Rare minerals? Great laptops!

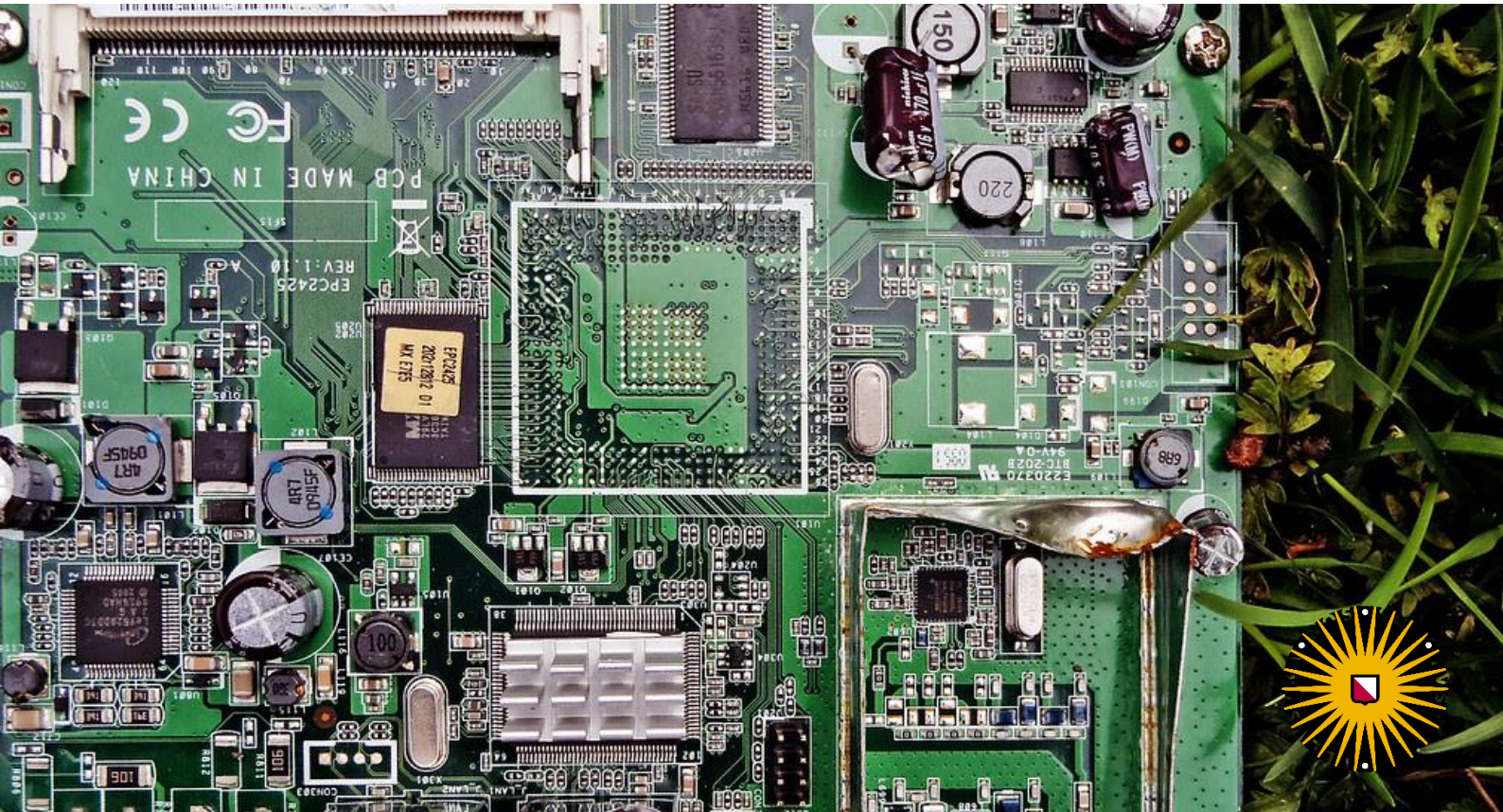
What we value in digital devices supports a capitalist system

Anke van Kempen 5686903

Master thesis for New Media & Digital Culture
Utrecht University
16th of July 2020 - 11371 words

Supervisor Dr. Ingrid Hoofd

e-mail: ankev@nkempen.nl



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ABSTRACT

The materiality of digital devices is heavily under-researched and under-mentioned within academia as well as in society. Researchers in geography and ecology have shown the importance of the topic yet the focus within new media studies is often on the possibilities of the devices and software instead. This shows a neglect of production processes that are often based in postcolonial and capitalist circumstances. The way we think and speak about digital devices impacts the material reality including production processes, energy use, waste disposal and human labour conditions. To understand how we value digital devices I conducted a critical discourse analysis based on Fairclough's (1995, 2013) perspective originating from Marxist thought. This allows me to understand to what extent the way we value digital devices is interrelated with a capitalist system. Focusing on the micro practices that are visible on platforms that recommend certain laptops over others in critical discourse study, makes it possible to understand the macro structures these are dependent on. Micro covers the smaller practices and utterances that are based in macro power structures like a capitalist system. My understanding is that we all participate in a reproduction of valuation. The way we actively value and revalue and therefore treat digital devices impacts the whole system. My analysis shows that the main discourse in the Netherlands shows a very capitalist way of presenting devices. Its most powerful platforms naturalise abstract, short-term, end-user focused attributes such as speed, capacity and looks whereas production circumstances are not mentioned. Even 'critical' platforms that review selling platforms are heavily entrenched in a capitalist way of valuation. Counter-platforms do show more ethical values and fight for people, environment and sustainability. There is a big gap between these ways of valuation that seems impossible to align. We need big changes, discursive and material, in order to change the current system. This thesis shows in which ways powerful consumer-focused media currently do the opposite and maintain the capitalist system instead.

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I want to thank my loved ones, my supervisor and study advisor, as well as the researchers writing in this underdeveloped field. You all, knowingly or unknowingly, supported me through this MA thesis journey.

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INTRODUCTION

Our society seems to ignore the physical, materiality of the things we use every day. We feel knowledgeable after a thorough online research on our new devices. Every day new dissections of laptops are presented covering connectors, types, drivers, warranty and motherboards. It feels as though we are in control of making the best possible choice by following critical recommenders like the Dutch Consumentenbond, Tweakers or Coolblue. Big tech sellers Apple and Samsung get top rates. However, the news on children working in harsh working conditions for these same Samsung and Apple (Reijerman 2011a; Schievink 2012), or the news about Apple's unsafe, inhumane work environments (Reijerman 2011b; Miltenburg 2012; Schellevis 2013) is not taken into recommendation criteria. Like Dutch newspaper Trouw recently mentioned about new generation batteries: people living in Democratic Republic of Congo (DRC) next to cobalt mines have to live with the hidden material aspects like water pollution, explosions and fighting for their home on an everyday basis (Haaij 2020). The iPad 2 mentioned in one of the articles still got a star-rate between 4 and 5 and a 9,5 out of 10, without any mention of explosions in their factory (Tweakers n.d.). In my opinion it should not be the case that devices made from rare minerals and created in factories with inhumane circumstances are presented as an A-quality product. Our current system of buying, producing and developing, and its volume and speed of resource flows needs to slow down. In the 2016 conference *Electronics get Green*, Maddy Cobbing et al (2016) specifically advise against purchasing and promoting the fast consumption of digital devices. They think it is scandalous that manufacturers provide little to no knowledge about the chemicals, resources and energy used in production (Cobbing et al. 2016).

Products' values become alienated from its source while capital compulsively seeks to reproduce itself on an expanded scale with additional biophysical wasting and new forms of value destruction (Knuth, Potts, and Goldstein 2019). On the other hand, there are platforms like Greenpeace and Ethical Consumer, trying to show a different side. To understand the struggle between values in device recommendations discourse I have done a critical discourse analysis of these platforms. The way we think and talk about technology has identifiable material force in everyday life. Recommendation platforms want us all, consumers, producers and distributers, to make good choices from different perspectives. Discursive practices from capitalist structure keep contributing to producing and reproducing an unequal social order through the accumulation of discursive capital (Angermuller 2018). That is why I will focus my analysis on valuation and to which extent the discourse's values interrelate with a capitalist system. "Through language, one always participates in valuation. And when we enter discourse, we should always reflect on what is perhaps the most existential good for us all, namely to be in a position of saying, thinking and doing things

which we value" (Angermuller 2018, 10). We need to pay attention to the wide world behind the devices we use every day.

