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Packaging-free products: when retailers and consumers (re/mis) appropriate the packaging functions

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Abstract

Purpose – Packaging elimination for selling packaging-free products disrupts the usual distribution and consumption frameworks in which packaging usually plays a central role. This study investigates how retailers and consumers reappropriate packaging and its functions when it disappears.

Design/methodology/approach – This research uses a qualitative data collection method with two parts: a netnography of 190 Instagram posts and 54 interviews with experts from packaging-free product stores (N = 10) and consumers (N = 44).

Findings – Drawing from the literature on packaging functions and the appropriation theory, this research reveals that actors deploy three appropriation strategies: (1) imitation, a strategy that favors a "utilitarian" function of packaging; (2) adaptation, a strategy that valorizes an "environmental" function of packaging; and (3) creation, a strategy that focuses on an "aesthetic" function of packaging. Finally, this research identifies the dark sides of packaging appropriation in the context of packaging-free products—namely, the damaging effects on health, the environment, and social exclusion.

Originality – This research contributes to the literature on packaging on a topic that remains under-investigated (i.e., packaging-free product consumption), though it is a growing trend that questions conventional models of product presentation. The article offers a discussion on (1) the new role of actors in the appropriation of packaging and (2) the ambivalence of the environmental function of packaging-free product consumption.

JEL classification: M31

Keywords Packaging, Packaging functions, Packaging-free product consumption, Appropriation, Netnography, Sustainability

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1. Introduction

The average European produces 180 kilos of packaging waste every year. One way to tackle this problem is to adopt measures to prevent consumers from producing packaging waste at the source, as in the case of packaging-free product consumption, which refers to the sale of products without packaging, in quantities chosen by the consumer and in reusable containers. Overall, the sector has experienced strong growth, with increasing numbers of shops, jobs, and sales turnover achieved over the past 5–10 years. Long-term forecasts, while speculative, present a mid-estimate EU market for bulk goods of €1.2 billion in 2030, with best case potential being significantly greater.¹ A real change in practices is coming, as retailers and consumers must adapt to ensure the continuity of packaging's functions. In particular, they will need to cope with the loss of the "silent salesman" that packaging represents (Pilditch, 1957) at the time of purchase. They will also need to appropriate new ways of doing things, at the time of use, to replace the vanished packaging (Beitzen-Heineke *et al.*, 2017; Fuentes *et al.*, 2019).

Thus, a research question that arises here is as follows: how can packaging-free products actors reappropriate the use of packaging when it disappears? To answer this question, we conducted a netnography analyzing 190 Instagram posts and also 54 interviews with experts from packaging-free product stores (N = 10) and consumers (N = 44). The data reveal how actors of packaging-free products reappropriate the use of packaging.

Our findings identify three appropriation strategies used by retailers and consumers, who jointly participate to the reappropriation process of packaging functions: (1) imitation, (2) adaptation, and (3) creation. Our data show that imitation is the strategy that favors a "utilitarian" packaging function, while adaptation promotes an "environmental" packaging function and creation an "aesthetic" function. The reappropriation of packaging in the context of packaging-free products therefore implies the valorization of one specific function: utilitarian, environmental, or aesthetic. In addition, this research highlights the dark sides of packaging appropriation in the context of packaging-free products—namely, the damaging effects on health, the environment, and social exclusion.

This research contributes not only to the rich literature on packaging but also to the more recent literature on packaging-free product consumption (Beitzen-Heineke *et al.*, 2017; Fuentes *et al.*, 2019; Louis *et al.*, 2021, Scharpenberg *et al.*, 2021). Whereas the latter focuses on the drawbacks and constraints of packaging-free product consumption, our work offers a new perspective on this kind of consumption by (1) highlighting the packaging appropriation process in the context of packaging-free products and (2) revealing its ambivalence, that is, its weak environmental value despite its essential promise and neglected social value. Finally, from a managerial perspective, our research offers suggestions on the actions actors of packaging-free product consumption can take to support a change toward more sustainable and responsible packaging practices, in the service of society.

2. Literature review

We begin by presenting the literature on both packaging functions and packaging-free product consumption. We then delineate the research framework, which uses the appropriation theoretical framework, to understand how actors reappropriate the functions of packaging in the context of packaging-free product consumption.

2.1. Packaging functions

¹ [2020_06_30_zwe_pfs_executive_study.pdf \(zerowasteeurope.eu\) ; Packaging Free Shops in Europe - an Initial Report - Eunomia](#)

Marketing research has investigated the subject of packaging for many years (e.g., Stewart, 1995; Underwood, 2003). Some studies have focused on its attributes (e.g., size, shape, materials, images, colors) and others on its functions. According to Prendergast and Pitt (1996), packaging performs four main functions. First, it performs a "logistical" function of preservation, protection, and storage throughout the distribution supply chain, by limiting the impact of external harms, particularly during transport. This involves choosing materials that preserve the product's physical integrity. Packaging also facilitates storage and its optimization in warehouses (i.e., dimensions). The aim here is to avoid losses.

