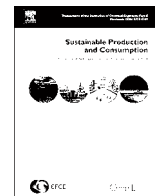




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# Sustainable Production and Consumption

journal homepage:



## On the attractiveness of clothing libraries for women: Investigating the adoption of product-service systems from a practice-based perspective

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### ARTICLE INFO

Editor: Prof. Idiano D'Adamo

#### Keywords:

Clothing library  
Consumption profile  
Practice theory  
Product-service system  
Circular fashion

### ABSTRACT

Clothing libraries, an application of product-service system in the clothing sector, could potentially combat clothing overconsumption but consumer adoption is limited so far. Research so far has largely overlooked the diversity in adoption barriers depending on the context. Using a practice-based approach, this paper explores how adoption barriers differ across clothing consumption profiles and types of clothing libraries. A focus group methodology is used to examine two types of clothing libraries (occasional vs. everyday) intended for women and four clothing consumption profiles (fashionista, rational, emotional, restrained). This paper shows that occasional clothing libraries are perceived as more attractive than everyday clothing libraries because they require a smaller change of practice. Factors such as the possibility of wearing the garment again, existing alternatives (second hand purchase or exchanges with friends or family), the type of occasion (event, seasonal or daily), the need for garment renewal, and the price interact in a similar way for clothing purchases and occasional clothing libraries. This paper also shows that the barriers to practice change differ between consumption profiles. For example, not feeling the need to renew one's wardrobe is an obstacle to subscribing to everyday clothing libraries for the rational profile, while this same factor, feeling the need to regularly renew one's wardrobe, is a lever for subscribing to everyday clothing libraries for the fashionista profile. The findings can be used to tailor clothing libraries to specific consumption profiles' needs in order to shift their fashion practices towards sustainable consumption.

### 1. Introduction

Since the 1990s, fast fashion has been the dominant business model in the clothing sector. This model favors the rapid turnover of consumer wardrobes ( ), leading to increased annual consumption of textiles ( ) that are discarded after having been used for a short period ( ); . This makes that the actual service life of the clothing is much shorter than their technical service life ( ) and the intensity of clothing use has declined by nearly 40 % ( ). This form of induced obsolescence has been shown to generate many negative ecological and social impacts ( ); . More specifically, this sector is the fourth largest user of raw materials and water ( ).

To overcome these issues, a shift towards a sustainable fashion industry through circular economy is increasingly advocated and

commonly referred to as circular fashion (

). More specifically, among the potentially more sustainable business models that are emerging in the fashion industry, clothing libraries are particularly innovative and promising (

). Within such systems, the consumer renounces the possession of their clothes and, instead, purchases the *use* of garments for a given period of time ( ). There are two main types of clothing libraries: clothing libraries offering clothing for a specific occasion (such as evening gowns and suits) and clothing libraries offering subscriptions for everyday clothes.

Clothing libraries are an application of the Product-Service System (PSS) concept in the textile sector ( ). A PSS is “a system consisting of tangible products and intangible services designed and combined so that they jointly are capable of fulfilling specific customer needs” ( , p. 246). By making the garments available to more than one customer, across space and/or time, clothing libraries intensify the

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use of those goods. This model therefore responds primarily to the imperative of responsible consumption (SDG 12), since it can potentially contribute to a systemic dematerialization of the economy ( ; ) by reducing the number of goods required to meet consumer needs. Focusing on the consumption side, PSS-related offers in fashion might also enable the production of higher quality garments as they no longer imply a high one-off cost for consumers. This is why PSS are considered as a potentially effective way of implementing circular economy as they shift products away from direct consumer purchase and towards controlled channels of intensified use by multiple people ( ).

However, as promising as they might be, PSS, including clothing libraries, nonetheless face the challenge of recruiting and retaining consumers ( ; ). This is most likely due to PSS requiring consumers to change well entrenched practices ( ; ). It therefore seems crucial to get a deeper understanding of what renders it difficult for consumers to move from the traditional purchase of products (e.g. buying clothes) to the adoption of PSS offers (e.g. such as the ones proposed in clothing libraries). In response, some researches have so far focused on identifying barriers and levers to consumer adoption and retention of PSS-related offers ( ; ). However, there is still a lack of studies exploring why consumer adoption barriers differ in importance ( ).

This is why the present paper is specifically intended at analyzing different consumer segments and the related practices of clothing consumption to better depict the challenges to be overcome for those proposing circular fashion alternatives such as clothing libraries. This is in line with current research needs, since “the role of individuals as consumers/users has received less attention than other aspects of CE (e.g. technological interventions) in mainstream debates to date” ( ).

## 2. Background

Practice-based insights have proven useful to shed light on the difficulties for consumers to adopt PSS solutions ( ; ) in general and in the clothing sector in particular (see ; ). More largely, it has recently been argued that a practice-based approach is crucial to fully grasp the tenets of what a sustainability-oriented shift towards circular economic models entails regarding the role of consumers ( ). Accordingly, the following first sub-section precisely shows the interest of practice theory in analyzing changes in consumption behaviors, while the second sub-section connects the related insights with the literature on the barriers to the adoption of clothing libraries.

### 2.1. Practice theory and behavior change

Practice theory distincts its analytical focus on practices rather than on consumers implementing them ( ), which appears to be especially suited for investigating the mechanisms that perpetuate the repetition of everyday practices such as clothing consumption ( ). Practice-based approaches emancipate thus themselves from the literature in consumer psychology or socio-psychology and, in particular, from the question of the “attitude-behavior” or “intention-behavior” gap (see in particular ; ).

We follow the work of and who described practices as consisting of a set of interconnected elements (i.e. a set of linked ‘doings and sayings’). Those elements are called ingredients ( ) and they are viewed as intertwined. The extent to which the ingredients constituting a given practice are entangled may explain the difficulty of changing that practice: modifying a single ingredient (price, for example) might not be sufficient to

trigger a change of practice, precisely because several constitutive ingredients are intertwined. Several ingredients need to be modified and unlocked before a change in practice can take place. More specifically, *habitual practices* ( ) highlight that, once they have become routinised, lock-in mechanisms prevent individuals from moving from their current consumption practices to any other new one.

The categories of ingredients vary slightly among authors ( ; ). We use the following categories of ingredients: (1) social interactions such as norms or reputation issues, (2) material context such as access or infrastructure, resources, money, and (3) attached meaning such as beliefs and motivations.

Analyzing consumption through this approach allows for the identification of the ingredients that constitute existing consumption practices related to fast fashion and those related to clothing libraries. This then enables depicting the forms of constraints (i.e. specific entanglements of ingredients) on which the habitual practices depend. These specific entanglements of ingredients could be linked to the consumption profiles of clothing. Conversely, the identification of these constraints can also be used to identify potential leverage points (the solution of a constraint becomes a lever) for practice change ( ).

Although the entanglement of ingredients is held as a major cause of the entrenchment of habitual practices (and thus preventing the adoption of new ones), it must be underlined that these interconnections are not all of the same weight. According to , the strength of the connection between the elements (the entanglement) impacts practice change: “*When the elements are ‘loosely coupled’ (...)* it is possible to change individual elements without making changes in other elements of the practice. *When elements are ‘tightly coupled’ (and each strongly dependent on the other), changes in one element also require changes in another element or reconfiguration of the relationship between them*”. It thus points to the need for a closer scrutiny of the practice at stake (i.e. clothing, in our case) prior to devising on ways to improve the adoption rate of an alternative offer (i.e. accessing clothes through a library, in our case).

