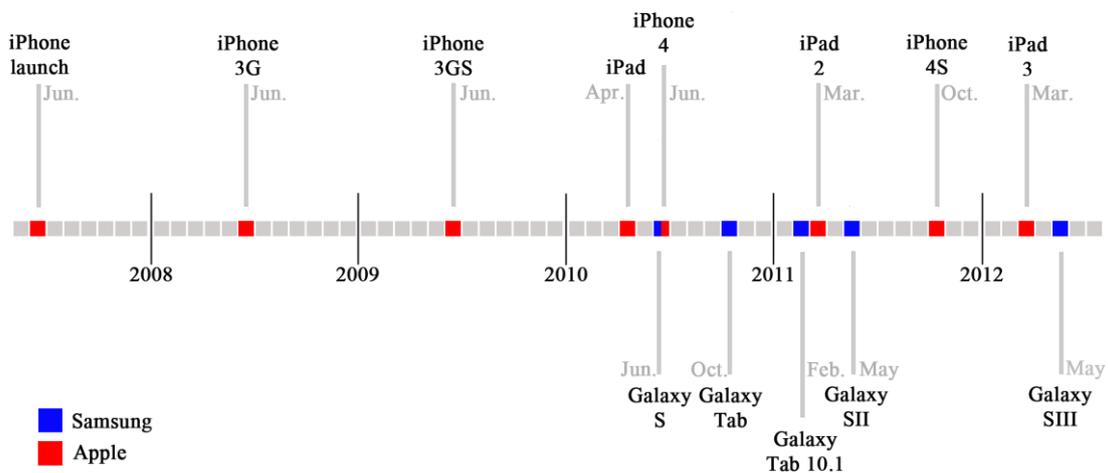


FIGURE 3. The release dates of primary Samsung and Apple products (Reuters 2013)

Figure 2, shows the release dates for the primary products of Apple and Samsung. The consistency of these dates are the most important feature of the diagram. The iPhone for example, has been released almost always in June. This allows for the maximum potential of immediately getting an upgrade on a phone plan when the year or two years are over.

The United Kingdom is one of the countries in the world that thrive on technological advances; the consumers in the UK are very active about purchasing the most current technology for themselves or for their homes. This trend of technological prosperity has led to the fact that there are now more active mobile phones than there are people to own them individually. However it would not be out of the question to make the statement that not everyone in the UK actually owns a mobile phone; the majority of children under 10 years old will not own a mobile phone and the majority of over 80 year olds will not own one either. According to the Guardian (Garside 2012) in 2011, 44 million individual people owned a mobile phone. What this means if we go back to the original figure of 81.6 million active phones in the UK is that there are a lot of people with more than one mobile phone to their disposal. It is predicted that in the next 5 years there will be more mobile phones in the world than people.

This many mobile phones active with many of them on contracts will mean the discarding of the phone after a set period of time, leading to the question of obsolescence. This time it is not the phone companies that are primarily at fault. Companies that own the networks used to make their money from pay as you go before contracts were really established. Now-a-days though, contracts offer a customer (that is a regular user) a lot more value for money. Often there is a free mobile phone included, of the customer's choosing, depending on the contract chosen. This is a particularly frivolous approach to giving out phones, but one that both parties feel is good value.

Unfortunately with this approach there are going to be a massive amount of mobile phones needlessly discarded once the next contract is signed and the customer gets their newer phone, often leaving the older one, that are rarely broken and work perfectly well, to be left in a drawer or thrown away.

Vodafone is the world's largest multinational telecommunications company based in the United Kingdom. They have recently created a contract that means that every year a customer can get a brand new top of the range phone. The 'older' phone will then be sent directly back to Vodafone. Vodafone were asked what their policy was regarding the discarded phones that they receive. They stated, "When customers do decide to change their phones, we will collect, reuse and recycle as many unwanted phones, devices and accessories as possible. Returned handsets can be refurbished and resold in lower income countries where the cost of new phones is prohibitive and landlines are scarce. If they can't be reused, they are recycled. Our aim is make sure nothing goes to landfill." (Frapwell 2012).

