Obsolescence in Information and Communication Technology: A Critical Discourse Analysis

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Abstract. Responsible production and consumption is one of the United Nations' Sustainable Development Goals. *Fast Tech*, resulting in premature obsolescence, is perceived as an important factor in unsustainable production and consumption patterns of information and communication technologies. In order to investigate societal perspectives on planned obsolescence and its root causes in Norway, we implemented a critical discourse analysis of the Norwegian written media. Technology discourses are often inspired by particular understandings of technology-society relations. We therefore mapped our findings on Andrew Feenberg's four theories of technology. All articles presented a critical perspective towards the phenomenon of obsolescence. The majority of articles expressed an instrumentalist understanding of technology as the cause of planned obsolescence, while the rest communicated technological determinism as the main worldview underlying planned obsolescence. Both instrumentalist and determinist understandings of technology are based on the understanding that technology is intrinsically neutral and can be used for good or bad ends. We argue that this *technology is neutral* perspective can undermine the development of policy and design interventions that can contribute to sustainable technology. A thorough engagement with the politics of technology is needed to reach the goal of responsible production and consumption.

Keywords: Norway, Planned Obsolescence, Slow Tech, Theories of Technology.

1 Introduction

The term obsolescence means different things. Focussing on products, we can understand obsolescence as products breaking down prematurely, becoming out of date or just not used anymore. There are different forms of obsolescence [1, 2], but this paper is mainly concerned with planned obsolescence, the "deliberate curtailment of product life spans" [3], which is often discussed in the context of unsustainable production and consumption. *Responsible consumption and production* is one of the United Nations Sustainable Development Goals [4]. This goal aims, among others, at "doing more and better with less, increasing net welfare gains from economic activities by reducing resource use, degradation and pollution along the whole lifecycle, while increasing quality of life" [4]. Within this discourse, the planned obsolescence of ICT

is based on a critical theory of technology, e.g. [5–7]; societal interventions to extend the lifespan of technology are perceived as both needed and possible.

According to Wyatt [8], technological determinism, rather than critical theory, is the dominant understanding of technology. In this perspective, society has no power over technological developments and their direction. In this paper, we will explore this apparent disparity between accounts of planned obsolescence and technological determinism by analysing texts on planned obsolescence in the Norwegian written media until the end of 2017. We will analyse these texts to bring out the main themes as well as the perspectives on technology underlying the discourse on planned obsolescence, in particular the relation between technology and society.

Feenberg's philosophy of technology forms the basis for understanding the relation or intersection between technology and society [9]. His approach identifies four dimensions of technology: autonomous (A) vs. human controlled (H) technology and neutral (N) vs. value-laden (V) technology[1], [2] (see Fig. 1):

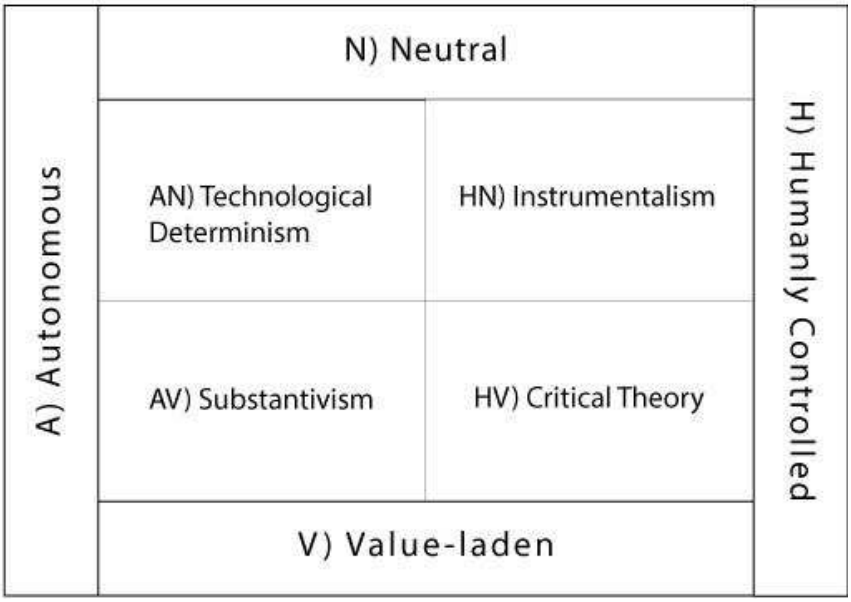


Fig. 1. Feenberg's model

- Autonomous technology (A) has a unidirectional strong effect that is not or only minimally mediated by other factors (such as society)