### 2.2. Adoption of clothing libraries

Previous research has identified adoption barriers related to practices. For instance, consumers’ generally dislike subscriptions ( ) and therefore dislike clothing libraries that entail a subscription. Subscriptions require consumers to change their routines. It requires a change of practice that goes beyond the change of type of consumption (purchase vs. use) and to overcome a series of (perceived) barriers ( ). In contrast, if consumers experiment once with a PSS offer (e.g., purchasing access to a garment through a clothing library), they change the consumption-related part of their practice (purchasing access to a product versus buying a product), but they do not necessarily change their current practices altogether (all the product-related habits). For example, the clothing practice does not need drastic change if a consumer goes once to a clothing library to rent an evening dress or a suit for a wedding. The remaining clothing practices have not necessarily been impacted. On the other hand, if this same consumer subscribes to a clothing library that provides them with three garments per month, the entire practice changes (e.g., the recurrence of access to new garments, anticipating the daily basis outfit, the logistics of picking up and returning clothes, etc.).

Thus, the commitment required by everyday clothing libraries is greater than by occasional clothing libraries ( ; ). As the routines are underpinned by an entanglement of ingredients constituting barriers to practice changes, breaking these routines requires overcoming barriers that are stronger and more intertwined than is the case for occasional clothing libraries offers which satisfy a punctual need ( ). Consumers tend to compare the use of clothing libraries with purchasing and owning clothes and a deeper understanding of practices related to ownership

(clothing purchases) and non-ownership (clothing libraries) is thus needed ( ). That is why this paper investigate whether different clothing libraries imply different changes of clothing consumption practices (assumption 1).

do indeed mention that the willingness to adopt clothing PSS differs between different clothing categories of use. They find that participants were willing to rent clothes for a special occasion while this was not the case for everyday use. However, this difference was not further explored or explained in more recent papers. Moreover, previous research has shown that consumers differ in their preferences and clothing consumption patterns (see ; ). Further exploring these patterns and understanding their potential role on the changeability of practices thus seem necessary.

Taking into account the aforementioned aspects, this paper will therefore also question whether different consumption profiles (i.e., fashionista, rational, emotional and restrained consumers purposely chosen to reflect stereotypical forms as explained in more details in ) face different barriers when envisioning to turn to clothing libraries (assumption 2). It has been shown in a few recent studies that the routinization of practices – the different specific combinations of ingredients' entanglement – can be subsumed into different 'profiles' (see ; ). Thus, a compulsive consumer does not display the same habitual clothing consumption practices as a consumer who is looking for a good deal, or a consumer who is trying to reduce their clothing consumption. Therefore, a seemingly similar change of practice should not necessarily confront these three practice-carriers with the same barriers.

### 3. Methodology

We conducted a focus group with potential clothing library customers to better understand the change required from consumers to adopt clothing libraries. This collective qualitative methodology is justified by the unit of analysis of practice theory being situated on the practice and not the individual ( ). The design was also made up so as to apprehend the tacit aspects and unconscious influences related to habitual practices ( ).

In the following, we outline our data collection process and analysis and describe the sample. We then present the two studied clothing library cases, namely a short-term library for occasional clothes and a long-term library for everyday clothes that are used to investigate assumption 1. Finally, we explain how we determined the clothing consumption profiles of participants to investigate assumption 2.

#### 3.1. Data collection and analysis

A qualitative methodology in the form of a focus group with 21 French-speaking Belgian women was set up and carried out in December 2020 to confront potential consumers with two existing clothing libraries. This focus group was intended to explore clothing consumption practice change and more specifically whether the change required from consumers to adopt clothing libraries differs based on their profile and the type of clothing library. Therefore, it could only be carried out in small groups, to allow for emulation and for sufficiently long speaking time for participants. This implies a very small number of participants and thus limitations regarding representativity and generalization.

The session lasted 2 h15 hours (but recordings reached nearly 6 h00 with the subgroups discussions) via videoconference and aimed to identify the barriers and levers to a practice change towards two clothing libraries: an occasional and an everyday clothing library.

The first part of the focus group consisted of a presentation of the two clothing libraries (through a visit of the website by each potential consumer individually) and followed by a collection of first impressions and a moment of questions and answers with the suppliers/providers (who were present only for the Q&A session) to overcome a bias of

understanding. The second part focused on participants' perceptions and barriers to adoption of the two clothing libraries presented. Finally, the third part consisted of a search for solutions with the participants to overcome the barriers. For more details on the sequence of the session, see Table S1.

This collective qualitative methodology was used precisely to characterize and understand the tacit aspects and subconscious influences of habitual practices. Indeed, the *confrontational* aspect of group methodologies allows for the emergence of elements, such as socio-cultural norms and constructs ( ), that would not necessarily be obtained in the more traditional setting of individual interviews. Moreover, this focus group was created and facilitated by two professional moderators with the aim of apprehending these subconscious influences ( ) through activities which directly approached the consumption of clothing and indirectly its subconsciousness. See Table S1 for animations' examples (Bono Hats, Me In your shoes, ...). We thus conducted the session in line with the unit of analysis of practice theory, which is situated on the practice and not the individual, the practice carriers ( ).

The virtual format of the focus group allowed us to easily record each of the discussions, in groups and in subgroups. Nearly 6 h00 of discussions were recorded (4 recordings of 25 min during the first moment in 4 sub-groups, 2 recordings of 25 min during the second moment in 4 sub-groups, 2 recordings of 15 min during the third moment in 2 sub-groups plus 1 h25 hours of discussions for the whole group). These recordings also include the opening statement, the closing thoughts, the breaks, the guidelines for the exercises, the time given to everyone to think about the answers and formulate them in the form of bullet points, etc. That is the reason why the transcript amounts to just over 34 pages of text. This transcript was systematically coded, without any software other than word processing. The codes were created based on what could correspond to barriers and levers of the clothing library linked to practice's ingredients and were discussed among authors. These codes are used in the first two parts of the results.

#### 3.2. Sample

To investigate the second assumption and ensure a variety of women's profiles, they were recruited on social networks (our focus group announcement was relayed by various people and organizations) and through word of mouth. Only women were recruited because the clothing libraries presented in the focus group are aimed at women. The panel consisted of 21 female consumers: eleven of whom lived in Brussels (within the nineteen municipalities of Brussels) and ten in Wallonia (further away from the clothing libraries). shows the different characteristics of the profiles of the 21 participants. These women were from all age groups. Four women were under 25 years of age, seven were between 25 and 35 years, seven were between 36 and 45 years, two were between 46 and 55 years, and one woman was over 65 years of age. Regarding their income, we asked them to place themselves on a scale of 1 to 10, one being that they were very poor and 10 very wealthy. Three women placed themselves on middle income (5–6), fifteen on high income (7–8) and three on very high income (9–10). The participants of this focus group are therefore from the upper middle class and the upper class. This means that there is a bias since the lower classes are not represented in this sample.

The literature highlights that beyond incentive mechanisms, there are key moments for change ( ). These key moments can be linked to life moments (new parenthood or moving) but also to temporary misalignments ( ) such as acquiring new knowledge like learning to sew, a specific dress code imposed, making a mistake and staining all one's laundry, ... By selecting consumers who are at different stages of life, it may therefore be possible to compare their consumption practices and the impact of these life moments on them.

### 3.3. Case study

To investigate whether different clothing libraries imply different changes of clothing consumption practices (assumption 1), participants were confronted with an occasional and an everyday clothing library based on real companies. These clothing libraries are described in the following and their key characteristics and differences are presented in .

