



OPEN ACCESS

EDITED BY

Konstantinos P. Tsagarakis,
Technical University of Crete, Greece

REVIEWED BY

Anupam Khajuria,
United Nations Centre for Regional
Development, Japan
Raffaella Taddeo,
G. d'Annunzio University of Chieti and
Pescara, Italy
Francesca Ceruti,
Energy and Sustainable Economic
Development (ENEA), Italy

*CORRESPONDENCE

Laura Niessen
✉ l.niessen@maastrichtuniversity.nl

SPECIALTY SECTION

This article was submitted to
Circular Economy,
a section of the journal
Frontiers in Sustainability

RECEIVED 14 February 2023

ACCEPTED 24 March 2023

PUBLISHED 18 April 2023

CITATION

Niessen L, Bocken NMP and Dijk M (2023)
Sufficiency as trend or tradition?—Uncovering
business pathways to sufficiency through
historical advertisements.
Front. Sustain. 4:1165682.
doi: 10.3389/frsus.2023.1165682

COPYRIGHT

© 2023 Niessen, Bocken and Dijk. This is an
open-access article distributed under the terms
of the [Creative Commons Attribution License
\(CC BY\)](https://creativecommons.org/licenses/by/4.0/). The use, distribution or reproduction
in other forums is permitted, provided the
original author(s) and the copyright owner(s)
are credited and that the original publication in
this journal is cited, in accordance with
accepted academic practice. No use,
distribution or reproduction is permitted which
does not comply with these terms.

Sufficiency as trend or tradition?—Uncovering business pathways to sufficiency through historical advertisements

Laura Niessen^{1*}, Nancy M. P. Bocken^{1,2} and Marc Dijk¹

¹School of Business and Economics, Maastricht Sustainability Institute, Maastricht University, Maastricht, Netherlands, ²International Institute for Industrial Environmental Economics (IIIEE), Lund University, Lund, Sweden

Climate change and dwindling resources underline that we need to bring production and consumption levels in line with planetary boundaries. Consumption, particularly in high-income communities, needs to be reduced and stabilized at sustainable levels. Businesses can play a key role as suppliers of goods and services and creators of demand. Some companies are rising to the challenge and promoting less consumption or “sufficiency” through long product lifetimes, repair services or rental offers, but they remain niche actors in the economic system. Similarly, while circular initiatives gain traction across sectors, firms focus primarily on recycling and efficiency improvements rather than supporting more radical “Reduce” strategies. To engage companies in promoting sustainable levels of consumption, it can be helpful to understand pathways of established businesses who currently promote sufficiency. What can we learn from companies that currently promote sufficiency in their communications? Have they always advocated sufficient consumption, or have they changed recently? Through a historical perspective, we provide insights on the pathway of sufficiency for three companies. A document analysis of historical advertisements shines light on the messaging to potential customers over time. It is combined with an analysis of contemporary communications to connect the companies’ past and present sufficiency approaches. Understanding different pathways to sufficiency can help modern-day businesses to reconsider their own business models and orientation. It can also point out levers for policy to support a transformation toward sustainable and circular business models that promote living within planetary boundaries.

KEYWORDS

sustainable business, sufficiency, sustainable consumption, business history, circular economy, advertising, product longevity

1. Introduction

“When I was young, we really took care of our things...”

Many of us have heard older citizens reminisce about how products were treated carefully, reused, and repaired in the past. This view is supported by research that identifies decreasing product lifespans and planned obsolescence, both of which lead to resource overuse and environmental degradation (Bakker et al., 2014). In many sectors, companies rely on high volumes of product sales, where items are produced, bought, used,

and discarded in only a few months (Bocken and Short, 2021). One of the most prominent examples of this pattern is fast fashion, with high production and consumption volumes. For example, the average US consumer is estimated to purchase a clothing item every 5.5 days (Niinimäki et al., 2020). Similar developments have been witnessed in other sectors, such as electronics, where continuous product innovation leads to technological and style obsolescence, with customers replacing products frequently to have the newest model (Rivera and Lallmahomed, 2015). Circular economy practices like product care and maintenance have also become less common. While once a ubiquitous practice, now only a fraction of the population considers repairing items, with one European survey reporting that 64% would try to repair a product if it breaks (Cerulli-Harms et al., 2018).

From a historical perspective, the impact of human activity through resource consumption has powerfully increased since 1945, leading to the “Great Acceleration”, or second stage of the “Anthropocene” where humans act as a bio-physical force on the earth-system (Crutzen and Stoermer, 2000; Bergquist, 2019). In the 21st century, we are overconsuming planetary resources (O’Neill et al., 2018). We are confronted ever more clearly with the effects of this overconsumption, for instance in the form of extreme weather events through climate change or biodiversity loss due to over extraction. These trends can only be slowed down or halted if we change affluent consumption patterns (Wiedmann et al., 2020) and integrate the concept of sufficiency, which advocates consumption levels within planetary boundaries (O’Neill et al., 2018). Businesses meet customer demands but also innovate products and services that create new desires in their customer base. They are highly influential in promoting certain lifestyles as “normal” or desirable, for instance through advertising (Baum, 2012). As such, companies can play an important role in creating social norms and promoting values. Most businesses have historically relied on resource extraction and high consumption levels to make profits. Only some rare examples exist of values-driven green entrepreneurs that promoted sustainability as early as the 19th century (Jones, 2017), primarily in the food, energy and tourism sectors.

Nowadays, sustainability is a commonplace goal for businesses and some even promote sufficiency, or consumption within the planetary boundaries, to their customers, for instance through circular business models and long product lifetimes (Niessen and Bocken, 2021; Bocken et al., 2022). Learning from the history of business can provide relevant insights and illustrate pathways for future action, to be better able to manage in similar situations (Golder, 2000). This research therefore tries to shed light on how three businesses from different sectors moved toward promoting the norm of sufficiency. All three companies have a long business history of over 100 years. They currently promote sufficiency to their customers in their communications and through offering long-life products. By reviewing their pathways toward sufficiency, lessons for other business can be drawn. To understand the journey of the companies over time, we investigate the following research question: To what extent have sufficiency-orientated businesses older than 100 years promoted sufficiency over time?

The three business cases are analyzed through a historical perspective. Print advertisements from the 1950s onwards are

analyzed to understand how the companies communicated to (potential) customers. The advertisements are supplemented with an analysis of current sustainability communications to understand how sufficiency is presently encouraged by the companies. The paper first introduces existing research on sufficiency in business and advertising, highlighting the research gap. After presenting the methods and the business cases, the results of the data analysis are detailed. Through the analysis, we found different pathways of businesses toward sufficiency communications. We provide learnings for both businesses and policy to make sufficiency an integral principle for a future circular economy.

2. Background

Sufficiency is still a niche concept in business. Yet, there are already some companies promoting the value through different strategies, including their advertising. This section reviews existing literature on sufficiency (in business), on the influence of advertising, for instance for sustainability, and on the benefits of historical business research to learn from past experiences.

2.1. Sufficiency in business

Through our systems of production and consumption, we have now surpassed the safe operating space for six of nine planetary boundaries including on novel chemical entities, biosphere extinction and climate change (Steffen et al., 2015; Persson et al., 2022; Wang-Erlandsson et al., 2022). Businesses can move production and consumption into sustainable pathways, as they supply goods and services and create demand. Current business action focuses on efficiency improvements, but it is also necessary to reconsider overall levels of resource extraction and use. This additional strategy is called “sufficiency” and entails the reduction and leveling of resource consumption to levels in line with planetary capacity (Spangenberg and Lorek, 2019). While sufficiency demands an end to resource overconsumption, it recognizes the requirement for human wellbeing by meeting social needs. Concepts such as consumption corridors identify consumption patterns that allow for a good life within planetary boundaries (Fuchs et al., 2021).

The urgency to change consumption patterns is becoming more widely accepted, with scholarship on sufficiency rising in recent years (Jungell-Michelsson and Heikkurinen, 2022). Policy-relevant publications such as the 2022 IPCC report have also started suggesting demand side-strategies for mitigation (Creutzig et al., 2022). While sufficiency calls for consumers to change their habits, these are heavily dependent on producers offering sustainable choices and supporting a move away from overconsumption. Bocken and Short (2016) introduced the idea of businesses “encouraging consumers to make do with less” (p. 42) and introduced sufficiency-oriented business models. Since then, research has expanded knowledge on how companies can move toward sufficiency, for instance looking at specific sufficiency strategies (Niessen and Bocken, 2021), characteristics of sufficiency-supporting businesses (Beyeler and Jaeger-Erben, 2022),

or sufficiency-oriented marketing practices (Gossen and Kropfeld, 2022).

2.2. Business communications (for sufficiency)

While companies can use diverse strategies to promote sufficiency, the focus of this research is on marketing activities, and particularly the sub-set of advertising and customer communications. Firms use advertising to present their products and services to the public but also to create a public image, for instance of corporate responsibility (Vandyke and Tedesco, 2016). Through advertising, businesses furthermore promote certain values and lifestyles as desirable and normal (Baum, 2012). Advertisement uses frames to create a specific understanding of an issue among recipients and can be highly influential in creating cultural frames, due to its omnipresence in modern society (Vandyke and Tedesco, 2016). Particularly image advertising can be influential as it not only provides information but also creates symbols and new myths (Phillips and Brown, 1993). A striking example of this influence is provided by the 2014 T-Mobile Austria “JUHU!” (“Hooray!”) campaign, which offered annual phone upgrades to new models. Advertisements pictured people excited about broken phones because they could upgrade to a new one (Wieser, 2016). These advertisements influenced customers’ understanding of “normal” phone replacement cycles: 7 out of 25 interviewees in Wieser and Tröger (2015) mentioned the campaign and thought that replacement after 1 year was normal, while the average in Austria was actually 2.7 years. The impact of this campaign illustrates how advertisement could be used to instead promote reduced consumption if companies encouraged sufficiency.

Research has studied advertisements in the context of environmental sustainability since the 1990s (Agarwal and Kumar, 2020). Iyer and Banerjee (1993) developed a framework to categorize green ads, while Carlson et al. (1993) initiated the field of assessing environmental advertisement claims, i.e., “greenwashing”. Green marketing has become much more frequent since the first studies in the 1990s (Segev et al., 2015) and made up almost 12% of all mainstream magazine advertising in 2008 (Baum, 2012). Research has looked into how environmental advertisements frame motherhood (Atkinson, 2014) and how car producers in China advertise energy efficiency and earth-friendliness to promote further private car ownership (Chen, 2016). Oyedele and Dejong (2013) looked into the consumers’ side, analyzing how green communications are perceived by and influence potential customers. In addition to advertisements, research has analyzed other business communications to understand sustainability messaging to the consumer. Fernández-Vázquez and Sancho-Rodríguez (2020) analyzed corporate social responsibility reports and websites of Spanish businesses to understand the discourse on climate change. de Burgh-Woodman and King (2012) analyzed website representation of a Toyota hybrid car in Australia to understand how images implied sustainability while the content did not refer to the environment. Lascity and Cairns (2020) reviewed brand websites, in-store advertising and social media

of fashion companies and found that their communication on clothing recycling programs creates a “complicated greenness” of encouraging further consumption.