It is important to mention that, in a way, consumers are held accountable to govern markets with their choices and reviews. Based on the information consumers can access, they are pushed to make 'good' and 'green' purchases and held responsible for production circumstances of the products that they choose. Soneryd and Uggla (2015) connect this line of reasoning to the field of consumer responsibility and the field of pro-environmental behaviour. The expectation seems that individuals should contribute by making adjustments in their everyday lives and, most of all, by being 'responsible' consumers (Soneryd and Uggla 2015). The DRC locals in the same Trouw article on cobalt mines also called on consumers to pressure tech companies as they do not expect anything from their government (Haaij 2020). While there is a lack of research and incomplete information on devices, these consumers depend on information in our current knowledge economy (P. Graham 2000). But how can people be responsible if they are not able to find out the processes behind certain products? As Taffel (2015) argues, the production process of digital devices especially is comprehensive and often complicated and opaque. It can be hard to think outside our taken for granted structures (Brand and Wissen 2012).

How we think about the materiality and immateriality of a device relates to the demands we make on its generation and disposal. I will walk the reader through my analysis of what values are produced, propagated, and transformed in digital devices recommendation discourse and what this means for our relations to the world and people. Firstly I will present my Theoretical Framework to show the need for academic expansion on the topic. Then I will analyse how parts of digital devices are valued within the discourse, and if not valued, what else is presented as more valuable instead. The methodology I use sees texts as materially enacted practices that are part of patterns of ideas and meaning in the world. It allows for a thorough understanding that considers micro practices as part of grander macro structures and vice versa: the smaller micro utterances and practices in a platform are part of bigger macro structures and valuation. This will be explained further in the Methodological Framework. The focus within this project will lie on how the materials and attributes are presented about the device. This includes the platforms discussed further in the Case section of the Framework. I start discussing my findings of micro practices, including the workings of the discourse and what micro values they spread. Then I will connect this to macro structures which is tied to the theoretical and methodological framework. The findings in conclusion will be followed up by a discussion including a needed call for action.

FRAMEWORK

Theoretical framework

Digital devices are made up of a lot of different materials and globalised production processes. By opening up the black box, Parikka and Goddard have analysed where materials from devices came from. In their research they conclude that working conditions, the large amounts of waste, environmental issues and geological inequality are a huge underexposed problem in the production of the sector. I, as well as media archaeologists such as Parikka (2012a), Gabrys (2011) and Goddard (2015, 2011), argue that this material part of media devices is not researched enough. I also argue that the lack of a critical discourse perspective contributes to our lack of understanding of structural inequalities on which this absence of critical material work is based. Such inequalities are structural and seem based on an imperial mode of living. In this mode the living conditions in capitalist centres have been based on the appropriation of the labour power and resources of other regions. It is imperial because it takes control over huge amounts of resources and labour capacity. Capitalists seem to have unlimited appropriation over this as well as a disproportionate claim to global sink. Meanwhile the other, often Third World, regions have to put up with the social and environmental difficulties (Brand and Wissen 2012). This shows that capitalism has postcolonialist tendencies.

Digging into what Jussi Parikka calls the 'dirty matter' of media allows us to get to the material reality of the subject. It is called dirty as this perspective to matter intensively uncovers where and when the materiality of this medium is. Materiality does not only contain solids, machines, things or objects but also the working conditions, waste and environmental impact. Such an awareness facilitates a perspective on both objects, non-solids and processes of digital devices (Parikka 2012b). For this thesis it is important to be aware of the depth of material aspects of digital devices. In *New materialism as media theory: Medianatures and dirty matter* (2012b) Parikka explains how a new materialist perspective should be used within media studies. New materialism creates a broad perspective through the technology of digital devices. Parikka argues that we must look at a continuum between the "'hard' contexts and pollution (CO_2, toxic materials, minerals, and other component parts) or their 'soft' bits (signs, meanings, attractions, desires)" (Parikka 2012b, 97). Acknowledging the wide range of materiality allows me to look at the (lack of) valuation of these materials as presented in the criteria on the platforms.

Materiality might seem new now that we face climate change and exhaustion of raw material like fossil fuels and certain metals like tungsten, indium and gold. But it definitely is not. *Greening the Media* by Maxwell and Miller (2012) shows how our increasing use of media has always been connected to the environment and human conditions. They argue that media studies have ignored the physical implications of the constant stream of need and

production of media devices. The production processes behind our devices are often exploitative and untraceable, as shown by Sy Taffel in *Towards an Ethical Electronics? Ecologies of Congolese Conflict Minerals* (2015). Taffel shows how rare metals mined in the Democratic Republic of Congo relate networked microelectronics to brutal war lords stealing from locals and forcing them to work. His exploration invites a materialist analysis relating to the geological instead of an immaterial discourse. He emphasises the need to focus on political, industrial and informational flows surrounding globalised microelectronics industries (Taffel 2015). This connection between the materiality and the broader political, industrial and informational has not been studied often. There seems to be an emergent field of such ecological materialist thinking that needs more attention.

The infrastructures that support the current system make increasing demands on scarce minerals, materials and energy in production and use (Murdock 2018). We need a devaluation of problematic use of resources like wasteful energy, exploitative labour, hyper-fast upgrading and raw material use. Capitalist values promote hyper-consumption and waste and this kind of consumption has led to a regime of accelerated "change, obsolescence and replacement" (Hesmondhalgh and Meier 2018). Climate change and exploitative labour are things that affect everything we do. Our everyday practices as well as our societies' overarching orientation toward economic growth and competitiveness need to change in order to change problematic impacts on the world (Paterson and Newell 2012). This fast, wasteful process can be found everywhere in our capitalist society. John Bellamy Foster's analysis *Ecology against Capitalism* (2001) shows that capitalist investment decisions are usually made with short-term profit in mind. This is a critical factor in determining overall environmental effects of companies. The harmful effects are noticed in the Third World, which is where innumerable Western companies get the fastest return on investments. Third World workers need to satisfy the demands of investors, bondholders, and banks to survive. And these stakeholders do not demonstrate potential ecological concerns (Foster 2001).

We need to watch carefully if current attempts to change this are not what David Neusteurer calls part of a 'passive revolution', which is actually a repetition of capitalism but in a green form (Neusteurer 2017). The concept of green economy, for instance, seems an attractive promise to better the climate: 'greening' business and markets, 'sustainable' consumption, 'green' technologies, ecologically and 'socially-sound' economic development and policies that harmonise social goals (Brand 2012). As many analyses of green economy like Neusteurer (2017), Brand (2012), Wanner (2015) and Knuth (2017) point out: the concept and its corresponding strategies consider economic growth as desirable and necessary. It is important to be aware and critical of such a 'win-win situation' for both environment and economy. Its side effects are externalised as necessary resources like extraction of rare earth metals and materials required for green technology and agriculture

for biofuel are located in the Global South (Neusteurer 2017). This externalisation could be implicit and unmentioned in discourse but empowers and greens the Global North while limiting possible improvements for the Global South. This repeats and strengthens international power relations. Neusteurer argues that such proposals are deeply rooted in our daily practices and imaginations and do not demand the needed radical change of people's behaviour and creates 'green jobs' and profit. He concludes that it is highly doubtful that green strategies are successful in dealing with current global challenges (Neusteurer 2017).

Methodological framework

Critical discourse analysis

When working towards a better treatment of materials and improvement of working conditions it is crucial to understand the structures that enable our current conditions. A dominant element in contemporary societies is the economy and its effects are strong and pervasive. Major changes have occurred over the past few decades due to a neoliberal capitalist ideology (Fairclough 2013). By using a Critical Discourse Analysis (CDA) I will be able to look at the structured patterns of meaning-making within recommendations of digital devices. Discourse contains the meanings and concepts through which people interpret and know the social world. Doing an analysis from the critical form of discourse analysis allows me to analyse language to address its involvement in the workings of contemporary capitalist societies. This seems highly necessary based on my theoretical findings that show how capitalist structures have often affected digital device trajectories in a way that disadvantages nature and people over capital. Fairclough argues that the active economic system affects all aspects of social life (Fairclough 2013). With the chosen method I can get a better understanding of how contemporary capitalism prevents or limits human and earthly well-being through discourse around digital devices.

