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THE DEVELOPMENT OF SUST, A DIGITAL INTERVENTION DISRUPTING ONLINE FASHION SHOPPING.

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1.0 Introduction

This report provides an overview of the research that underpins SUST, which has been designed to disrupt online fashion shopping practices. SUST is a platform consisting of a crowd-sourcing website (sust.earth) and an integrated web browser extension. It has been developed through a collaboration between Marketing and Consumption and Computer Science researchers at the University of Bristol, and digital innovation expert Dr Tim Kindberg at Matter II Media. Five phases of interpretive consumer research developed a detailed understanding of how the dynamics of online fashion shopping hinder sustainability and how a digital intervention can help foster sustainable change. This report provides a brief overview of existing understandings of the persistence of unsustainable fast fashion shopping, particularly online, from extant literature. It provides an overview of the methodology of the SUST research project, and a summary of findings. Finally, the core elements of SUST are explained, linking to the principles developed from the research.

1.1 Background

Despite the fashion industry's sustainable innovation activity, overconsumption in fashion pervades within our "see-now-buy-now society" (Mukendi and Henninger, 2020, p.457). Existing research points to the incongruity of 'sustainability' and 'fashion', particularly in online shopping.

Sustainability is perceived as an additional benefit to consumers rather than integral to fashion shopping decisions (Magnuson et al., 2017; Perry and Chung, 2016; Olson, 2022). Put simply, most fashion consumers are less worried about sustainability than running out of wardrobe space (Harris

et al., 2016), and search attributes like fit, comfort, price-performance and quality are most important to consumers (Rausch, 2017). Rather, fashion shopping decisions “fall more on an emotional spectrum than a rational one” (Pauluzzo and Mason, 2022, p.192). Emotions shape purchase repetition (Cairns et al., 2021) and the prioritisation of newness within a culture of hedonic and impulse buying (Hume, 2010).

Our research focused on the way online fashion practices lock in repetition, excitement and newness, and lock out alternative sustainable modes. Our research questions are therefore ‘*how do the dynamics of online fashion shopping practices persistently occlude sustainability?*’ and ‘*what are the tools that can foster change towards more sustainable online fashion practices?*’

2.0 Methodology

We explored how sustainably-minded consumers shop online through five qualitative research phases between 2020 – 2023, involving 58 participants (see Table 1). The research stages and samples are set out below.

Table 1: Research stages and samples overview

Research Phase	Sample Size	Nature of Research
Phase 1: Two face-to-face focus groups in Bristol, UK. Feb 2020	n= 9	Explored ‘sustainable orientations’ and how these are enacted in shopping practices.
Phase 2: Online interviews. May 2020	n=13	Explored how sustainability is enacted in online shopping. Interviews included a ‘walk through’ of online shopping practice performance, as participants searched for an item of their choice and attempted to make sustainable purchases.
Phase 3: Online interviews. Aug/Sept 2020	n=15	Explored online fashion shopping and what would be useful in shaping online shopping practices to enable sustainable shopping.
Phase 4: Online interviews with international fashion activists. Oct 2022	n=9	Explored sustainable fashion practices beyond shopping, including research and sharing activities.
Phase 5: Face-to-face focus groups with sustainable fashion enthusiasts (one student focus group, one professional), Bristol UK. Dec 2022/Jan 2023	n=12	Explored sustainable fashion shopping practices on and offline, and how sustainability can be supported, in particular through collective action.
Total: 58 participants		

Focus groups (90 minutes) and interviews (40 – 80 minutes) were recorded, transcribed and analysed using NVivo12.

3.0 Consumer research findings

Our analysis identifies that online fashion shopping practices are organised in a way that makes sustainability difficult to enact, even for the most interested and reflective consumers. Those with the deepest commitment to sustainability are pushed offline. Consumers accruing knowledge of sustainable fashion alternatives, and unsustainable practices do so in isolation and have little opportunity to share their insights and influence others.