- Humanly controlled technology (H), in which society has a unidirectional strong effect that is not or only minimally mediated by other factors (such as technology)

[1] [10] p. 45
[2] [11] p. 9

- Neutral technology (N) can be used for good or bad – there is no connection between means (technology) and ends (our goals)

- Value-laden technology (V), in which there is an intimate connection between means (technology) and ends (our goals).

The four dimensions intersect and form a 2x2-matrix with the couples AN - Determinism, AV - Substantivism, HN - Instrumentalism and HV - Critical Theory. Deterministic theories of technology "minimize our power to control technical development but consider technical means to be neutral"[3]. Substantivist theories of technology share this "scepticism regarding human agency but deny the neutrality thesis" [ibid.]. Critical theories "affirm human agency while rejecting the neutrality of technology" [ibid.]. Instrumentalism asserts "both the possibility of human control and the neutrality of technology" [ibid.].

In this paper we will map discourses of obsolescence on these four theoretical frameworks. We envision that this will enable a better understanding of where planned obsolescence is located in the intersections of technology and society, thus contributing to future policy and design interventions that prolong the lifespan of ICTs and that can contribute to sustainable consumption and production.

2 Background and Methodology

In 2014, Patrignani and Whitehouse [12] called for the establishment of a Slow Tech movement. It was inspired by the Slow Food movement, founded in 1989 in Italy, a grassroots organisation, which proposed to reverse the effects of fast food[4]. In analogy to slow food, Slow Tech is not a "technology that is slow", but a concept that makes people "reflect, stand back, and consider" (ibid.). Patrignani and Whitehouse state that within computer ethics, a more proactive attitude has to be cultivated, which produces ICT that is good, clean and fair [12]. The approach is a holistic one, since it questions the complete value chain of ICT development and production [ibid.].

An example of today's "fast tech" is the smartphone, which is replaced on average every 18 months[5]. Such *fast consumption* is often based on a *fast pace of technological development*, which results in premature obsolescence [13]. Patrignani and Whitehouse emphasize that we "need to re-appropriate the pace of technological development and overcome the traditional view of "technological determinism" (Davies, 1997)"[6]. The Slow Tech movement thus "signals a departure away from the traditional position of technology push and from the mantra that technology is driving the future"[7].

[3] [11] p. 9
[4] [12] p. 82
[5] [12] p. 84
[6] [12] p. 89
[7] [12] p. 81

Patrignani and Whitehouse argue that "computer ethics have to become a tool to steer computing innovation constructively in a responsible way, and not simply a tool to compensate or fill a policy gap. This is a form of responsible innovation that places human beings, society, sustainability, the environment and planet as essential."[8]. They thus place the Slow Tech movement firmly in the Critical Theory quadrant of the theories of technology matrix. Their call for policy innovation is based on a perspective of technology as human-controlled and value-laden – thus opposing the technological determinist position.

2.1 Mapping obsolescence discourses

What types of understanding of the relationship between technology and society are underlying Norwegian public discourses on planned obsolescence? We employed a Critical Discourse Analysis (CDA) of written publications in the national media on planned obsolescence. Discourse analysis sees language as social practice; language or discourse is socially constitutive as well as socially conditioned [14]. CDA has a transformative component; by making the interconnectedness of things visible, CDA can be "a guide for human action", contributing to "producing both enlightenment and emancipation"[9]. The purpose of our analysis is to reveal the different discourse positions or ideological locations of these publications, in order to evaluate to what extent these positions do justice to Patrignani and Whitehouse's Slow Tech movement.