Business communications can promote sufficiency through, for instance, encouraging longevity (durability, timelessness), repair and reuse and educating consumers (Gossen et al., 2019). Companies can also use a more radical form of green communications: the green demarketing approach. Green demarketing (GD) refers to “a brand’s strategic attempt to reduce consumption at a category level through encouraging focal brand purchase, ostensibly out of the concern for the environment” (Armstrong Soule and Reich, 2015, p. 1404). With GD, a company actively uses its advertising to discourage consumption. Examples include Patagonia’s 2011 “Don’t Buy this Jacket” advertisement, REI’s 2015 “Opt Outside” Black Friday campaign (Reich and Armstrong Soule, 2016) or KLM’s ‘Fly Responsibly’ campaign (Hesse and Rünz, 2020). Green demarketing is related to quality appeals in that they can both promote durable products and reduced new purchases. However, GD goes further as it does not focus on monetary savings and sometimes does not promote any products but rather encourages reduced consumption (Reich and Armstrong Soule, 2016). Research suggests that GD advertisements do not only appeal to radical green consumers (Reich and Armstrong Soule, 2016) and elicit majority positive reactions (Hesse and Rünz, 2020). Less positive reactions can occur when the sender of the advertisement is perceived as illegitimate (e.g., Dutch airline KLM suggesting flying less) (Hesse and Rünz, 2020). Companies might hesitate to use radical campaigns for sufficiency, as there is potential for backlash. Generally, advertising campaigns that promote sufficiency might be perceived as greenwashing if not carefully designed and implemented in all business activities (Gossen et al., 2019). As such, it can be insightful to look at the historical development of how long-standing companies have come to promote sufficiency nowadays.

2.3. Research gap: historical perspective and pathways

Looking at the history of businesses can provide insights for current and future action. As pointed out by Smith and Greer (2017), researching historical change on the level of the firm can help to “understand the specific circumstances in which companies change their strategies so as to protect the environment” (p. 989). The emergence of environmentalism in business has become an increasing focus of business historians. Jones (2017) book *Profits and Sustainability*, for instance, traces the development of current green entrepreneurship from early frontrunners in diverse sectors (e.g., food, tourism, cosmetics). Desrochers (2011) describes the work of Victorian age pioneers of what today would be called “industrial ecology”, showing how environmental considerations have been incorporated into business activities for a long time. Other research investigates more recent 20th century history, for instance the efforts of the oil industry to decarbonize (Boon, 2019), chemical giant DuPont’s development into a sustainability pioneer (Rome, 2019), and German companies Henkel and Bayer embracing sustainability following strict regulations and public

backlash (Jones and Lubinski, 2013). Research on the history of sufficiency values in businesses, however, is still missing.

While sufficiency practices such as using products for a long time and repairing might feel like “bringing back the old times”, it is necessary to rethink consumption in times of resource overuse. Companies can play an important part in promoting sufficiency and making it an acceptable social value, as firms hold power not only to influence markets but also politics, society and culture (Decker et al., 2015). While it may seem like a difficult task to some firms, we can look at the past to learn how companies communicated to their (potential) customers in terms of sufficiency and general sustainability. The historical development of established businesses that now promote sufficiency can help detect future pathways of communicating sufficiency for other firms.

3. Methods

In order to investigate how long-standing companies promote sufficiency and identify pathways in their sufficiency trajectories, we employed an analysis of historical advertisements for three case companies: Denby Pottery, Levi’s and Miele. Tracing the advertising communication of these businesses over time can help understand whether and, if so, how they integrated sufficiency considerations into their customer communication over time. This can help develop different pathways toward sufficiency for businesses today and shed light on business communications for sufficiency and sustainability.

3.1. Data sample, collection and analysis

The data collection for the paper included historical advertisement analysis and a review of present-day sustainability communications. The aim was to understand the historical development of advertising over time for companies that currently promote sufficiency but already have a longstanding company history. We aimed to select a range of companies from different sectors in this exploratory study to gain broad insight.

Our sample consisted of three companies: British pottery manufacturer Denby Pottery Company (abbreviated as Denby), American clothing brand Levi’s and German appliances manufacturer Miele. The companies were sourced from the Business for Sufficiency database created by the first author (Niessen and Bocken, 2022)¹. This database was created to raise awareness of companies that publicly talk about the need for sufficiency. It hosts over 150 business examples, going beyond a handful of iconic examples, and providing exemplars across industries. The three companies researched in this paper have a business history of over 100 years and can therefore provide interesting insights of developments over time. Twenty suitable long-standing companies (set up pre-1980s) from the database were contacted for this research. Unfortunately, none was available

to offer access to their company archives, so advertisements were collected from publicly available online sources. The three selected case companies were the only ones with sufficient advertisements publicly available online, making this a sample based on convenience. Following Antheaume et al. (2013), we applied a qualitative approach with a small sample of businesses, where the heterogeneity of the sample in terms of sector, size and origin country reflects the diversity of sufficiency-supporting businesses. Table 1 presents data on the three companies and section 3.2 details the business cases further.

Historical advertisements were collected via the following publicly available advertisement archives: AdForum, Advertising Archives, BrandHistory and Adsoftheworld. Additionally, stock photo website Alamy and online marketplaces Ebay and Etsy were scanned for advertisements. The data collection was limited to print advertisements to enable comparison across decades, since video or billboard content is not easily comparable with older print adverts. Advertisements for the three companies were limited to Germany, the United States and the United Kingdom. This meant we included home markets for all firms (Germany for Miele, UK for Denby, and US for Levi’s), as well as foreign campaigns by the brands, which enabled comparability. Advertisements were included if they were (1) legible, (2) stemming from the company itself, (3) if time and country of publication were discernible and (4) if there was a relevant text segment to analyze (beyond a mere tagline). The advertisements were not limited to a time range but after the four-step selection, collected advertisements happened to cover similar periods for all three companies. These historical advertisements were then complemented with a review of recent (2019–2023) sustainability activities, reviewing websites and sustainability reports, where available. Table 2 provides an overview of the data collected and analyzed per company and the full list including document numbers is available in Supplementary material.

The advertisements were analyzed through a qualitative content analysis. We recognize that “all advertising can be viewed and understood as a kind of discourse promoting and promulgating certain societal values” (Baum, 2012, p. 424). Framing and discourse in advertising can shape how the public perceives sustainability issues (Chen, 2016; Vandyke and Tedesco, 2016) and discourse and semiotics can be useful to understand the normalization of values. However, in this research, the large number of advertisements made a full discourse analysis too unwieldy, so we chose a qualitative content analysis to find recurring themes in the advertisements. Content analysis is a commonly used method for research on sustainability in advertising and can help to discover patterns (Carlson et al., 1993). In advertising research, content analysis is often quantitative, counting the occurrence of certain codes (Agarwal and Kumar, 2020). For this paper, we have chosen to include a qualitative content analysis. Qualitative content analysis can be used to search underlying themes in documents, with themes being constantly revised as documents are coded (Bryman, 2012). For each of the three companies, a sample of five advertisements were initially coded for themes independently by all three authors, using the open coding approach (Strauss and Corbin, 1990). Codes were compared and streamlined to increase objectivity. The remaining advertisements were coded by the first author and final codes

¹ The database is updated regularly and available to the public at: www.circularx.eu/en/tool/26/business-for-sufficiency-database.

TABLE 1 Overview of business cases.

	Denby	Levi's	Miele
Headquarters	United Kingdom	United States	Germany
Foundation year	1809	1873	1899
Staff members	501–1,000	14,800	22,000
Current sufficiency strategies (based on Niessen and Bocken, 2021)	Awareness-raising Design Green alternative Long warranty	Awareness-raising Design Green alternative Life extension service Personalized production Reuse Support for repair	Design Green alternative

TABLE 2 Overview of data types collected per business case.

		Amount	Time range
Denby			
Print advertisements	Historical	14	1955–1999
Webpages	Current	13	Online January 2023
Levi's			
Print advertisements	Historical	106	1952–2011
Sustainability reports	Current	3	2019–2021
Webpages	Current	3	Online January 2023
Miele			
Print advertisements	Historical	91	1956–2011
Sustainability reports	Current	2	2019; 2021
Webpages	Current	3	Online January 2023

were reviewed by all to reduce potential bias. While some bias might have persisted, it should not have created a large problem, as the coding was done to find patterns rather than test pre-existing hypotheses (Iyer and Banerjee, 1993). Coding was also used to analyze sustainability representation on websites and in sustainability reports. A multimodal analysis of both text and visual imagery could have added important insights (Barberá-Tomás et al., 2019). Yet, image interpretation is more subjective, so text analysis can ensure a higher level of objectivity (Baum, 2012).

3.2. Business cases

This section contains an overview of the three case companies, Denby, Levi's and Miele.

3.2.1. Denby

Denby Pottery Company Ltd manufactures pottery in Denby, Derbyshire, United Kingdom. Established in 1809 by William Bourne, the business was run as the private company Joseph Bourne & Son Ltd. by his descendants and then floated as a public company in 1970 as Denbyware Ltd. (Derbyshire Record Office, n.d.; Denby Pottery Company, n.d.-b). The Denby group includes Burleigh Pottery, Hartley Greens Pottery and Poole Pottery (Denby Pottery

Company, n.d.-b) but this analysis focuses on Denby Pottery. Denby Pottery employs between 501–1000 staff members (Denby Pottery Company, n.d.-c) and has company representation in the US, Korea and China as well as selling through stockists in other countries, such as Ireland and France (Denby Group Limited, 2022; Denby Pottery Company, n.d.-d). The company produces tableware and cookware designed for longevity and versatility to promote multi-functional use (Denby Pottery Company, n.d.-i). Denby products are covered with long warranties, such as a 10-year warranty on stoneware and a lifetime warranty on selected cookware items (Denby Pottery Company, n.d.-a). In 2019, Denby launched The Conscious Choice campaign promoting the sustainable nature of their products and inspiring sufficiency in use. The campaign provides tips on sustainable living, a care product guide or tips on repurposing items (Denby Pottery Company, n.d.-e,f,g,h).