The specific approach I will use is described in Fairclough's (1995) *The critical study of language*. His approach to CDA discusses how to look closely at texts to observe what background knowledge is necessary to understand them. The background knowledges selected for *critical* analysis are subsumed naturalised ideological representations, not need-to-know facts like which key belongs to which door. In case of devices, an example could be that having a fast, last generation processor is a great choice. It seems obvious that having the best working laptop for the user is the best one in general. But it is not a fact, it is a perspective that considers an end-user perspective and promotes hyper consumption. Naturalised means that it is presented as natural, as common sense. Naturalisation can be understood on a scale: it can be accepted generally or only within a narrow social circle. CDA assumes that there is a big picture of society and that we should try to understand it. Research on small discursive practices can be understood within a broader system

(Fairclough 1995). The ideas spread and repeated about digital devices impact which aspects of society we care about, and therefore what we will improve or neglect in the world. By questioning whether it might be alternatively represented it becomes possible to recognise whether it is a naturalised ideological representation, or not (Fairclough 1995).

Every social institution has an ideological-discursive formation and certain subject positions. Subject positions are roles one can have with certain status and possibilities within the institution. In the case of online platforms, there could be the reader, moderator, member, product-tester or writer. Who can speak and who can ask questions, and whose words are considered most relevant and presenting the truth are part of the ideological practices of a social institution (Fairclough 1995). A subject position is valued subjectively — by family, friends, acquaintances — and objectively — recognised in larger communities or institutions. In discourse a participant can position themself and valuate others and their ideas through utterances. All participants of the discourse community are involved in deciding which/whose positions are real and objective. People are constantly 'doing' subject positions. Through a critical discourse analysis, we can witness how knowledge is mobilised in the making of social hierarchies. The circumstances of discourse are often unorganised and people are usually unaware and unreflective of this redistribution of value (Angermuller 2018).

Certain subjects get a dominant position and become valuable because they absorb time and energy of the members of the discourse community who read, watch and spread their ideas. These other members can be seen as the discourse 'workers' who are mostly unheard and nameless and who often only read or talk about other's opinions. That is how, as Angermuller (2018) calls it, discursive capital is accumulated. Valuation only works because time and energy are put in by all members of the community. Understood from Angermuller's (2018) interpretation of Marxist-based value theory within CDA we can understand that power and inequality are not imposed on the participants: it is an active ongoing practice of all members. Value is not inherent, it is attached and actively expressed. People choose to use, for instance, Tweakers and read a product-tester's review and repeat that representation of a device to their friends. Value is the product of all members who participate in constituting and establishing social practices like that. Through discourse a community produces and reproduces material hierarchies between more and less valued members of the discourse community. Truths need to be explained in terms of the hierarchical social order that these practices produce and reproduce (Angermuller 2018).

Participating in these reproductions is often not reflected on by the participants. In society it can be natural to look up technical specifications. The broader effects of this go past when not critically reflected upon, especially in the case of digital devices that are often black boxed. Because of this, one's subject position(s) can be incompatible with their social beliefs.

A subject's goal (their conscious objective) can be totally different than the institution's goal of the subject (their unconscious objective). Rationalisations generated by the subject may radically distort the ideological basis of practice. An example of this is a writer praising a new smartphone because of its new screen as research shows it is top notch technology, while maybe unconsciously promoting its implicit capital enhancing forced fast labour-based production. This is possible as the ideology is often presented as if it is a transparent reflection of reality, given the same way to all. Critical discourse analysis looks beyond these immediate micro situations to disclose structures in discourse which cumulatively reproduce macro structures (Fairclough 1995).

A community or institution has at least one dominant ideological-discursive formation present. This formation includes its values, subject positions and ways of presenting information. Through actions (micro), institutions affirm their own statuses and roles, and establish and transmit shared systems of value and knowledge (macro) (Fairclough 1995). Oftentimes the ideology is competing in an ideological struggle with other ideologies (van Dijk 1998). But a community's norms become very naturalised when they are not undermined, questioned or challenged. In this analysis I will scrutinise representative device recommendation platforms to understand the existing norms and power structures within.

Analysing value

Even though valuation seems to be foundational to the methodology, the concept of value in practice is often taken for granted (Sowińska 2013). There are some fields that try to propose a clarification of the term. Main sociological perspectives of doing an empirical study of values provide with a pragmatic approach and focus on the question of what value is placed on a thing. The things or objects that we value are ways of pursuing a value: if you value A, you will need to have B to reach this A. So B can be the object or means without which A is unattainable (Fallding 1965). Recommending more RAM (random-access memory) in a device (B), serves pursuing a fast device, so speed as an abstract value (A). This basic understanding allows the analysis of how certain values are projected or used on objects. Connected to Fairclough's (1995) approach to CDA this means that if we, on a macro level, value being fast and productive, we will need computer hardware that allows us to do that. New features presumably imply the need of rare minerals and complicated parts that are hard to recycle unless explicitly stated otherwise. This awareness of features' values can show which processes are made opaque and which are presented as having main importance in the recommendation discourse around digital devices. If we value well-functioning nature, we will need processes that do not pollute or waste natural resources.

Our blind spot of immateriality can from a Marxist perspective be understood as outcome from a capitalist system. The production of the commodity is concealed from view

by the focus of attention on finished goods. The devices are valued more abstractly than on material specifics like labour practices and material use (Pirgmaier 2018). This value system is built on the crucial asymmetry between the workers who produce the value, and the few who appropriate the products of labour and own the means of production. They are participants of the economic process. By participating they reproduce this class structure between the middle-class end users who accumulate value, and the workers who are cut off of these riches they helped produce for society. Negotiation of value, such as the value of commodities, is expressed within societal relationship in discourse (Angermuller 2018). As published in an urging 2008 article by Machin and Richardson in the journal *Critical Discourse Studies*, we need to renew an interest in structural inequalities (Machin and Richardson 2008).

From a CDA perspective the workings of value are at the heart of the ideas and ideals we have about the world, or in other words, in our ideologies. Teun van Dijk's socio-cognitive analyses *Ideology* (1998) and *Ideology and Discourse* (2007) focus on this connection of ideology and discourse. Values are essentially socially constructed. They are part of cultural common ground which makes their role in the construction of ideology crucial. All ideologies are based on a selection and combination of values drawn from a cultural common ground (van Dijk 1998, 286). In other words, values dictate what is permitted or prohibited and the goals that should be aspired by individuals and societies alike. Values usually also involve a set of counter-values when the ideology is brought to bear in an ideological struggle (van Dijk 1998). Within discourse we are able to notice which values are "'talked up' or 'talked down'" (P. W. Graham 2002, 232). Values in this context contain several aspects of people's value systems such as aesthetic, moral, social, prestige, intellectual, and any other kinds of value: not just price value as is currently generally the case (P. W. Graham and Luke 2011). I will analyse to what extent (capitalist) ideological values are projected on digital devices. Focusing on the discourse dimension of ideologies explains how ideologies are the base of our daily texts and talk about digital devices.

This includes the visible postcolonial working in the use of nature and land for capitalist reasons as discussed in Sarah Knuth's (2017) article on different forms of green devaluation. Her work is based in planning and geography and her analytical focus there is on the inequal division of land and work. She recognises how the land of people who do not have much gets taken for 'the greater good', which profits capitalists but not the people whose land and labour is used. Her perspective allows me to make visible blind spots of immateriality behind digital devices such as mentioned in media studies by Murdock (2018) and Maxwell and Miller (2012). I will critically examine not only valuation but also devaluation, which prompts us to consider more expansive analyses of value and the reproduction (or destruction) of capitalism. These aspects are not yet integrated in the

mainstream debate of media studies even though processes of green devaluation, decommodification and techno-industrial replacement are all important in understanding current developments.