Inspired by the work of Sommervold [15], we selected *the critical discourse and dispositive analysis* method developed by Jäger [16]. This approach enabled us to identify the ideological discourse positions of the authors and their texts and to map these positions onto Feenberg's theories of technology matrix.

Our analysis is also inspired by Jaeger-Erben and Proske [17], who implemented a discourse analysis of planned obsolescence in German national and regional newspapers from the last 30 years. It revealed over 200 articles matching the terms "obsolescence" or "product lifetimes". They found that broad media coverage of obsolescence started in 2011, coinciding with the release of the film documentary "The Light Bulb Conspiracy"[10]. Jaeger-Erben and Proske present some first insights from their ongoing analysis, where they emphasize that consumers mainly attribute responsibility for, and power over, the lifetimes of products to product developers/producers and do not question their own practices of usage and disposal. Furthermore they show how products remain passive in their examined articles, appear as only objects for projections, whereas they would like to promote the materiality in the practices of consumption more. Jæger-Erben and Proske do not implement a form of mapping in their study, but their proposed design scenarios to stimulate longer lasting products form an important part of the overarching objectives of our research project.

[8] [12] pp. 81–82
[9] [14] p. 10
[10] [17] p. 182

3 Critical Discourse Analysis

3.1 Method

In our study, discourse is the flow of the societal knowledge about "planned obsolescence" gained and stored over time, determining individual and collective doing and/or formative action shaping society. Discourse exercises power[11], as it transports "knowledge on which the collective and individual consciousness feeds"[12]. In conjunction with our overarching research project, which is concerned with the transformative change from designed obsolescence to sustainable technology design, the topic of obsolescence can serve as example for a dispositive. A dispositive, as Jäger (citing Foucault) calls it, is the interplay of the elements of discursive practices, non-discursive practices, and so-called manifestations/materializations[13]. At the heart of this dispositive is the reconstruction of knowledge in the discursive practices, which builds the foundation for further investigation into "gaps" in the discourse, underlying non-discursive practices (unspoken, unwritten, embodied knowledge of doing), and underlying established or emerging manifestations (materialized knowledge, here designed technology and its lifecycle), that have to be reconstructed[14].

The data acquisition for the discourse analysis took place in *Retriever Atekst*, the Scandinavian media (newspaper, web, television, and radio) research database. A rough first search with "planlagt" and "foreldelse" or the English equivalents "planned" and "obsolescence" as key terms, gave a huge data set of mostly newspaper articles, which included articles that dealt with planned crimes and the legal limitation period (a valid meaning of the Norwegian equivalent for obsolescence). With the exact search phrase "planlagt foreldelse" (and/or "planned obsolescence"), these connotations where successfully excluded from the search result. We expanded the search with other compositions, including either "obsolescence" or "planned". Among them were "innebygd foreldelse" (build-in obsolescence) and "planlagt/kortere/forkortet levetid" (planned/shorter/shortened life-span). This resulted in a body of 70 articles.

A second round of filtering was implemented by a more superficial reading of the Norwegian articles, deciding if the phenomenon *planned obsolescence* (PO) was discussed in depth or mentioned only once, but with (some of) its implications for society, economy, politics discussed. If the PO was just mentioned casually, or in a context that did not fit the above, the article was put aside. This second round resulted in 16 articles for further consideration in the actual discourse analysis.

We applied Jäger's set of analytical guidelines for processing the 16 articles[15]. The coding, in the form of a categorization strategy, was performed with the help of prepared tables for note-taking and comparison. Thus, each article was analysed in several categories: 1) institutional framework or context, including author and cause of

[11] [16] pp. 33–34
[12] [16] p. 38
[13] [16] p. 38
[14] [16] pp. 59, 62
[15] [16] pp. 55–57

the article; 2) text 'surface', including layout and structure of the article; 3) rhetorical means, including argumentation strategy, players, references; 4) ideological statements, including perspectives on humans, technology, society and the future; 5) other striking issues; 6) summary; and 7) concluding interpretation. The following section is organized in the same manner (category 1 to 4), directly followed by the discussion of the results.