3.2.2. Levi's

Levi Strauss & Co. operates the Levi's, Dockers, Signature by Levi Strauss & Co. and Denizen brands with 14,800 employees worldwide and 50,000 retail locations worldwide (Levi Strauss and CO, n.d.-a). The focus here is on the Levi's brand which is sold in around 500 Levi's stores in over 100 countries (Levi's, n.d.-a). Founders Levi Strauss and Jacob Davis designed and

patented the first blue jeans in 1873 (Levi Strauss and CO, n.d.-b). Headquartered in San Francisco, United States, Levi's still sells denim products and other apparel products. Levi's products are designed for durability and the brand facilitates repair or alterations in their in-store Levi's Tailor Shops (Levi's, n.d.-c). Levi's also offers an online clothing resale point (Levi's, n.d.-b). In April 2021, Levi's launched the "Buy Better, Wear Longer" spring campaign (Levi Strauss CO, 2021). The campaign aimed to raise awareness of the environmental impact of consumption and to encourage customers to wear Levi's items for a long time, to buy reused items or to have them repaired (Levi Strauss CO, 2021). The "Buy Better, Wear Longer" campaign was relaunched in September 2022 (Levi Strauss CO, 2022).

3.2.3. Miele

Miele is an appliance manufacturer based in Gütersloh, Germany. Founded by Carl Miele and Reinhard Zinnkann in 1899, Miele initially developed cream separators and moved on to other devices such as washing machines or vacuum cleaners, but also automobiles and bicycles (now discontinued) (Miele, n.d.-a). The company is still owned by descendants of the two founders (Miele, n.d.-a,n). In 2021, the Miele Group employed around 22,000 staff members globally, of which 11,400 are based in Germany, and they held subsidiaries on all five continents (Miele, 2022, n.d.-d). Production is based in European factories (largely Germany) and in one Chinese facility (Miele, n.d.-c). Miele products include white good electronics that are built for a 20 year lifetime, designing them for durability and repair (Miele, n.d.-e). Following their slogan of "Immer Besser" ("Always Better"), they try to design and produce

efficient and smart appliances that reduce resource use (Miele, n.d.-e).

4. Results: pathways to sufficiency

Understanding the past of modern businesses can provide valuable lessons for the future. The three business cases were researched to understand how well established companies that currently promote sufficiency have come to do so over time. Data from historical advertisements and current day communications were analyzed to understand the main themes communicated to customers. Recurring themes that emerged are presented below, connecting them to sufficiency where relevant. Figure 1 displays the presence of the longevity and durability themes in the three cases over time in percentages. To illustrate, if 5 out of 10 advertisements in a decade included the themes of longevity or durability, this decade was coded as 50% presence of the themes, while another decade with 25 advertisements might have included 5 that mention longevity or durability, so they would be coded at 20% presence.

4.1. Denby: sufficiency over time

4.1.1. Sufficiency in historical advertisements

Advertisements were not as widely available for Denby as for the other two businesses. In total, 14 advertisements were found for the period of 1955 to 1999. The ten main recurring themes over time are detailed in Table 3 with a brief description and examples.

In the 1950s (4 ads: all UK), the beauty of Denby pottery was emphasized, featuring in all advertisements. The advertisements promote products as designed "to live with" (Ad 4, 1957, UK). This

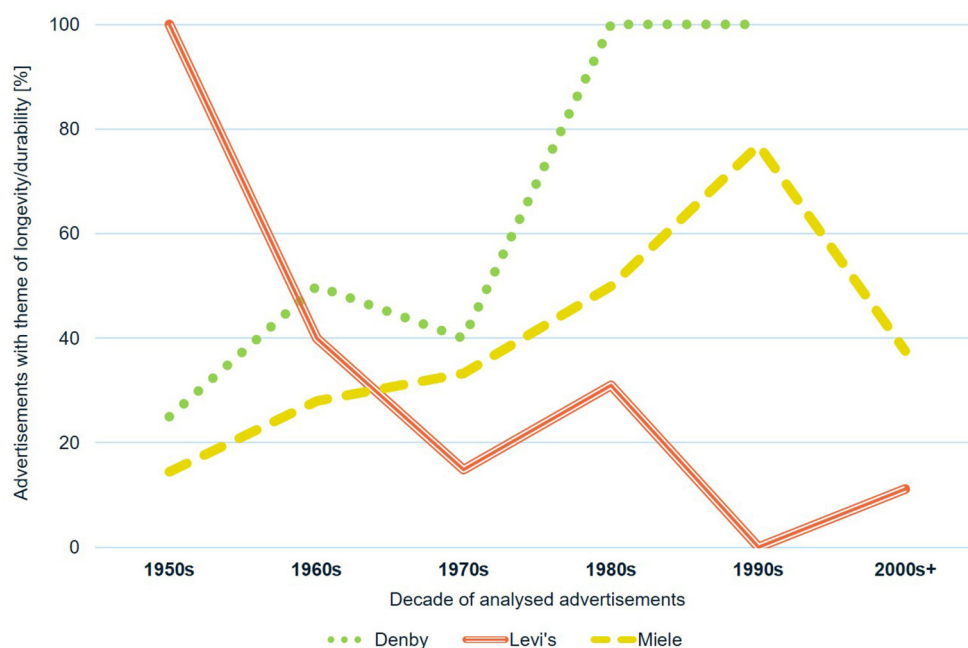


FIGURE 1
Presence of longevity/durability theme in advertisements (in %).

TABLE 3 Denby main themes in advertisements.

Theme	Communication	Example
Beauty	Denby tableware is beautifully designed and decorative, with appealing shapes and colors.	"They all agree without question on its being amongst the best looking Dinnerware you can buy." (Ad 13, 1974, US)
Craftsmanship	The tableware is produced by experienced craftspeople and oftentimes handmade.	"Skilled hands with the experience of generations are the tools we use to create Cotswold." (Ad 11, 1974, US)
Design	Denby products are carefully designed, to meet users' needs and be pleasant to look at.	"Denby... designed with in you in mind." (Ad 6, 1960, UK)
Desirability	Customers want Denby products because of their positive attributes, such as beauty and longevity.	"Your friends will be forever grateful for a Denby gift." (Ad 18, 1955, UK)
History	Denby has been crafting pottery since 1809 and is a well-established English stoneware brand.	"Denby, the craftsman potters who have been creating genuine stoneware since 1809." (Ad 2, 1970s, UK)
Individuality	The variety of Denby tableware means that customers can chose the style they like and express individual taste.	"Choose Greenwheat for the touch of individuality that marks a skilled hostess." (Ad 6, 1969, UK)
Longevity	Denby pottery is made with a lot of care and therefore sturdy and highly durable, lasting for a long time.	"A lot of people still can't bring themselves to believe that Denby Dinnerware is as hard-wearing as we claim it is." (Ad 3, 1970s, UK)
Practical	Denby pottery items can endure heat and cold, enabling cooking, serving and storing in the same item.	"Safe for use in the oven, fridge/freezer, microwave and dishwasher" (Ad 15, 1995, US)
Service	To underscore the longevity of Denby's tableware, a warrantee is provided.	"Guaranteed for 2 years from date of purchase against any manufacturing defects or breakage." (Ad 11, 1974, US)
Versatility	Denby pottery can be combined with different interior styles and can be used for cooking, serving and storage.	"Simple, good shapes, attractive and pleasant to handle: three soft colors to harmonize equally with modern or traditional interiors." (Ad 4, 1957, UK)

refers to versatility: "Whether a home is in contemporary, period or traditional style, you will find that Denby Tableware 'lives' in any setting" (Ad 18, 1955, UK). It also refers to practicality: "meals can be served direct from the oven to the table in a matter of seconds" (Ad 5, 1955, UK). Product longevity is only mentioned in one advertisement, pointing out that Denby is "for ever" (Ad 18, 1955, UK). Yet, two of the advertisements refer to sufficiency, advertising to only buy what you need: "if you are creating a new home you can buy Denby piece by piece without the restriction of a complete set that so often leaves you with too many of one item and not enough of others" (Ad 5, 1955, UK).

In the 1960s (2 ads: all UK), beauty and design are still important. Denby pottery is "designed with you in mind" (Ad 9, 1961, UK), helping the skilled host express individual style when entertaining. Again, the versatility of the pottery is mentioned, as well as its practical use for cooking and serving. Longevity is mentioned in one of the two ads, stating that Denby items "live longer, in the oven or on the table" (Ad 6, 1960, UK).

In the 1970s (5 ads: 3 UK, 2 US), advertisements have similar messages and layout in both the UK and the US. In addition to talking about the beauty and design on pottery, the adverts highlight British craftsmanship in producing the pottery: "Run your finger along them and you'll know at once that it's an original hand-crafted piece—the kind that machines just can't copy" (Ad 11, 1974, US). Another common theme is that of the sturdy durability: "Soft as silk... hard as nails" (Ad 13, 1974, US), with two advertisements highlighting the durability that promotes long product lifetimes. This is bolstered by a service guarantee offered on manufacturing defects or breakage: "The no-nonsense 2 year guarantee is your safeguard" (Ad 11, 1974, US).

In the 1980s (1 ad: all UK), the advertisement touches upon the themes of design, referring to "27 original designs and 80

different colors" (Ad 10, 1980, UK). It also links to the theme of craftsmanship, pointing out that the advertised item is handcrafted. Finally, the theme of longevity is touched upon, claiming that the colors on Denby pottery "are fused in and will never fade" (Ad 10, 1980, UK).

In the 1990s (2 ads: 1 UK, 1 US), beauty and design are slightly less important selling points, with one of the ads instead focusing on the practical attributes and longevity: "it takes years of everyday use. Freezers, ovens, dishwashers and microwaves included" (Ad 17, 1999, UK). Longevity is also mentioned in the American ad, referring to "its incredible strength and durability" (Ad 15, 1995, US). The US advertisement also points to the brand name and fame of Denby: "Denby is famous for its unique use of shape and richly colored glazes" (Ad 15, 1995, US).

4.1.2. Sufficiency over time

Denby historical print advertisements were found for the period of 1955 to 1999. More recent company communication was therefore analyzed through reviewing the company website. This included both the general website as well as their Conscious Choice campaign, which encourages customers to make small changes and live more sustainably.

Denby launched its Conscious Choice campaign in 2019 and has retained the campaign as a constant component on its website since then. The campaign tells customers to consume more considerably and change their life to live more sustainably. To that end, the Denby website provides tips and advice, for instance on how to repurpose unwanted items or how to buy items that can be used for a long time. In their messaging, the call for sufficiency is quite clear, with statements such as "Do more with less" (D44, 2023). The messaging focuses on smaller, easy lifestyle changes particularly

with regards to homeware items, so the sector Denby works in. The thematic focus is on circularity and a zero waste lifestyle, so reducing waste for instance through reusing and repurposing items. Yet, they also openly suggest reconsidering if customers should buy more homeware products: *“Before investing in new tableware or any homeware, think about what you really need. By making more conscious choices, you’re helping to look after the planet too”* (D33, 2023). Circularity is furthermore mentioned for their own production practices, where glaze and clay are reused or recycled (D37, 2023).