Of course the telecommunications industry does not rely solely on contract phone. Many people find the thought of contracts to be excessive or to have a lot of monetary pressure, which if finances are stretched then paying around 40€ a month can be difficult. Usually a fine is given if payment is not achieved in a set time too, which increases the pressure. Instead of having such pecuniary demands, one may choose the rather less fashionable approach of pay as you go or also known as the Sim free option. These are less binding and allow the user to decide exactly how much they would like to pay each month and when they would like to give up the phone without pressure of changing to a newer phone. This in itself eases obsolescence, as it is the consumer who decides when the phone should be discarded or in fact the phones natural lifespan.

The whole mobile phone industry has seen a huge incline in interest in recent times due to many reasons including:

- Media exposure of competition between two dominating rivals (Samsung and Apple).
- Well maintained and developed marketing from all major players in the industry.
- The actuality that people are becoming and have become genuine fans of a company, as if they had celebrity status.
- Although phone contracts can average 40€ per month, it can feel cheaper when one considers that often a phone is included in the price.

- Lastly the fact that phones have just developed exponentially in recent times to have anything that a buyer would want from a device.

These five reasons and there are many more make up the interpretation for the inclined success of these devices.

When you understand that the majority of the phones that are becoming obsolete are fully working we have to bring up the term obsolescence and its whole definition. ‘Such a pattern renders the term "obsolescence" itself obsolete. It makes no sense to call a discarded but working phone obsolete when the same make and model is still available for purchase and continues to provide excellent service to its owners (Slade 2006, 264). It seems that capitalism and consumerism have pushed buying to a flippant affair, with little regard for common sense.

8 EXTENDING OBSOLESCENCE

After analysing and discussing planned obsolescence and the five subsequent yet equally important subheadings, it lacks the modern intensity of contemporary life. Since these six ideas were created, one must feel that the model can be extended further. The extension can only really come from one avenue that hasn't been talked about to its full potential. This potential has not been deliberated due to the nature of it being such a new phenomenon. 'The power of consumers', the strength they have on the market to influence almost any product, but with particular regard to electronics. With this extension, consumers are creating their own obsolescence, an obsolescence that would have been unheard of ten or twenty years ago.

8.1 Consumer led obsolescence (CLO)

This idea extends an already broad, and to some extent current notion, which lacks in some ways. When the obsolescence model was created, the idea that consumers would have such influence via so many avenues was unthinkable. The original idea for planned obsolescence was first coined in 1932, and has evolved ever since. The model as it is today has turned stagnant, and needs to be updated. Although every part of the model still holds strong value in today's world, the notion has progressed. This advancement is the cause of the huge buying power from the consumers' perspective and the exponential incline of online social media.

Social media giant Facebook have over a billion active users or around 14% of the population use Facebook regularly. Facebook has a reach across the whole world, but particularly around more economically developed countries (MEC). This reach with the MEDs allows for communication with the consumers that are predominantly the most influential in the market place, the most affluent and vocal. Users of Facebook and indeed Twitter, which should not be overlooked, have the reign of free speech and power to influence friend. Users are able to share websites, links, images and hash-tags. This ability to cyber share can be tracked by marketers, and regularly is, such the influence that these numbers of people have. If a product is talked about and other

friends like it, they can share, this sharing of interesting information allows companies and marketers to understand what is important to people. Obviously the most talked about product is the most interesting to the masses.

Mass consumer interest sparks mass competition from companies trying to gain the attention and consideration from the consumers. It is a complete turnaround from previous; consumers are the ones influencing companies' behaviour instead of companies influencing consumers' behaviour.