Second, packaging has a "marketing" function of recognition, attraction, information, and positioning, as packaging is at the interface of products and consumers and transmits information about product attributes. A product's color and shape, in particular, serve to attract consumers in stores. Packaging has an informational function and conveys a certain image: it provides verbal information about the product, its content, and the way it is manufactured or used (Rettie and Brewer, 2000). Finally, packaging serves a strategic purpose of brand positioning and visual stimulus (Briand-Decré and Cloonan, 2019; Chen, 2021; Underwood *et al.*, 2001), where decisions are made (i.e., on the shelf).

Third, packaging performs a "marketing-logistics" function of handling, transport, storage, and use. Packaging can improve usage performance owing to its ergonomics. The aim is to simplify access to the product, reassure consumers of its safety, make safety precautions easy to understand, and facilitate handling (Holmes and Paswan, 2012), dosing, and use (Folkes *et al.*, 1993; Silva *et al.*, 2012; Wansink, 1996). Following Hoch and Deighton's (1989) work on product use, some studies have shown the influence of product shape on perceptions of functional performance, such as aerodynamics or durability (Hoegg and Alba, 2011).

Fourth, packaging has an "environmental" (or sustainable) function in response to consumer demands and regulatory pressures (Murtas *et al.*, 2022). This function entails the ecological efficiency of packaging or ecological impact (Schwepker and Cornwell, 1991), characterized by limiting the packaging size or overpackaging (reduce) and reusing or using recycled or recyclable materials (e.g., Aydinliyim and Pangburn, 2012; Magnier and Cri , 2015; Monnot *et al.*, 2015). Packaging can also be a lever for action to limit waste by taking better account of uses (e.g., better-sized or resealable packaging) (Wikstr m *et al.*, 2019). Thus, the product's life cycle must be considered, giving priority to eco-design (Ketelsen *et al.*, 2020; Zeng *et al.*, 2020). However, this environmental function raises the question of the trade-off between the packaging's "technical" ability to protect the product and the limitation of its ecological footprint.

Actors are willing to adopt packaging that adequately fulfills all its functions, including environmental ones, without compromising other functions. A radical alternative for limiting the ecological impact of packaging is therefore to eliminate it, through packaging-free product consumption. While the marketing literature on packaging affirms its central role, it pays little or no attention to the effect of its disappearance (Monnot *et al.*, 2015). In this case, it does not raise the question of what actors of packaging-free product consumption can do to ensure product functionality when packaging disappears.

2.2. Packaging-free product consumption

In the context of packaging-free product consumption, packaging, which is often important for the purchase decision, disappears. Whereas packaging traditionally plays an important role in the market interface between buyers and products, in the context of packaging-free product consumption, there is no longer any packaging to perform this function.

Packaging-free product consumption refers to the “sale of non-pre-packaged, self-service products in quantities chosen by the consumer and in reusable containers.”² Thus, it is a form of “responsible” consumption that focuses on eliminating polluting and unsustainable objects (Rapp *et al.*, 2017) that is more transparent and sustainable (Beitzen-Heineke *et al.*, 2017) and allows for enhancing the “health” and “quality” dimensions of products (Zeiss, 2018). Other studies have noted that packaging-free product consumption also simplifies consumers’ daily lives, as less packaging means less work for them because they no longer need to open and discard it (Fuentes *et al.*, 2019). A few studies have addressed the topic of packaging-free product consumption (e.g., Beitzen-Heineke *et al.*, 2017; Louis *et al.*, 2021; Zeiss, 2018), focusing on the challenges of such consumption for retailers and on the constraints of this practice for consumers.

According to Fuentes *et al.* (2019), packaging-free product consumption is a shopping practice, but as a distinctive feature, it relies on a particular combination of meanings, materials, and skills. Consumers considering packaging-free product consumption may develop new skills and meanings, but also rely on a new material environment. Consumers must break their established routines and envisage new ones, which requires certain reflexivity. Consumer skills are therefore a major obstacle to the development of packaging-free product consumption. Consumers also need to understand how such consumption works and be able to identify products, choose the right containers, and know how to compensate for the lack of product information. Packaging-free product consumption also needs a change in the relationship to cooking (and “homemade”) and to food in general (Beitzen-Heineke *et al.*, 2017; Zeiss, 2018). In this context, consumers no longer have direct access to the preparation or preservation advice originally present on the packaging; instead, they have direct contact with the raw product, with no sanitary barrier, which can have an impact on food safety. Another obstacle is the need for consumers to make specific logistical organization. Fuentes *et al.* (2019) argue that packaging-free product consumption implies a reconfiguration of shopping practices not only in store but also upstream (planning) and downstream (storage and preservation). Packaging-free product consumption also leads to a change in terms of the quantities purchased: consumers tend to buy in larger quantities to limit the number of trips to stores. This issue of quantity also needs to be considered in terms of people’s ability to measure out themselves what they need.

Finally, an important point regarding “materials” and, therefore, packaging is that packaging-free product consumption is not a way of dematerializing a practice, but rather rematerializing it, as consumers need to multiply the use of other objects, including containers. By eliminating packaging, packaging-free product retailers need to do things differently. They have to ensure product hygiene and food safety because products are no longer protected. They also have to convey information in a different way. This thus creates a new service relationship (Louis *et al.*, 2021).