Sarah Knuth's article poses as an example to critically analyse the discursive argumentation behind decommodification. A focus on decommodification means examining in what way certain aspects are not sellable anymore. Reasons for this diverge: some are part of capitalist thinking whereas other arguments might stem from anti-capitalist thinking. Divestments could be made from moral obsolescence (it not being morally right), technological obsolescence (there is something better that they use instead) or asset stranding (it is not profitable anymore). And where these are devalued, other things get valued. It is for instance a new phenomenon that 'environmental 'externalities'' such as pollution (prevention) and pro-environmental actions get included in how products are valued. Knuth also argues that it is too simple to just view green developments as a win-win situation for capitalists. There will be capital value in new aspects but among capitalists there will be winners and losers (Knuth 2017).

> "Scholars must expand their thinking on value to capture essential features of an emerging 21st century green capitalism" - (Knuth 2017, 112).

Case description

A digital device that seems generally taken for granted and is widely used, is a laptop. For this study I picked a well-rated and well-known brand: Acer. It is a middle ground option that is rated well, yet is not hugely hyped. As a lot of devices, its model Acer Swift 3 has a high rating in regular platforms, yet low ratings on the more activist counter platforms. This makes it an interesting example to use for this study. As the regular platforms do not have separate explanation of their criteria, I had to make a decision of where to get the information on the platform. Choosing one kind of device and model, Acer (Swift 3 SF314-56-5427), allows me to have a base line to come back to and see the differences and similarities on the platforms.

Taking the research case product, the laptop Acer Swift 3, there are a few recommendation options. Firstly there are some popular technology platforms used in the Netherlands. The first is one of the most popular web shops in the Netherlands which is Coolblue. Second there is the popular tech website Tweakers for critical and thorough independent information about devices. And third there is the Consumentenbond which analyses products so consumers can make informed choices. Then secondly there are a few brand ratings available that include Acer and inform on a different level than the product. Ethical Consumer offers information for consumers on how ethical, sustainable and transparent businesses are, and Greenpeace has published a report based on rating digital

devices (smartphones, tablets and PC's) that is also aimed at consumers[1]. Although both of them are not Dutch, they are accessible online in the Netherlands and seem to be the only counter-platforms with a consumer focus offering insights on devices available in the Dutch market.

The corpus represents both 'regular' platforms as well as more 'activist', counter platforms. This offers a broad view on digital devices discourse. Both groups of platforms say to critically examine and describe which laptops or brands they recommend based on their criteria. From a critical discourse analysis, these platforms represent certain values which inform the consumer. They are part of the same society and represent the same brand and technology as the regular platforms. It will be interesting to see if they demand radical change or if they might attempt more of the mentioned 'passive revolution'. All of the platforms will be further explained in analysis. I will frame the platforms together as an interrelated set of discursive institutions representing recommendations on digital devices, in the Netherlands. Recommendation platforms that compare different digital devices usually imply, by recommending a device, a proposal to get a new product. They promote buying new and thus more digital devices. Additionally, it is important to analyse how the use and re-use of digital devices are presented. Propositions of getting a second-hand device or providing repairing devices are examples of that. The comparisons which are based upon these criteria between devices pose an important corpus through which we can understand contemporary values that are determining in consumers choice of digital devices. It seems ironic that information is available from all over the whole world through such devices while regularly not enough attention is paid to its global material reality. This makes digital devices especially interesting to analyse from their seemingly detached material sides.

[1] *Rank a Brand* also stood out but has recently been taken off the internet and therefore also out of this analysis. It is not an actual part of the discourse anymore.

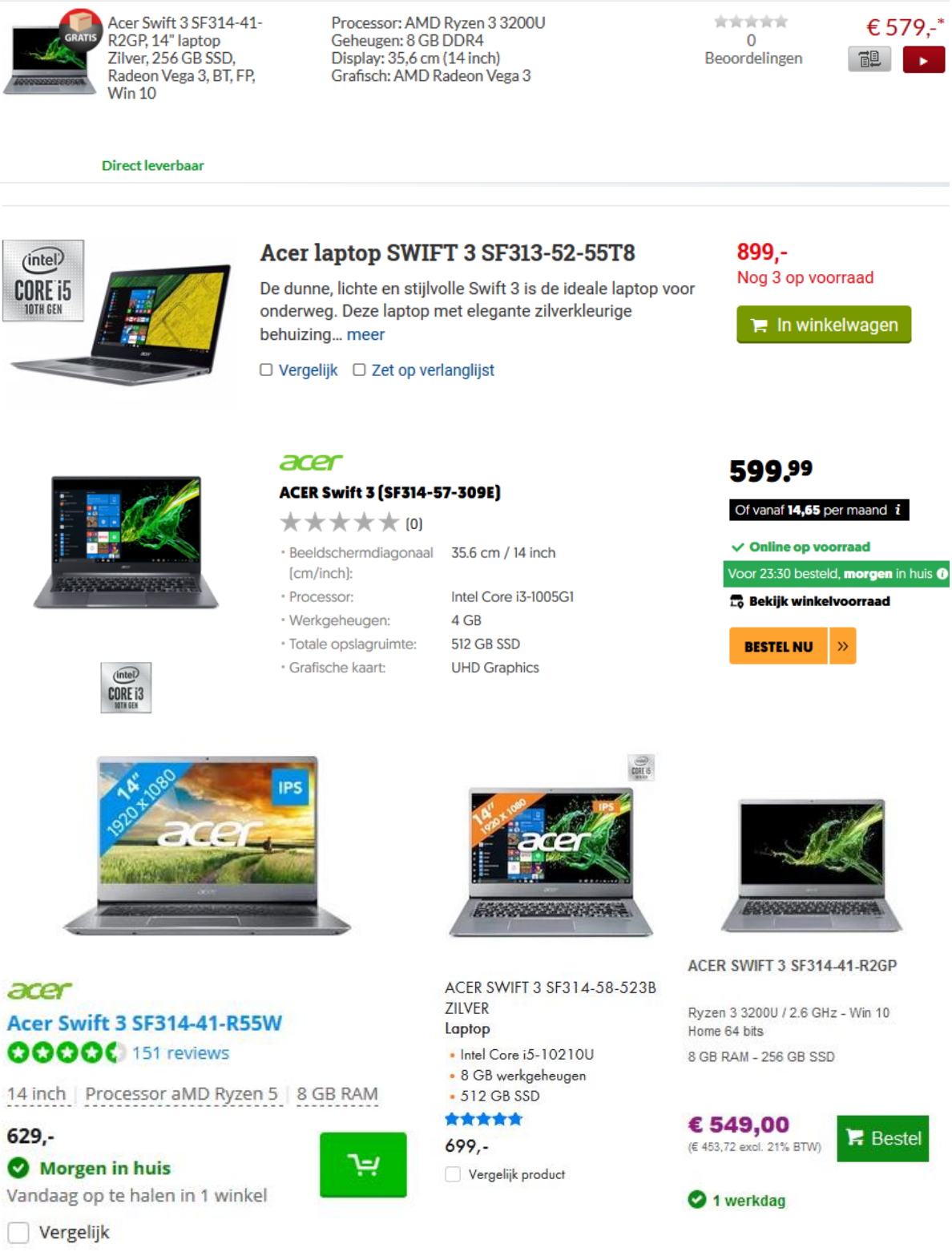

Table 1: Dutch web shops selling Acer Swift laptops. From top to bottom; Alternate, BCC, Paradigit and Mediamarkt - From left to right; Coolblue, Azerty and Expert (Alternate n.d.; BCC n.d.; Mediamarkt n.d.; Coolblue n.d.; Azerty n.d.; Expert n.d.)

Recommendation platforms

Coolblue

Coolblue is one of the most visited web shops in the Netherlands, selling mainly kitchen appliances and electronics. Together with Mediamarkt and Bol.com, Coolblue rules the market. These big web shops provide approximately the same information and could be put in the same category with web shops like BCC, Paradigit, Expert, Azerty and other device-offering web shops. The goal they all have is to present products in a way that sells. This is illustrated by the figures in table 1 on the previous page. The site I analysed is their Acer Swift 3 model product page (Coolblue n.d.). Coolblue specifically works with the motto: anything for a smile ("*alles voor een glimlach*") and has a small and customer-tailored range of products. By collecting customer data they continuously adapt their range of products, delivery options and customer service (van Dongen 2018; De Ondernemer 2018; Coolblue n.d.). I decided to focus solely on Coolblue to represent web shops as they are growing and provide a lot of consumers with information and products.

