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# Searching and finding: A lifelong quest

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**Abstract** How do users search? This question is quite crucial for user experience, since why would users go online if to look for something? There is always a goal to accomplish, a need to fulfil when users visit websites. Searching is something very basic to human nature: in some senses the whole life is a quest for something. We have been observing users using search functions on different websites and we were surprised at how much small things mattered. The search function needs to be prominent and immediately accessible on the home page, users want typing in a search term to be as easy as possible. We found the relevance of search results is one of the most criticised issues: users feel frustrated when search results do not match. We explored other options to make searching and finding more fun and we found that users like swiping when shopping. Combining swiping with categories for different products helps users narrow search results. Getting too many search results can be a problem because many online shoppers tend to scroll and browse through products without using filtering or sorting options. In Summary: the ideal search function should be like a good therapist: repeating what the user told him, and making meaningful and suitable suggestions. Therapists say getting what you need—not what you want—makes you happy. So it is doubtful whether Google's approach for proactive search with artificial intelligence will make people happy: 'Giving you what you want before you know you want it'.

**KEYWORDS:** user experience, usability, search, mobile, swiping, user behaviour, user research

## INTRODUCTION

For our ancestors, the hunter gatherers, searching for food was essential for survival.

Today it seems we are more often searching for keys than for food. Still, search is a prevalent theme in arts and music.

The Oxford English dictionary defines ‘to search’ as ‘trying to find something’. There are different types of searches with different outcomes: you can search for something specific like a new battery for your mobile phone, or you search for something vague, like a birthday present, which is much harder. In some cases, you do not search, but you find! For example, when you see sales offerings or inspirational content on editorial pages of websites. The last option, you do not search and you do not find, is of less interest to us, and it not considered in this article.

Usually we mean search when the user is actively searching for something and knows what he or she is looking for. In discovery, as opposed to search, the user is less active and is reacting to offers, suggestions and inspiration.

In online shopping user testing, we found that the search for a product is more difficult than the checkout process. For some

users, search is a real challenge. So in our test, sixteen users were instructed to buy a product of their own choice and the time they spent for shopping far exceeded the checkout time (see Figure 1).

In addition, we found different shopper types. For example, the emotional shopper is inspired by pictures and content and is inclined to buy something spontaneously and unplanned: finding without searching (see Figure 2).

User comment when looking at the bag in figure 4: *‘I saw something colourful; I really love colourful stuff. I really liked it and thought about it for a moment. But then I thought to myself that I really don’t need it’*.

## FACTS ABOUT SHOPPING ONLINE USING A SMARTPHONE

Thirty-three per cent of internet users in the UK view their smartphone as the most important device to get online. People spend almost two hours daily online on their smartphone, 45 minutes more than on their laptop (source: Ofcom, 2015).

Mobile devices are of utmost importance for successful online retailing. The percentage of retail sales on mobile devices rose from

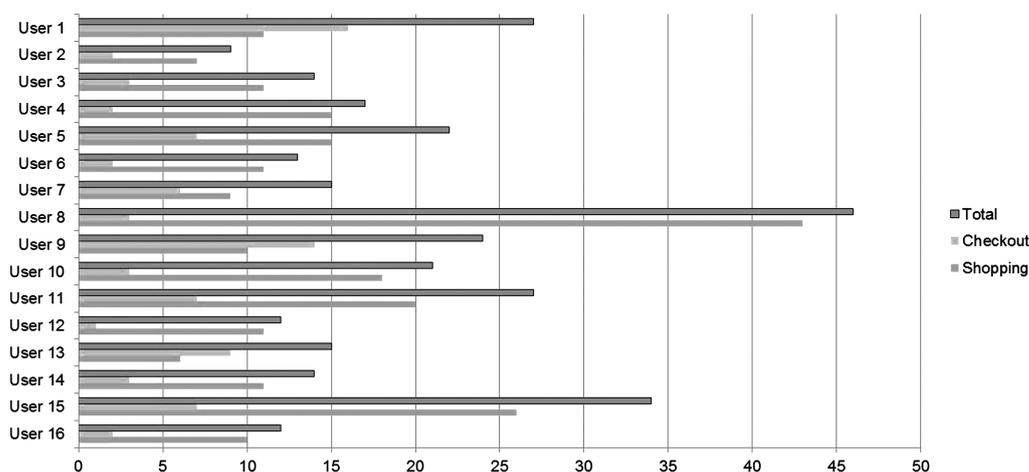
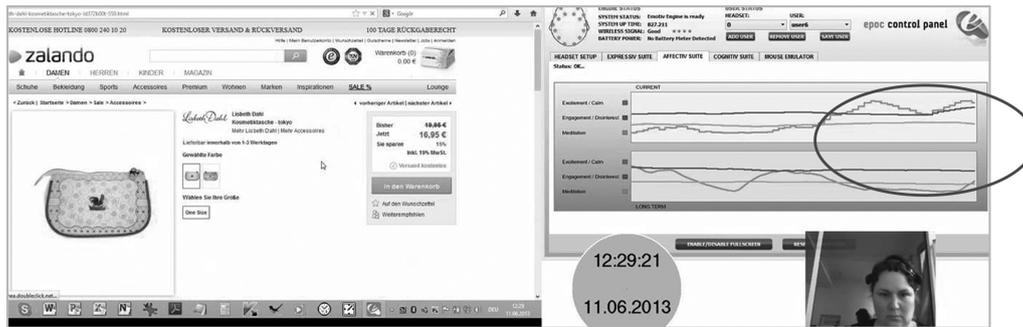


Figure 1: Time users spent with shopping and checkout in minutes (N = 16)

Source: Duda, S. (2013) ‘Emotions of online shopping: A usability study of online stores using EEG measurements’, available at: [http://www.smiling.club/assets/fileupload/online\\_shopping\\_emotions\\_duda\\_e.pdf](http://www.smiling.club/assets/fileupload/online_shopping_emotions_duda_e.pdf) (accessed 24th October, 2016).