The occasional clothing library is physically based in Brussels and provides evening dresses for occasions such as parties, weddings, and other celebrations. Users can go to the store to try on dresses. They can also match these dresses with shoes, bags and head accessories. The dresses come from destocking (unsold) or are purchased second hand (bought back from customers). These dresses are all from specific brands pre-selected by the founders based on their quality or their environmental labels. The dresses are repaired when possible and resold to clients when they are no longer borrowed or when they are no longer in perfect condition.

The everyday clothing library located in Brussels (shop + online platform) offers clothes for everyday and in particular for women who want chic, quality and ethical clothes. The users are mainly women who are changing jobs, whose body type has changed (e.g. after a pregnancy) or who want to dress in a chic way without having to renew their entire wardrobe. Users choose their clothes in store or from an online catalogue. The clothes are bought by the founders on the basis of their strict ethical and sustainable criteria, giving preference to European production and avoiding mixtures of materials in order to increase the chance of recycling. Clothes are repaired when possible and resold to clients when they are no longer borrowed or when they are no longer in perfect condition. When a piece is at the end of its life cycle, it is taken out of the circuit and recycled or upcycled through their network of partners.

### 3.4. Segmentation of fashion consumers

Many extant studies have focused on identifying the factors, values, or attitudes that influence clothing consumption behaviors or practices (see below). These studies clearly indicate that individuals differ in their clothing consumption preferences. Therefore, we draw on this extant literature to distinguish consumer segments. We to segment

**Table 1**  
Offers presented in focus group.

Characteristics of the offers	Clothing libraries	
	Occasional library	Everyday library
Type of clothing library	Occasional library	Everyday library
Aims	Library of evening dresses for occasions such as parties, weddings, and other celebrations	Everyday clothing library, particularly for women who want chic, quality and ethical clothes
Product linked	Dresses + shoes, bags, and head accessories	Clothes for everyday
Type of payment	Pay-per-use	Subscription
Price	From 45 € to 150 € for 5 to 12 days	35 €/month for one garment 60 €/month for two garments
	(Price depends on the sale value)	75 €/month for 3 garments
Deposit	None	None
Booking	At the store	In store or online catalogue
Pick-up and drop-off	At the store	At home
Maintenance	By the provider Cleaned in an ecological dry cleaner between each use	By the provider Cleaned in an ecological dry cleaner between each use
Additional characteristics	Insurance against stains and small involuntary damages included in the price	Insurance against stains and small involuntary damages included in the price

**Table 2**

Factors, values or attitudes that influence clothing consumption behaviors or practices that can be connected to our categorization.

Profiles	Equivalents in literature
Fashionista	- The hoarder, the oniomaniac and the fashionista ( ) - Consumers seeking fashion and novelty ( ) - Compulsive buyers with fashion interest ( )
Rational	- Fashion- oriented impulse buyers ( ) - Self consumers, concerned with hedonistic needs ( ) - Consumers that buy responding to practical function value factor or economy value factor ( )
Emotional	- ‘Social’ consumers, concerned with social image ( ) - Consumers that buy responding to emotion and affects ( ) - Consumers that buy responding to group interaction value factor and status and achievement value factor ( )
Restrained	- Consumers with frugal consumption ( ) - ‘Sacrifice’ consumers who strive to reduce their impact on the world ( )

respondents to compare the importance of adoption barriers among them. The four profiles are: (1) the profile of consumers who buy clothes a lot and often, who attach great importance to following fashion trends, who favor fashion and sometimes buy compulsively, which is called here the *fashionista* profile; (2) the profile of consumers of clothes who favor the quality-price ratio and who try to rationalize their consumption of clothes, called here the *rational* profile; (3) the profile of consumers for whom clothes are loaded with memories, convey emotions and who buy on impulse or to fulfill a social purpose, called the *emotional* profile, and (4) the profile of clothes consumers who try to restrict their consumption of clothes, buy and own little and try to respond to each situation with what they already have, called the *restrained* profile. We collected information on participants’ fashion consumption profiles ahead of the focus group using a questionnaire (see Table S2). These four segments describe extreme practices of clothing consumption which implies that most consumers will not match these profiles exactly. The profiles are not meant to be exhaustive, but to distinguish between extreme clothing consumption practices.

When participants registered, they filled in a questionnaire to situate their current clothing consumption practices. Through this questionnaire – the results of which are used to refine the focus group analysis – we sought to identify different profiles of clothing consumption practices. This profiling aims to refine the understanding of the barriers and levers and to identify to what extent these may differ for the adoption of clothing libraries according to initially different clothing practices. Thus, the questionnaire was created to determine which profile each participant most closely matches (see Table S2).

## 4. Results

This section is divided into four subsections. The first subsection presents the participants segmentation. The second subsection presents the barriers and levers of the clothing library linked to practice’s ingredients which are classified following the habitual practices categories: social interactions, material context and attached meaning. The third subsection presents the barriers and levers depending on the type of clothing library (occasional and everyday). The last subsection presents the barriers and levers depending on the profile (fashionista, rational, emotional and restrained consumer).

### 4.1. Segmentation of participants

The number of respondents fitting the four segments differs.

Furthermore, few participant perfectly fit into one segment. As the participants were not forced to position themselves on each proposition, we considered the participants who had ticked the most proposition for a profile (compared to the other participants) as the ones closest to the 4 theoretical profiles (fashionista, rational, emotional, restrained). They are highlighted in orange in Table 3. In total, four participants fit the fashionista segment, one falls into the rational segment, three can be classified in the emotional segment, and two participants fall into the restrained segment.

Regarding the exploration of the assumption 2 (barriers to practice change differ between consumption profiles), the fourth part of the results was constructed by re-coding only the statements of people allocated to the profiles (fashionista, rational, emotional and restrained). For the fashionista profile, we analyzed the statements of participants 1, 3 and 11 looking for specific barriers and levers for this profile. For the rational profile, we analyzed the statements of participant 21. For the emotional profile, we analyzed the statements of participants 15 and 20. For the restrained profile, we analyzed the statements of participants 2 and 5.

4.2. Barriers and levers of the clothing library adoption linked to practices' ingredients

4.2.1. Social interactions

When purchasing or renting a garment, the projection of one's own image with the garment is one of the ingredients leading to consumption. Participants expressed that they purchase certain pieces of clothing because they project that wearing the clothing will likely allow them to boost their self-confidence or bring compliment from colleagues.

*"I bought this dress because it made me look good, because it suited my body type."*

It is not the clothing that they like, it is the image that a certain clothing gives off. In the following example, the consumers want to keep the garments responsible of those social interactions and do not want to share it or bring it back to the clothing library. But there is a balance between the attachment to clothing and the benefits that clothing libraries offer. Thus, participants clearly expressed that they perceived a difference in this balance between clothing libraries for everyday clothes and occasional wear.

**Table 3**  
Participants' profiles (n = 21).

#	Age	Home	Income (1-10)	Fashionista (1-9)	Rational (1-8)	Emotional (1-4)	Restrained (1-7)
1	25-35	BXL	5	5	3	3	0
2	36-45	BXL	9	0	2	1	5
3	> 65	BXL	8	5	2	2	1
4	36-45	HBXL	7	0	1	1	3
5	36-45	HBXL	8	1	2	2	4
6	46-55	HBXL	8	0	3	3	2
7	36-45	HBXL	8	2	3	0	2
8	25-35	BXL	7	4	2	3	1
9	36-45	HBXL	7	3	1	3	1
10	< 25	BXL	8	4	3	2	2
11	< 25	HBXL	9	5	3	3	1
12	25-35	BXL	8	5	2	4	0
13	36-45	BXL	7	0	3	2	3
14	36-45	BXL	8	0	1	2	2
15	25-35	HBXL	7	2	3	4	1
16	46-55	HBXL	8	0	3	3	3
17	25-35	BXL	10	1	2	3	1
18	< 25	BXL	7	3	2	3	2
19	< 25	HBXL	6	1	3	3	1
20	25-35	HBXL	7	2	3	4	2
21	25-35	BXL	6	3	4	3	3

*"I like to have my own clothes [...], I find it [clothing libraries] a little bit tricky. I would not mind [to rent once] a little evening dress, but everyday clothes [and libraries], I would hate to have to share all the time and not own them."*

Regarding the levers related to the ingredients of social interactions, the clothing libraries allow to stand out from the crowd, to distinguish oneself from others at a lower cost.