Social network allows users to have a voice. To express opinions on any matter which they take an interest to them, and quite often it is products that are near to market or are on the market. This type of situation is likely to influence sales, with the method quite like the social psychology chapter that was written about previously, the social dynamic of influence.

There are other ways consumers interact and often predict forthcoming products on the internet, and this is via forums. These forums can be set up by anyone and can be commented on by anyone with an opinion and an internet connection. It may be argued that prediction of a forthcoming product is not difficult as many companies follow a fairly ordinary evolution of design. However if the cyber voice is not followed nowadays, then the 'internet world' will quite often get incredibly vocal and dismissive about a product if it does not meet the standards expected.

The blogosphere and YouTube have the same influential voice. Companies currently, are so keen to get bloggers and evaluators on YouTube on their side, that they will often send production firsts to them for free to be evaluated by them. This can be hugely beneficial as many bloggers have a large audience. To a company, this can mean free marketing and important marketing, to an audience that will actually listen and take an interest.

8.2 Improvements to the original model

As with each of the other headings, functional, stylistic, postponement, etc., they all take small influences from each other, but predominantly extend their own point. The overlapping of these terms therefore annunciates the complexity of the original evolutionary obsolescence model. The inclusion of this new term ‘consumer led obsolescence’ or CLO must naturally overlap too. To understand how it overlaps, one must consider the broader perspective. Planned obsolescence and all of its understudies could not function to any degree without consumers. This is basis for the whole model. Consumers are in metaphorical terms, the Sun in our solar system giving life to planet Earth, which are the companies. If the Sun disappeared all of life would stop existing. This is the same for consumers and companies. Ultimately consumers control obsolescence. Consumers are ‘happy’ to buy, thus companies are only too willing to sell, and to influence sales. Nowadays though there has been a shift in the dynamics of consumer behaviour towards companies. Consumers now have the power and the means to influence their own buying behaviour and take an avid interest in deciding for themselves how and what they will purchase. People are no longer sucked in to weak advertising, consumers now demand what they want, and are in control. This is the key shift. The demand and control is now rooted in the hands of the buyer. And they are very much aware of their power. It no longer sits solely with the companies influencing buyers, but now buyers influence companies.

8.3 Defining Consumer led obsolescence (CLO)

To have an original theory extended, one must have a definition that is a “statement conveying fundamental character” (Unknown B 2013). Without defining the obsolescence models new addition then the proposal can be misinterpreted.