**Figure 2:** Emotional shopper with EEG measurement, which shows excitement about the bag (orange line)

Source: Duda, S. (2013) ‘Emotions of online shopping: A usability study of online stores using EEG measurements’, available at: [http://www.smiling.club/assets/fileupload/online\\_shopping\\_emotions\\_duda\\_e.pdf](http://www.smiling.club/assets/fileupload/online_shopping_emotions_duda_e.pdf) (accessed 24th October, 2016).

0.4 per cent in 2012 to an impressive 45 per cent in 2015 (see Figure 3).

The numbers from 2016 indicate that 51 per cent of e-commerce transactions in the UK are completed on mobile devices (tablets and smartphones), more than on desktops or laptops (see Figure 4).

Fashion is the most searched category on mobile devices (see Figure 5).

Designing for a mobile application is special. You never have the users’ full attention. Furthermore, the size of the screen is limited.

How can we help users search and find online the products they love?

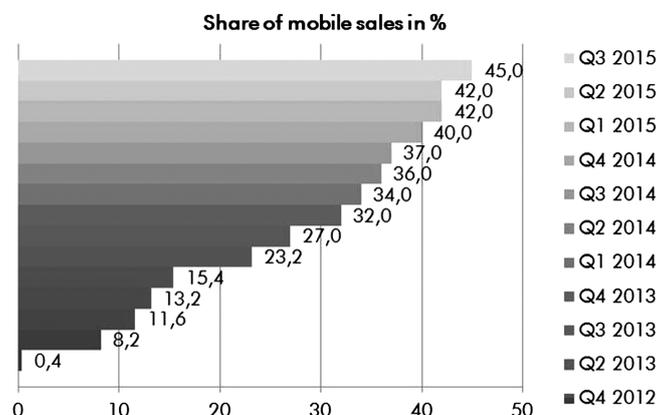
### INSPIRATION VERSUS SEARCH

Users claim their shopping is goal-oriented. Many of them start their journey via Google,

or they use the search engine on a website. So they never get to see the home page of an online store and, as a result, miss out on inspiring content. Nevertheless, they do like inspiration: they want to see products in context and they want to see product details. Therefore, our recommendation is to integrate inspiration into the product pages and the gallery pages.

Google has transformed from a mere search function to the ‘largest online shop in the world’ and does a good job of inspiring its users. When a user searches for a black dress, Google offers categories with different styles such as ‘Party’, ‘Lace’, ‘Work’, and so on. This makes it easier for the user to choose and make a decision (see Figure 6).

Made.com is successfully selling sofas online. Users cannot touch and feel the sofa,



**Figure 3:** Online retail sales via mobile devices in the UK (source: Statista 2016)

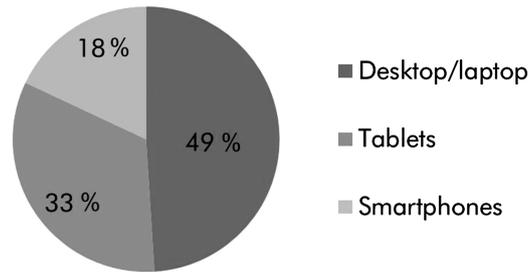


Figure 4: Devices used for mobile shopping (source: Ecommercenews.eu)

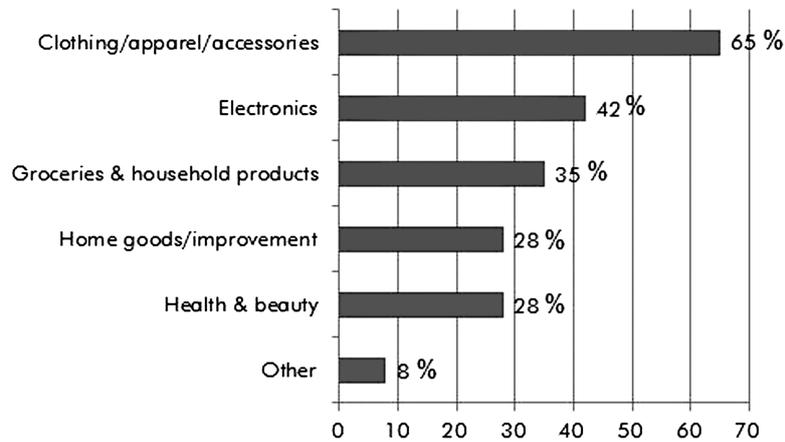


Figure 5: Most searched categories on mobile

Source: Econsultancy.

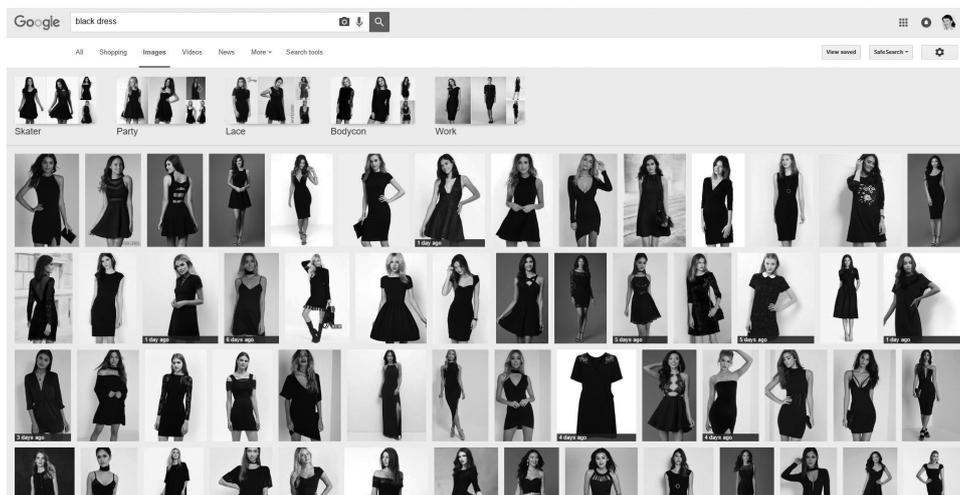


Figure 6: Search for 'black dress' on Google: Results under 'images'