Clothing libraries also allow answering to the dress code and to social norms. For example, one of the participants says she could not have gone to three weddings in the same family with the same dress and therefore she had to buy a new dress. The clothing library would have allowed her to fulfill this social norm at a lower cost.

*"It is great for parties, weddings, events where you're always looking for THE outfit and finally, you are only going to wear it once or twice while spending a lot of money."*

Regarding the ingredients of the practice of the social interaction category, participants point out that clothes are objects that have an attachment potential as a barrier because they are vectors of pleasure if the garment fits them well. However, the context of social interactions differs between everyday clothes and occasional clothes.

4.2.2. Material context

Participants cite the following as obstacles related to the physical context of the practice of consuming clothing in clothing libraries: these clothing libraries are not always accessible, especially for the participants who do not live in Brussels while the offers presented are from Brussels.

*"I do not live in Brussels. Even for the occasional clothing library, you have to do several round trips. You have to go and try on, come back afterwards to pick up the dress and then return it. If there was something like that, closer to home, I might go."*

About the accessibility, as clothing libraries are still a very uncommon model, all those who did not know of this kind of model are simply surprised by the offer and do not identify it as an offer they could use. There is a lack of communication on a wider scale. This lack of communication leads to a lack of accessibility, which is why it has been assimilated to an ingredient of the material context.

*"It is a concept that I really do not know. I think I had heard about it once but... well, I have the same reaction about both offers. It is a reaction of astonishment; I find the principle in general nice and intelligent. Now, would I sign up? I am not sure."*

*"I have never really used this kind of service and I do not have anyone around me who has had experience with it either. Why not, but not sure I'd really use it."*

Because the participants are not familiar with this model, they fear that the clothing libraries do not have clothes that fit them. It appears that the practice of clothing consumption is sometimes partly anchored around the morphology of the consumers. Once they have identified the stores where they are sure to find clothes that fit them, it is more difficult for them to be attracted by a new offer.

*"I'm pretty small and I always need to have my pants, skirts and dresses taken in. So I wonder how it would work [with the clothing libraries]. There are body type issues and finally, it has to be clothes that are wearable by many different people. In this case, they are going to be too big for me."*

Another ingredient of the material context that hinders participants are the logistics, which appears to be more complicated than those related to traditional clothing purchases.

*“The logistics...I always forget to return my books to the library, I always get fines and that’s the kind of thing...it can’t be easy to return the rented clothes from my wardrobe.”*

*“The rental concept, I find it nice by definition, but logistically, it’s complicated too: you have to get there, you have to try, once you have the size, can it be done only on the basis of the site. I need to try, so that’s also specific to each one.”*

Price was also identified as a barrier to clothing library use. Each consumer has her own perception of what the right price is for her and thus quickly makes an opinion if the price seems accessible or excessive to her. Prices are considered excessive by some because it is compared with the garment as such and not with to the service provided.

*“I think it’s also a comparison in terms of price compared to new and in the end, what’s the point of using clothing libraries and not just buy a sweater for 35 euros instead of renting it? ...for just a month or something.”*

As a lever of the material context, participants mentioned first that the insurances (against stains and minor accidental damage) of the offers reassure the consumer. They also mentioned that there is no need to store clothes anymore with this solution.

*“Storage is a real advantage. That’s one of my big concerns. I know I have too many clothes, clothes that I wear but not often and they [clothing libraries] help rethink the idea of the wardrobe and the space that’s available. They add value.”*

#### 4.2.3. Attached meaning

The representation of the clothing library supplies and of the consumption practices of the participants’ clothing appears to be obstacles of the attached meaning category. It appeared during the discussions that the participants had their own representation of the offers, and that this representation is more a matter of perception than of reality.

This misrepresentation was characterized by a low evaluation of the offer in terms of environmental benefits or financial sustainability. This is reflected in consumers being keen on questioning the financial health of the offering companies, the lifespan of the clothes, the fact that there are clear reports on the real environmental benefit of the fabric, on the origin and end of life, etc. These questions were seen as a kind of defense mechanism against this new offer and proposal for change in practice. This is the case of this participant who wonders if the clothes are ethical and sustainable and admits to being critical of the offer. A little later she admits to having bought an evening dress on the criterion that it is cheap and not on the criteria of sustainability or ethics.

*“I am always quite critical... I also wonder if the clothes are durable, are ethical.”* Later in the discussion: *“... Sometimes it’s a little annoying to look in different stores for the cheap evening dress that you don’t know when you’ll wear again...”*

Another obstacle related to the attached meaning is that the clothing libraries require consumer to think in advance of the purchase or rental in relation to the moment of use. It is necessary to foresee the practice (and in the very moment of use the consumer has to make do with what they have). For some consumers, this causes a mental burden. Without having tested it, the consumer projects herself in the difficulties which could occur and that they try to avoid. This mental burden is related to the logistic and the uncertainty regarding the fit but also to the washing, to the potential of damaging the garment, and to the necessity of going to pick up and return the garment.

Related to motivation, the consumer wants to know in advance that she will find the perfect fit, the perfect garment that will put stars in her eyes which she knows how to find with her own routine. The consumers need to be reassured that they will find pieces that they like, that they will have choices, variety and that those pieces will be available in due time. Additionally to this fear, consumers fear of not having a garment in perfect condition since it is not the first use.

It is also a problem if the consumer knows exactly what she wants to wear: she knows that the probability is greater that she will find it in a classic store. In this case, classical stores seem more convenient than clothing libraries. The consumer compares with what is known to avoid risks, to stay in one’s comfort zone.

As leverage, clothing libraries are a solution for consumers who are looking for clothing that is more environmentally sustainable and perceive these offerings as more sustainable. It is also an offer that allows consumers to try something else, another style, other types of clothing without risk.

#### 4.3. Barriers and levers depending on the type of clothing library

The participants were asked to indicate their intention to actually subscribe to each of the two clothing libraries in the future on a scale from 1 (unlikely) to 5 (likely) at the end of the focus group session. We found a clear gap between the intention to adopt occasional clothing libraries and everyday clothing library as shown in below. The majority of participants intends to subscribe to the occasional clothing library but not to the everyday clothing library.

Interestingly, participants did not state specific barriers to occasional clothing libraries whereas several barriers were spontaneously mentioned with regard to everyday clothing libraries. One of them is that it is uncertain for consumers that, in the long term, the clothes will continue to please, that there will be stock, new pieces, and no redundancy.

Another barrier is that consumer already have plenty of clothes in their wardrobes and thus do not need more clothes on a daily basis.

*“And clearly, I accumulate pieces from season to season. There is a spring/summer and a fall/winter collection but since they are good quality clothes, I keep them for several years and so, in the end, I accumulate. So, clearly, I don’t necessarily wear the same clothes every week and so I would have the same problem: I would only wear the clothes once or twice a month and so, it’s not financially beneficial at all.”*

Linked to the price, the participants have the impression that everyday clothing libraries would not be *financially beneficial*.