Tweakers

Tweakers is a Dutch technology website available for free to everyone. Their aim is to provide critical knowledge on the complex developments of technology mainly by providing tech news and advice and specifications on tech devices (Tweakers n.d.). The website plays a big role in informing consumers about electronics and therefore for presenting producers/brands. Tweakers emphasises its independence, though they would not be able to sustain without advertisements. It is a for-profit platform owned by the Persgroep Nederland. Their Pricewatch system is a main part of their website and shows the current best and cheapest products. When these links to external web shops are clicked on, Tweakers gets paid (Tweakers n.d.). They have a web page focused on is the Acer Swift 3 model (Tweakers n.d.). I aim to find out what they, as an independent critical tech platform, provide as important specifications about devices. And how they can be positioned within the discourse.

Consumentenbond

Consumentenbond is a non-profit authority in the Netherlands known for critically analysing products and fighting for consumer's rights (Consumentenbond Video 2018). Their funds come from subscription fees, selling predicates, and compensations from companies that are in their comparison sites, collectives and transfer services (Consumentenbond n.d.). Consumer protection is their main goal and consumers themselves can impact Consumentenbond's strategy: Its federal board consists of 75 of Consumentenbond members. They also have a supervisory board that consists of members who are company managers and directors varying from Springer Media BV to Shell (Consumentenbond n.d.).

Working together with consumers they aim to 'make markets fair and safe'. They serve consumer interests by getting brands to sell the best products possible without being guided by political and commercial interests. One of their main resources is product- and service comparisons that include tech device advice. Employees of the Consumentenbond carry out this research themselves (Consumentenbond n.d., n.d.). They have a product page on the specific Acer Swift 3 (Consumentenbond n.d.).

Greenpeace: Guide to Greener Electronics

Greenpeace is an independent campaigning organisation that aims to expose global environmental problems and develop solutions for a green and peaceful future. They aim to stop global warming, protect biodiversity, slow hyper-consumption, promote renewable energy and nurture peace and non-violence. They are funded by individual contributions, together with grants from foundations and they work actively to ensure transparency and public accountability (Greenpeace n.d.). Looking behind the largest electronic device (smartphones, tablets, and personal computers) brands in East Asia, North America, and Europe (Cook and Jardim 2017a; Greenpeace 2017) they try to improve the supply chain and manufacturing processes (Greenpeace n.d.).

Greenpeace's 2017 Guide to Greener Electronics, relaunched after their 18th edition in 2012, focuses on measuring three critical impact areas tied to product design and responsible supply chain management across the electronics sector: energy, resource consumption and chemicals. Within each impact area, companies are graded on transparency, commitment, performance and advocacy efforts. This Rethink-IT campaign (Greenpeace n.d.) challenges the IT sector to take responsibility for its rapidly growing footprint on the planet by focusing on consumers, investors and businesses and their supply chain. The section I focused its analysis on is their Acer section (Cook and Jardim 2017b, 10–12).

Ethical consumer

Ethical Consumer is a UK-based non-profit magazine aimed at 'independent thinkers' that want to make global businesses more sustainable through consumer pressure. Their income comes from reader subscriptions, consultancy work for campaign groups and ethical organisations and adverts from ethically vetted companies, grants and other income. They seek to discover the truth behind the products we buy and the companies we buy them from through online accessible guides on for instance laptops (Ethical Consumer n.d.). Through these guides they investigate, score and rank several brands on ethical and environmental criteria such as company approaches to conflict materials and toxic chemicals, human rights, EU energy efficiency labels, and tax avoidance. They also run campaigns like boycotts and protests aimed at catalysing consumers to act. Next to that they organise prizes together with

cosmetics brand Lush to support individuals and projects that help good causes like environment and cruelty-free research. Ethical Consumer's main focus is on consumers but they also act by themselves to promote good causes and call out businesses like UK supermarkets to act better (Ethical Consumer 2018a). The web page I focused my analysis on is the Acer section within their laptop score table (Bryson 2019).

Research question

To summarise, the idea that exists of the materiality and immateriality of a medium relates to the demands we make on the disposal and generation of those devices. Understanding the way that values are produced, propagated, and transformed in digital devices recommendation discourse and what this means for our relations to the world and people is exactly what I aim to find out with this thesis. Other structures could be present, but these will not be visible with this approach. This methodology sees texts as materially enacted practices that are part of patterns creating ideas and meaning in the world. The used methodology allows for a thorough understanding of how parts of digital devices are valued within the discourse, and if not valued, what else is presented as more valuable instead. It will provide insight on how we value materials and their production in our contemporary culture and which elements are not valued equally, or not even mentioned. This thesis aims to be representative for Netherlands-focused recommendation of digital devices.

The research question that will be answered is: *How are digital devices valued in discourse aimed at consumers and to what extent does this interrelate with a capitalist system?* Specifically, the question considers online recommendation platforms that cover digital devices offered in The Netherlands, including the platforms Coolblue, Consumentenbond, Tweakers, Greenpeace and Ethical Consumer, with their consideration of Acer (Swift 3) laptops placed centrally.

MICRO PRACTICES

Micro practices are expressions of value on a small scale. The analysed expressions come from participants that are active on the recommendation platforms, such as editors, writers and users. The choice of platforms is described in the Case chapter. In the upcoming pages I will critically analyse utterances on the platforms to understand what values they represent. From critical discourse perspective, values are both actively manifested by participants of discourse communities as they are part of a broader macro structure which maintain each other (Fairclough 1995). The macro structures will be discussed in the next chapter, which binds the micro values together with the macro, broader societal aspects. The platforms are firstly divided by category: device selling platforms, device reviewing platforms and counter platforms. In the values chapter thereafter, they are categorized in valued topics.

Naturalised hyper-consumption in action

There is an important distinction between the first three, device selling and reviewing, platforms and the two counter platforms. The first two are currently normalised and easy to find. Their home page immediately puts the visitor in a position to look at the best buying choices. Such platforms enable consumers to easily buy a new product. The counter platforms do not provide the option to buy a new product at all. They are also harder to find and need specific search terms like environment, sustainability, ethical or conflict minerals. In contrast: you get greeted with a big assortment of products by simply searching for a laptop.

Device selling platforms

Platforms that sell digital devices are represented in this category based on web shop Coolblue. Ideologies that are very naturalised can be recognised by the way their message seems like common sense (Fairclough 1995). This is visible in the way web shop Coolblue presents its information. They work to offer consumers exactly what they are looking for in their website by continually updating their website, service and products. Explicitly mentioned is that they are there for you when you immediately need a new product. By having a relatively smaller but always updated offer they serve last-minute and fast-decision consumers. Coolblue decides what customers want and need from their website based upon their analysis of customer behaviour data. Customers only passively decide through their behaviour. Coolblue has a fast upgrading system: one of the Acer Swift 3 laptops that has been on the market for a year now, since 17th of May 2019, is not available anymore. Coolblue only offers new products and continually looks for an upgraded best product for their customers and takes the older ones off sale.

With their in-home specialist (who is a product editor) they answer the questions a consumer might have about the use of the product. Just as if it was written by an actual user.

They offer a 2-year warranty with a repairing service so it is simple for the consumer to feel safe about buying a product. This all enforces the idea that you should buy a device with the latest tech, always available and disposable after 2 years. They make it seem like 2 years is a generous period of time. By providing a story around the information about the technical specifications it is easy to agree to need the new specifics and a lighter, more beautiful and powerful device. There is room for consumer reviews but only about the product itself and only after purchase.

Device reviewing platforms

This category represents platforms that analyse and recommend devices and brands based on Consumentenbond and Tweakers. They do not sell the products themselves, but they review them and recommend where to purchase them. The Consumentenbond has its own team with electronics experts who test eight new laptops every two weeks. They have their own criteria and put every laptop to the same test. The grade that's prominent on their website is based on these tests (Verlooij 2020). They show their testing quite comprehensively although the weighting factors of the grading are barely explained. The way the website is built puts Consumentenbond in an expert position with the consumer having a side role in the actual reviewing system.