nor can they can sit on it; yet the pictures offer enough contextual and detailed information to convince them to buy online without actually seeing the product (see Figures 7 and 8).

Another option for providing additional information about size and material are

videos wherein products are modelled, this way a potential buyer can see the material flow on a real person (see Figure 9).

User comment: *'I love watching the videos of the models walking, you can really see the fabric move'*.

Contextual and detailed information about products not only helps the user

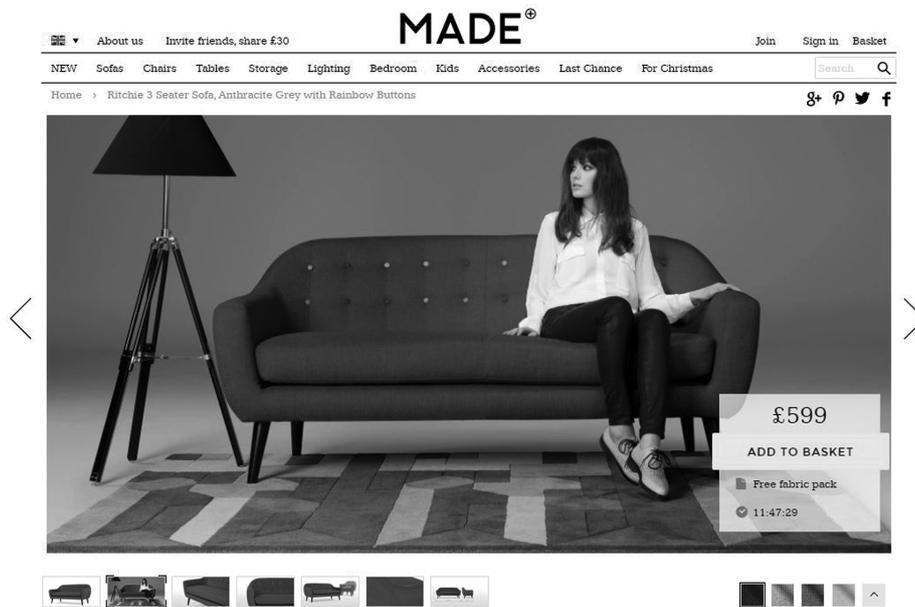


Figure 7: Made.com shows sofa in context with lamp and woman which gives size information