3.2 Results

Characterization of the newspapers. The first step in processing the acquired data focussed on a general description of the media, which in this case is the national press in Norway, and its place in society. The newspapers included in the analysis are the major nationwide daily issued newspapers Aftenposten, Dagbladet, Klassekampen, VG (Verdens Gang) and the weekly published Morgenbladet (all with their headquarters located in Oslo), the regional newspapers Fædrelandsvennen, Fredriksstad Blad, Østlandets Blad, and the news magazines with certain thematic focus Norske Le Monde diplomatique (monthly international news magazine), Harvest (weekly nature/people/environment magazine) and Teknisk Ukeblad (monthly technology magazine). All newspapers define themselves as politically independent; since 2010, no Norwegian newspaper has been sympathising openly with a certain political party [18].

Institutional framework or context. The media coverage of planned obsolescence started in the early 2000s. At the time, the phenomenon was not yet called planned obsolescence, but was described through terms such as "short life-span". After two relevant articles in 2006, the term "planned obsolescence" started to surface with one article in 2010 ("Made to fall out of its hinges"), in 2011 ("Products that last"), and in 2012 ("A well-documented conspiracy"). The increase in media-coverage coincided with the broadcasting of the documentary film "Pyramids of Waste" (also called "The Lightbulb Conspiracy", by Cosima Dannoritzer) on Norwegian TV. In 2013 and 2014, several articles with headings like "Time for something new, you think?", "Breaks down as planned" as well as about the sharing economy, alternative economic models or the circular economy followed. In 2015, there was a noticeable low on media coverage of obsolescence, while 2016 was the year in which Apple was discussed in terms of product life-span, a new repair culture developed, and debates about smartphone swapping started. In 2017, alternative solutions, such as the circular economy, EU-regulations, and the repair culture in Norway gained attention.

Six of the selected articles were *written by* journalists employed by the newspaper. Three articles had no author mentioned and were obviously written by the editorial staff at the newspaper. Three had freelancer or regularly writing columnists employed for the article, among them was one philosophy professor; two articles were reader's letters by one writer/author and students; one article was written by an industrial designer, and one article was authored by a spokesperson of a political organisation (see Table 1).

Table 1. List of newspaper articles used in the Discourse Analysis

Nr.	Title	Publication	Year	Author
1	Speculation in the warranty period	Fædrelands-vennen	2006	n/a
2	A mobile phone shall last for five years	Teknisk Ukeblad	2006	n/a
3	Made to fall out of its hinges	Klassekampen	2010	A. Thodok Eriksen
4	Products that last	Østlandets Blad	2011	C. F. Haugfos, B. A. Mong, O. Fosse, I. K. Kann
5	A well-documented conspiracy	Dagbladet	2012	Ø. Wyller
6	Time for something new, you think?	Fredriksstad Blad	2013	T. Skjeklesæther
7	Breaks down as planned	Aftenposten	2013	A. Mauren
8	Own or share?	(Norske) Le Monde diplo-matique	2013	M. Denoun, G. Valadon
9	A radical idea	Klassekampen	2014	A. J. Vetlesen
10	Apple: Most people change their iPhone after three years	VG Nett	2016	Ø. Larsen-Vonstett, A. Støren Wedén
11	A new mobile phone every year?	Dagbladet	2016	L. Nøst
12	Will it be white Christmas again?	Harvest	2016	L. Julsen, K. Østli
13	A fix idea	Morgenbladet	2017	B. Stenvik, C. Belgaux, K. Hustad
14	This is how the EU wants to stop planned obsolescence of elec-tronics	Teknisk Ukeblad	2017	n/a
15	Everything can be repaired	Aftenposten	2017	B. Stærk
16	Technology companies reprimanded for mak-ing things that need to be replaced often	Aftenposten	2017	K. Hanssen

Most of articles had a particular *cause* or reason why they were written. Seven of the 16 articles were published shortly after a documentary on planned obsolescence was broadcast on national TV, after a governmental/parliament press release, a re-port's publication, a sentence at court, or a company's marketing release. Others were inspired by a reflection over community events, meetings with experts, record-breaking technology, and the latest trends in European economy or climate change.