In promoting sufficiency, Denby’s messaging retains the same themes that have been found in the historical analysis. Similar to before, the spotlight is put on versatility and the practical nature of Denby items. Since Denby products are versatile, they can be used for many different occasions: *“Our ranges are truly styled by life with items that are super versatile and multi-functional, so a smaller number of pieces are needed”* (D28, 2023). Similarly, versatility means that items can be reused for different uses, such as using a cup as a plant pot or toothbrush holder, using them longer. Denby products promote sufficient consumption through durability and long product lifetimes. While this theme was also present in the advertisements, it is further bolstered in recent communication by making a link to sustainability in the Conscious Choice campaign. Additionally, Denby has increased the protective guarantee to 10-year and lifetime guarantees for selected product ranges: *“With a 10-year guarantee, Denby can be used everyday as well as for special occasions, making versatile pieces work harder than more traditional tableware that is only used for “best”, saving on the purchase of multiple collections”* (D41, 2023).

The analysis tracked Denby’s communications over time and revealed that modern-day sufficiency communications are based

on historical advertisement themes and therefore coherent with existing company values. Despite fewer historical data available, advertisements exhibited different themes of sufficiency (longevity and buying only what is needed) since the 1950s. The themes of longevity, versatility and practicality are retained throughout the decades, highlighting that Denby products can be used for a long time, in different settings and for various uses. This might help to reduce the purchase of new homeware items. The historical themes of longevity, versatility and practicality are now explicitly linked to sustainability through the Conscious Choice campaign and help promote a framing of sufficiency.

4.2. Levi’s: revival of original sufficiency values

4.2.1. Sufficiency in historical advertisements

Levi’s has changed its advertisement rhetoric somewhat between 1952 and 2011. Depending on the target audience, advertisements evoked such diverse Levi’s wearers as cowboys, businessmen, women, or children. Yet, despite the variety, some recurring themes were identified in the advertisements. Table 4 provides detail on how these ten main themes are communicated with exemplary statements.

In the 1950s (3 ads: all US), Levi’s advertisements target “cowboys” and rangers, talking about the history of cowboys wearing Levi’s: *“Levi’s and cowboys have been teamed up since Gold Rush days”* (Ad 26, 1952, US). They emphasize the comfort and design that is particularly convenient on horseback: *“LEVI’S jeans are cut to fit you better—with long, lean lines that mean solid*

TABLE 4 Levi’s main themes in advertisement.

Theme	Communication	Example
Comfort	Levi’s clothing is comfortable. It is designed to fit well and becomes more comfortable and soft over time.	“Only ONE brand of blue jeans offers you this slim, snug comfort, in the saddle or on any job.” (Ad 17, 1961, US)
Convenience	The clothing is designed to be worn in a range of settings and can be easily cared for and is designed to suit the wearer’s needs.	“Because the stain-resistant VISA fabric is also Sta-Prest for amazing crease retention and wrinkle resistance.” (Ad 56, 1986, US)
Desirable/popular	People want to wear Levi’s and it is a sought after brand.	“The miners loved ‘em. And they weren’t the only ones.” (Ad 91, 1983, US)
Durability	Levi’s products are highly durable, lasting for a long time and meant to be worn for long.	“Hard working, durable boot jeans only Levi’s could make.” (Ad 8, 1979, US)
History	Levi’s are the original creators of denim and hold many years of experience in producing clothing.	“The legend begins back in 1850, when a man named Levi Strauss invented the world’s first blue jeans.” (Ad 91, 1983, US)
Material	Different types of materials are used in Levi’s clothing that can hold useful attributes, such as durability or convenience of care.	“When Levi’s Slouch Straight 504 Jeans have LYCRA fiber, you get a fit that doesn’t quit.” (Ad 37, 2005, US)
Quality	The clothing is of high quality, designed and built by experienced craftsmen.	“[W]ith all the quality you’ve come to expect from Levi’s jeans.” (Ad 52, 1980, US)
Style/design	The Levi’s style is distinctive, created through a specific design. It can be the Levi’s denim style or different (e.g., business style with Panatela).	“LEVI’S—cut to a slim, trim pattern that’s never been copied successfully—and made of the world’s toughest all-cotton denim for months of extra wear!” (Ad 27, 1966, US)
Tough	Levi’s clothing is made out of tough materials that can take a lot of stress and strain but remain durable.	“Since 1850, pants with the Levi’s “tab” on the back have shrugged off everything from bucking broncos to bicycle sprockets.” (Ad 14, 1979, US)
Value for money	The clothing is good value for money, as it lasts long, and the price is therefore sensible.	“At eight dollars, they’re the bargain of a lifetime.” (Ad 32, 1973, US)

comfort, in the saddle and out” (Ad 21, 1958, US). The toughness of the material and the durability of the clothing is also emphasized in all three advertisements: “And LEVI’s are made to last you longer—with super-tough XX denim reinforced with Copper Rivets” (Ad 21, 1958, US).

In the 1960s (15 ads: 10 US, 5 UK), advertisements still target cowboys but the themes are broadened, targeting more diverse audiences in the US and globally. Eight advertisements link to cowboys and tough-wearing denim. Several others target a different segment, introducing new styles (e.g., a 1969 advertisement introduces “Levi’s for Gals”) or product lines (e.g., two US ads introduce Levi’s Sta-Prest slacks for men and three UK ads advertise Levi’s cord or canvas pants). Style and material feature heavily for Western denim ads and alternative product lines: “Still think of Levi’s as blue jeans?” (Ad 28, 1967, US). The convenience of new materials is mentioned in some ads if clothing needs not be ironed. Durability features much less, mentioned in only six advertisements and, with one exception, only in cowboy-themed denim ads.

In the 1970s (27 ads: 25 US, 2 UK), three different audiences are targeted. Similar to the 1960s, one target group relates to Levi’s denim jeans. These are portrayed as tough, durable, made for hard work (adults) or play (children): “They’re built to “out-tough” the toughest kids” (Ad 73, 1978, US). The second target group is adult men. Levi’s Panatela is introduced as a brand of business wear: “they don’t look like Levi’s, but -thank heaven- they’re made like Levi’s!” (Ad 32, 1973, US). Style and material play a main role, as does value for money and a good price: “Slacks. Not \$lacks” (Ad 24, 1973, US). The third target group are women: in the 1970s and 1980s, Levi’s released advertisements with sketches of women wearing Levi’s jeans or “Bend Over” clothing. The ads focus on the comfort and figure-flattering properties. They also suggest matching with other Levi’s items, promoting further consumption. Longevity is only mentioned in four of the 27 ads, showing its low importance.

In the 1980s (47 ads: 45 US, 1 UK, 1 German), two of the three target audiences from the 1970s remain, while male business wear is less extensively advertised with only two adverts. The advertising generally focuses on denim jeans. Some references to company history and the American West remain but the focus is on comfort: “Life is full of simple pleasures, like the comfort of Levi’s jeans” (Ad 40, 1989, US). There is some reference to the material, pointing out fabrics and shrink-to-fit characteristics. The jeans are advertised as cut to fit women and girls specifically: “Now the Levi’s legend is tailored to fit a girl’s figure” (Ad 57, 1980, US). Another target group is parents, advertising the tough durability of Levi’s which makes them “a sound purchase decision” (Ad 1, 1987, US). Durability features in just over 30% of the advertisements (15 of 47), not being a major selling point in most adverts.

In the 1990s (4 ads: 4 US), adverts differ quite substantially from previous decades. Texts are shorter, often limited to a tagline, in line with developments described by Ahern et al. (2013). Since only advertisements with more than a tagline were included in the analysis, few advertisements from the 1990s were suitable. The four advertisements analyzed do not really link to previously recurrent themes. One advertisement addresses parents, describing a child that likes tools and building and always wears Levi’s jeans. Contrary to the previous focus on comfort in Levi’s advertisements, the other three ads emphasize how uncomfortable Levi’s jeans are: “Stiffer

than aluminum siding, but not nearly as comfortable” (Ad 102, 1998, US). While the “toughness” of Levi’s is mentioned in these ads, it is not in relation to durability but in relation to stiff fabric.

In the 2000s and 2010s (9 ads: 9 US), the trend continues toward fewer words, but some advertisements still feature more information. There is some overlap with previously recurring themes, such as style (e.g., in making women’s “curves” look good) and comfort of right fit. Yet, most advertisements are part of the “Go Forth” campaign themed around adventure and legacy, with a vague nod to the American pioneers: “Your Legacy is yours to make. Go Forth” (Ad 83, 2011, US). One advertisement directly links to sustainability in material by promoting the 100% organic cotton content and another advert links explicitly to sufficiency, showing a care tag with laundry instructions and the advice to “Donate to Goodwill when no longer needed and care for our planet” (Ad 107, 2009, US). Only one advert touches upon durability implicitly: “a fit that doesn’t quit” (Ad 37, 2005, US).

4.2.2. Revival of original sufficiency values

Print advertisements for Levi’s were only publicly available until 2011. In April 2021 and September 2022, Levi’s ran the sufficiency-promoting advertising campaign “Buy Better, Wear Longer”. The company’s website and sustainability report also detail how Levi’s positions itself with regard to sufficiency in consumption. Therefore, the website and Sustainability Reports from 2019, 2020 and 2021 are reviewed to analyze how Levi’s currently promotes sufficiency.

Levi’s is quite direct in pointing out the need to reduce current consumption levels and promote this particularly through the longevity and durability of its products: “Designing and manufacturing quality products with timeless style that can be worn and loved longer, that can be passed down across generations, and that actively nurture authentic self-expression is key to addressing overconsumption and driving toward a more sustainable, less resource-intensive apparel sector” (D116, 2023). Connected to consumption, Levi’s sustainability communications frequently refer to the circular economy. This includes circularity in design (e.g., design for reuse and recycling), their Levi’s Second Hand resale platform and the Tailor Shops repair offer in selected stores. Levi’s works on collaborative projects, for instance with the Ellen MacArthur Foundation, but also repeatedly state the consumers’ role and responsibility to act: “To truly realize circularity, we need your help closing the loop” (Document 111, 2023).