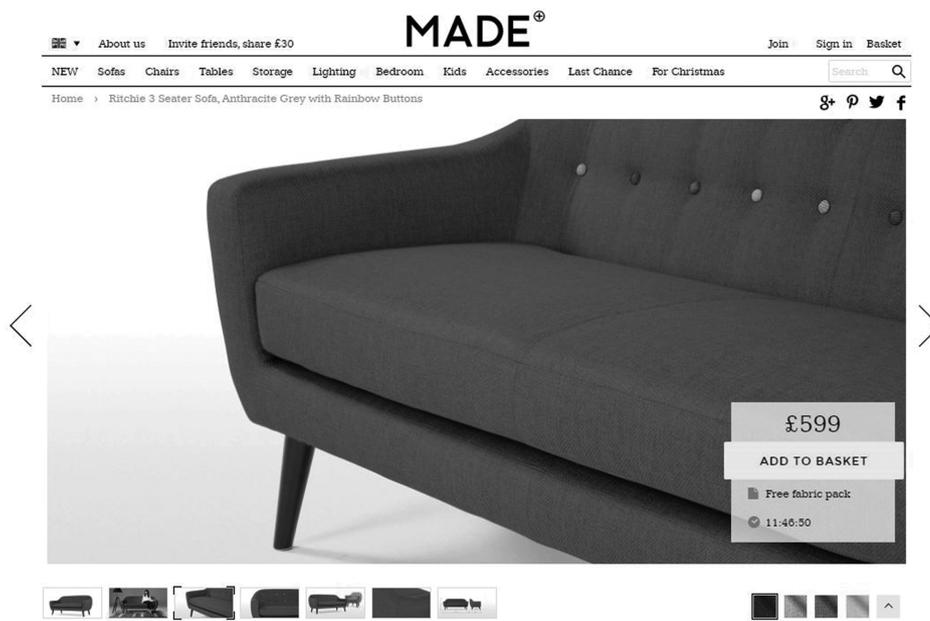


Figure 8: Made.com shows sofa close up so users can see the material in detail

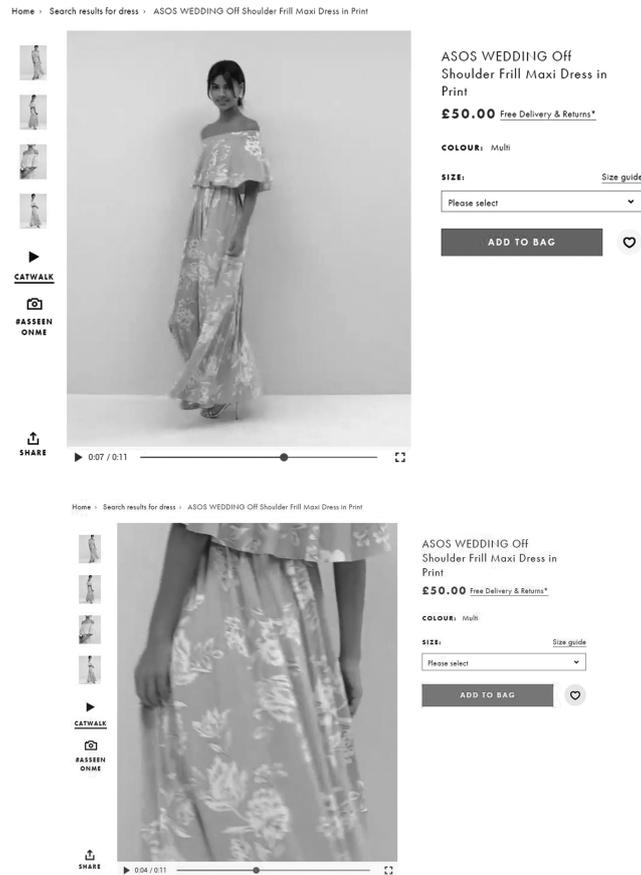


Figure 9: ASOS offers user catwalk videos

decide whether the product is really what he or she is looking for but also raises the success rates of online searches.

### SEARCH FUNCTIONS ON MOBILE WEBSITES

We took a close look at various mobile websites and their search functions and observed user behaviour.

On the mobile website of Missguided, the search function icon has to be clicked to open the search field (see Figure 10). Users disliked this because it meant having to click twice before being able to use the search function:

- ‘You have to do a second step. Not there immediately’.

Apart from this, users liked the clear design of the website:

- ‘I like that. Less fuzzy’.

Users liked the sort by and filter function at the top, but some felt both options were similar. It turned out that not all users knew the difference between filtering and sorting.

- ‘Filtering is quite good!’

The Home Shopping Network (HSN) website offers product pictures when typing search words. Users did not like this because they felt the suggestions were non-matching (see Figure 11). Some users were even typing too fast to see the suggestions offered.

- ‘I don’t like things coming up during typing’.

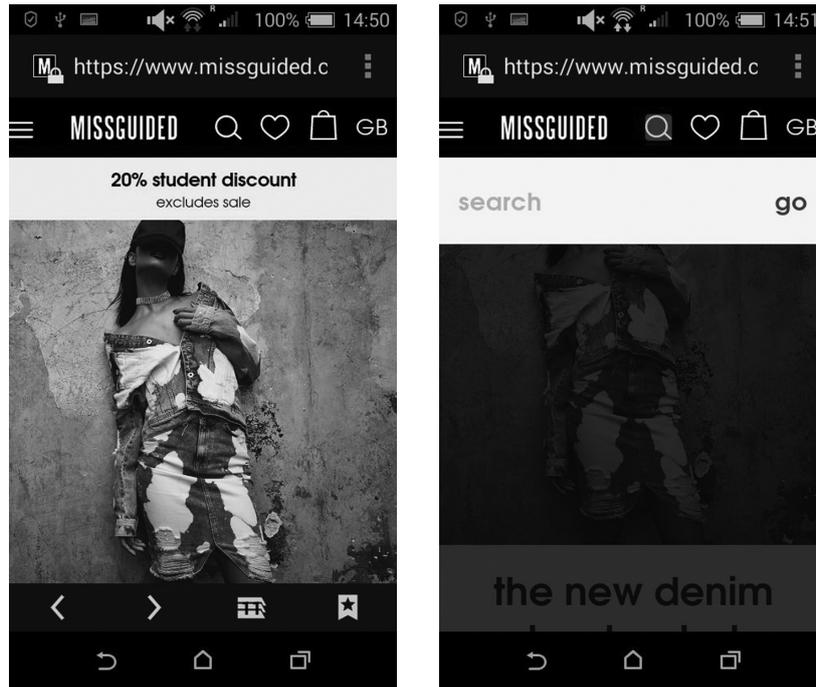


Figure 10: Missguided home page and search

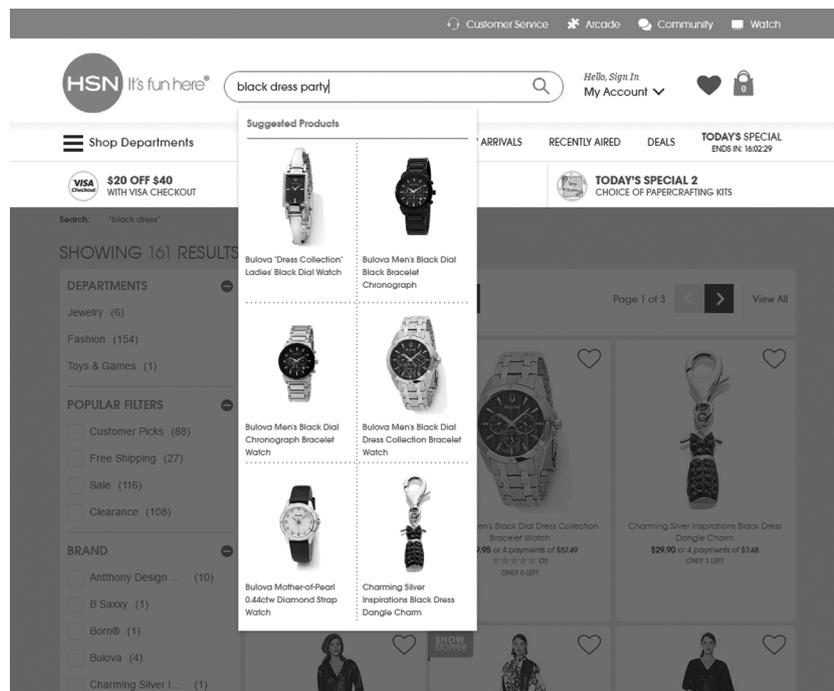


Figure 11: HSN home page with type ahead suggestions

- ‘I like to finish what I wrote [into search]’.
- ‘I don’t like [them] giving me suggestions! If they don’t know yet what I want’.
- ‘Because it is not what you have asked for’.