Several of the articles appeared in the 'debate', 'reader's opinion', 'comment' or 'chronicle' section, while some were published in the economic, general news or culture section. The articles tended to be published on pages with a rather high page number, at the best page 3 or 4 was reached.

Text 'surface'. The *headlines* were often significant and promising and thus certainly a criterion for inclusion of the article into the analysis. If a headline was not promising on first sight, but amongst others discussed obsolescence, the article's plot was often embedded in a range of other discourse strands (see Rhetorical Means below). The articles' headlines can be grouped into a first category, showcasing obsolescence by using "break" (and synonyms/idioms of that) or "last" in the title (2, 3, 4, 7). The second category applies the word "new" in conjunction with a question mark or some form for "exchange" in the title (6, 10, 11, 16). In the third category, terms such as speculation, conspiracy or planned obsolescence itself are used (1, 5, 14), and the last cluster exists around the term "fix/fixed", meaning repair or restoration (13, 15). The remaining headlines point to higher-level topics and/or give little hint, that the phenomenon obsolescence is discussed.

For the majority of articles, the *layout*, in terms of pictures and text-setting, was made up of a picture/illustration of some kind followed or surrounded by text in one or several columns. Nine of the articles showed realistic photographs of objects/scenes, the others illustrative comic-style or symbolic drawings, one a map and graphical sidebar information, and one used a photomontage to convey the message. The lightbulb was often used as a symbol for either short-lived products/a conspiracy image, or for energy/the earth/globe and in double meaning for an idea. At least five of the articles also pictured their author in a small portrait, next to the text.

The *themes* of the articles can be expressed in a wide range of key-words and -phrases, which can be clustered for to represent six bigger thematic blocks. Starting with the core theme-block about life-span of technology and related, the next block concerns break-down and disuse of technology and its different forms. These are followed by throw-away-mentality and overconsumption themes together with the block about environmental crisis and other consequences. The last two theme-blocks concern longevity of technology in its different forms and the themes economy/economic systems.

Rhetorical means. As mentioned earlier, the main plot of some articles was embedded in a range of other discourse strands. This means that the main theme in the text, in our case planned obsolescence (PO), is described by addressing several themes and referring to other strands of discourse. These could concern a wide range of environmental issues, climate change, sustainable consumption in general, economical models or alternative work-life models. Less strong entanglement with other discourse strands was found in articles, which, for example, presented personal experiences with broken technologies.

The *argumentation* in the articles often had the same structure: one or more example(s) in the beginning, then PO would be explained, and the consequences, implica-

tions or counter-activities for individuals or societal structures elaborated. If obsolescence was presented in its larger context, first the whole scene was described and then the different aspects narrated and compared. Planned obsolescence or a similar phrase appeared most often only once in the first third or half of the text with a constricting effect on the argumentation.

In terms of *references*, the authors often drew on either none or a lot of different experts (interviewed for the purpose of the article) or sources of public/academic knowledge, one article had footnotes for an easier overview. Examples for experts/sources included are political scientists, philosophers, economists, marketing managers, industrial designers, technology researchers, and representatives of organizations like Greenpeace Norway, Future in our Hands, Restarters Oslo, Norwegian Consumer Counsel, Norwegian second hand store chain Fretex and Norwegian TV broadcaster NRK. One author (of a 2017 article) was included as an expert in a 2016 article, which highlights a new continuity in the discursive practice.

When reflecting about *implications and insinuations* across all articles, this can be summarized with the phrase "critique on PO is a matter of...", although not all articles expressed a clear critique. For some of the articles, critique of PO is a matter of 1) taking repair(ability) seriously or in one's own hands; 2) self-reflection, enlightenment and passive opposition/ignorance, 3) awakening from the magic aura around technology, 4) awakening from the addictive economy of innovation, 5) not giving in to profit-orientation, 6) implementation of longer-lasting products together with a change in societal attitude, 7) demanding longer-lasting products using consumers' purchasing power ("voting" with the wallet, market pull vs. technology push). In addition, critique is a matter of 8) reforming the/strengthen of regulation in the economic model or radical political uprising on a system (macro-) level, in which critique spreads out to overconsumption in general rather than a focus on PO.