Three processes are triggered when sustainably-oriented consumers engage with online fashion shopping practices, set out in Figure 1:

Figure 1: Three processes of sustainable online fashion shopping



3.1 Unsettling fashion shopping

Sustainably-oriented consumers no longer enjoy online fashion shopping without reflection and doubt. They miss the excitement and pleasure they formerly gained from shopping, particularly the ‘newness’ of buying clothes regularly. However, interest and understanding of ‘sustainability’ (which is shorthand for interest in poor supply chain working conditions and the wide-reaching environmental damage of fashion industry) disrupts online shopping. Pleasure can no longer be integrated so easily into online shopping because it becomes conflicted and considered. Consumers look for ways to adapt.

3.2 Adapting online shopping

The second process is the attempted (largely unsuccessfully) adaptation of online shopping. This happens in relation to rules that consumers apply to their shopping, such as 'only buying clothes made from natural fibres', or 'only buying quality items that will last'. First, the ubiquitous 'scrolling' that is part of normative online shopping shifts from fast fashion sites to second hand sites like Depop and Vinted. Second, scrolling shifts from purchase-driven to inspiration-driven. Consumers scroll Pinterest to make boards and collect style ideas. Third, passive scrolling of 'pushed' products is adapted to a more search-oriented activity, where consumers hunt out sustainable alternatives to appealing designs. Fourth, 'acceptable' fashion brands are identified forming a restricted constellation.

Despite adaptation efforts, sustainable online fashion shopping feels difficult and frustrating. The process is laborious, and many participants described feeling 'overwhelmed' or 'overloaded'.

3.3 Moving offline

The third process is online shopping abandonment as consumers with the deepest commitment to sustainability and the highest levels of reflexivity and scepticism directed towards fashion industry claims, move offline. The most committed practitioners 'always' research brand sustainability policies before considering buying, with high expectations of transparency as well as sustainable brand performance. This research is enacted by individuals, and rarely shared. However, it means that on an individual basis, consumers accrue further commitment and knowledge which renders online fashion shopping unfeasible in practice and pushes them offline. Particularly, consumers accrue heightened scepticism and lose the desire to shop online at all, despite a continued love of fashion.

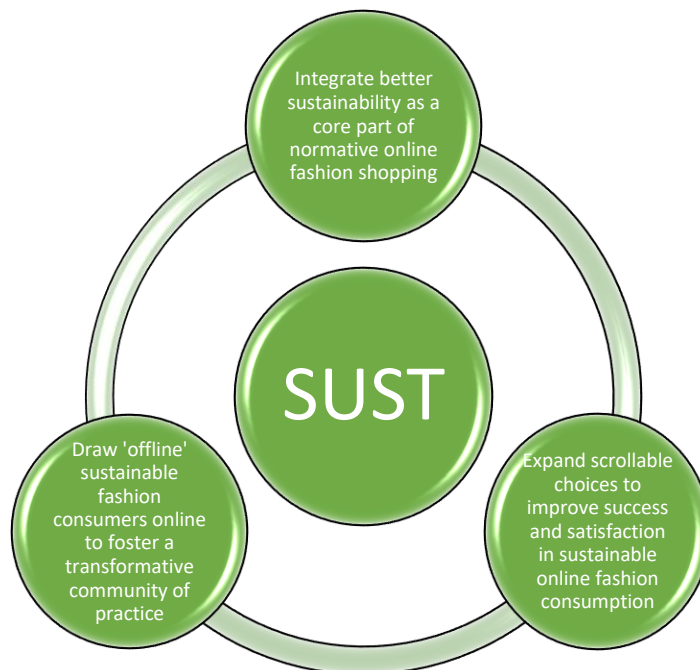
Moving offline, consumers shop in vintage and charity shops. They also make their own clothes and seek out original designers with sustainable production processes. Fashion shopping accrues new value and alternative meanings centred on uniqueness, the experience of hunting and finding fashion treasure, and feeling 'close' to fashion.

An iterative process ensues where sustainably-oriented consumers engage in search and research rather than passive scrolling, accruing insight and knowledge, heightening scepticism about fashion industry practices which restricts their engagement with brands and pushes their shopping offline. Meanwhile, online fashion consumers remain who are loosely 'concerned' about environmental impacts of fashion but without the knowledge and capacity to resist or transform normative practices.