Levi’s makes two claims in their communications on sufficiency that should be examined more closely. First, there are some claims about the history of the brand as a long-time advocate for sustainability and that it has “always made products that are built to last” (D112, 2019, p. 14). The review of historical print advertisements does not support these statements. Sustainability was rarely mentioned even in advertisements from the 2000s and 2010s. Furthermore, while the durability of the denim jeans was a recurring theme in communication, it was not picked up in advertisements for other products lines (e.g., Panatela business wear or cords). This makes it unclear if these items were also designed for longevity. Second, Levi’s claims to help consumers buy more consciously. The “Buy Better, Wear Longer” campaign

is meant to be “the continuation of our ongoing conversation with consumers about the need to combat overproduction and overconsumption in and by the apparel industry” (D114, 2021). While the campaign promotes reduced consumption and wearing clothes for longer, it is noticeable that the advertising campaign only ran for a limited amount of time. While Levi’s told customers to reduce overconsumption during the campaigns, a visit on the website any other day does not show reference to sufficiency. Instead, Levi’s incentivizes more consumption with sales, discounts, and a member program, which gives credit with each purchase. The claim to converse with customers about overproduction and overconsumption thus seems ambiguous at best.

Following Levi’s pathway toward sufficiency over time, it can be argued that recent advertising campaigns could be considered a revival of the original values of durability and long wear. The “Buy Better, Wear Longer” campaign encouraged customers to cherish their Levi’s clothing for a long time and the company aims to design clothing for long product lives. This can be seen as mirroring the inception of the company. As stated in a 1983 US advertisement, the founding legend is that Levi Strauss made pants “that even the roughest, orneriest miner couldn’t wear out for a good long time” (Ad 91). Durability and long wear were thus a founding value but were not present as main themes in advertisement after the 1950s. Rather, advertisements focused on style and design, on the comfort and the materials in the clothes. With a growing awareness of the need for sufficiency, the historical value of durability can thus be revived. However, as an analysis of current communications reveals, there is a risk of jeopardizing sufficiency messaging if it is contradicted by incentives for further consumption.

4.3. Miele: longevity but also incentivized consumption

4.3.1. Sufficiency in historical advertisements

The Miele advertisement rhetoric has changed little over the course of almost 60 years. Some variations and changes in emphasis can be observed but advertisements generally communicated a similar brand image to customers from 1956 to 2011. Table 5 provides detail on how these ten main themes are communicated with exemplary statements.

In the 1950s (13 ads: all German), convenience is the main selling point for Miele. Advertisements are directed at homemakers, describing effortless house cleaning with a vacuum cleaner or different size washing machines: “Not to have to labor just once, that is every housewife’s dream. It can easily come true when you have a Miele at home” (Ad 18, 1958, Germany; own translation). The advertisements are mainly aimed at households that do not yet use appliances for household chores. Savings in electricity and detergent consumption through efficiency are portrayed just once and as desirable only because of associated monetary savings. Longevity is mentioned in two ads but only touched upon in calling the appliances “solid” and pointing to their shatterproof casing.

In the 1960s (25 ads: 24 German, 1 UK), the emphasis is still on convenience. Performance features even more, comparing Miele with competing products and justifying premium pricing:

“Because Miele does not build especially cheap but especially good machines” (Ad 47, 1968, Germany; own translation). Innovation is more prominent (11 ads), with ads dedicated to the features of, e.g., the “Super dishwasher”. Efficiency is barely mentioned (2 ads), only referring to saving water and detergent. Longevity, however, is referred to in seven ads, pointing out the durable casing, the cleaning that protects the laundry and the long use life: “It radiates reliability. Today, tomorrow and in many, many years. Like all Miele appliances” (Ad 43, 1967, Germany; own translation). One theme that emerges more clearly is more consumption, which runs counter to sufficiency. Five ads contain messages that encourage running a laundry cycle with few items or not holding back on using dishes. Buying further Miele items is also encouraged by highlighting appliance combinations and the extended product range.

In the 1970s (12 ads: 10 German, 2 UK), convenience and performance remain focal selling points. The two British ads focus on the premium price and status associated with Miele: “Miele is expensive. But the best usually is. It’s the price of excellence and exclusivity” (Ad 9, 1972, UK). Efficiency does not feature but longevity features in four of the German ads, promoting the long life and testing for 15–20 years of use. The third most common theme is more consumption (6 ads), showing the product range or products designed to be combined. Two advertisements also tell customers to replace their washing machine with a new Miele or use a Miele dryer rather than drying outdoors: “We have nothing against the good old sun. But for drying laundry, the Miele is simply better” (Ad 58, 1976, Germany; own translation).

In the 1980s (12 ads: 3 German, 9 UK), convenience and performance remain focal and advertisements provide detailed descriptions of how Miele appliances are superior. The ads target a high-earning customer segment with statements such as “the somewhat more refined cuisine” (Ad 63, 1986, Germany, own translation), well-dressed people and spacious dwellings. Efficiency features in three ads that mention low energy and detergent use for money saving. Longevity features in six ads, highlighting reliability over time: “I bought my Miele 15 years ago. It’s as good as new, not a moment’s trouble” (Ad 95, 1982, UK). Some ads that promote efficiency and longevity also encourage consumption. The “response” to the previous quote is “That’s why I decided to buy the Miele washer and dryer together” (Ad 95, 1982, UK). The advertisement suggests buying several Miele appliances. If the household already uses a dryer, this might not be a clear incentive for consumption, but historical context suggests dryers were not common yet: “Why is drying with Miele so much better than drying on the clothesline?” (Ad 61, 1980, Germany, own translation).

In the 1990s (13 ads: 4 German, 3 UK, 6 US), Miele products are still advertised for their convenience and performance. Design receives some attention, with headlines about the beauty of Miele products: “Intelligent Beauty Seeks Long Term Commitment” (Ad 103, 1998, US). Longevity now is one of the major selling points, mentioned in ten advertisements and the slogan “The decision for life” (Ad 66, 1995, Germany, own translation). Efficiency features in four ads, referring to energy and money savings, here for the first time referencing the environment: “Miele also offers serious environmental and financial benefits” (Ad 101, 1995, US). Additional consumption is again incentivized by five ads, pointing

TABLE 5 Miele main themes in advertisement.

Theme	Communication	Example
Convenience	The appliances are easy to use. They make life easier by taking over chores and saving time.	"It washes the lot. Not just big loads: it does every single thing you'd wash and dry by hand." (Ad 91, 1966, UK)
Efficiency	Miele products save electricity or detergent through efficient programmes. This saves money.	"These ecologically and economically sensible machines use as little water, detergent, and energy as possible." (Ad 99, 1992, US)
History	Miele holds many years of experience in producing appliances, which is a benefit to customers.	"With over a century of laundry experience, trust Miele to give you outstanding washing performance time and time again." (Ad 88, 2009, UK)
Innovation	Miele works with state-of-the-art technology and continuously improves its appliances. There is progress compared to previous models or competitors' products.	"Miele is known for their unique approach to appliance design, an approach that challenges the very limits of technology." (Ad 100, 1994, US)
Longevity	The appliances are durable. They are tested for 20 years of performance and rarely need to be repaired. They treat items gently to ensure long life (e.g., clothes or dishes).	"Statistically, people change their partner before they change their Miele washing machine. [...] A Miele washing machine is built to last 20 years. It'll cherish your clothes till death do you part." (Ad 109, 2003, UK)
Monetary	The appliances are pricey but that is justified as they are of premium quality and perform better.	"The price of a Miele [...] is two and three times that of other available dishwashers. But so is its performance." (Ad 91, 1966, UK)
More consumption	Rather than using less resource-intensive options, Miele appliances should be used. Also, several Miele appliances should be bought together.	"I'd never dream of using my automatic for just a couple of shirts.—Ah, but this is a Miele." (Ad 4, 1980s, UK)
Performance	Miele items are reliable and trustworthy. They provide the desired results, such as strong cleaning but also careful treatment of products.	"In the Silver Moon vacuum cleaner, elegant European design is blissfully wedded to legendary performance." (Ad 106, 2004, US)
Quality	The appliances are high-quality products that are built by experienced craftsmen.	"Owners of Miele ovens and cooktops know to expect performance combined with superb function, design and quality." (Ad 102, 1997, US)
Superiority	Miele have the best available products. Their products provide outstanding results, better than others.	"It's these and scores of other uncompromising details that set Miele well apart from the rest." (Ad 96, 1987, UK)

to other products and suggesting to machine wash more different types of fabric and use the dryer instead of drying outdoors.

In the 2000s and 2010s (16 ads: 4 German, 8 UK, 4 US), advertisements mostly focus on convenience and performance. Some advertisements mention longevity with tongue-in-cheek headlines, such as "Statistically, people change their partner before they change their Miele washing machine" (Ad 109, 2003, UK). Longevity is also described in how carefully Miele cleans laundry, supporting long lifetimes: "Good news, our revolutionary drum means clothes last longer" (Ad 110, 2003, UK). Efficiency is only mentioned in three advertisements, referring to the energy-efficient performance of appliances. More consumption is incentivized in two ads, one that offers a cashback scheme and another highlighting discounts on new models.

4.3.2. Longevity but also incentivized consumption

Advertisements for recent years were not publicly available, so sustainability reports from 2019 and 2021 as well as webpages on the international Miele website were reviewed for current communication about sustainability and sufficiency. Not all communications relate to sustainability, so this represents a section, but it allows analyzing how Miele promotes sufficiency. It is likely that general communications cover sustainability more than in the past, since the company states in its 2021 Sustainability Report that "sustainability is being anchored even more firmly within the

organization and given a higher profile in the way the company presents itself, including in how it communicates with customers" (D114, 2021, p. 12).

In its sustainability communications, Miele highlights the long company history of high-quality, reliable products: "From day one, the core of our product philosophy has been to manufacture products of exceptionally high quality with a long service life, using premium-quality materials and sophisticated production methods. So, using a longer-lasting Miele appliance gives you peace of mind, knowing that you are consuming less" (Document 111, 2023). Sufficiency is mainly communicated through long lifetimes and product durability, keeping in line with the recurrent allusion to longevity in its advertisements. A new way of advocating sufficiency is also through circular economy terminology, promoting repair and reuse, as well as recycling and zero waste in a circular value chain. Miele's 2019 Sustainability Report furthermore mentions (pilot) projects with rental of washing machines in the Netherlands and Germany.

One common sustainability element in Miele's current communication is efficiency. This is slightly surprising considering the only occasional mention of it in advertisements over time. Yet, both sustainability reports and the website place great emphasis on efficiency, such as: "Miele is committed to the objective of limiting the rise in global warming to two degrees, and is playing its part in achieving it. The company focuses on longevity along with energy and resource efficiency" (D113, 2019, p. 21). This new focus is explained in the 2019 Sustainability Report as related

to customer interest for efficiency: “Miele is registering a growing interest in sustainability among customers, especially with respect to consumption. Feedback from dealers and customer surveys make it clear that efficiency values for electricity, water and gas have become a key argument when it comes to making the decision to purchase” (D113, 2019, p. 42). However, the counter-sufficiency theme of incentivizing more consumption also reappears in current communications: The SingleWash program feature was introduced in 2018 to address the issue of customers running machines for light loads, which Miele acknowledges “consum[es] unnecessary amounts of resources” (D113, 2019, p. 3). The SingleWash feature supports washing single items of clothing but adjusts the water consumption to lighter loads. While making the wash more efficient, the feature not only enables more consumption, but Miele even promotes it in their communication, such as “[w]asting water and energy are just as much a thing of the past as waiting for weeks to do laundry” (D113, 2019, p. 4).