Amazon’s mobile website was to offer matching type-ahead suggestions. Most of the users liked it. They valued relevant results. In general, they liked the clean and compact look of the search function on top of the page (see Figure 12).

- ‘It says to me they have what I am looking for’.
- ‘It is there, clear; you don’t have to click on anything’.
- ‘I like that. As soon as you come to the page, it shows search. Very clear’.

Users do not like filters taking them to a different page and some users never discover the filter options (see Figure 13). One Amazon customer told us she had never

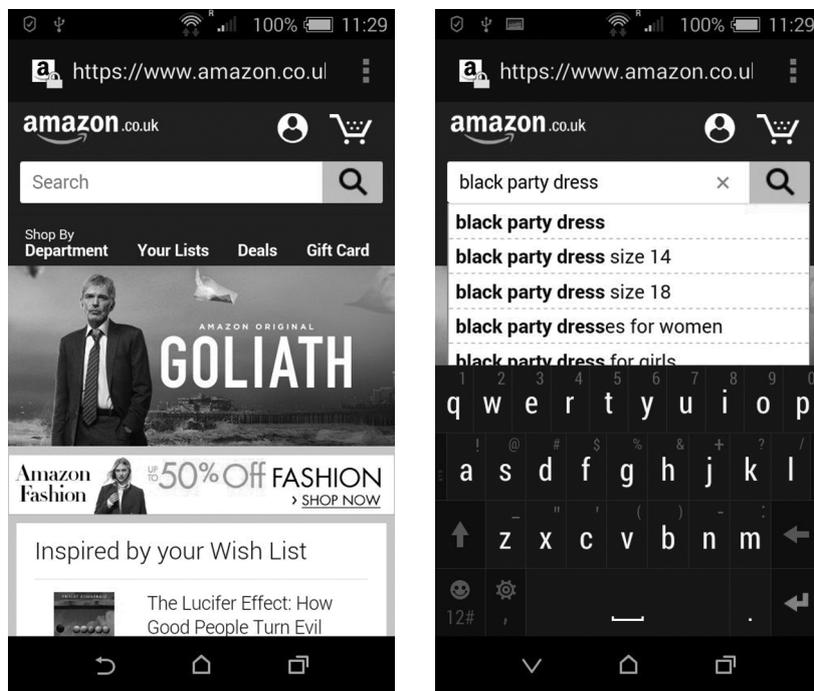


Figure 12: Amazon home page with search function

used the refinement options because she had never noticed them!

- ‘Would stress me out! Takes me to a different page’.
- ‘I don’t like that. It took me off the whole page’.

Some users tend to scroll endlessly and browse through the products. Many others do not use the sorting and filtering options

at all, while some do not understand the functionality of these options.

The Baynard Institute (2016)<sup>1</sup> recommends promotion of important product filters on the website as it leads to a more efficient search process for a user.

When using the Google search function, half of the users liked the type-ahead suggestions:

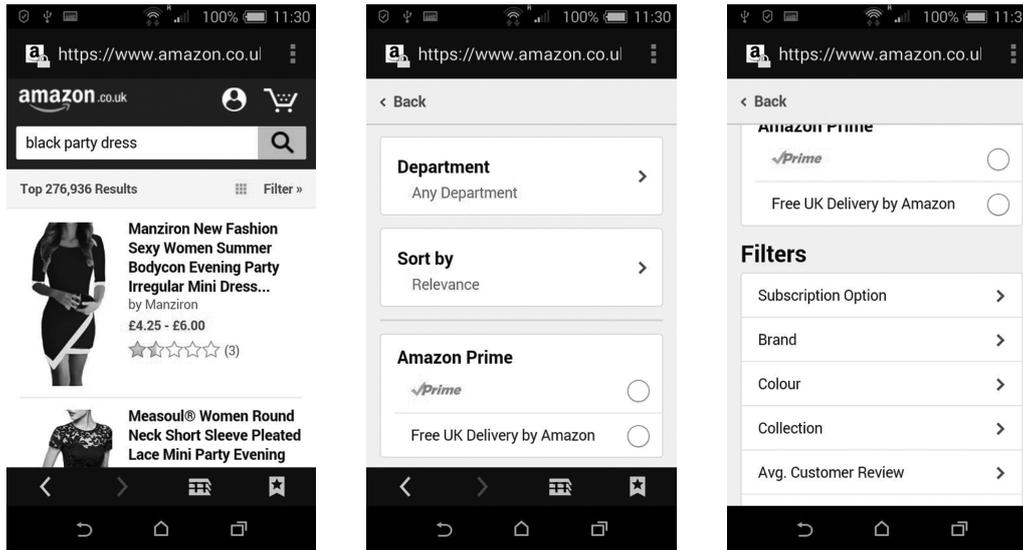


Figure 13: Amazon website with filters hard to discover

- ‘I like Google. I google everything’.
  - ‘It is large and easy to use’.
  - ‘I like Google, because it gives me what I want’.
  - ‘With Google you can refine it yourself by typing in search ‘size 6’ for example’.
- Almost all users liked horizontal scrolling, which enables them to scroll through the search results and pictures (see Figure 14):
- ‘That’s quite good’.
  - ‘I really like this!’