3.4 Conclusion

From these underpinnings, we identified that a digital intervention can be designed based on three principles (set out in Figure 3). First, an intervention can shape online fashion practices by enabling ‘better sustainability’ to integrate as a normative part of online fashion shopping, for example by providing sustainability information alongside other choice metrics. Second, an intervention is needed to support the success and satisfaction of practitioners in attempting online shopping performance adaptation, for example by enhancing their capacity to scroll and shop for sustainable alternatives and by expanding their acceptable brand constellations. Thirdly, an intervention can bring ‘offline’ practitioners back to online fashion shopping to draw on their expertise accrued through research and to reward them for helping foster practice transformation. The integration of these insights into the development of SUST are discussed in the next section.

Figure 3: Research-led principles underpinning SUST



4.0 The development of SUST in shaping online fashion shopping practices

SUST is a platform consisting of a crowd-sourcing website sust.earth, and an integrated web browser extension that works with many mainstream fashion websites. The extension annotates products with sustainability-related information and links to actions that promote more sustainable choices. The platform is designed to foster an online community of sustainable fashion consumers engaging in transformative research and action, (1) to inform and engage not only one another but also consumers operating as individuals outside the community, and (2) to question and motivate brands

in order to challenge and transition online fashion shopping practices. This section sets out the key design aspects of SUST.

4.1 Sustainability information and alternatives at point of scroll

SUST's browser extension SUST enables sustainably-oriented consumers to enact fashion shopping more sustainably by providing information and alternatives such as second hand products and rental and repair services directly at the point of scroll, without requiring the user to consult separate sources of information. This is achieved through the browser extension, which identifies and annotates fashion products in a growing list of websites.

The extension decorates each such product with a "Sust button", which is colour-coded according to brand ratings (see Fig. 4).

Figure 4: A Sust button superimposed by the browser extension on a product image.



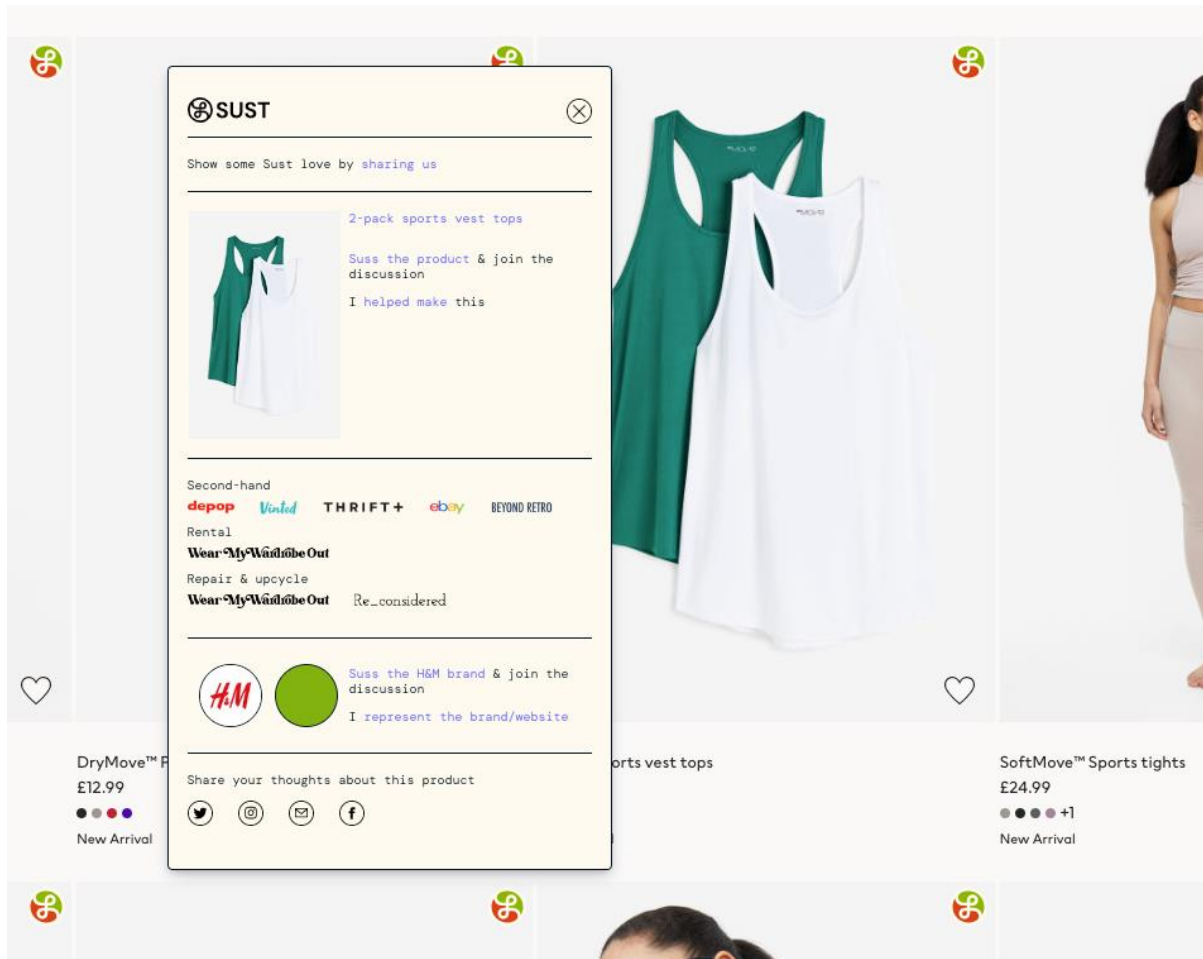
Clicking on the button produces a pop-up (Fig. 5) with direct links both to pre-owned alternatives and to pages on the sust.earth website where the user can find new alternatives and become more deeply engaged in the SUST community. The links to second-hand and rental alternatives incorporate keywords from the product description, to help narrow-down the search.