Finally, with the disappearance of packaging, packaging-free products must undoubtedly do things differently. Their new ways of doing need to be rethought in terms of pro-environmental aspects, as one of the central promises of packaging-free product consumption is to reduce the ecological impact of packaging. This change leads us to suggest that a reappropriation of packaging must occur.

2.3. Appropriation: an enlightening theoretical framework

To answer the question of how packaging-free product actors can reappropriate the packaging functions when it disappears, we use the appropriation conceptual framework. Appropriation refers to the action of adapting or adjusting something to a particular purpose, person, or occasion; it also captures the act of owning something. Appropriation is a key concept in

² [\[FAQ\] Vente en vrac : que sait-on sur cette tendance de la consommation responsable ? | CITEO](#)

environmental psychology, as well as other research fields, for understanding the appropriation of spaces. It is a psychological concept that refers to the fundamental psychological process of acting and intervening in a space to transform and personalize it. In marketing, the concept has notably been applied to the appropriation of spaces in an experiential logic (Holbrook, 2000), to the appropriation of services (Mifsud *et al.*, 2015), and even to the appropriation of objects (Belk, 1988) such as shared objects (Martin-Gruen and Darpy, 2015).

In concrete terms, the appropriation process reflects individuals' efforts to create their own meanings, which begins long before the use phase and continues after the initial routines of use. In marketing, studies have used two approaches to examine the appropriation process. The first (the dominant approach) is the action of the subject toward the object (top-down approach) (Carù and Cova, 2006); the second is the reciprocal action of subject and object (recursive logic) (Belk, 1988; Sartre, 1943). We adopt the recursive logic herein because we assume an influence of the individual on the object and vice versa.

This approach, which is common in the marketing literature, identifies three ways to appropriate something: creating (making something to have it), knowing (knowing something intimately contributes to its existence), and controlling. First, having something implies creating. Something appears to its author as a creation that bears his or her mark indefinitely. For Sartre (1943), buying is one way an object is created, with money appearing as a "creative force": buying an object is a symbolic act that means creating the object. Second, knowing the object is also one of the forms appropriation can take. The desire to know is thus related to appropriation. The very idea of discovery includes an appropriative *jouissance*. In knowing, consciousness draws the object to oneself and incorporates it. Third, controlling is a mastery operation linked to the ability to use the object and to have the power to destroy it or modify its matter. One aspect of appropriation through control lies in overcoming a difficult situation or an obstacle. So, when individuals overtake objects toward a goal, they enjoy their possession. That is, individuals perceive external objects as part of themselves as soon as they are able to exercise control over them.

Applied to the context of packaging-free product consumption, the appropriation theoretical framework seems highly relevant because actors need to become active participants to ensure the packaging's functions and appropriate them. The question that arises is thus: how do packaging-free product actors reappropriate the packaging's functions when it disappears, and how do the different dimensions of appropriation relate together in this context?

3. Methodology

Our study focuses on the French context, as packaging-free product consumption has existed in France for several years now, but it has also recently led to the opening of a variety of specialist and non-specialist stores and will continue to do so in the coming years. Indeed, in France, by 2030, 20% of food stores over 400 square meters will have to be dedicated to packaging-free products. This is therefore a suitable context to examine how actors deal with this practice.

To answer our research question, we used a comprehensive qualitative approach. Following the example of Rokka and Canniford (2016), we used the social networking service Instagram as part of a netnography. Consumers' photographs on Instagram reflect their representations of the world, enabling us to understand their behavior and consider the cultural meanings they attach to their practices. The many images allowed us to go beyond the discourse and visualize a set of containers individuals chose and their physical characteristics. The texts associated with the images and the hashtags provide access to the meaning the consumers gave to their choices.

We deemed this method highly suitable to understand the material and physical object that is packaging. We collected 250 Instagram posts using “#vrac”³ in February 2020. We then cleaned up the database by deleting posts that were irrelevant to the study (unrelated to packaging-free products or containers). We then carried out a content analysis of the texts and photographs of the 190 posts we finally selected.⁴

We also conducted interviews (see the Appendix for details on the informants) in parallel with the netnography. These interviews enabled us to question actors who make use of packaging-free products, on both the retailer and consumer sides. We signed a research contract with a well-known organic French retailer, which facilitated access to the field and especially interviews with experts from packaging-free product stores. Indeed, we interviewed department and store managers from 10 specialist packaging-free product stores. We discuss the specific features of a packaging-free product department compared with a conventional one, including organization, merchandising, and customer relationships. We then interviewed 44 consumers who buy packaging-free products, focusing on three main themes: packaging-free product consumption in general, consumer organization and purchasing process, and the constraints and advantages of this type of consumption. We recruited these consumers on a voluntary basis from our personal networks. These consumers simply responded to a call to take part in a discussion on their packaging-free product consumption. These interviews, focusing on similar themes, enabled us to carry out a mirror analysis of the content of the discussions by comparing the views of retailers and consumers. These exchanges constitute a whole discourse related to packaging functions and the way they are appropriated that we could then analyze. The literature on packaging functions provided a preliminary framework for data analysis, while the appropriation framework emerged from the analysis through an inductive approach. Indeed, the data raised the question of the appropriation of practices.