In between these ways of thinking we would locate one article's implication, that 9) legislation and the judiciary in PO-cases showcase how wicked the problem and critique on PO can be, since success of regulatory efforts is restricted and (becomes) part of the problem. Yet another article has no take on critique towards PO, the implication there is, that consumers would have no stimulation to require any longer-lasting technology, for the simple reason that they (always) find themselves in the average group (3-4 years useful life of an iPhone for example) and are thus comforted.

Ideological statements. The general *perspectives on humans* across the articles is complex: the consumer is regarded as a little naïve, either in need to be informed about, or not sure about, life-span/PO facts; humans are seen as basically good-natured, being lulled by "magical" technology, thus not acknowledging the facts about PO. Other articles state humans are certainly aware of the facts about PO (in electronics).

Another view on consumers and producers in the articles is that of being "homo economicus". On the one hand, producers are seen as profit-oriented and consumers are prompted to be more «homo economicus»-like and make use of the same weapon, i.e. their purchasing power. On the other hand, humans are seen as being differ-

ent/diverse individuals, not «homo economicus», but rather «hard to read». Several articles reside between these two positions; humans are thus described as seeing themselves in good company with most of the other members of society, doing business-as-usual, being a bit prone to reject responsibility, and being not political enough.

The *perspectives on society* are often based on conflicting values between consumer and producer. When consumers and producers exercise their rights, in court for example, there are compromises found that show the power distribution between the corporate sector, the legislation/judiciary, and the user. Some articles perceive society as seemingly having control over technology/PO through consumer rights regulation, lawsuits and the like. This is particularly valid, when the members of society see themselves in good company with each other and agree on what "average" or "normal" means. Others regard society in more complex categories: ignorant (for example not so open in terms of providing information) or informed producers and ignorant (wasteful) or informed consumers. Others perceive society as a group of individuals, who do not (yet) act according to what they know/have insight in, or who are not "willing" to know. Several articles value the role of experts (for example professional repairers) as having a broader understanding of PO and the knowledge for intervention. Furthermore, in some articles, society is little valued in terms of being able to create a market pull (demand-side) against PO or in terms of result-oriented or executive political power.

The *perspectives on technology* vary across the articles. For a few, technology is a mere means to an end (tools, instruments for users) and is seen to have a "natural" degradation course. Others see technology as constantly innovated, pushed by business. Several articles transmit a view of technology as being unfortunately *the* outcome of the invisible hand of the economy and outside human control. They enumerate attributes like over-elaborated, "gadget"-like, stifling, marginal innovative, not adapted to the user or as automation taking people's jobs. In addition, the growing consumption of technology is related to a too low rate for proper recycling and to the high rate of energy, resources and work contained in consumer technologies.

Several articles convey the message that technology often is a black-box, though some notice it is easy (and not so magical) to repair in order to prolong the life-span. In these articles longer-lasting or even ever-lasting technology is mentioned as having been "out there", either from before the high-tech-age (mechanical) or since the high-tech-age began (just missing a market pull on the contrary to a technology push). Ever-lasting technology is also seen as existing in theory and its existence "in practice" is dependent on a society-level attitude change. In other articles the view on longer-lasting technology is a bit double edged, as authors wonder if it really is expedient to stick to "older" technology, not profiting from innovation and future efficiency gains.

The *future perspectives* in the articles can often be formulated as an if-else clause or an if-not-then phrase. Most of the articles draw a picture of the future as being dependent on a change in planned obsolescence and overconsumption, otherwise earth, as the living basis for humankind, would be severely compromised. So *if* everyone repairs /changes the attitude towards the old stuff, and/or *if* everyone awakens

from the urge for the newest, and/or *if* we recognize the urgency for finding majorities/critical masses towards a change, and/or *if* the economic system can be changed substantially to zero-growth, *then* the living basis - the earth - is saved, and/or humankind was not too late to get up pace towards a critical mass, and/or crisis in form of negative growth will not take over.