*“Since it’s an everyday rental, I think it makes less sense than renting outfits for events because I want to wear my everyday outfits more than once. I wear them for years, but I pay only one time... after that the libraries would allow me to change clothes more frequently, but I have more reservations about this offer than the other one.”*

The everyday clothing library also is compared to alternatives, with the possibility to exchange clothes with friends, receive and donate clothes or to purchase second-hand (second hand platforms, flea market, ...) or even just an attempt to consume more soberly.

*“I’m lucky enough to have a mom and sister who are the same size as me, so I admit, I don’t use that kind of service, but I do a lot of swapping with girlfriends.”*

Finally, the participants express that they prefer to wear the same garment several times because they are attached to it or because it is possible (contrary to a wedding dress which consumers typically only wear once).

*“I prefer to buy than to rent, I am more in a logic to buy clothes and keep them, but I understand the principle.”*

The occasional clothing library has an advantage over the everyday clothing library by not requiring a subscription. In addition, everyday clothing libraries with a clear cancellation process of the subscription are more attractive to participants.

*“Having used the subscription system via [an online everyday clothing library], I was able to change the frequency and stop the subscription at*

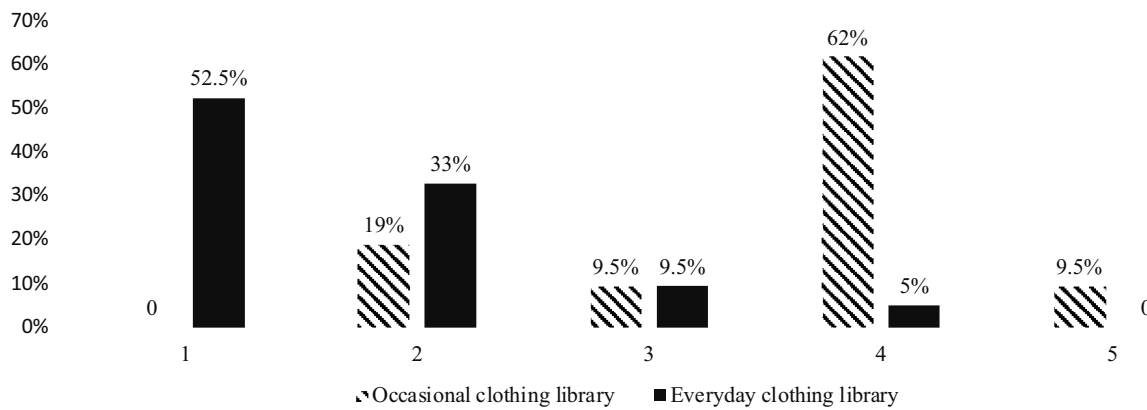


Fig. 1. Intention to subscribe to the clothing library.

*any time without any cost and restart it in 6 months or 1 year and I had this flexibility, otherwise, I would never have tested.”*

Participants also mentioned that another type of clothing library has hybrid advantages between the everyday and the occasional: the library for a season, a defined period, or a particular moment of life such as a pregnancy. This model especially allows to calculate more easily a utility-price ratio.

*“I would sign up for a maternity clothing library offer, because it is a determined period. So, we know it’s for 9 months.”*

*“Renting a jacket really spoke to me. Basically, I did not see myself doing that but it’s true that a winter jacket is very seasonal. For the jacket it’s a good system and maybe for other clothes that I do not really think about, but for the rest, it really changes on a daily basis, and it does not change according to the seasons.”*

Finally, participants mentioned that logistics also impacted their will to adopt. Consumers are willing to spend time finding a garment for a particular occasion because the logistics are similar. If the consumer does not have a garment in their closet to wear for that occasion, they will have to go to one or more stores to find a dress anyway. In this case, the logistics are acceptable. Whereas in the case of everyday clothing libraries, the desire for novelty and wardrobe renewal is not always important enough to justify the logistics behind the membership.

*“For an occasion, I would tend to start the logistics. If it is for an event, I might rent a dress because it’s occasional and I do not need that dress lying around in my closet. Whereas everyday clothes, I admit, I value them differently. If I have a great top or a great bottom, I like to wear it again on a few occasions and so not to start all that logistics of going to bring it back, pick it up.”*

Comparing the barriers and levers mentioned by consumers shows that consumers perceive clothing libraries differently depending on whether the clothes are intended for a specific occasion, a season or period of life, or for everyday use. Consumers react differently in these three different situations because consumers compare the interactions between the ingredients of the practice in a different way.

In the case of an event, the occasional clothing library is interesting if it offers a price that is cheaper than what the consumer would have usually consumed. This reference price depends on the quality and durability of the garment if the consumer pays attention to it. In this same case, the consumer will be interested in the clothing library if they think they cannot wear the garment again. If they are thinking of wearing it again because they are attached to it or because social norms do not require another garment, the consumer will not be interested in the offer. A consumer’s need to renew these clothes will increase their interest in the offer, if they are not satisfied with their current wardrobe. Finally, the consumer will be interested in the offer if they do not find

existing alternatives.

All of these elements are interrelated (see ). This is why everyday clothing libraries seem less attractive to the average consumer. The price could be more interesting if the consumer is used to buying expensive clothes. But this relation to the price drops if the consumer thinks of keeping the piece for a long time and knows that they will be able to wear it many times. This relationship also decreases if the consumer already has a habitual practice of alternative clothing consumption, such as exchanging these clothes with their family or buying them second-hand. In this case, they manage to lower the cost of satisfying their desire to renew their wardrobe.

This section has highlighted different elements that interact in constituting barriers to breaking up routines and changing consumption practices. These elements can be visually depicted as in . This figure will serve as a basis to visualise the elements that reinforce the barriers, and the potential levers towards breaking with an extant routine for each clothing consumption profile in the following section.

#### 4.4. Barriers and levers of the different consumption profiles

The relationships between the practice ingredients vary not only by clothing library type but also by clothing consumption profile. For the purpose of this subsection, only the quotes from specific participants will thus be used as explained in .

##### 4.4.1. Fashionista consumption profile

None of the participants were self-declared fashionistas or compulsive clothing consumers. However, the participants take this stereotypical compulsive consumer profile as a reference to explain who they feel the everyday clothing library’s offer would fit. They indicate that this profile has a need to renew their wardrobe, to have new pieces regularly. In doing so, they also show that this need is linked to a budget: it is difficult to regularly renew one’s wardrobe without allocating a certain budget to it. On the other hand, consumers who do not renew their wardrobe as much identify less the need to receive new pieces every month and believe they do not have the budget to afford this service. For the fashionista consumption profile, needing a regular wardrobe renewal is an ingredient of the current practice that plays positively on a subscription intention.

*“I really feel like it’s dedicated to compulsive buyers, shopaholics who go shopping once or twice a week and who automatically have to buy a piece or else it does not go well in their life. So yes, it becomes interesting because their budget is controlled on one or two pieces. Now, on a larger public it is not the case, and therefore, I find that the price remains excessive.”*

Participants emphasized that without this budget, it is difficult to subscribe to this everyday clothing library.