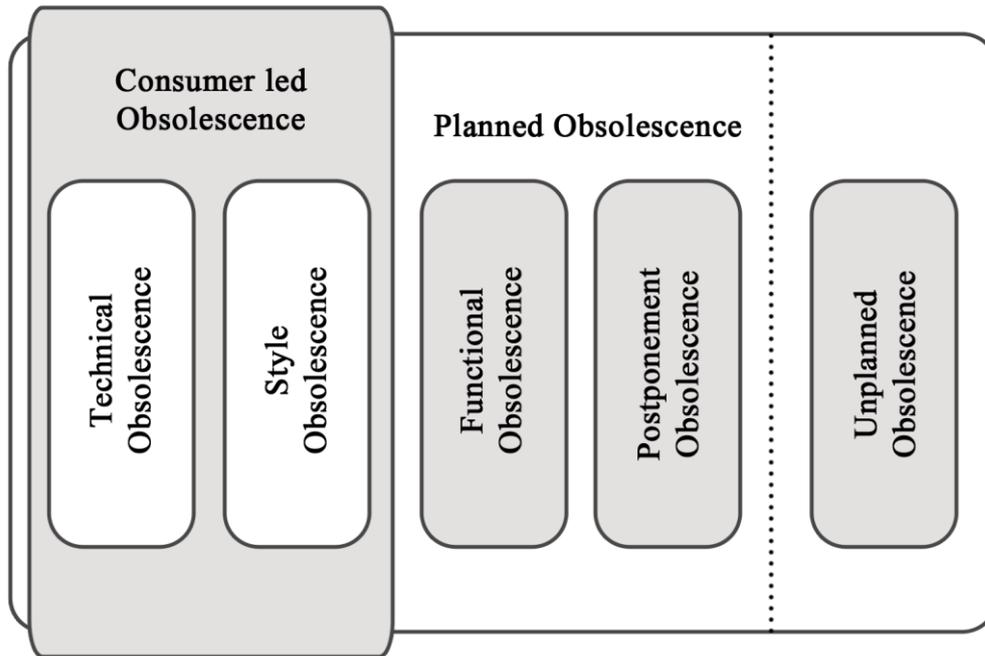


FIGURE 3. Extension of the original model to now include Consumer led obsolescence

The diagram in figure 3 visualizes the placement of the new heading. It states that CLO has a strong relationship and influence on technical and stylistic obsolescence but plays little part in influencing functional and postponement. The reason for this is, functional and postponement can only be a decision which is based principally with the company, whereas technical and style decisions can and are strongly based on consumer behaviour and authority.

The definition:

Consumer led obsolescence or CLO, is the consumers' conscious ability to influence what companies produce, through the use of social media and strong web presence, that push opinions through to the companies. Essentially consumers are in control of making products obsolete and deciding what features is advantageous in the newest versions.

8.4 The Future

CLO, has a strong presence in today's world, but in 5 or 10 years the idea could be nullified, or be even stronger than today. Social media at this point in time gives people a voice to be heard thus allowing consumers to be steadily in control. In this fast paced life of consumerism, things were different in the 1800's and before. People mended things, it was never a consideration to go out and buy a new product just because said item was malfunctioning. Of course in those days electronics were not what they are today. Current electronics are incredibly complex and not any laymen could consider fixing them. But we have got to a point now where, before the product has even stopped working, one wants to change it for a new model. In an increasingly unsatisfied and more affluent world of today, consumers are looking to tomorrow. Companies have created modern societies that are commonly unsatisfied unless they have the best and newest model. The original idea of planned obsolescence was for "from the customer's desire to own something a little newer, a little better, a little sooner than is necessary" (Stevens 1960). And today that phrase is as true as can be. The manipulation to change a mindset intent on owning a product for a lifetime and not years was a difficult transition. As soon as some consumers were seduced by the marketing the of having a newer, classier, more stylish product that fitted one's lifestyle that bit better led to other consumers inevitably following the 'smug factor'.

The idea that consumers are leading companies to create products of their choosing may have been the whole point from the beginning. Needless to say, that it makes it a lot easier for a company when they inevitably know what a consumer desires. But what if now that the consumers are in charge and aware, that in the future they decide that this needless spending to please themselves is an unnecessary luxury. Either companies will have to abandon a very lucrative model and change back to the older and much more modest approach to consumerism. Or alternatively they will have to begin the life cycle of planned obsolescence again; with intense marketing on the most influential audience. Currently the idea has not been full circle and may still be in its infancy, but one must suspect that the culture of obsolescence and unnecessary waste can only last so long before it defaults.

As CLO is still in its infancy as well so it may be some time before there are any common decisions by consumers to change their mindset from what it is today to the more modest and humble pre-1800 attitude. The one way in which the situation may change rapidly is if economic circumstances change, and consumers are forced in to thinking differently; at the moment however people are more than happy to have the newest, the more functional and the better than before product.

9 ENVIRONMENT

In recent times, environmental issues have been the topic of debate by any number of newspapers, magazines, politicians and pretty much any laymen with an inkling of current knowledge. The environmental discussions are usually stemming from the shadowy topic of global warming depending on which story one is to believe or indeed follow. However, man-made global warming does link heavily with the topic of this discussion of e-waste.