A difference on Tweakers compared to Consumentenbond is that it allows its users to cocreate recommendation content. Everyone (with an account) has access to the edit section of product pages and can enter any edit within Tweakers' framework. Within this framework one can add and alter within pre-existent categories. Similar to Consumentenbond, these categories all focus on the end-product and attributions that are important in the practical use of this product. Going to the brand pages on Tweakers provides information on Acer's start and growth and (best) new products but no information on the product processes unless it is very big news. There is no place within the product's specifics framework to see any production information.

What differs compared to Coolblue is that on Consumentenbond and Tweakers people ask each other for help about repairing and second-hand buying. A user from Consumentenbond's community actually pointed towards Tweakers for more information on buying second hand (Marielouise58 2018). Consumentenbond also has its own manual on how to deal with broken laptops and when and how to repair (Verlooij 2019). Tweakers' community has a lot of second hand offers and help with repairing. Tweakers and Consumentenbond could be considered as a step out of the most taken-for-granted way of thinking about digital devices compared to the way info is naturalised on web shops. Their users provide a conversation on second hand and refurbished products and the repairing and sustaining of current products. Based on Coolblue, those kinds of discussions are not facilitated on selling platforms. As will be discussed throughout the coming chapters in this

thesis: the way platforms represent affects the way digital devices are produced and therefore the environment, the treatment of people and the use of (rare) minerals.

Counter platforms

Greenpeace and Ethical Consumer represent the counter platforms in this discourse analysis. Figure 1 and 2 on the next page show their brand rankings. Their approach towards the discussion of devices seems opposite to the other platforms. Greenpeace sees that the IT sector has a rapidly growing footprint on the planet. Considered from discourse perspective, they approach the 17 world leading consumer electronics companies from East Asia, Europe and North America as the highest subject position in the social hierarchy of dominance in the discourse. They approach the companies with a counter ideology against the waste fuelling, consumption driving, planned to obsoletion products that the companies sell and (have) produce(d). Greenpeace makes suggestions on how to improve design and supply chain and grades the companies in their analysis. Their report speaks for the earth and for the public and their "increasing demand [...] to define innovation not by fewer millimeters and more megapixels, but by how they are made" (Cook and Jardim 2017a, 3). Greenpeace actively criticises the lack of transparency and publicly available information about their product processes as this limits understanding and improvement of product processes. After publishing the report they posted articles on (lack of) improvements by the analysed companies (Greenpeace international 2018, 2019; Lee 2018) and on their report's subject in general, such as e-waste (Weyler 2019).

Ethical Consumer's primary goal is to make global businesses more sustainable through consumer pressure. Just like Greenpeace they view global businesses as dominant subjects in discourse that heavily affect society's valuation on people, animals, environment, politics and sustainability. Ethical Consumer's approach ties closely to the way that Soneryd and Uggla (2015) describe as governance by consumers. Ethical Consumer highlights the need for change in growing corporate power on which they say the government has less and less power. Therefore, consumers' "economic vote may have as much influence as their political vote" (Ethical Consumer 2020). They reflect on this themselves by mentioning that ethical consumerism is not a replacement for other forms of political action. It is rather an important additional way for people to exert their influence (Ethical Consumer 2020). Consumers are provided with the necessary tools and resources to make informed choices through Ethical Consumer's website and magazines. They aim to provide fully transparent rankings of the companies behind brands and products. Businesses, academics and the UK government acknowledge Ethical Consumer's market reports and findings which strengthens Ethical Consumer's subject position.

Overall Grades		ENERGY	RESOURCES	CHEMICALS
FAIRPHONE	B	B	A-	B-
	B-	A-	C	B
DELL	C+	C+	B-	C+
hp	C+	B	B-	C+
Lenovo	C-	C	C	D
Microsoft	C-	D+	D+	C
acer	D+	C-	C-	D

Figure 1: Greenpeace Guide to Greener Electronics report overview (Cook and Jardim 2017b, 6)

Brand	Score (out of 20)	Ratings Categories	Positive Scores
ASUS laptops Company Profile: ASUSTeK Computer Inc	9	Environment People Politics	
VeryPC Thinbook Company Profile: Very Innovative Group Ltd	9	Environment People Politics	
ACER laptops Company Profile: Acer Inc.	8	Environment People Politics	
Lenovo TCO Certified laptops [T] Company Profile: Lenovo Group Limited	8	Environment People Animals Politics	Product sustainability

Figure 2: Ethical Consumer's laptop score table (behind paywall) (Bryson 2019)

Together Greenpeace and Ethical Consumer aim for ethical and environmentally friendly devices to provide a voice against the regular, usually black boxed, commodification of digital devices. These platforms pose as part of a discursive formation on digital devices that aim for more environmental and humanitarian discourse on devices. Greenpeace and Ethical Consumer have mentioned each other more than once on social media and in reporting. They do not always come to the same conclusions but both support people's quests for the most 'eco-friendly' laptop, as illustrated by a citation from *The Guardian*:

"Organisations such as Greenpeace and Ethical Consumer magazine have been banging this particular drum for years. And, most usefully for the average consumer, they both publish handy scorecards rating the various computer manufacturers in relationship to these issues" (Hickman 2009).

Unitedly they are a growing counter ideology within a big ocean of fast-selling capitalist values. They also both mention the use of iFixit.com as a first resort: Repairing before getting a new laptop. iFixit is a wiki-based site that teaches people how to fix devices. It competes with the notion that broken products need to be replaced with a new one. iFixit provides free repair manuals, repair support and has a small share of device recommendations based on repairability[2]. With such platforms competing in an ideological struggle, the discourse's leading norms become undermined, questioned and challenged, and most importantly, less naturalised.

An unfairly fairy tale

Again, a big difference between platforms is noticeable between the three selling or reviewing platforms and the two counter platforms. The first are product-focused and user-centred without looking at the broader spectrum of a digital device, such as the impact of production or recycling. Greenpeace and Ethical Consumer solely focused on the broader specifics by looking at the impacts on the world such as the earth's minerals and the environment. People valued in these two platforms were the people who mine for or make the device. This is contrary to the regular focus on end-product and consumer benefits. I will present these findings through categorizing this chapter by the actors that were valued. The detailed analysis of all topics mentioned in the cases can be found in Appendixes 2-5. The analysis is grounded on the values presented on the platforms: I used the platforms to provide information about values, not the other way around. The appendixes show entirely different topics per group of platforms because the values of the selling- and reviewing platforms do not overlap with the counter platforms. I looked at the platforms' rating criteria which can be found in the external appendix, and the news on the laptop brand (Acer) and laptop hardware brand (Intel) assembled in Appendix 1. Per category I will discuss in what way values were or were not considered on certain platforms in the chapter below.

[2] https://www.ifixit.com/laptop-repairability

End-product user

You can find out how fast, cheap, game-friendly and pretty the laptop is on ratings from Coolblue, Tweakers and Consumentenbond. All of them have criteria about the attributes the laptop has for the user and a detailed list on the laptop's hardware. Attributes and hardware are often combined and interpreted for the reader: the metal material makes it sturdy, the SSD makes it fast and the fingerprint scanner makes it easy and convenient. This is illustrated by Figure 3 below which shows a product description by Coolblue. The most-mentioned topics are the price and the size of the laptop. Thereafter comes the SSD-storage and processor. These platforms do not actively reflect on the product's brand or origin but focus solely on the product itself. Ethical Consumer mentions one thing in relation to the end-user which is the elimination of bio-accumulative chemicals. This jointly relates to the assembler of the product.