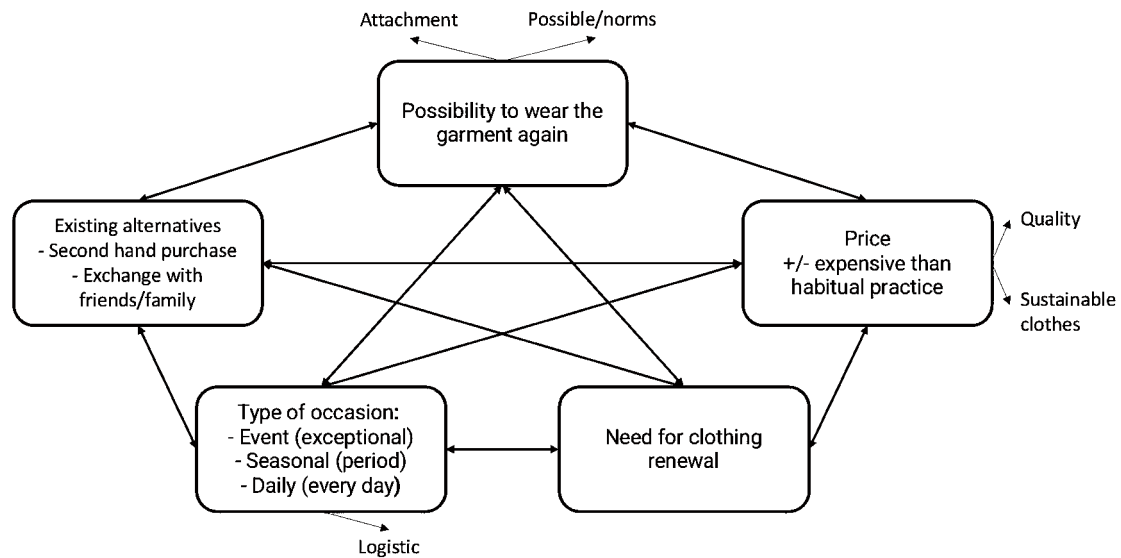


Fig. 2. Representation of the interacting elements constituting barriers to break-up routines.

*“I think that if you have the budget and if you get bored very quickly of clothes and want to change very regularly, it can be a good alternative. But you have to have the budget.”*

However, in these ingredients, one element can play against clothing libraries for this profile of fashionista: if the individual already has developed alternative strategies to satisfy their need for renewal. This is the case of this participant who explains that she often changes her wardrobe, not by buying or renting them but by exchanging them with her family and friends.

*“I’m lucky enough to have a mom and a sister who are the same size as me, so I admit, I do not use this kind of service, but I do a lot of swapping with girlfriends.”*

shows a representation of the interacting elements that constitute specific barriers (in red) or levers (in green) for the fashionista profile.

#### 4.4.2. Rational consumption profile

For the rational profile, the price takes precedence. Thus, this consumption profiles’ adoption intention depends on how the clothing library offer scores on price in comparison to the usual practice. For the rational profile, the price of using the everyday clothing library is perceived as higher than the price of buying her clothes.

*“I think it’s also a comparison in terms of price versus new and at the end of the day, what’s the point of going through their platform or just going to the store and buying a sweater for 35 euros instead of renting it for just a month or something like that.”*

The fact that alternatives exist to reduce the overall cost of purchase creates a disincentive to adopt everyday clothing libraries. In the case of the participant who scored highest on the rational profile, being able to resell clothing when she no longer wants it is what reduces the relative cost of using a garment and makes it less expensive than going through the everyday clothing library.

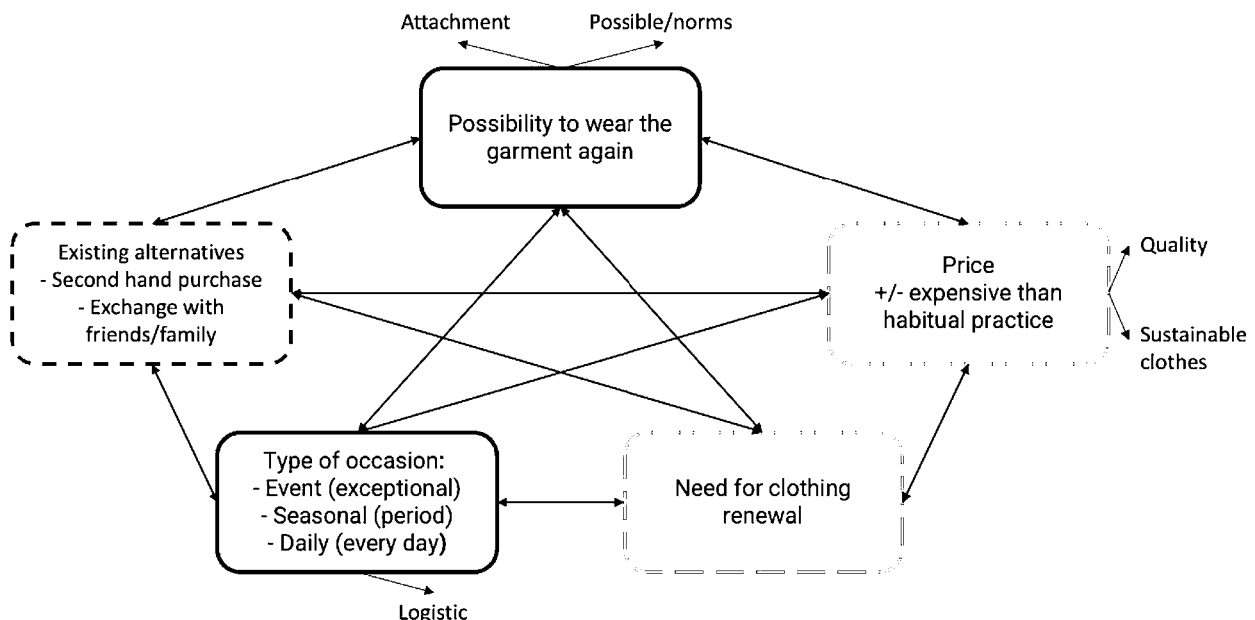


Fig. 3. Representation of the interacting elements constituting barriers or levers for the fashionista.



“If you stop using it after 4-5 months, you can always sell it on a second-hand platform but then also much cheaper and someone else will be able to buy it at a much lower price than the cost price of a new one.”

Finally, not feeling a need to renew one’s wardrobe regularly, to keep one’s clothes for a long time and to use them all year round also constitute an obstacle to subscribing to everyday clothing libraries.

“When I have a piece of clothing, I keep it for a long time because I like to combine it with other things. I don’t dress according to the seasons, so there are clothes that I use all year round, especially since in Belgium it can snow in March and the next day it’s really nice. So, this [offer of everyday clothes library], it doesn’t correspond to me because I have the impression that it is more for people who want to change their wardrobe very very often because they never wear the same thing twice because they have to be fashionable.”

This is also reflected in the rationalization of the purchase of clothing by favoring clothes that will be easily associated with the rest of the wardrobe.

“But the principle does not attract me at all because at the beginning, when I buy clothes, I try that they are clothes that I can combine with many other clothes to be able to make many different associations.”

shows a representation of the interacting elements that constitute specific barriers (in red) or levers (in green) for the rational profile.

#### 4.4.3. Emotional consumption profile

Most participants display some features of the emotional profile. In the focus group session, this is reflected by almost all agreeing that one of the barriers to clothing libraries, whether for everyday or occasions, stems from being attached to the clothing. With respect to everyday clothing libraries, participants are not willing to use them because they generally like to wear their clothes more than once. When a garment fits well, they like to keep it and wear it again.

“If I have a nice top or bottom, I like to wear it on several occasions, so I don’t have to go through all the logistics of bringing it back, picking it up.”

For the occasional clothing library, the principle is somewhat the same. Some participants were concerned that they would not want to return the garment because they might become attached to it.

“What would hold me back is wearing a dress, seeing that it fits well and having to tell myself that I have to return it.”