4. Findings

Because packaging is no longer imposed by manufacturers, retailers and consumers need to appropriate it to present, transport, store, preserve, and consume products. The categories of functions identified in the literature are at the retail level and do not appear with the same terms at the consumer level. Therefore, for consistency and clarity, we renamed them as follows to reflect consumer concerns: “utilitarian” function (preservation, protection, recognition, handling, transport, storage, use, and information), “environmental” function, and “aesthetic” function (attraction and positioning of the store or self).

Analysis of the Instagram posts and interview data led to the identification of three related appropriation strategies: imitation, adaptation, and creation. Each strategy emphasizes one of the packaging functions. This does not mean that the other two functions are necessarily absent; they may be present but in the background. Finally, our analysis also highlights the dark sides of packaging appropriation in the context of packaging-free products—namely, the damaging effects on health, the environment, and social exclusion.

4.1. Packaging appropriation through imitation: a focus on the utilitarian function

Retailers and consumers can first reappropriate packaging functions by imitating manufacturers’ packaging. The main aim of this imitation strategy is to ensure the utilitarian function of packaging-free product consumption.

4.1.1. Promote conservation and protection

³ *Vrac* is the French word for packaging-free product consumption.

⁴ We transformed the pictures from the Instagram posts into drawings to respect consumers’ privacy.

Both retailers and consumers have an interest in ensuring the preservation and protection of packaging-free products. As such, they need to imitate all or parts of traditional manufacturers' packaging for which they have identified the attributes that ensure these functions: "I find that dry products store better in glass, and moreover I refuse to buy plastic" (Bérangère). One example is the use of containers (e.g., bottles) that are chosen not only for their shape but also for their ability to preserve the organoleptic qualities (e.g., opacity) of specific products, such as oil, which needs to be protected from light (Figure 1).

Figure 1 Imitation of packaging to preserve and protect the product



Some consumers reuse industrial packaging, such as old egg cartons and dishwashing detergent cans. The aim is to opt for packaging that has proved its worth in terms of preservation and protection, while avoiding waste, since it is not thrown away. Other consumers go one step further and choose replicas of reusable industrial packaging, such as plastic egg cartons.

For distributors, the issue of product protection is also of prime importance, given their responsibility to their customers, particularly in terms of service and hygiene: "Flour is a product that attracts a lot of moths, so it's quite complicated and very volatile, but people are careful anyway, it's not disgusting ... but for us it's more a problem of the container, because we use the same bins as for cakes. We would need a bin that's better suited to flour, because if there is some moisture, flour sets a little" (Expert, store 6).

4.1.2. Facilitate product category recognition

Consumers in France have become accustomed to standardized packaging typical of a product category, which they try to reproduce. Certain packaging shapes are associated with certain product categories, making them easier to recognize. The case of washing powder (Figure 2), for example, comes up several times in posts; for this product, consumers tend to prefer packaging that is typical of the category (i.e., a can with a handle).

Figure 2 Imitation of packaging to facilitate product category recognition



Instagram Post 52

“So I turned to @biocoop_officiel liquid detergent because I do my other shopping there. The little plus? I can now fill my can!”

Retailers also tend to provide their customers with empty containers that are typical of the product category: “I find that here [oil], we’re clearly on something that evokes the wine cube ... or in any case food” (Vanessa). Some retailers even go so far as to offer pre-filled packaging close to packaging-free products’ devices, so that customers have no doubts about the product category: “We chose to put honey in small jars and present them here, so that customers can identify the product; otherwise with the machine they don’t necessarily understand that it’s honey, how to serve it, etc.” (Expert, store 5).

4.1.3. Simplify transport and handling

Packaging-free product retailers and consumers also imitate some traditional packaging to simplify transport and handling, either because of its weight (e.g., cardboard box) or because of its ease of handling (e.g., a handle). Figure 3 provides an example.

Figure 3 Imitation of packaging to ease transport



“You’d rather use cardboard instead of ... because if you already have your own containers at home, it can be a good way of transporting, and they’re lighter.” (Dorothee)

4.1.4. Make use of ergonomics

Finally, the strategy of imitating traditional packaging also aims to retain the advantages it offers in terms of ergonomics. The example of the laundry detergent can is also enlightening in this respect, as the size of the neck makes it easy to fill when serving in-store or consuming at home. This is reflected in the following example of a box for pasta, which helps the consumer with dosage: “I like the ones [boxes] for spaghetti for example, so it’s a round one that’s really shaped like a packet of spaghetti ... and what’s even nicer is that you’ve got a sort of measuring

device when you take them out, so you can calibrate them for how many people you want” (Samantha).

4.2. Packaging appropriation through adaptation: a focus on the environmental function

Retailers and consumers can reappropriate packaging functions by adapting conventional packaging. This adaptation strategy is mainly intended to ensure the environmental function of packaging in the context of packaging-free product consumption. Indeed, the aim is to consider the specific features of this consumption practice to achieve ecological efficiency.