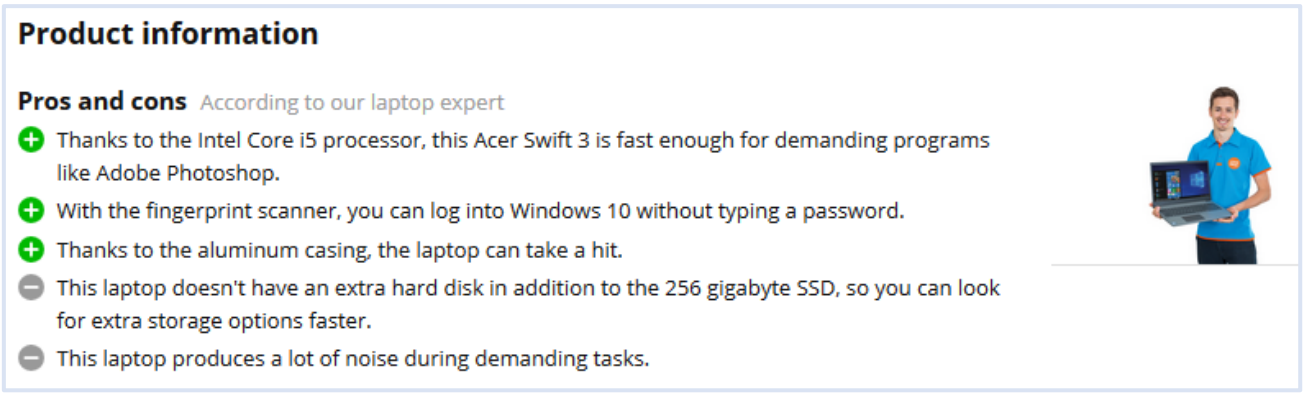

Figure 3: Coolbue's laptop expert's description of an Acer Swift 3 laptop (Coolblue n.d.)

What stood out is that for Consumentenbond an important item is Digital and Privacy, and 'smart digital' like smart devices, smartphones, software and laptops. In this category in their annual rapport of 2018 they present compliance with privacy legislation (GDPR), fraud issues and fighting provider duopoly (Consumentenbond 2018). This suggests a critical approach but corresponds with the insufficient academic discourse around new media devices that neglects production circumstances and its humanitarian and environmental impact. Consumentenbond aims to protect the rights of Dutch consumers and make it easier to choose a product in the current oversupply of everything (Consumentenbond n.d.). They do not look past the direct product values a product has to offer the consumer to see how it impacts the world they live in.

People

The basis in the topic people is making sure the production processes abide by human rights. Apparently it is not self-evident that child labour, slave labour and forced labour should be eliminated. Having no discrimination and a safe and hygienic workplace are points made by Ethical Consumer and Greenpeace. In the case of electronics especially the use of certain chemicals and materials is often known to be hazardous. Not all companies and production facilities agree with this or have just not eliminated all of known hazardous chemicals. These two platforms mentioned a few chemicals specifically that should be eradicated from production: benzene and n-hexane that is known to cause leukaemia and motor function disabilities, brominated flame retardants and PVC that are known to increase the risk of fire, beryllium and antimony that are known carcinogens, and phthalates that can disrupt hormones (Cook and Jardim 2017a; Ethical Consumer 2018b). In summary they all only allow chemicals and other circumstances (no child labour or forced labour) that are needed for worker health and safety.

In the circumstance of electronics production, it has to be made explicit that workers get paid fairly and that no excessive payments go to executives. Ethical Consumer makes sure to check brands on their worker rights and whether workers can unionise, get formally registered as employees, get a working week of maximum of 48 hours and a maximum of 12 hours voluntary overtime. They also want workers to have access to a free, accessible and anonymous complaint system (Ethical Consumer 2018c). Conflict minerals are a big deal within the electronics sector and they are mentioned by both counter platforms. Conflict source smelting means that the metal has been smelted in a conflict area. Fighting towards conflict-free minerals they claim that companies have a clear policy on resources from the Democratic Republic of Congo (DRC), the country that is most known for its conflict materials. Through the mentioned criteria the platforms aim to improve DRC's situation. Ethical Consumer rejects a collaboration with oppressive regimes (Ethical Consumer 2018c) and Greenpeace mentions the need for conflict awareness (Cook and Jardim 2017a). Overall, being transparent about efforts has an especially important role in these platforms. Filling requirements about their transparency on the supply chain can be achieved by having regular audits and clear audience schedules, and reporting on it. Greenpeace and Ethical Consumer value that companies take accountability for their choice of production and how people are treated while working towards the development of their products.

The other platforms do not explicitly mention the subject but Tweakers shows more critical news compared to Coolblue (which has no news page) and Consumentenbond. As can be read in Appendix 1, Tweakers mentions a lot of take-overs by Intel. Intel is also accused of forbidden salary agreements and firing a lot of people because of reorganisations (Miltenburg 2019; Jansen 2019; Nijs 2015). They also mention Intel's investments and production

activities. None of this is mentioned in the recommendations, implying that this is not important in comparing devices. The fact that many of electronics minerals are mined in conflict areas was made very clear through counter platforms. Ethical Consumer and Greenpeace mentioned whether Acer worked together with mines collaborating with armed groups and whether miners were forced to work or had to work with hazardous chemicals. This was not included by Coolblue, Consumentenbond nor Tweakers. With these choices they implicitly spread the message that the only people-aspect that the reader should care about is their own, user experience and not how this product impacts others.

Environment

Looking behind smartphones, PCs, and other computing devices, Greenpeace and Ethical Consumer try to improve the environmental impact of the supply chain and manufacturing processes "still reliant on 19th-century sources of energy, dangerous mining practices, hazardous chemicals, and poorly designed products that drive consumption of the Earth's resources" (Greenpeace n.d.). This statement by Greenpeace matches with the topics that they value. Carbon emission decrease is one of the most mentioned criteria within the analysed platforms (Cook and Jardim 2017a; Ethical Consumer 2018b). Renewable and reusable energy and energy efficiency were also important within the reports. Acer's company reports were analysed by these institutions on having clear and ambitious goals working towards being more environmentally friendly (Ethical Consumer 2018b; Cook and Jardim 2017b). Transparency and clear reporting around the topic were also important criteria. Vague statements such as 'green electricity' and buying RECs (credits on renewable energy) instead of improving their process were criticised upon (Cook and Jardim 2017b). This suggests that they support a counter capitalist ideology and not a passive revolution as discussed by Neusteurer (2017).

As shown in Greenpeace's report and Ethical Consumer's scores, there are clear criteria possible about environmental factors, such as the mention of air, water and land pollution, and carbon footprint (Cook and Jardim 2017a; Ethical Consumer 2018b). These were not hard to find as brands such as Acer provide reports on their production processes and often about their sustainability and climate change (Acer 2018, n.d.). Nevertheless these were not part of Coolblue, Tweakers or Consumentenbond who claim to provide critical information for the consumer. This implies that they assume that consumers do not have to care about the environment when comparing devices. Viewed from critical discourse analysis perspective, this again allows user-centered thought to maintain. When people looking for devices will not come across such information, it renders it normal to not include such impacts as important about a device or brand.

Sustainability

Having no detrimental implications in the production process in the future, or at least working towards little or less, is a recurring topic. This firstly covers the reduction of resource consumption so materials will not become (even more) scarce. Broad mentions of this reduction are made by Greenpeace and Ethical Consumer. The reduction of metal and plastic use and decrease of land, material, air and water footprint are considered. Use of already owned products is also a sustainable strategy that needs to be implemented next to cutting down the use of resources in new products. They include optionality and decrease of non-necessary accessories such as a charger that the user already has, and using less packaging (Ethical Consumer n.d.; Cook and Jardim 2017b). Greenpeace criticises brands for not designing products to reduce resource consumption. Product design impacts future resource consumption and can make a big material difference. The focus on brand research looked critically at how ambitious a brand's targets are. Acer was blamed by Greenpeace for stalling commitment and holding off any targets managing the use of some specific chemicals (Cook and Jardim 2017b).

Greenpeace also considers brands' plans on product life extension: continuing software updates, warranty extension and repair facilities such as available repair guides, spare parts and repairable product design (Cook and Jardim 2017b). Tweakers and Consumentenbond's users discussed repairing and second-hand as well. Next to buying guides, Ethical Consumer provided considerations before buying a new device (Hunt 2018) and a guide on how to buy second-hand smart phones, laptops and desktops (Carlile 2019). These options make a laptop sustain as long as possible. Other ways of sustaining material are take-back programs and recycling or using recycled material. Greenpeace chose to include these as important factors (Cook and Jardim 2017b).