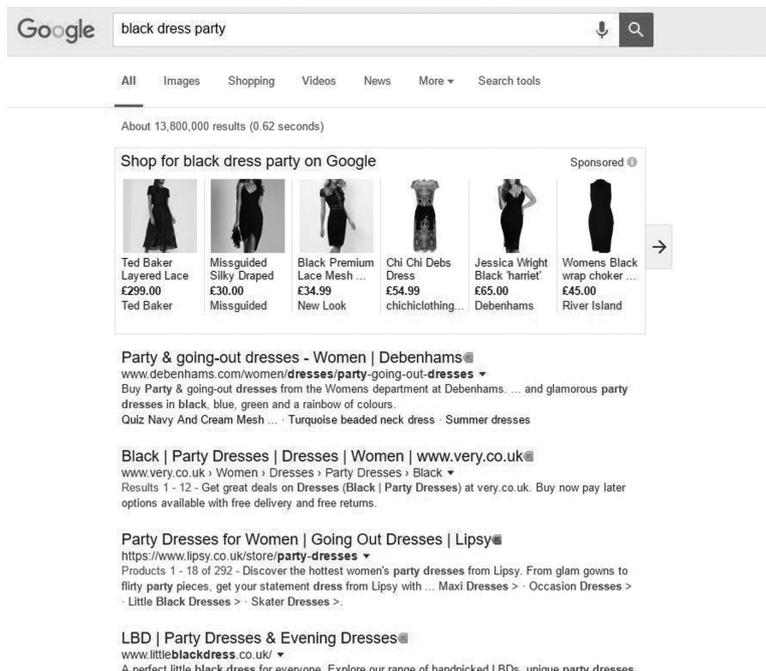


Figure 14: Google search results with horizontal scrolling

Most users do not mind sponsored results; the reason for this could be because some of them do not know what ‘sponsored’ means. Only a few users criticised sponsored results.

### HOW CAN SWIPING HELP USERS WITH SEARCH AND FIND

App users are spending more money than those using the mobile browser or the desktop version (app users have a higher global retail average order value, found by Criteo, 2016<sup>2</sup>): ‘Not only do apps convert a higher percentage of customers but they also bring in more revenue per transaction.’

Therefore, investing in apps seems like a good idea. Some apps, like the Missguided app, offer special features where you can swipe products to the left or right, indicating dislike or like (see Figure 15).

Our findings indicate that most users liked swiping. Swiped items go into the wish list

and this makes it easy for the users to transfer them to their shopping bag.

- ‘I like the constant reminder of swiping each way. I like that it is learning, more tailored options’.
- ‘When I am in the wish list, that’s really easy to add items to the bag’.

The Handpicked Personal Shopper app (see Figure 16) offers a pre-selection of departments before swiping, which the users liked a lot.

- ‘That’s good. I can choose what to look at’.
- ‘Good to pick the category before. It narrows down everything’.

The Wantlist app (see Figure 17) offers different categories (departments/sections, categories, high-end/high-street), filtering options and recommendations, which the users appreciated a lot.