4.2.1. Optimize packaging with the right shape and the right dose

Retailers and consumers often choose containers for packaging-free products to fit the contents according to product shape and/or quantity. Doing so avoids taking up too much space with half-empty containers (e.g., small ones for spices) or wasting, which is one of the aims of packaging-free product consumption: “I have the biggest jars for rice, pasta, couscous, and smaller jars for small chocolates, dried fruit [and so on]” (Julia).

This container optimization helps limit the environmental impact of transport. In Instagram post 61 (Figure 4), a home-delivery packaging-free product retailer sends containers adapted to the products they contain and their quantity; no space is wasted, and a strap is used to ensure that the jars do not open during transport. In this case, adaptation primarily serves the environmental function (i.e., optimizing parcel size), while guaranteeing protection and transport.

Figure 4 Adaptation of optimized packaging to reduce the impact of delivery



4.2.2. Reuse and limit packaging

To meet the definition of packaging-free product consumption, which consists of using reusable containers, retailers and consumers adapt the packaging they use, either by encouraging reuse or by limiting the amount of packaging. For consumers, this can mean taking the packaging provided for free by retailers: “We often take the cardboard boxes in which they [retailers] receive the products; they make them available to the customer at the store entrance, and you can use them as a shopping basket and you leave with them, and often we stick labels on them.... And once home, we store in our jars” (Régis).

This desire to reuse packaging can also lead consumers to disentangle the transport container (e.g., a reusable bag) from the storage container (e.g., a reusable jar). Doing so also satisfies the transport function, by limiting the weight to carry, or the preservation function, by better preserving products to avoid loss or breakage: “I always take two or three tote bags, and in them I’ve already put my little bags for packaging-free product consumption.... So as soon

as I arrive, I generally put the products in the jars.... When you get home, it's not just that you take the packet and put it on the shelf but that you put it into another jar" (Aline); "We tell our customers that they shouldn't leave products in bags, [or] otherwise there could be moisture problems" (Expert, store 1).

Packaging-free product consumption also generates new uses for which traditional containers cannot simply be copied. On the retailer's side, for example, packaging-free product consumption can mean simultaneous production and distribution of products. For example, a machine for crushing hazelnuts to make spreads is used as a container (Instagram post 45), thus avoiding the need for two devices, one for production and one for service.

4.2.3. Limit information to what is essential

The elimination of packaging as an information medium means that information must be conveyed in a different way. For retailers, the containers encompass the information required by law (e.g., origin, composition, shelf life) and, sometimes, other potentially value-creating information (e.g., recipes, information on the supplier): "Information is key: origin, certification, organic, ingredients, allergens, cooking tips. But the question is, how do we convey this information without packaging? The power of brands is necessarily weaker in packaging-free product consumption. Labeling really needs to be homogenized to support the customer" (Expert, store 4). Retailers therefore adapt by generally limiting themselves to information that is essential for customers. Once at home, customers will only have the information in which they are interested. Proof of this is that labels are becoming increasingly rare on consumer containers, and most of the time, no inscriptions are affixed at all. For example, one retailer, which has opted for small jars for spices, indicates only on the cap the name of the spice, the composition of its blend, the price per kilo, and the origin. On the consumer side, only the name of the product is considered relevant, to also ensure the recognition function of the product, such as different teas (Figure 5).

Figure 5 Adaptation of packaging to limit information to what is essential



4.3. Packaging appropriation through creation: a focus on the aesthetic function

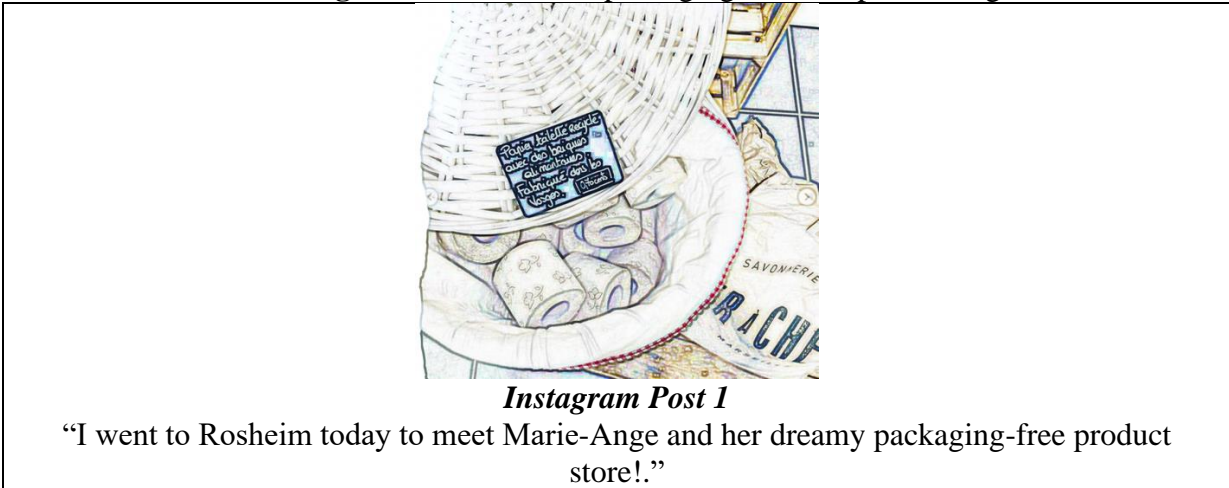
Finally, retailers and consumers can reappropriate the packaging functions by creating new packaging specifically for packaging-free product consumption. This creative strategy is mainly

intended to ensure the aesthetic function. It is a matter of reinventing packaging to suit a desired self-image.