The pop-up also includes the brand's social media links so that the user may easily message the brand with questions or concerns.

Through the alternatives supplied next to products, SUST enables committed consumers to expand fashion brand constellations, to shop more sustainably and support challenger brands. Currently the extension operates on c. 40 websites. Most are mainstream, such as ASOS, H&M and Zara. Although someone committed to sustainability is unlikely to shop there, they might want to scroll there. Sust

keeps them only a click or two away from potentially more sustainable alternatives. Not only do sustainably-minded consumers benefit from increased choice, they can also recommend to others who are less sustainably-minded that they should give the extension a try.

Figure 5: Screenshot of SUST on the H&M Fashion website



4.2 SUST's crowd-sourcing website

SUST facilitates collective activism by fostering a sustainable fashion community of 'researchers' who crowdsource and share sustainability data. SUST's pop-ups include links to product and brand pages on the SUST website. There, consumers can:

- I. ask or answer questions about the product or brand, and comment on and upvote/downvote existing contributions.
- II. suggest new alternatives to products, and alternatives to brands; they may also upvote and downvote those alternatives, and indeed all products and brands.
- III. "stitch" i.e. add to or correct the metadata for products and brands, thereby aiding all users.

In return, for their contributions, SUST users are awarded reputational points. We have modelled SUST partly on other crowd-sourcing sites for problem-solving, such as stackoverflow.com. We regard SUST as a place to help solve, or search for solutions to, sustainable fashion problems. People who ask good questions or provide good answers will be suitably rewarded.

4.3 Dialogue between fashion brands and sustainable consumers

SUST is designed for dialogue, not only between fashion consumers, but also between consumers and brands. The sustainably-minded consumers we talked to in our research typically did not have an antagonistic attitude towards brands.

We observed some cases of people asking brands questions in our research, but that was typically a private matter. Another feature of the SUST website is to facilitate asking brands questions publicly, with the goal of applying collective pressure. The question appears on the brand's page. Other users may "+1" it, i.e., send the brand the same question; everyone may upvote or downvote the brand's reply.

We anticipate that, via their votes (and purchases), SUST's users will reward brands that answer their questions transparently, and whose items they consider to be more sustainable.

Through SUST, the normative orientations of online fashion shopping can be transformed, brands can be rewarded for their transparent sustainability innovations, and consumers can challenge former orthodoxies and engage in transformative practice change online.

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