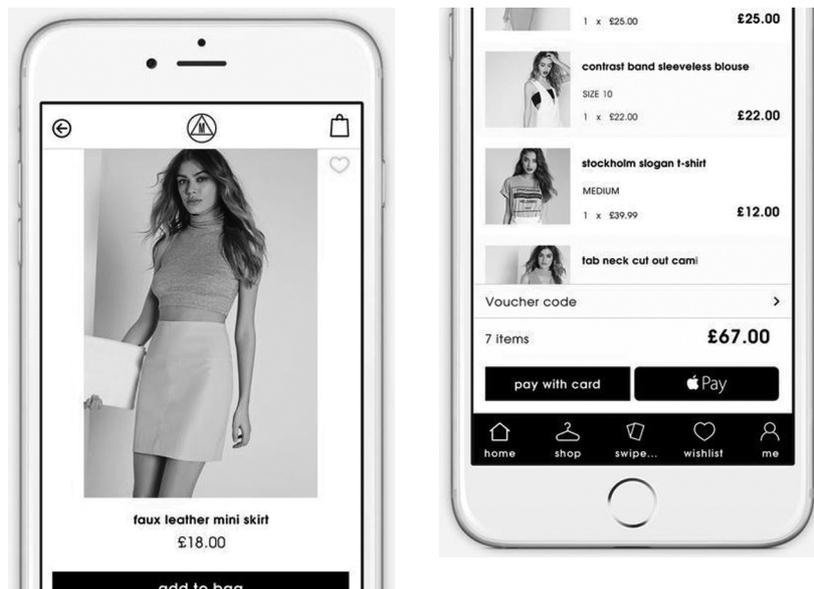


Figure 15: Missguided app with swiping feature

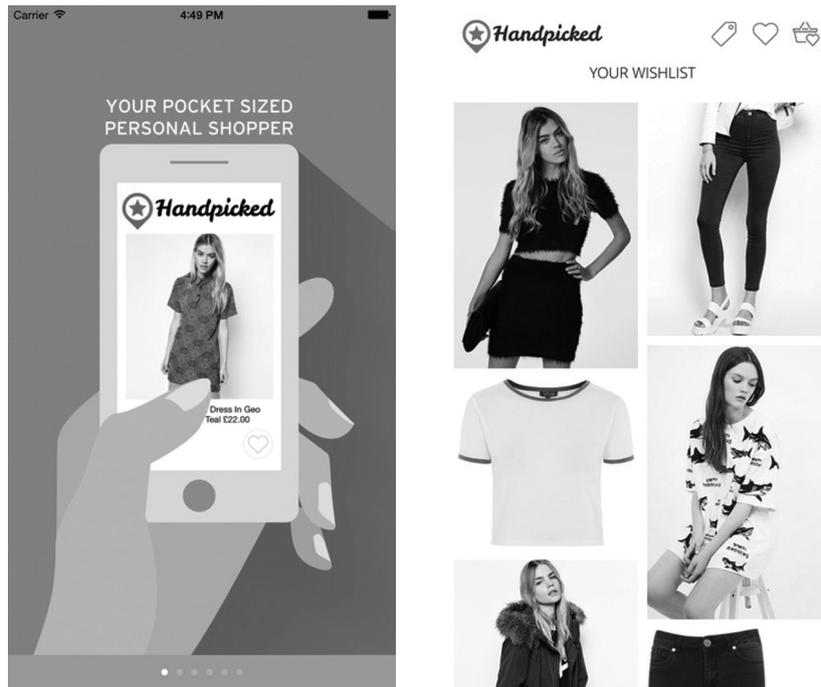


Figure 16: Handpicked app with swiping feature

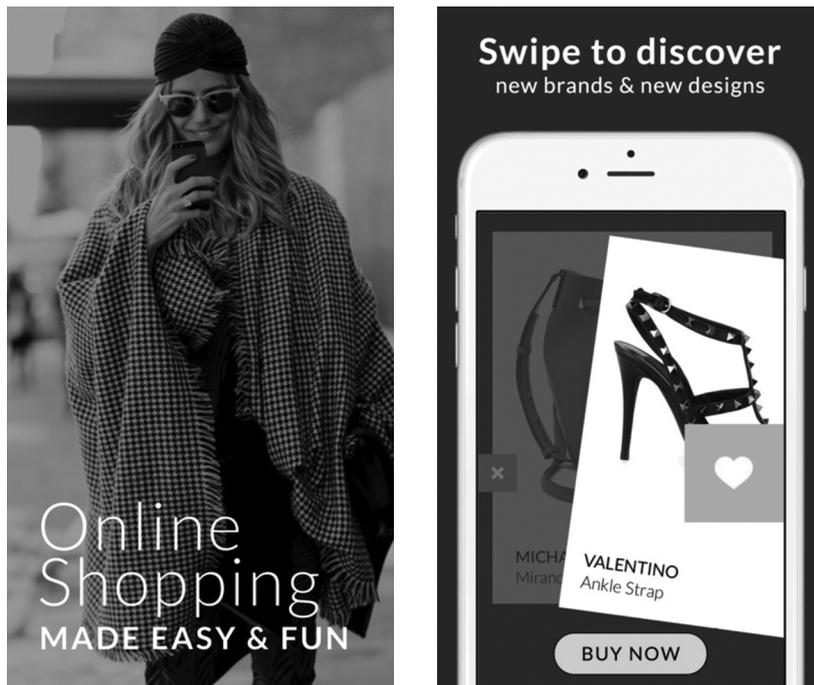


Figure 17: Wantlist app with swiping feature

- *‘That’s good that you can filter!’*
- *‘I like the recommendations of similar styles and prices. Haven’t seen that before. Quite good’.*

### **SUMMARY: HOW DO USERS SEARCH?**

When users search for products online, they do not frequently use the filtering and sorting options. Many prefer to just scroll through the results. Especially on the mobile, users find left-hand filtering *‘fiddly’*.

Users are very sensitive regarding relevant search results! Non-matching search results were an issue for almost all search functions of e-commerce shops tested in the usability lab. Many search functions were unable to bring in relevant results or display relevant results at the top.

### **CONCLUSION: HOW TO DESIGN A GOOD SEARCH FUNCTION**

A good search function is clean, prominent, accessible and easy. Small things matter! Users complain when search functions are *‘too busy’*.

Users like the search function to be visible and preferably at the top of the page. It should be immediately available (without a second click).

- *‘Clean, simple, easy’.*
- *‘Give what [is] asked for’.*
- *‘Clear at the top of site, easy to read font, colourful’.*
- *‘[. . .] the search button is a bit hidden’.*
- *‘I had to click on the button to load the search tool, which was less useful and time consuming’.*

Despite the expressed need for a visible search, the search function itself should be unobtrusive and not disturb the user during typing.

- *‘Let me put my whole search in’.*

Users like it when the search types ahead and continues the users’ input in a meaningful way — then they feel understood. But there are complaints about non-matching results. Therefore, be careful with product pictures: the risk of a picture experienced as non-matching is higher than that of text.

A good search function is like a good therapist. A good therapist will repeat what the patient has told him/her so the patient feels understood (see Figure 18).

A good search function is always there for the user, is attentive, and knows what the user needs.

### **THE FUTURE OF SEARCH**

The search of the future will be influenced by further developments in natural language processing (Google voice!), context-sensitive and location-based search, and using more personal information (not all users will like this!) (Behshad Behzadi, reported by Chris O’Brien, 2015).<sup>3</sup>

- *‘The future of search engines is context.’* (Aaron Friedman, 2015)<sup>4</sup>
- *‘The future of search is to try to build the ultimate personal assistant.’* (Behshad Behzadi, director of search innovation Google, 2015)<sup>5</sup>