4.3.1. Assert positioning and self-image

Retailers offer some containers to customers, from recycled versions to branded ones, thus taking the place of manufacturers’ brands. However, many retailers are opting to stop offering self-service containers, in line with their zero-waste positioning: “Our aim is to eliminate packaging, so we encourage consumers to bring in their own containers. This is consistent with our positioning, which isn’t the same in every store. As soon as a product exists in packaging-free version, we remove the packaged product reference” (Expert, store 3). While packaging-free product retailers have yet to develop standardized merchandising practices, they often break with the tradition of using aisle after aisle and reinvent the sales space to showcase products differently. The containers they choose to store, arrange, and present are an important source of differentiation; these contribute to the store’s ambience and positioning. While silos are common for dry goods, they coexist with other, more original containers, which give an impression of artisanal merchandising or even “homestyle” merchandising, in a quest for authenticity, proximity, and conviviality with customers (Figure 6). Featured are jars of all shapes, recycled bottles, containers for liquids in different shapes and materials (metal, glass), baskets for toilet paper, and clothesline wire for sanitary towels, to name a few.

Figure 6 Creation of a packaging to assert positioning



While packaging is no longer a reflection of a brand, it is undeniably a reflection of its owner. For some consumers, it is a genuine means of expressing their identity. Containers are sometimes chosen with care, in an “ecolochic” approach in which aesthetics is central (Figure 7).

Figure 7 Creation of packaging to assert self-image



Instagram Post 247

“To put your fruits and vegetables and all packaging-free products!!! This is the first change I’ve made in my #ecolochic approach, and it’s also the easiest because all you have to do is:

1) Buy packaging-free products’ bags 2) Take them shopping 3) That’s it!

As for the bags, you can find very pretty ones just about everywhere now, and lots of small designers make them made in France and organic! I bought mine from the #ahtable brand a few years ago at @biocoop_officiel because they’re super thin and so I don’t feel like I’m adding to the weight of the bag when I weigh it. But when they’re at the end of their life (soon, I think) I’ll buy some nice ones ;)”

Some materials are also chosen because of cultural affinities, such as wax, which adds color but also expresses an attachment to Senegal. Moreover, containers are a means of self-expression when they are homemade and therefore perfectly adapted to the consumer’s tastes. Some consumers seek to convey a refined image and set the scene for their consumption by opting for artistic packaging-free product bags. This emphasis on aesthetics extends even to the packaging’s informational function: “I bought a Dymo, the stuff that lets you label your jars the old-fashioned way, and it’s pretty” (Clothilde).

4.3.2. Turn packaging into a decorative object

Packaging aesthetics can even become a goal in itself, taking on a decorative function. Among retailers, this is reflected in the use of transparent packaging with a highly elaborate design: “There’s also a side where it’s not yet well marketed [some store packaging for liquid packaging-free products].... When you buy shampoo, it’s still a pleasure product, contrary to multi-purpose cleaner for which you don’t care. For shampoo you still want something [packaging] that’s a bit nice” (Expert, store 10).

On the consumer side, this trend is embodied in the use of hashtags such as #déco, #homedeco, #insidedecoration, and #sweeti. Many posts show containers in kitchens (Figure 8). The packaging, which is chosen to be perfectly suited to the locations in which consumers put it and to sublimate the products it contains, does not end up throw away or hidden. It is displayed like works of art, on shelves or in cupboards that become real showcases: “I also like the aesthetics of my kitchen, much better with all my jars” (Julia).

Figure 8 Creation of a packaging to turn it into a decorative object



Instagram Post 19

“Buying packaging-free products, cooking seasonal products. It’s a new pleasure to be in the kitchen!”

Consumers are therefore creative in their appropriation of packaging. This can take the form of the assortment of jars, the choice of vintage handwritten labels, noble materials such as wood or glass, or original shapes such as test tubes for spices or a wrought-iron hen for eggs. The transparency of the containers also contributes to the aesthetic function, enhancing the natural colors of the products they contain.

Belk (1988) drew on Sartre’s (1943) work to understand the impact of the relationship with an object on consumers’ identity construction. He examined how people’s possessions become part of the self to constitute the extended self. Our research shows that the creation of packaging serves this extension of the self.

4.4. Dark sides of packaging-free product consumption: not-so-responsible appropriation

Packaging-free product consumption is at first sight considered a sustainable practice. However, an in-depth assessment of this context enabled us to identify negative aspects, and even abuses, leading us to deem packaging-free product consumption as a practice that is not always so responsible. In particular, three major categories of appropriation limits emerged: health risks, adverse environmental effects, and lack of social inclusion.

4.4.1. Health risks: hygiene and misuse

Many consumers associate packaging-free products with healthy, raw, unprocessed, organic, or local products. However, this study on how actors reappropriate packaging in this context reveals potential health risks.