On the other hand, there are several articles conveying a wait-and-see perspective or they leave it up to the reader what might happen afterwards. In these perspectives mostly the inner-societal competition between different stakeholders is considered key to whether and how to deal with the phenomenon PO. Hereunder fall the views that the future of PO might be a judiciary compromise, regulation might confine the product life-span/PO issues, or the future would be up to the consumers, using their purchasing power to counteract PO, while no urgency level is given other than that of the individual's ambition. A few would also let the reader decide whether appealing to the competitive instinct of companies, especially in Corporate Social and Environmental Responsibility, will do the trick towards sustainability.

4 Discussion

4.1 Mapping technology perspectives on Feenberg's matrix

Figure 2 is a map of the different technology perspectives underlying the discussion of planned obsolescence in the 16 newspaper articles. The numbers refer to numbered articles in Table 1. The circles present the article's stance towards PO, while the hexagons represent the articles stance towards the root causes for PO. The map shows that the majority of articles express a critical perspective on PO. They express the need to change the current situation in which PO plays a dominant role in what has become the consumer society with its obsession for growth. These articles discuss several solutions to counter PO, such as using products as long as possible (lifespan), knowing the relative purchasing power and using it wisely; new regulation and active use of the Norwegian Consumer Act (warranty up to 5 years for electronics); change in business models (sharing instead of owning, lowering retail-prices for repair, circular economy); and product design that invites to a longer lifespan (repairable products, circular products).

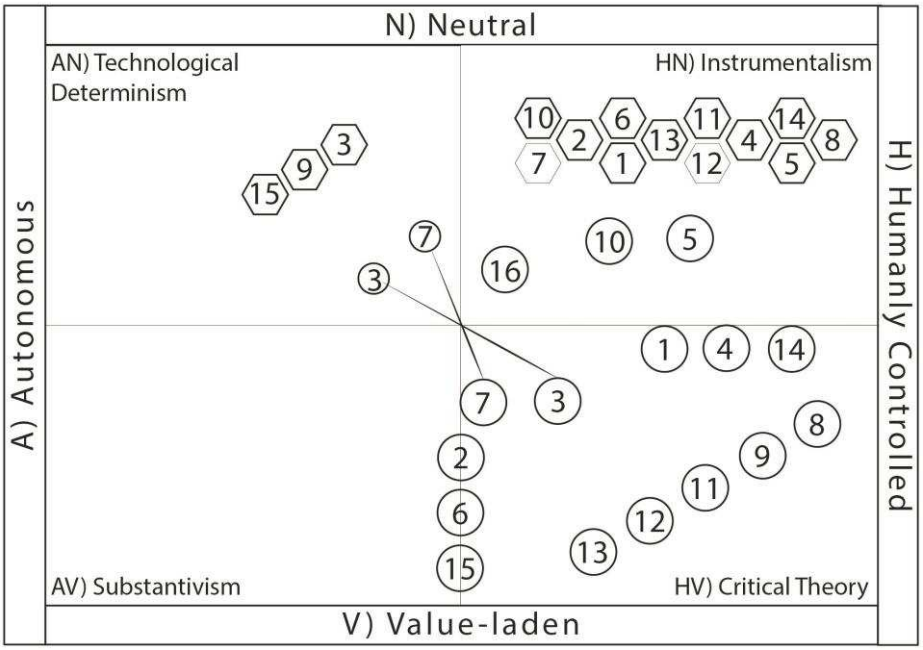


Fig. 2. Mapping of articles

Some of the articles (2, 6, and 15) can be found on the overlap between Critical Theory and Substantivism. This means that these articles reject PO, but don't see real possibilities for change, because technological development is only minimally mediated by society. In article 15 it is expressed as "frightening, that designers not only know to design for purchase but also for throw-away", where the author wishes back nostalgic mechanical rather than electrical products for to last another 50 years.