“If there are clothes I like, I wouldn’t want to give it back. Now I suppose there are possibilities to buy them but if the idea is to rent, I’m less interested.”

shows a representation of the interacting elements that constitute specific barriers (in red) or levers (in green) for the emotional profile.

#### 4.4.4. Restrained consumption profile

For the restrained profile, one ingredient that hinders adoption of everyday and occasional clothing libraries is wanting to reuse the same clothes.

“I almost never go to the stores; I tend to wear the same thing often.”

Another ingredient that hinders adoption of everyday clothing libraries is not needing to renew one’s clothes.

“I find that for an offer of everyday clothing, rental, ... jeans or other, these are things that we wear a lot.”

shows a representation of the interacting elements that constitute specific barriers (in red) or levers (in green) for the restrained profile.

### 5. Discussion

Interestingly, participants projected that the everyday clothing library could be suitable for compulsive clothing consumers (fashionista) as it seems more convenient than classical offers. However, if only fashionista profiles used clothing libraries, the clothing industry would be even less sustainable (because this fashionista profile would use clothing libraries to access even more clothes).

All other profiles would need to change their usual practice, change the interconnectedness of the ingredients of their practice for the everyday clothing library to become an equally or even more convenient practice than the usual practice. This confirms the idea that there are extremes in terms of profiles and that the different specific combinations of ingredients’ entanglement can be subsumed into those different ‘profiles’ (see ; ).

The research shows that consumers identify or differentiate themselves from these profiles to justify their positioning in relation to PSS

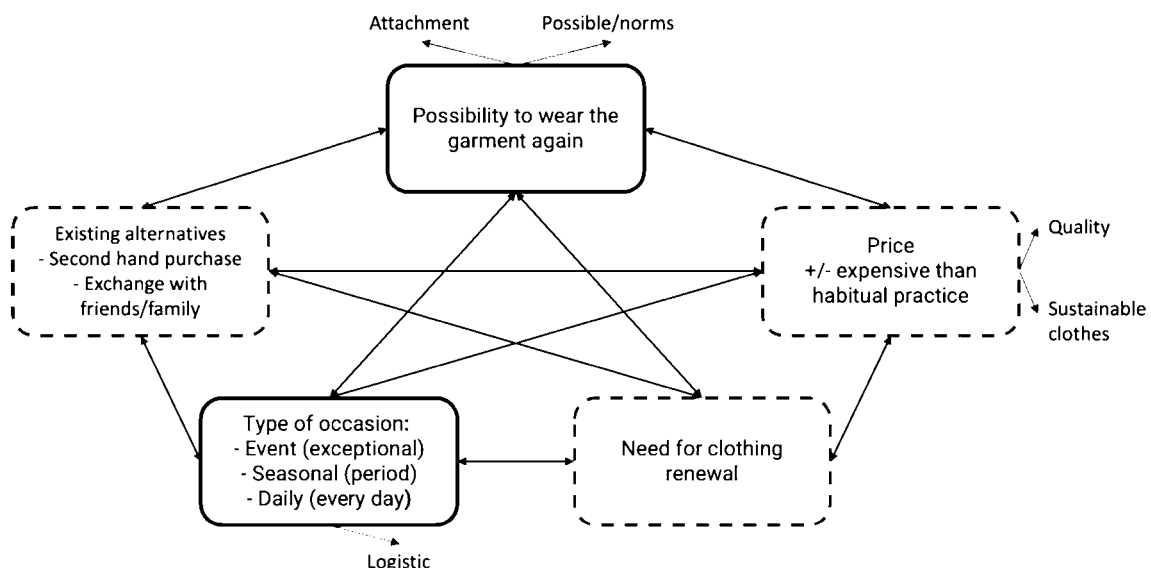


Fig. 4. Representation of the interacting elements constituting barriers or levers for the rational.

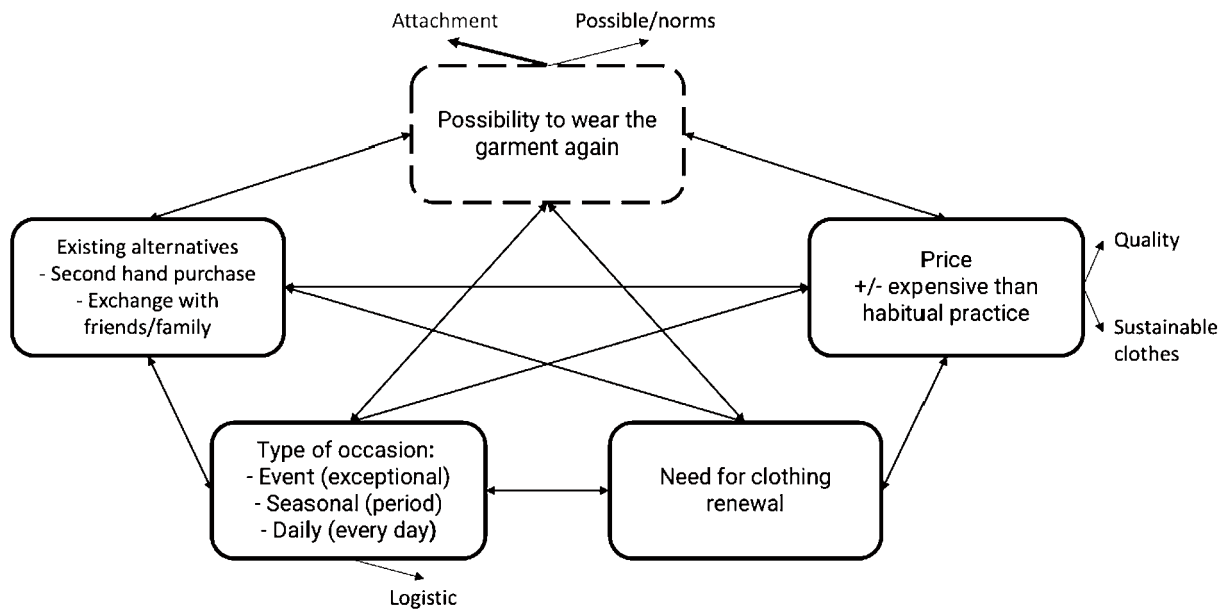


Fig. 5. Representation of the interacting elements constituting barriers or levers for the emotional.

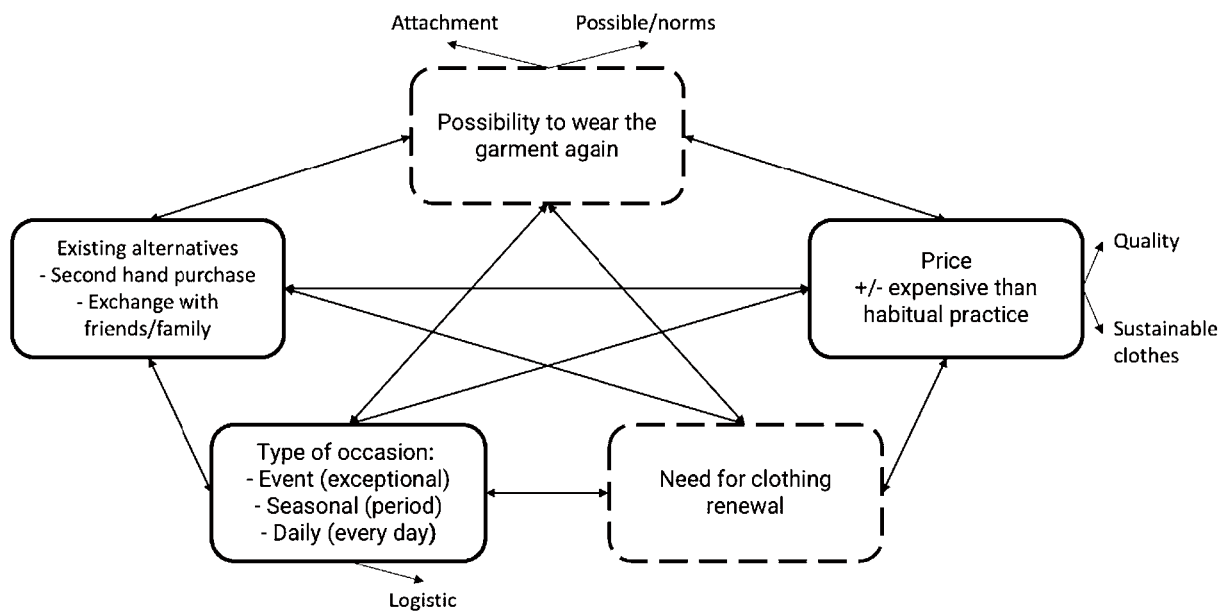


Fig. 6. Representation of the interacting elements constituting barriers or levers for the restrained.