First, the container chosen by retailers can have an impact on the hygiene of the products, especially when consumers can touch them during service, as is the case with boxes. According to Alex, “we have to be careful about hygiene, so that not everyone puts their hands [on the products].” There is also the question of how clean the containers in store are. As Anne-Laure expressed: “once the container is empty, is it cleaned?”

Second, beyond the issue of hygiene is also the issue of expiry. Danielle is reticent about the risk of expiry due to a perceived lack of product turnover: “At first, I wondered how long these products had been in these big pots, you know? So, if there’s not a big turnover, you say to yourself, ‘Well, okay, but my rice has been in there for six months, it’s not very good.’” The life span of the product in the silo depends not only on turnover but also on the filling method. When the silo is filled from the top, the first-in, first-out principle applies, but for jars or similar containers, sales staff fill above what is left. According to Anne-Laure, “you mustn’t refill over

the top. You see, for me, this kind of thing has to be emptied before refilling. How long does it stay in jars like that?”

Lack of hygiene and poor storage management can lead to waste (i.e., unattractiveness, loss of products) but, above all, to health problems. For example, Anne-Laure has totally abandoned the packaging-free product practice because in her semolina bought without packaging, she “found little bugs inside ... little larvae crawling in [her] pot.” Adding to the short-term health risk is the reputational risk of the practice. Customers confronted with this type of situation can generate negative word of mouth and discourage other consumers from adopting the practice. Experts also stress the need to educate consumers about product preservation. Containers brought in by customers can be dirty and therefore present health risks. For this reason, some stores have stopped “jar exchange” operations, in which jars brought in by customers were made available free of charge (Expert, store 1).

Consumers generally do not trust the hygiene of others, which can present health risks for them. This is the case of Camille, who said, for example: “I was very happy to be able to take them [eggs] directly from them [a specific store], and I didn’t care if there was a little trace of egg runoff on the box. But then I was told that it seemed to be a problem. If the egg carton was stained, it could contaminate the egg[s].”

Finally, product misuse can be linked to a lack of information on the packaging. While manufacturers are subject to strict regulations, consumers often put no information on their packaging. Worse still, when they reuse old packaging, they may leave out-of-date information that could jeopardize their health. Reused packaging can lead to product misuse when information is lacking. For example, as Figure 9 shows, a consumer uses old apple juice bottles, with the original labels, to put in washing powder, which could present a risk of confusion during consumption.

Figure 9 Reused packaging



Instagram Post 27

“Until now, I’d done my washing liquid with ashes. The house being heated exclusively with wood, it was the most cost-effective here. But not the fastest, far from it. So I decided to follow @maison_minimaliste_zerodechet's recipe. I went from 2 hours of prep work to 5 minutes!!!! 38 euros a gray can, so yes necessarily more expensive than the price of ash but frankly I adhere to [this practice] 100%.”

Packaging can therefore be a source of health risks due to a lack of hygiene and product information, whether in the store or at home. The freer actors are to repackage products and the greater the number of manipulations, the greater are the risks. The utilitarian function, in particular preservation, may not be a priority.

4.4.2. Harmful effects on the environment: waste and over-consumption

Packaging-free product consumption represents “an eco-responsible approach to improve the world” (Alex), whose “principle is still to avoid waste” (Dorothee). However, the packaging retailers and consumers choose can have harmful effects on the environment, such as waste and packaging over-consumption.

Most consumers recognize significant in-store wastage, or “losses” (Albane) associated with silos that can have an inaccurate or too fast flow: “You see, it’s not clean. You put some on the side.... Oh dear, I’ve taken too much, how do I manage [this?] But there are many people who must take some and then leave it on the side” (Colette). Waste can also be linked to the ability of the packaging chosen by the retailer to protect and preserve the product. For example, “all the cornflakes that are crushed at the bottom of the container” do not appeal to Eva because they have become “dust.” In jars, the product can also lose its organoleptic properties because “when you lift the lid, it gets air. It won’t stay crisp for a very long time” (Danielle).

As it is unsealed, containers used for packaging-free products can be a source of waste in store. Similar sources of waste are present in consumers’ homes: “I know that if you don’t put your morning cereal in a well-sealed container, it can go soft...” (Amandine). For Fabienne, waste is greater in the case of packaging-free products, as there is a loss of reference to the expiry date of products: “Preservation is a bit scary; you tell yourself that you’re wasting, whereas at the start you tell yourself that there are eco-friendly benefits. I associate waste with that, and then, in the end, I have the impression that I’m generating more” (Fabienne)

In addition to product waste, packaging-free product consumption can lead to over-consumption. While such consumption is intended to do away with single-use packaging, the reality is sometimes quite the opposite. In stores, behind well-stocked silos, is the “hidden face” of packaging-free product consumption, as an expert from store 7 explained: “Even for packaging-free product consumption, we sometimes think it’s ridiculous, we have little packaging of stuff that we pour back in. For example, the dried fruit mix comes in one kilo packets; there are six per box, I open five a day. I’d rather have a 12 kilos packet.... I don’t think customers imagine there’s so much plastic in the packaging I use. That’s why the manager told me he wanted me to remove the bag of almonds under the mill, so [customers] wouldn’t see that it’s a little one kilo bag I’m opening and pouring into it, when you see the quantity I sell.”