Tracing Miele’s communication over time, sufficiency is promoted recurrently through product longevity and durability, suggesting that the high quality of appliances enables a long use life and avoids replacement. This theme was mentioned as early as the 1950s and is referred to throughout the decades in some of the advertisements. Yet, it is not one of the main selling points. These are convenience, performance and innovation. This focus might explain why there is also an ongoing counter-current of incentivizing consumption in advertisements. Rather than promoting reduced consumption, the advertisements focus on how more Miele products can be used to make life more convenient (irrespective of resource use). This creates an ambiguous framing of sufficiency where sufficient consumption is promoted on the product level (innovating products that last long and consume less) but increased consumption is promoted on the consumer behavior level (convenience is important, so more washing, drying, etc. should not be hindered).

5. Discussion

Based on the themes and trends identified in the data of the three companies, we now discuss whether sufficiency can be considered a trend or tradition in those cases. We address common themes and how sufficiency was promoted or contradicted in the data. We also highlight three learnings for businesses and policymakers and present some limitations to the research.

5.1. Sufficiency as trend or tradition?

The analysis of historical and current data for the three businesses shows quite distinct and diverse pathways toward sufficiency. Sufficiency can be promoted through diverse strategies, for instance through awareness-raising, moderating sales or promoting product longevity (Niessen and Bocken, 2021). In this paper, we focused on communications from three companies that all advocated for sufficiency through product longevity. Figure 1 visualizes the prevalence of the longevity/durability theme in the advertisements over time. Denby has been communicating about longevity since the 1950s, with increasing emphasis placed on it

over time. Levi’s was founded on the value of durability, creating hardwearing clothing for miners and cowboys and this value was still prevalent in advertisement in the 1950s. However, from then onwards, it became much less prevalent in Levi’s advertisement, with ads instead promoting style or comfort. Miele’s advertisement history shows that, while longevity became a more prominent theme in advertisement over time, convenience and performance were more important.

By making products last longer, citizens might keep their items longer instead of replacing them and fewer new items would need to be produced. While maintaining products for a long time might have been commonplace in past generations, current affluent citizens are less likely to take care of their products as replacing them is affordable. Furthermore, companies might even build lower quality items to encourage replacement. Yet, product longevity has been reintroduced in communications of all three companies and has been framed in environmental terms in recent communications, after the 2000s. This is in line with existing research that sees advertisements addressing greenhouse gas reductions as a significant focus from the 2000s onwards (Ahern et al., 2013). More recently, businesses have started communicating on their sustainability action through the circular economy concept. The circular economy is defined by Geissdoerfer et al. (2017) as: “a regenerative system in which resource input and waste, emission, and energy leakage are minimized by slowing, closing, and narrowing material and energy loops. This can be achieved through long-lasting design, maintenance, repair, reuse, remanufacturing, refurbishing, and recycling” (p. 759). One of the pillars of a circular economy is “slowing the loop” (Bocken et al., 2016), in which products and components are kept in use for as long as possible. All three companies have adopted circular economy aims in their current communications. As longevity largely overlaps with circularity principles, these two themes can be easily integrated. Levi’s, for instance, uses circularity terminology to revive their original business value of durability.

Another common theme across the three cases was medium or high-end pricing. All three companies sell their items at a medium or higher price segment. This was communicated in different ways. Denby rarely referred to the price, but Miele openly promoted its premium pricing, pointing out that this was due to high quality. Levi’s used an alternative route of communicating the price. While Levi’s clothing is not sold at low prices, the advertisements repeatedly referenced good value for money. This was often explained by the durability of the clothing, so that an initially higher price would pay off over time. Premium pricing is a common strategy for businesses that want to use sufficiency marketing (Gossen et al., 2019) as it might discourage excessive consumption. If a business sells its products or services at a high price, customers might only purchase what they really need. However, premium pricing carries the risk of excluding lower income groups and making sufficient consumption a niche for wealthy elites. Especially in sectors that meet basic needs such as food or essential household products, premium pricing should be applied with caution.

The analysis revealed other themes that relate (positively or negatively) to sufficiency. While product longevity is one way to promote sufficiency, there are also other approaches. Some Denby communications asked customers to only buy what is needed and

Sufficiency...	Denby	Levi's	Miele
as a founding value	Not part of founding history	Part of founding history	Not part of founding history
as tradition in communication	Durability (increasing importance) Warranty Buy only what is needed	Durability (decreasing importance)	Mixed messages Durability (increasing importance) Encourage consuming more
as modern sustainability	Durability Warranty Buy only what is needed	Mixed messages Durability Repair & Reuse Encourage consuming more	Mixed messages Durability Support for repair Encourage consuming more

FIGURE 2
Sufficiency as trend or tradition in the case businesses.

question whether a new purchase is required. This draws near the green demarketing approach where purchases are discouraged for the sake of the environment (Reich and Armstrong Soule, 2016). In contrast, both Miele and Levi's communications contained themes negatively related to sufficiency. Miele advertisements repeatedly encouraged additional consumption, for instance through promoting more washing or further purchases. An example is the SingleWash program designed to wash individual items efficiently. This example shows that businesses, which promote sufficiency, can experience "complicated greenness" (Lascity and Cairns, 2020), where environmental messaging can induce more consumption. Miele promotes sufficiency on the product level but not in their customers' behavior, making their messaging inconsistent. Some Levi's advertisements also promoted further purchases and current communications of the company actively encourage consumption, for instance through discounts and sales. This might lead to backlash on their sufficiency-oriented "Buy Better, Wear Longer" campaign. As with the case of KLM, customers might consider the messaging untrustworthy and potentially greenwashing (Hesse and Rünz, 2020).

Looking at the three businesses, it seems that sufficiency has more of a tradition at Denby while it rather seems to be a trend for Levi's and Miele. As illustrated in Figure 2, Denby does not have longevity as a founding value but has promoted both long product lives and buying only what is needed over time. Longevity has increased in importance and was supported by business policies, for instance on long warranties. While Denby also offers discounted products, there seems to be a tradition of sufficiency as a value in the company. Levi's, on the other hand, was built on durability but has lost this focus since the 1950s. While sufficiency is in the heritage of the business, Levi's has only recently rediscovered it with increasing public interest in sustainability. In current communications, Levi's has returned to its roots, advocating circularity and long product lifetimes. Policies have been implemented to support long lifetimes (e.g., repair or reuse

options). However, the analysis showed some ambiguity in current sufficiency communications, as campaigns such as "Buy Better, Wear Longer" only run for some weeks. Finally, Miele seems to also have adopted sufficiency in response to the trend of environmental awareness. While longevity played an increasing role from the 1950s onwards, this was not linked to changes in consumption. Instead, product efficiency improvements were used to encourage further consumption. This trend can still be observed in current communication, where convenience overshadows sufficiency to some extent. Levi's and Miele both have a relatively easy position of integrating sufficiency through their longevity and circular economy agendas, so now could be the time to build it into a tradition.

5.2. Learnings

The company cases present three core learnings for business, which can be connected with relevant policy suggestions. A first learning is that sufficiency values, such as product longevity or buying only what is needed, are not new and these values can be revived from past generations, as our fictional introduction quote also illustrates: "When I was young, we really took care of our things...". As the three cases show, promoting sufficiency values does not seem to run against business logic, as all three cases are long-established, successful enterprises. With the increasing popularity of the circular economy concept (Geissdoerfer et al., 2020), companies can combine circular activities with the principle of sufficiency in consumption and production. This is a paramount change, as sufficiency needs to be a fundamental principle of the circular economy for it to be sustainable (Velenturf and Purnell, 2021; Bocken et al., 2022).

The second learning is that companies can promote sufficiency through providing long-life products and offering services that support longevity, such as repair, reuse or rental. Especially

businesses that can build on existing longevity values, such as high quality, durable, repairable or versatile products, should find it easy to incorporate sufficiency in their communications. Promoting sufficiency can help businesses work toward the Sustainable Development Goals, particularly Goal 12 on Sustainable Production and Consumption patterns. Businesses that promote sufficiency through longevity and circularity work toward SDG targets, such as 12.2 (sustainable management and efficient use of natural resources) and 12.5 (reduce waste generation through prevention, reduction and reuse) (United Nations Department of Economic and Social Affairs, n.d.). Yet, more product longevity and circular activities also require policy support, to increase uptake and ensure that sufficiency is affordable and not only accessible to wealthy consumers (Bocken et al., 2014). Governments can support sufficiency through financial incentives [e.g., lower taxes on repair as in Sweden (Dalhammar et al., 2020)] or through legislative requirements for producers, such as design for reparability, minimum provision of spare parts, or supporting long warranties. Some steps in that direction are already taken by, for instance, the European Union in the Commission's suggestions for the European Green Deal (European Commission, 2019). Policy can also support sufficiency through public procurement guidelines and by promoting a cultural shift toward sufficiency, for instance through education.

Finally, the third learning is that companies, which promote sufficiency, need to be consistent in their communications. Sufficiency has to be integrated in all business activities; otherwise, sufficiency-related business communications might be considered greenwashing (Gossen et al., 2019). Policy should support genuine communications with strict rules for advertising about sustainability efforts. With growing markets for sustainable products and services, greenwashing has also proliferated (de Freitas Netto et al., 2020). As illustrated by Wieser and Tröger (2018) with the T-Mobile Austria campaign, where customers were offered annual upgrades to new phones, advertisement can strongly influence cultural norms and governments need to reconsider what norms should be promoted in public spaces. Similarly, companies can use their cultural reach to promote social norms for sufficiency. For instance, a company selling shower gel could promote "shorter, colder showers" as better for the skin, planet and wallet (Bocken and Allwood, 2012).