As we discussed earlier the mobile phone industry and nearly every computer based industry (including tablets) is growing heavily as we are most probably in on the steep upward climb to maturity in the age of computing. According to Wikipedia an average of 87% of the population owns a mobile phone. This figure however is incorrect as it bases the figure on no single person owning more than one phone. But still, this figure is indeed interesting. The figure suggests that there are just over 6 billion active mobile phones in the world.

In 2011, 66 million tablet computers were sold (Unknown C 2012) and according to Gartner the world's leading information technology research and advisory company, sales are expected to double to 119 million in 2012 and 182 million in 2013(Pettey & van der Meulen 2012).

Even with these 2 relatively small items I have worked out that if the average light weight mobile phone weighs 200gms and 6 billion are on due course to become obsolete then they will weigh 1,200,000 tons which is around the weight of 10 cargo ships. The obsolete tablets will weigh around one cargo ship. This figure is sure to go up with the popularity of these products.

9.1 Consumer strength with Environmental issues

It can be very easy to be critical of companies if you are to believe the many documentaries and newspaper articles focusing on the topic of companies not being

'green', which in truth is an issue for a lot of consumers. Most companies' now-a-days follow a code of conduct regarding green issues and it has become a corporate responsibility for larger companies. These companies if asked and to answer truthfully would probably avoid being green, being green is expensive it is a cost that many companies would like to avoid but an example of this and how consumers have now a lot of power over companies is made clear. But first we must understand a term and system which has received a lot of backing and becoming a standard to which companies should follow; it is called EPEAT or Electronic Product Environmental Assessment Tool (Green Electronics Council 2007). It is the environmental rating system for electronic products. Apple were originally a member of this green scheme which rates products on how environmentally friendly they are. Nonetheless Apple decided that this was not for them, they left the system leaving none of their products to be rated by EPEAT anymore. Apple were unaware this would cause such an issue. This did cause an issue however, "government agencies, schools and scientists" (Arthur 2012) put a huge amount of pressure on Apple to reconsider their decision. "The city of San Francisco announced that it would stop buying Apple computers" (Arthur 2012). This was enough for the senior executive of Apple to admit that they had made a "mistake" (Mansfield 2012) adding "We've recently heard from many loyal Apple customers who were disappointed to learn that we had removed our products from the EPEAT rating system. I recognise that this was a mistake. Starting today, all eligible Apple products are back on EPEAT" (Mansfield 2012). Maintaining that "our commitment to protecting the environment has never changed, and today it is as strong as ever" (Mansfield 2012).

With the huge pressure from consumers and politicians Apple went back to labelling their products with rating from EPEAT.

9.2 Toxic E-Waste

Electronic products and particularly mobile phones have extremely short user life span; they are very quickly discarded once marketing has taken control and activated the need to own the newest model. Universal gadgets and electronics such as televisions and phones are owned by "90 percent of the population, and are creating unmanageable

mounds of electronic waste each time they are thrown away” (Slade 2006, 264). But an issue that has not been addressed as yet but must be, for one to recognize the dangers of e-waste. Some products contain high levels of permanent biological toxins (PBTs). Arsenic, lead, nickel and zinc are most common. (Slade 2006, 264). As yet companies haven’t done enough to stop such chemicals being present. So what are the alternatives to prevent such dangers from such prosperity?

9.3 Environmentally friendly obsolescence

Planned obsolescence was created to increase wealth and enforce a capitalist approach. But there is a downside too. The environment has become an issue that is hard to ignore, and one that has to be addressed if products such as phones and TV are to be discarded so readily. Companies are ultimately responsible for creating a change. E-Waste, today is excessive, but if the products were made with environmentally friendly materials or had materials that could be reused, then there are no reason why this manor of purchasing couldn’t continue. The waste would either become a second degree commodity with value of its own or alternatively become a safe, environmentally friendly, waste product. Unfortunately, little has been done to boost this idea, as dealing with the waste is not a profitable business, as yet.