Three of the articles (5, 10, 16) express an instrumentalist perspective towards PO, arguing that this is business as usual: the technology push of PO is stronger than the market pull of products with a long lifespan. From article 5 the according mantra can be read "a satisfied consumer is not economically profitable".

Two articles (3, 7) overlap between Critical Theory and Technological Determinism. This means that these articles reject PO and at the same time keep being fascinated by technological development driving the future: In article 3 it reads "economy as is, needs growth, it is not stable because of its positive feedback-mechanism", whereas political reforms towards zero-growth are proposed later and contemporary critique on PO is denounced as "moral barking". Article 7 shares the opinion that "electronic consumer goods are about constant new products or technological functions, with cycles of <1 year it is then just logical not to make these long-lasting", whereas deploring that this same "greed culture" could "suffocate society".

In terms of mapping the root cause(s) for planned obsolescence, most articles are located in the Instrumentalism quadrant of the matrix. These articles describe these root causes as in terms of one of the characteristics of instrumental theory [9]. For

example, “To always buy the latest model, even if the old one still functions, becomes an attractive proposal, when someone else will benefit” from the old mobile phone. (article 11). Here technology is perceived as useful in any social context, they are not intertwined with local social arrangements. Article 9 mentions “the natural resource exploitation treadmill, which is based on the extreme idea of unlimited growth”. Here is the idea of unlimited growth, through its metaphor of the treadmill, which underlies the root causes of PO. The universality of economic growth results in conceptions that it will perform in every context (country, era, civilization) in the same manner. A similar perspective is found in article 13: “to measure a society’s success in economic activity”. In these economic perspectives, technology is perceived a neutral product, “indifferent to the ends to which it can be employed to achieve”[16].

4.2 Options for transformation and emancipation

Through mapping our analysis of Norwegian newspaper articles on planned obsolescence on Feenberg’s four main theories of technology, we showed that mainly critical perspectives in technology guide critiques of PO, while the root causes of PO are explained in instrumentalist terms, i.e., the products themselves are neutral, but human interventions created the PO. This outcome of our analysis is both a reason for optimism and for caution. Optimism, because there seems to be a real possibility for change: the majority perceives PO not as the characteristic of autonomous technology, but as the effect of societal intervention. Motivated by a strong belief in progress, almost all articles therefore discuss proposals to change the current state through other societal interventions. New regulation, repair, and consumers using their purchasing power wisely are often mentioned as future perspectives towards change.

There is, however, enough reason to be cautious about the options for change. Technological determinism, which perceives technology as an autonomous, neutral force, which serves humanity’s progress towards freedom and happiness [11], motivates several of the articles. What Instrumentalism and Technological Determinism have in common is the notion of neutral technology. As long as the dominant discourse on PO is informed by an understanding of technology as neutral, the values informing technologies remain invisible.

Our analysis points towards two conflicting positions contained in the articles, namely a critical perspective on PO and proposals that call for the transformation of technology and its industry on the one hand and an instrumental perspective when it comes to understanding the root causes for PO (and technology in general). Slow Tech, on the other hand, is based on the understanding of technology as the result of complex interactions with society, which is more in line with the critical theory perspective. Thinking of technology as a tool that can be used for good or bad is a powerful meme. We can therefore not speculate that the opponents of PO will embrace Slow Tech as a new meme.

[16] [9] p. 5

5 Concluding Remarks

Critical Discourse Analysis is an important tool in understanding discourses on planned obsolescence. It enabled us to bring out societal perspectives on planned obsolescence and what are considered ways for challenging or opposing it. Combining this analysis with Feenberg's theories of technology framework added an extra layer of results and analysis. We found that the idea of neutral technology dominates the discourse on where planned obsolescence comes from or how it is maintained. None of the proposed measures to deal with planned obsolescence is situated in a critical understanding of technology as politics by other means. The critical stances towards PO found in the Norwegian media are thus a continuation of the liberal idea that we can control technology for more acceptable ends. This lack of deeper engagement with the politics of technology forms the main obstacle to the change that is needed to fulfill the goal of sustainable production and consumption.

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