5.3. Limitations

The research provided insight on potential business pathways toward sufficiency, yet some limitations need to be acknowledged. Due to the historical nature of the research, a different number of advertisements was available for the different companies, with much less advertisement data from Denby, and clear differences regarding the countries in each of the three cases. There is a possibility that only the more popular advertisements are still available publicly. Access to archival data would have given better insights for all three companies, would have provided more recent advertisements and could have helped understand differences between online or offline communications, advertising

or institutional communications (i.e., strategic reports) and might have highlighted country differences. Similarly, it would have been interesting to interview marketing executives from the three companies to understand the intentions behind advertising and communications. Fewer advertisements were analyzed from the 1990s onwards as the trend toward less text-heavy ads (Ahern et al., 2013) meant less available content for analysis. Incorporating the visual element in a multimodal analysis might provide further insights (Barberá-Tomás et al., 2019). Yet, the findings should still be relevant, as advertisements without text would not be able to carry a message of sufficiency as explicitly. There was some variation in advertisements style and messaging between the different countries but this was not explored, as the overall corporate communication was the focus. More insights could have been gained by including other business cases that might have presented alternative pathways toward sufficiency, such as furniture manufacturer Vitsœ, which has kept advertisement to a minimum and relied on word of mouth recommendations to avoid overselling (Bocken and Short, 2016). Finally, important insights could be gained by researching how customers received advertisements and how they were influenced by them, as done for instance by Oyedele and Dejong (2013). Due to the historical nature of this research, customers exposed to advertisements from the 1950s onwards would need to provide their insights, which was outside the scope of this paper.

6. Conclusion

In the wake of an ecological crisis, we need to reconsider our systems of production and consumption. Sufficiency as a guiding principle strives for sustainable levels of resource use and can be promoted not only by NGOs or governments, but also by businesses. Looking back over time, this paper has reviewed how three long-standing businesses have come to be proponents of sufficiency in their communications. We analyzed historical advertisements and current online communications to understand how the brands Denby Pottery, Levi's and Miele promoted sufficiency over time. While the three businesses showed diverse pathways toward sufficiency, including mixed messaging, common themes emerged around product longevity and circular practices. From these findings, we developed three main learnings for businesses: First, sufficiency values (e.g., product longevity, buying only what you need) are not new and can be revived as a successful business strategy. Second, businesses can promote sufficiency through long-life products and services that support longevity and could help mainstream the concept to the broader population. Third, companies promoting sufficiency need to be consistent in their communications to avoid suspicions of greenwashing. These three business learnings go hand in hand with policy actions required to support them, for instance promoting longevity through taxation and regulatory requirements or monitoring advertisements to reduce communication that promotes unsustainable behavior. These business and policy actions could help establish sufficiency as a fundamental principle in business and society.

While this paper sheds light on historical business communications and their link to sufficiency, there is still

much to be investigated. Future research could delve into the organizational implications of sufficiency communications, for instance by looking into a possible financial effect or the intentions from management when promoting sufficiency. Furthermore, sufficiency communications could be correlated with actual product lifetimes to assess whether companies live up to their communicated product promises.

Data availability statement

Publicly available datasets were analyzed in this study. The links to the data can be found in the [Supplementary material](#).

Author contributions

LN: conceptualization, data curation, formal analysis, investigation, methodology, visualization, writing—original draft, and writing—review and editing. NB: conceptualization, funding acquisition, supervision, and writing—review and editing. MD: conceptualization, supervision, and writing—review and editing. All authors contributed to the article and approved the submitted version.

Funding

This work was supported by the European Union's Horizon 2020's European Research Council (ERC) funding scheme

References

- Agarwal, N. D., and Kumar, V. V. R. (2020). Three decades of green advertising—a review of literature and bibliometric analysis. *Benchmarking Int. J.* 28, 1934–1958. doi: 10.1108/BIJ-07-2020-0380
- Ahern, L., Bortree, D. S., and Smith, A. N. (2013). Key trends in environmental advertising across 30 years in national geographic magazine. *Public Underst. Sci.* 22, 479–94. doi: 10.1177/0963662512444848
- Antheaume, N., Robic, P., and Barbelivien, D. (2013). French family business and longevity: Have they been Conducting sustainable development policies before it became a fashion? *Bus. Hist.*, 55, 942–962. doi: 10.1080/00076791.2012.744583
- Armstrong Soule, C. A., and Reich, B. J. (2015). Less is more: is a green demarketing strategy sustainable? *J. Market. Manage.* 31, 1403–1427. doi: 10.1080/0267257X.2015.1059874
- Atkinson, L. (2014). Green moms: the social construction of a green mothering identity via environmental advertising appeals. *Consumption Markets Cult.*, 17, 553–572. doi: 10.1080/10253866.2013.879817
- Bakker, C., Wang, F., Huisman, J., and Den Hollander, M. (2014). Products that go round: exploring product life extension through design. *J. Clean. Prod.*, 69, 10–16. doi: 10.1016/j.jclepro.2014.01.028
- Barberá-Tomás, D., Castelló, I., De Bakker, F. G., and Zietsma, C. (2019). Energizing through visuals: how social entrepreneurs use emotion-symbolic work for social change. *Acad. Manage. J.* 62, 1789–1817. doi: 10.5465/amj.2017.1488
- Baum, L. M. (2012). It's Not easy being green ... or is it? a content analysis of environmental claims in magazine advertisements from the United States and United Kingdom. *Environ. Commun.* 6, 423–440. doi: 10.1080/17524032.2012.724022
- Bergquist, A.-K. (2019). Renewing business history in the era of the anthropocene. *Bus. Hist. Rev.*, 93, 3–24. doi: 10.1017/S0007680519000369
- Beyeler, L., and Jaeger-Erben, M. (2022). How to make more of less: Characteristics of sufficiency in business practices. *Front. Sustain.* 3, 131. doi: 10.3389/frsus.2022.949710
- [grant agreement No. 850159], as part of project Circular X (www.circularx.eu).
- Bocken, N., and Allwood, J. M. (2012). Strategies to reduce the carbon footprint of consumer goods by influencing stakeholder. *J. Clean. Prod.* 35, 118–129. doi: 10.1016/j.jclepro.2012.05.031
- Bocken, N., and Short, S. W. (2016). Towards a sufficiency-driven business model: experiences and opportunities. *Environ. Innovat. Societal Transit.* 18, 41–61. doi: 10.1016/j.eist.2015.07.010
- Bocken, N., Short, S. W., Rana, P., and Evans, S. (2014). A literature and practice review to develop sustainable business model archetypes. *J. Clean. Prod.* 65, 42–56. doi: 10.1016/j.jclepro.2013.11.039
- Bocken, N. M., De Pauw, I., Bakker, C., and Van Der Grinten, B. (2016). Product design and business model strategies for a circular economy. *J. Ind. Prod. Eng.* 33, 308–320. doi: 10.1080/21681015.2016.1172124
- Bocken, N. M. P., Niessen, L., and Short, S. W. (2022). The sufficiency-based circular economy—an analysis of 150 companies. *Front. Sustain.* 3. doi: 10.3389/frsus.2022.899289
- Bocken, N. M. P., and Short, S. W. (2021). Unsustainable business models—recognising and resolving institutionalised social and environmental harm. *J. Clean. Prod.* 312, 127828. doi: 10.1016/j.jclepro.2021.127828
- Boon, M. (2019). A climate of change? The oil industry and decarbonization in historical perspective. *Bus. Hist. Rev.* 93, 101–125. doi: 10.1017/S0007680519000321
- Bryman, A. (2012). *Social Research Methods*. Oxford: Oxford University Press.
- Carlson, L., Grove, S. J., and Kangun, N. (1993). A content analysis of environmental advertising claims: a matrix method approach. *J. Advertis.* 22, 27–39. doi: 10.1080/00913367.1993.10673409
- Cerulli-Harms, A., Suter, J., Landzaat, W., Duke, C., Rodriguez Diaz, A., Porsch, L., et al. (2018). “Behavioural Study on Consumers’ Engagement in the Circular Economy,” in *European Commission*.
- Chen, S. (2016). Selling the environment: Green marketing discourse in China's automobile advertising. *Discourse Context Media.* 12, 11–19. doi: 10.1016/j.dcm.2016.03.003

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/frsus.2023.1165682/full#supplementary-material>