If consumerism is to continue its growth, but the environmental issues to take a positive turn for the better, then things have to change. Once it has, obsolescence can become a topic with very few negative connotations. It can then be praised with influencing the economy and improving technology for the better with no shame of damaging the environment.

10 CONCLUSION

The purpose of this thesis was to understand and elaborate on the principle of planned obsolescence. The reason behind the usage of built in obsolescence, but predominantly, on how the method could be extended to fit the modern approach to society's norms. Each avenue of planned obsolescence was discussed and corroborated that the theory must be expanded in some respects and to update it. This thesis also examined what psychological methods are used to enforce and to aid consumers in obsolescence. Lastly, the waste that is occurring due to the incessant purchasing was discussed and questioned whether obsolescence is worth it.

Commitment and Consistency, Scarcity, Social, and lastly Ego were the four heading chosen to meet the persuasive needs of obsolescence. Each heading enlists an idea which manipulates the consumer in to purchasing by either subconscious or conscious techniques. Commitment and Consistency and Ego are predominantly a side-effect of buying in to a company product. Scarcity and Social are the most influenced by company marketing.

Consumers, now more than ever, have a voice. This voice is stronger than it has ever been, due to the strength of the internet. Facebook, Twitter, blogs and internet forums give consumers a way of expressing feelings that can be heard by anyone. Companies have woken up to the power of this social stronghold, and are now willing to listen. Consumers are well aware of this power and are becoming the manipulators and the enforcers of ideas to aid and guide companies in the right direction, if they are willing to listen.

This change in dynamic, from companies enforcing obsolescence on consumers to consumers now dictating their own paths to the companies, is a fresh concept. Each method of obsolescence, be it, technical, stylistic, functional or otherwise, still holds a strong regard in a capitalistic and consumerist lifestyle, but consumers are now beginning to have the last word. Consumers now dictate themselves for when they will

make their previously own product obsolete, with little aid from company pressure. This switch has been named Consumer led Obsolescence or CLO.

With all this, arguably, over purchasing, leads to impressive amounts of waste that has to be discarded; waste that has become hard to ignore by the sheer quantities. This waste is not being dealt with particularly efficiently and the products that are being created are not made to be safe when discarded. Many products hold toxins and chemicals that when left to decay is dangerous to the environment. If companies fix the issues of dangerous chemical and also environmentally friendly disposal of products, then there is no reason why obsolescence isn't a strong viable capitalist dream. It just needs to be environmentally modernised.

11 DISCUSSION

This thesis, although great to write at the end, was difficult to start. It has taken about a year of work. The preliminary goal was to be finished in less than 5 months but the time was extended when the writing led to a development in the methodology. Finding literature that aided the writing of this subject was difficult. Many writing were over opinionated and there was little works written by published scholars.

I decided on this topic to write about, as I had seen an old documentary explaining the subject. It interested me so much that I thought I could work with the idea and perhaps expand it in to a modern theory. Before I watched the documentary I knew nothing of the topic, other than believing it could go on. I didn't really comprehend the enormity of the concept and the influence it has on today's culture. The research was very enlightening and I learnt a great deal from writing about this topic.

As I already stated, the thesis started slowly. I found myself hitting dead ends and I could work out which route I wanted to follow. About half way through the time of writing this thesis, I had a breakthrough. I noticed what the topic was missing; Consumer led obsolescence. This allowed me to focus my thesis and not create something that was solely written from research that was found. I never had a commissioner for my topic as I felt that this would be too restricting and would allow for creative thinking. Had I had the option to write this thesis again with a commissioner, I believe that I would still choose to work alone.

Many things made me struggle to write this thesis; lack of strong literature, my own casual approach and mainly the lack of obvious direction to go. If I was to do the whole thing again though, the main thing I would change is, understanding of not to get too overwhelmed by the whole thing. Writing this started as a struggle but it led to a stronger and better work ethic and a much broader knowledge on a topic, which I believe is of interest to many people.

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