Repairability and good warranty were also mentioned in context of the advantage of the end user. Coolblue has a free repair service for the first 30 days. They also provide a free repair service if the product is still within warranty and not damaged by 'wrong use'. Customers can choose to let Coolblue fix their product after warranty as well, but it's not free. Coolblue also does not provide repairing information or help to repair yourself (Coolblue n.d.). It does seem low threshold as shipping to let it be repaired is free, but their free repair service ends after the standard 2 years of Coolblue warranty (Coolblue n.d.). As part of their 'Go green' business they make sure their delivery options are energy efficient and their processing reduces waste. They also sell devices that have been sent back by a customers for a lower price, implicitly suggesting that brand new is most valuable. Coolblue shows investments in sustainability but only in ways that impact their own environment (where they deliver and where they distribute). The way they recommend devices does not reflect this at all. Their 'sustainability' turns out to serve end-user benefits.

Consumentenbond has fought for the right to repair and the continuation of updates. Updates and repairability are cheaper for the user than buying a new laptop. They not directly connect sustainability to their digital devices but they explicitly mention it as an important topic for food and energy (Wilt 2019; Natuur & Milieu 2019). When repairability or energy-use were mentioned by Consumentenbond, this was in context of easy repair and long-lasting batteries in classrooms. The only time they relate sustainability to digital devices is on their description of the Fairphone which is then disregarded as not up to the technical standards for their users (Rensink 2019). The 'actual page' for Fairphone has no mention of its ethical vantages as it does not fit in their rating system, except for in the comments (Consumentenbond 2020). The rhetoric from Consumentenbond on digital devices advocates for the consumer and indirectly might positively impact other actors (such as the environment, mineral sustainability and human wellbeing) as well. But what is mainly valued on their platform is consumer's product-use. Even though, I argue that a more sustainable device (and a greener, fairer world) is of paramount interest for consumer and society.

Capitalist macro structures

Macro structures include the broader societal system or context that the analysed platforms are part of (Fairclough 1995). Without an explicit search for counter arguments and materiality, a consumer will structurally only consider selling platforms and device reviewing platforms. I argue that the approach of these platforms is deeply rooted in a capitalist system. The structural inequality visible in waste disposal, environmental impact and labour mentioned earlier by Parikka (2012b) and Taffel (2015) is opaque. Reviewing platforms show a bit more depth by looking behind the product's brand they are discussing: Tweakers shows brand's news, good and bad, and Consumentenbond shows how they are working with brands towards sustainability of devices (for the consumer). The reviewing platforms Coolblue and Consumentenbond also mention they work towards sustainability, but their actual recommendation criteria do not demonstrate such concerns at all. Generally there seems to be a passive revolution going on as mentioned by Neusteurer (2017) with a steady continuation of what Hesmondhalgh and Meier (2018) recognised as hyper-consumption. Consumentenbond and Tweakers do facilitate user discussion on second-hand products, energy use and repairability which opens up a small door towards a consideration of sustainability. If a consumer wants, this could actively be connected to impact on rare resources, labour and environment. But it is not mentioned explicitly at all. This suggests a broader negligence of materiality.

Values usually involve a set of counter values that is brought to bear in an ideological struggle as mentioned by van Dijk (1998). Greenpeace and Ethical Consumer present a perspective that goes against the abstract, naturalised values represented by Coolblue,

Tweakers and Consumentenbond. The two provide the consumers who actively look behind the end-product for a set of counter values. The knowledge needed to understand their arguments is not presented as common sense but laid out so the reader can understand clearly. They both counter the taken-for-granted values and extensively explain their methodologies and choice of criteria. By following Knuth's (2017; 2019) way of analysis: This actively devalues the need for the consumption of new products and shows a counter-capitalist form of action. They actually promote repair and second-hand as preferred choices and see brand new products as a last resort option. Their criteria also fit a critical perspective on the aforementioned passive revolution. Companies using the word 'green' or buying RECs (Renewable Energy Certificates) are reflected on critically in their ratings. This counter-critique versus the product-focused perspective in regular platforms shows a clear interrelation with capitalism. The most naturalised and powerful platforms relate to a capitalist system and a repetition of its values.

Conclusion & Discussion

Selling and reviewing platforms reproduce the workings of a capitalist system. They repeat a blind spot of immateriality and promote consumption based on abstract values which corresponds to Elke Pirgmaier's (2018) analysis of Capital(ism). These platforms show no reflection on their criteria which demonstrates how naturalised this kind of valuation is (Fairclough 1995). They present devices with short-term profit in mind for the end user by only covering aspects that are directly beneficial for the end-user without considering environment, people or sustainability. Meanwhile, the platforms and Acer implicitly profit because this allows them to sell. The web shop also did not mention repairing or second-hand laptops as an option. Arguably this makes sense as it tries to sell a product. But the reason this phenomenon makes sense is because we are used to this kind of platform with its specific representation of digital devices. Web shops can represent devices this way because we all, as a discourse community, continue to participate in this standard. By repeating and not challenging the way we look for and spread information on digital devices, we maintain our current valuation.

Because the regular platforms have a strong subject position, they can present this end-user focus and still get lots of compliant visitors. Even though the regular platforms seem transparent and neutral, and spread the message that they are critical, their recommendations focus purely on what directly affects the end-user of the product. This usually excludes the processes or influence it has on other actors than buyer and seller. Consumers have to dig deeper and find platforms that are more specified towards a certain topic they care about. As discussed, discourse and materiality influence each other. I made visible in what micro ways we participate in the valuation of digital devices and how this extends on a macro level to our capitalist society. I am aware that I do not have explicit

answers to make a change. Hopefully I did open the reader's eyes to the everyday active process that is going on. New media are unavoidably connected to the material world. Remember that our constantly changing media always also mean a change of materiality in some way: in the build of servers, screens or consoles. As the counter platforms showed this at least consists of people, environment and sustainability. From a capitalist perspective it makes sense to keep this world opaque as it might slow down the focus on short-term abstract values and monetary profits. But if we decide to disagree to this valuation, we need to look critically at our current system. This thesis offers insights to spark theoretical and societal change of thinking that makes us feel and act less powerless in the current situation. We urgently need to increase a more material way of viewing new media.

Call for action

To understand the broader discourse on digital devices in society it would be useful to look further than consumer-focused information. This analysis focused on online consumer-focused recommendation platforms which gives insight in the way the general public (assuming those are targeted as consumers) gets informed about devices. It would be useful to analyse a broader discourse around digital devices including government and organisations focusing on producers, brands and other supply chain. There is a lot going on in campaigning for more ethical production of digital devices that did not fit in the scope of this thesis. Organisations *Responsible Sourcing Network* and *The Enough Project,* and the new European *Conflict Minerals Regulation* starting 2021, work towards a better treatment of workers that mine for minerals used in electronics. These are currently all rather behind the scenes for consumers, but active processes for producers. A political-economic perspective and a focus on geography could both help understand the broader material implications of the way digital devices come about in our world.

This thesis arguably puts consumers in a position to govern markets with their choices and reviews. But that seems impossible as there still seem to be no good options when we consider both regular (capitalist) values and counter-capitalist values: the devices rated 5 stars in a web shop often get a D in ethics. Nor are there any devices that are completely up to even just the most basic ethical standards. Greenpeace and Ethical Consumer merely provide an overview of brand's work in progress and a rating which shows to what extent brands are working towards a better treatment of workers, material and environment. To install the latest software and keep up with contemporary use, requires devices that are up to a good enough technical standard. As argued by Cobbing et al. (2016) we need to decrease purchases and promotion of fast consumption and increase the focus on improving production. There seems to be no platform available (yet) that allows consumers to bridge making more ethical choices to the need for a device that is up to current standards. Options could be inspired by

Ethical Consumer and Greenpeace who also both support political action and projects that work towards a more ethical approach and campaign against those projects that lack behind.

We can all take more control in making good choices if we look critically at the information presented to us. Concrete contemporary topics for further research could be related to our COVID crisis. The first news on COVID-19 in January and February showed us a part of the world behind our devices. We suddenly started caring about workers in China. "*Coronavirus could cripple electronics industry"* (Chin 2020) and "*Coronavirus May Disrupt TV, Laptop, and PC Monitor Production*" (Kan 2020) discuss personnel stationed mainly in Wuhan but also China in general. Only when it started to directly impact the end-user and our capitalist system, they made it onto our news. Combined with the Black Lives Matter movements, this case allows us to look further and reconsider our postcolonial capitalist system. These stammering times amplify that our current system is not built to last. It could be the advantageous time to make a proper change.

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