- Creutzig, F., Roy, J., Devine-Wright, P., Díaz-José, J., Geels, F. W., Grubler, A., et al. (2022). "Demand, services and social aspects of mitigation," in Shukla, P. R., Skea, J., Slade, R., Al Khourdjie, A., Van Diemen, R., Mccollum, D., Pathak, M., Some, S., Vyas, P., Fradera, R., Belkacemi, M., Hasija, A., Lisboa, G., Luz, S., and Malley, J., eds. *Ipc, 2022: Climate Change 2022: Mitigation of Climate Change. Contribution of Working Group III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (Cambridge, UK and New York, NY, USA: Cambridge University Press).
- Crutzen, P., and Stoermer, E. F. (2000). The 'Anthropocene'. *Global Change Newsletter* 41, 17–18.
- Dalhammar, C., Richter, J. L., Almén, J., Anehagen, M., Enstroem, E., Hartman, C., et al. (2020). *Promoting the Repair Sector in Sweden, Lund, Sweden, International Institute for Industrial Environmental Economics*. Lund: Lund University.
- de Burgh-Woodman, H., and King, D. (2012). Sustainability and the human/nature connection: a critical discourse analysis of being "symbolically" sustainable. *Consump. Markets Culture*. 16, 145–168. doi: 10.1080/10253866.2012.662834
- de Freitas Netto, S. V., Sobral, M. F. F., Ribeiro, A. R. B., and Soares, G. R. D. L. (2020). Concepts and forms of greenwashing: a systematic review. *Environ. Sci. Europe* 32, 19. doi: 10.1186/s12302-020-0300-3
- Decker, S., Kipping, M., and Wadhvani, R. D. (2015). New business histories! Plurality in business history research methods. *Bus. Hist.* 57, 30–40. doi: 10.1080/00076791.2014.977870
- Denby Group Limited (2022). *Full accounts Annual Report for the Period Ended 31 December 2021*.
- Denby Pottery Company (n.d.-a). Denby Guarantees. Available online at: <https://www.denbypottery.com/guarantees> (accessed January 12, 2023).
- Denby Pottery Company (n.d.-b). Denby History. Available online at: <https://www.denbypottery.com/denby-history> (accessed January 12, 2023).
- Denby Pottery Company (n.d.-c). Denby Pottery Company Ltd. LinkedIn: LinkedIn.
- Denby Pottery Company (n.d.-d). Denby Stores and Stockists. Available online at: <https://www.denbypottery.com/stores-and-stockists> (accessed January 12, 2023).
- Denby Pottery Company (n.d.-e). Denby: The Conscious Choice. Available online at: <https://www.denbypottery.com/denby-conscious-choice> (accessed January 12, 2023).
- Denby Pottery Company (n.d.-f). Product Care. Available online at: <https://www.denbypottery.com/product-care> (accessed January 12, 2023).
- Denby Pottery Company (n.d.-g). Quick and Easy Tips for a more conscious life. Available online at: <https://www.denbypottery.com/conscious-choice-easy-tips> (accessed January 12, 2023).
- Denby Pottery Company (n.d.-h). Repurposing Tips. Available online at: <https://www.denbypottery.com/conscious-repurposing> (accessed January 12, 2023).
- Denby Pottery Company (n.d.-i). Why Choose Denby. Available online at: <https://www.denbypottery.com/why-choose-denby> (accessed January 12, 2023).
- Derbyshire Record Office (n.d.). Jopseh Bourne and Son Ltd, later Denby Pottery - [early 19th cent-late 20th cent]. Available online at: <https://calmview.derbyshire.gov.uk/CalmView/Record.aspx?src=CalmView.Catalog&id=D3147> (accessed January 12, 2023).
- Desrochers, P. (2011). Victorian pioneers of corporate sustainability. *Bus. Hist. Rev.* 83, 703–729. doi: 10.1017/S000768050000888X
- European Commission (2019) *The European Green Deal—Communication from the Commission*. Brussels.
- Fernández-Vázquez, J.-S., and Sancho-Rodríguez, Á. (2020). Critical discourse analysis of climate change in IBEX 35 companies. *Technol. Forecast. Soc. Change*. 157, 120063. doi: 10.1016/j.techfore.2020.120063
- Fuchs, D., Sahakian, M., Gumbert, T., Di Giulio, A., Maniates, M., and Lorek, S., et al. (2021). *Consumption Corridors: Living a Good Life within Sustainable Limits*. New York, Routledge. doi: 10.4324/9780367748746
- Geissdoerfer, M., Pieroni, M. P. P., Pigosso, D. C. A., and Soufani, K. (2020). Circular business models: a review. *J. Clean. Prod.* 277, 123741. doi: 10.1016/j.jclepro.2020.123741
- Geissdoerfer, M., Savaget, P., Bocken, N. M. P., and Hultink, E. J. (2017). The circular economy—a new sustainability paradigm? *J. Clean. Prod.* 143, 757–768. doi: 10.1016/j.jclepro.2016.12.048
- Golder, P. N. (2000). Historical method in marketing research with new evidence on long-term market share stability. *J. Market. Res.* 37, 156–72. doi: 10.1509/jmkr.37.2.156.18732
- Gossen, M., and Kropfeld, M. I. (2022). "Choose nature. Buy less." Exploring sufficiency-oriented marketing and consumption practices in the outdoor industry. *Sustain. Prod. Consumpt.* 30, 720–736. doi: 10.1016/j.spc.2022.01.005
- Gossen, M., Ziesemer, F., and Schrader, U. (2019). Why and how commercial marketing should promote sufficient consumption: a systematic literature review. *J. Macromarket.* 39, 252–269. doi: 10.1177/0276146719866238
- Hesse, A., and Rünz, S. (2020). 'Fly Responsibly': a case study on consumer perceptions of a green demarketing campaign. *J. Market. Commun.* 28, 232–252. doi: 10.1080/13527266.2020.1842483
- Iyer, E., and Banerjee, B. (1993). Anatomy of green advertising. *Adv. Consumer Res.* 20, 494–501.
- Jones, G. (2017). *Profits and Sustainability: A history of Green Entrepreneurship*. Oxford: Oxford University Press. doi: 10.1093/oso/9780198706977.001.0001
- Jones, G., and Lubinski, C. (2013). Making "Green Giants": environment sustainability in the German chemical industry, 1950s–1980s. *Bus. Hist.* 56, 623–649. doi: 10.1080/00076791.2013.837889
- Jungell-Michelsson, J., and Heikkurinen, P. (2022). Sufficiency: a systematic literature review. *Ecol. Econ.* 195, 107380. doi: 10.1016/j.ecolecon.2022.107380
- Lascity, M. E., and Cairns, M. R. (2020). Complicated green advertising: understanding the promotion of clothing recycling efforts. *Westminster Papers Commun. Culture* 15, 44–62. doi: 10.16997/wpc.384
- Levi Strauss and CO (2021). *Levi's® Launches "Buy Better, Wear Longer" Campaign*.
- Levi Strauss and CO (2022). *Levi's® Launches "Buy Better, Wear Longer"—No match found—2*.
- Levi Strauss and CO (n.d.-a). Company. Available online at: <https://www.levistrauss.com/who-we-are/company/> (accessed January 13, 2023).
- Levi Strauss and CO (n.d.-b). Levis History. Available online at: <https://www.levistrauss.com/levis-history/> (accessed January 13, 2023).
- Levi's (n.d.-a). About Us - Levi Strauss and Co. History. Available online at: https://www.levi.com/US/en_US/features/about-us (accessed January 13, 2023).
- Levi's (n.d.-b). Levi's SecondHand. Available online at: <https://www.secondhand.levi.com/> (accessed January 13, 2023).
- Levi's (n.d.-c). Tailor Shop. Available online at: https://www.levi.com/US/en_US/features/tailor-shop (accessed January 13, 2023).
- Miele (2022). Business development. Available online at: <https://www.miele.com/en/com/business-development-2094.htm> (accessed January 13, 2023).
- Miele (n.d.-a). History. Available online at: <https://www.miele.com/en/com/history-2089.htm> (accessed January 13, 2023).
- Miele (n.d.-b). Management. Available online at: <https://www.miele.com/en/com/management-2093.htm> (accessed January 13, 2023).
- Miele (n.d.-c). Miele production sites. Available online at: <https://www.miele.com/en/com/production-sites-2157.htm#item-0-0> (accessed January 13, 2023).
- Miele (n.d.-d). Miele subsidiaries. Available online at: <https://www.miele.com/en/com/subsidiaries-2156.htm#item-3-3> (accessed January 13, 2023).
- Miele (n.d.-e). Sustainability at Miele. Available online at: <https://www.miele.com/en/c/sustainability-3359.htm> (accessed January 13, 2023).
- Niessen, L., and Bocken, N. (2022). "A sufficiency database as a tool to drive sustainable business models," in *Proceedings of the 7th International Conference on New Business Models: Sustainable Business Model Challenges: Economic Recovery and Digital Transformation*, eds L. Michelini, A. Minà, and P. Alaimo Di Loro (LUMSA University).
- Niessen, L., and Bocken, N. M. P. (2021). How can businesses drive sufficiency? The business for sufficiency framework. *Sustain. Prod. Consumpt.* 28, 1090–1103. doi: 10.1016/j.spc.2021.07.030
- Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., Gwilt, A., et al. (2020). The environmental price of fast fashion. *Nat. Rev. Earth Environ.* 1, 189–200. doi: 10.1038/s43017-020-0039-9
- O'Neill, D. W., Fanning, A. L., Lamb, W. F., and Steinberger, J. K. (2018). A good life for all within planetary boundaries. *Nat. Sustain.* 1, 88–95. doi: 10.1038/s41893-018-0021-4
- Oyedele, A., and Dejong, P. (2013). Consumer readings of green appeals in advertisements. *J. Promot. Managem.* 19, 435–451. doi: 10.1080/10496491.2013.817222
- Persson, L., Carney Almroth, B. M., Collins, C. D., Cornell, S., de Wit, C. A., Diamond, M. L., et al. (2022). Outside the safe operating space of the planetary boundary for novel entities. *Environ. Sci. Technol.* 56, 1510–1521. doi: 10.1021/acs.est.1c04158
- Phillips, N., and Brown, J. L. (1993). Analyzing communication in and around organizations: a critical hermeneutic approach. *Acad. Manage. J.* 36, 1547–1576. doi: 10.2307/256821
- Reich, B. J., and Armstrong Soule, C. A. (2016). Green demarketing in advertisements: comparing "buy green" and "buy less" appeals in product and institutional advertising contexts. *J. Advert.* 45, 441–458. doi: 10.1080/00913367.2016.1214649
- Rivera, J. L., and Lallahmed, A. (2015). Environmental implications of planned obsolescence and product lifetime: a literature review. *Int. J. Sustain. Eng.* 9, 119–129. doi: 10.1080/19397038.2015.1099757

- Rome, A. (2019). DuPont and the limits of corporate environmentalism. *Bus. Hist. Rev.* 93, 75–99. doi: 10.1017/S0007680519000345
- Segev, S., Fernandes, J., and Hong, C. (2015). Is your product really green? A content analysis to reassess green advertising. *J. Advert.* 45, 85–93. doi: 10.1080/00913367.2015.1083918
- Smith, A., and Greer, K. (2017). Uniting business history and global environmental history. *Bus. Hist.* 59, 987–1009. doi: 10.1080/00076791.2017.1338688
- Spangenberg, J. H., and Lorek, S. (2019). Sufficiency and consumer behaviour: from theory to policy. *Energy Policy* 129, 1070–1079. doi: 10.1016/j.enpol.2019.03.013
- Steffen, W., Richardson, K., Rockstrom, J., Cornell, S. E., Fetzer, I., Bennett, E. M., et al. (2015). Planetary boundaries: guiding human development on a changing planet. *Sci. Sustain.* 347, 1259855. doi: 10.1126/science.1259855
- Strauss, A., and Corbin, J. M. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park, CA: SAGE.
- United Nations Department of Economic and Social Affairs (n.d.). Goal 12. Available online at: <https://sdgs.un.org/goals/goal12> (accessed March 8, 2023).
- Vandyke, M. S., and Tedesco, J. C. (2016). Understanding green content strategies: an analysis of environmental advertising frames from 1990 to 2010. *Int. J. Strategic Commun.* 10, 36–50. doi: 10.1080/1553118X.2015.1066379
- Velenturf, A. P. M., and Purnell, P. (2021). Principles for a sustainable circular economy. *Sustain. Prod. Consump.* 27, 1437–1457. doi: 10.1016/j.spc.2021.02.018
- Wang-Erlandsson, L., Tobian, A., Van Der Ent, R. J., Fetzer, I., Te Wierik, S., Porkka, M., et al. (2022). A planetary boundary for green water. *Nat. Rev. Earth Environ.* 3, 380–92. doi: 10.1038/s43017-022-00287-8
- Wiedmann, T., Lenzen, M., Keysser, L. T., and Steinberger, J. K. (2020). Scientists' warning on affluence. *Nat. Commun.* 11, 3107. doi: 10.1038/s41467-020-16941-y
- Wieser, H. (2016). Beyond planned obsolescence product lifespans and the challenges to a circular economy. *Gaia-Ecol. Perspect. Sci. Soc.* 25, 156–160. doi: 10.14512/gaia.25.3.5
- Wieser, H., and Tröger, N. (2015). *Die Nutzungsdauer und Obsoleszenz von Gebrauchsgütern im Zeitalter der Beschleunigung*. Eine empirische Untersuchung in österreichischen Haushalten. Vienna: Kammer für Arbeiter und Angestellte für Wien.
- Wieser, H., and Tröger, N. (2018). Exploring the inner loops of the circular economy: replacement, repair, and reuse of mobile phones in Austria. *J. Clean. Prod.* 172, 3042–3055. doi: 10.1016/j.jclepro.2017.11.106