offers. They also spontaneously identify a compulsive buyer profile as the perfect target consumer of the everyday clothing library. However, none of the participants identified themselves with this compulsive buyer profile. Rather, participants tended to identify with certain elements of the profile ideals that were dependent on real-life situations. For example, buying on a “coup de coeur” when looking for a dress for a particular occasion while being rather rational regarding everyday garments.

As it stands, the target customers of everyday clothing libraries – compulsive buyers – seem much more circumscribed than those of occasional libraries. This explains the greater consumer interest in occasional clothing libraries than in everyday clothing libraries which is consistent with the generic dislike for subscription-based PSS offers ( ; ), and, more widely, the greater reluctance towards subscription-based PSS ( ).

5.1. Recommendations for practitioners

Our findings have several implications for practice. Three strategies to overcome the obstacles linked to consumer adoption were identified for companies. First, providing offerings that fit with habitual practices and are the “best solution” possible and communicate relevant benefits to different consumer profiles (including clothing libraries for a season or a period of life such as childhood or pregnancy). This echoes the finding of a recent study that argues that the expected benefits from adopting distinct clothing PSS differ and that this should be acknowledged when communicating about them ( ). However, this strategy might not change clothing consumption practices since the entanglement of ingredients does not change (see ). Second, clothing libraries could specifically target consumers with traits of the fashionista profile for whom such services might be especially relevant and whose clothing consumption

sustainability it could improve most. It is still necessary to work on the current obstacles, for instance, by placing physical clothing libraries in locations that fit into consumers weekly routines and practices or by creating a blog where customers share casual photos and small video of how rental clothes changed their lives (see also the insights from

regarding the role of peers and of social media on the adoption of PSS-related offers in clothing). This could reduce the risk of selecting clothes compared to buying clothes and could shift consumption patterns. Third, the most severe practice changes required from the target segment could be turned into a benefit, for example, instead of the logistics process being a hurdle for consumers, this could be turned into an exciting customer experience (relevant to the specific consumption profiles).

In terms of strategy for improving circularity of clothing this implies targeting specific profiles or use cases in promoting clothing libraries. Alternatively, in line with the findings in , public authorities could promote the range of more sustainable solutions in the clothing sector (second-hand, exchanges, donations, clothing libraries, clothing repair, etc.) as a set of solutions that consumers could intelligently embrace considering their respective situations.

Furthermore, promoting the sustainability of clothing libraries could make them more attractive to consumers. Indeed, in line with

recent research, the lack of appeal for clothing libraries, a potentially more sustainable alternative to fast fashion, could stem from a “sustainability bias”.

show that second-hand clothing is perceived as less environmentally friendly than “bio” clothing. Other ingredients in the purchasing decision therefore outweigh the recognized environmental benefits, because the second-hand market has never been presented as an environmentally beneficial activity, unlike the organic market (

). Applied to PSS, promoting their sustainability could encourage consumers to adopt PSS offers.

### 5.2. Theoretical implications

Our study contributes in several ways to extant literature. First, it contributes to a more nuanced understanding of the interaction of current clothing consumption practices with clothing library adoption. Different consumer profiles imply different clothing consumption practices and the different clothing library models require larger (everyday clothing libraries) or smaller (occasional clothing libraries) changes to these practices. Second, it further highlights the complexity of PSS adoption due to the diversity of both PSS and consumers. It thus extends the findings by who concluded that the type of product and duration of use influence the importance of PSS adoption barriers. This also suggests that the same barriers are relevant for multiple PSS but that the impact of these barriers can greatly differ. Third, we demonstrate how practice theory can be used to investigate PSS adoption barriers by understanding current consumption practices as suggested by . Using a practice-theory lens allowed us to identify the ingredients of clothing consumption practices and how these are entangled and to what extent these practices would need to change in clothing PSS, thereby explaining why adoption willingness differs between occasional and everyday clothing libraries as noted by

### 5.3. Limitations and avenues for future research

This study comes with a few limitations and highlights avenues for future research. Due to the qualitative nature of the research, the sample size is limited especially when comparing the different consumer profiles. We therefore encourage quantitative studies to compare consumption practices and lock-ins across the different consumer profiles. Furthermore, the extreme consumption profiles used to distinguish consumer segments showed that only few real consumers fall clearly into one profile. They rather show some traits of different profiles that

might even differ depending on the type of event and environment (clothing at work, at an event, casual, at home, ...). In addition, it seems that consumers may have different profiles depending on the occasion (clothing at work, at an event, casual, at home, ...), which means that study participants need to be provided with a specific use context when determining their profile.

We propose two avenues for future research. First, trying occasional clothing libraries could generate a process of familiarization with new consumption practices because the practice change required is relatively low and consumers can familiarize themselves with clothing PSS without commitment. For example, user of occasional clothing libraries familiarize themselves with non-ownership practices (see

) that might in the long-term lead to the use of everyday clothing libraries. It would be very interesting to investigate this through a longitudinal study to document possible changes in clothing consumption practices of consumers trying out occasional clothing libraries. Second, we recommend researching impacts of the adoption of (clothing) PSS by the different consumer segments. It seems likely that clothing library adoption would not (equally) improve environmental sustainability across all consumer segments. For example, consumers falling under the rationale and restrained profiles might already be quite sustainable in their consumption of everyday clothes while this is likely not the case for fashionistas. Combining methods such as lifecycle assessment with consumer segments could help quantify the potential sustainability gains of different consumer profiles' adoption of clothing libraries.

## 6. Conclusion

To assess the importance of adoption barriers of clothing libraries, it is crucial to consider the diversity of both PSS and consumers. We find that current consumption practices prevent adoption of clothing libraries due to the change in practices that these require. The attractiveness of clothing libraries differs based on the exact service offered and the current practices of consumers. The occasional clothing library appears more attractive (or at least less unattractive) because it does not require consumers to drastically change their consumption practices. An everyday clothing library on the other hand requires consumers to change their routine in many respects.

Clothing libraries are not a one-fits-all solution. This means that the clothing library PSS is not a sustainable consumption silver bullet and only contributes to SDG 12 (responsible consumption and production) under certain conditions. This paper investigated some of these conditions. Depending on the usual clothing consumption practices of consumers, the adoption of clothing libraries can be more or less cumbersome based on how well previous practices align with the practices required to use a specific clothing library. For specific consumer segments and for specific situations clothing library offers can be more attractive and potentially more sustainable.

### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

### Appendix A. Supplementary data

Supplementary data to this article can be found online at

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