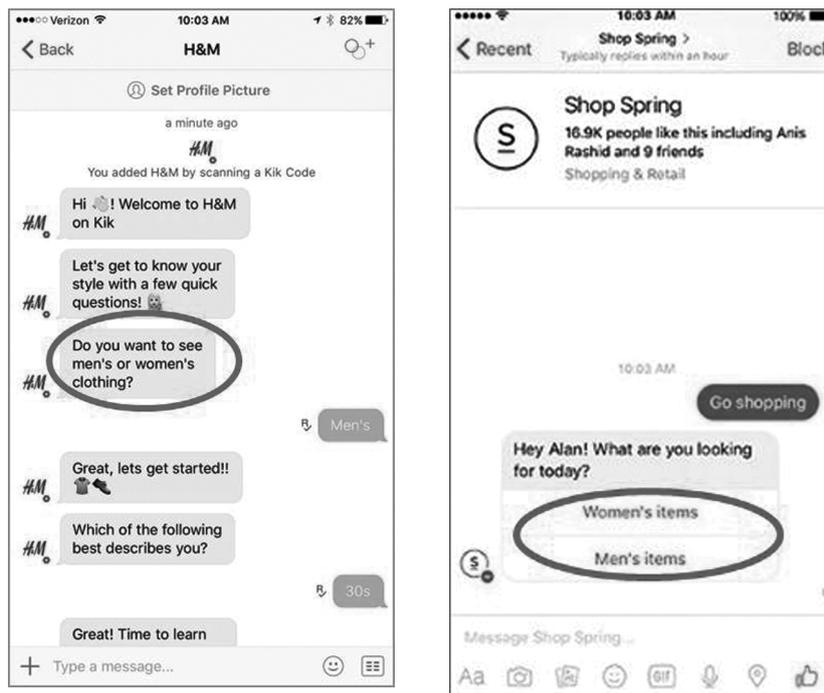
The rise of messaging apps has led to conversational commerce. H & M offers a dialogue that imitates a human conversation; Shop Spring offers menu options in the dialogue and thus makes it easier for the user (see Figure 19).

Some apps such as Poncho, retrieve weather information in the form of a dialogue (see Figure 20). It makes you question the effort involved in typing in



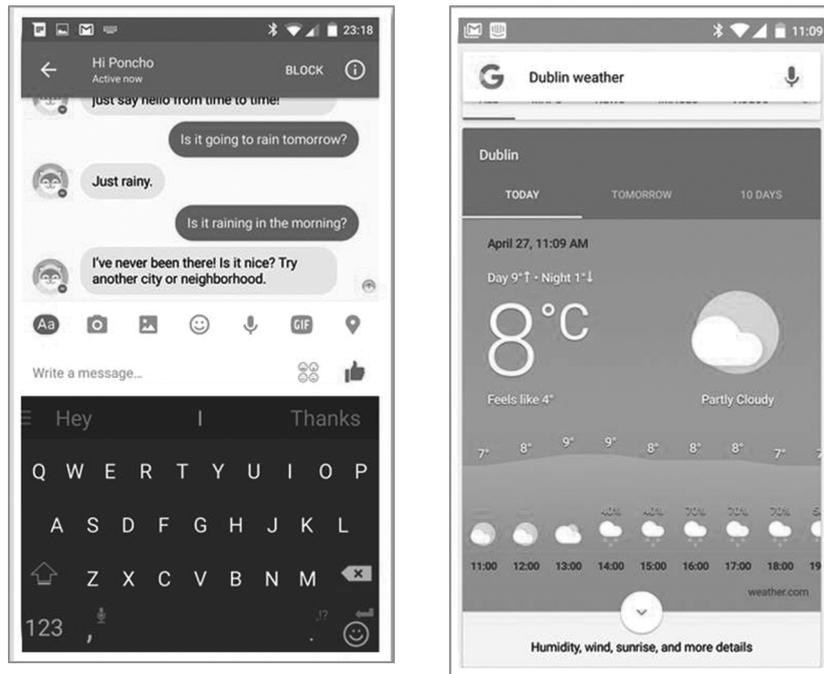
**Figure 18:** Therapist with patient on couch.

Source: <http://styleture.com/2011/05/25/psychoanalytic-couches/>



**Figure 19:** Conversational commerce with H & M and Shop Spring.

Source: <http://venturebeat.com/2016/06/16/the-state-of-bots-11-examples-of-conversational-commerce-in-2016/>



**Figure 20:** Poncho app with conversational commerce versus normal Google search for weather.

Source: <https://blog.intercom.com/bots-versus-humans/>

answers and questions in a dialogue when it is so much faster to use Google search and just type in ‘Dublin weather’.

Will we only interact with bots in the future? Will we get rid of human contact during shopping? No shop assistant, but a 24/7 nice and always friendly and never-tired bot with unlimited knowledge and expertise? A bot able to guide us immediately to the things we are searching for? A bot we can talk to as you would to a human being?

The question for the future is: How can bots and humans best share work? We should not forget that bots and humans are good at different things.

Bots can give quick answers to simple questions. For example, the most common reason for dialing a call centre is the question ‘Where is my order?’ or ‘Have you received my documents?’ If bots could answer these simple questions, it would free up call centres to deal with more complex things and give

real human support! But even for these simple tasks, a simple form can be better than a dialogue with a bot.

Humans are good at understanding human emotions, showing empathy, listening and reasoning, like no bot can do. These qualities are unique to humans and cannot be replaced. In some cases, human contact can solve problems more quickly or even prevent problems altogether. Human contact can smooth things and calm people down. Paul Adams, Intercom, says: ‘Everyone is talking about the rise of chatbots; but are forgetting that humans are pretty good too’.<sup>6</sup>

Google’s goal for the future is a proactive search with artificial intelligence: ‘Giving you what you want before you know you want it’.

What do therapists say about this? ‘Key to happiness: Focus on what you need, not what you want’. (Allison Conner, 2012).<sup>7</sup>

Hopefully we will have a future where our search for happiness is supported by

empathic and understanding search functions that will give us what we really need.

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