It is not just retailers that overuse packaging though. Consumers can also buy more than they need, for two reasons. On the one hand, retailers may refuse the containers they bring in, forcing them to use other containers in store. Camille found herself in this frustrating situation: “I was a bit disgusted when [employee] told me, ‘Ah well, you have to buy the basic plastic thing.’ Even if afterwards it’s not single-use, but in fact I already had one at home, so I didn’t need a second one.” On the other hand, consumers may repurchase containers when they can reclaim them and do so purely for aesthetic considerations, such as the beauty of the jar or the harmony of the jars with each other: “Do we really need to have brand-new Le Parfait jars when at Day by Day [store name], for example, there are four cartons of clean jars ready to use.... So yes, on your kitchen shelf, it’s nicer to have the same brand of Le Parfait jars, all neatly lined up and everything, but in reality, it doesn’t change a thing” (Camille). Arthur echoed this choice, explaining, “You have a somewhat perverse effect of lots of things that are going to be developed to encourage you to buy packaging-free products’ bags, to encourage you to buy Le Parfait jars.... So yes, it’s all good, but I have the impression that you have a somewhat paradoxical side.... I have the impression that it’s a sales argument, in fact more than a state of mind, for certain retailers it’s really a sales argument ... you always have this business side and perhaps of over-consumption.”

Instagram posts also illustrate that these types of purchases can be made in discount chains, which have a reputation for encouraging over-consumption through environmentally and employee-unfriendly production. Consumers who buy their jars and boxes for packaging-

free products from these retailers tend to put greater emphasis on utilitarian and aesthetic functions, to the detriment of the packaging’s environmental function.

So, although packaging-free product consumption is supposed to have positive externalities for the environment, perverse effects counterbalance or even hinder these positive effects. In addition to the environmental risk induced by irresponsible packaging, a societal risk also arises when certain consumers are physically and cognitively unable to consume.

4.4.3. Social problems: lack of inclusion and education on packaging-free product consumption
Packaging-free product consumption can be non-inclusive, not only because of its perceived high price but also because of the way products are made available in-store. In-store packaging may be inaccessible to two types of groups – people with reduced mobility and the elderly – for reasons of merchandising and a lack of physical and/or cognitive resources.

Optimizing store space and multiplying the number of products sold has led retailers to place as many silos as possible on the walls, even if this means placing them at great heights. However, “if it’s too high for persons with reduced mobility, they won’t be able to access the silo” (Anne-Laure). Amandine agrees: “Even for wheelchair users, for example, I imagine it’s too high.” For Fabienne, it is not just the disabled who are penalized but also short people like her. Unlike conventional aisles with pre-filled boxes, consumers do not just have to grab the product; they have to identify it and be able to help themselves: “I think that when [a product is] high like that, as much as in stores with conventional aisles, you have products that are high, you have to climb or ask someone to take them down for you, but you see what it is even if far away. Here, you don’t even know what it is.”

Even when the product is accessible and the label legible enough to recognize it, customers may lack the physical and/or cognitive resources to put products into their own packaging. The opening mechanism may be difficult (“I can’t imagine elderly persons pressing a silo on their own,” Elodie) or the technology too complex (“an older person who isn’t used to digital touchscreen [would be excluded],” Anne-Laure). Some devices can also be too complex, as in the case of a spread-making machine. Here again, this may exclude people “because they may not be very comfortable using this kind of machine” (Elodie). Finally, handling linked to packaging-free product consumption, with its various manipulations (e.g., carrying containers, filling them, putting products in jars at home), is physical by nature. In summary, beyond the classic dimensions of accessibility such as price or product availability, sources of exclusion may be specific to the packaging and in-store availability system, which could have socially harmful effects.

Our findings show that retailers and consumers implement strategies that favor one function over the other. Some deviations also lead the chosen packaging to be rather irresponsible in terms of health, environmental, or inclusion criteria. Table I summarizes the links between the predominant function and the potential dark sides.

Table I Summary of the dark sides of packaging appropriation

Predominant function	Dark sides	Examples
Environmental	Health	Excessive reuse of packaging without updating original information
	Exclusion	Focus on the environmental dimension to the detriment of the social inclusion dimension (e.g., products placed in simple bags directly on the floor, for which service requires bending down,

		which can be unsuitable for elderly people or those with back problems)
Utilitarian	Health	Reuse of packaging without hygienic precautions (e.g., containers adapted to the product for protection and filling, but with the risk of expired products at the bottom)
	Food waste	Use of packaging not adapted to the service of a given product (e.g., containers adapted to storage but not necessarily to service [opening, flow] and therefore losses on the floor)
	Over-consumption	Use of unique packaging for each product use
	Exclusion	Complexity of packaging for some people (e.g., packaging that manufactures and preserves the product, such as spreads)
Aesthetic	Health	Absence of labels or information to health safety (e.g., nature of the product, expiration date) for aesthetic reasons and to the detriment of health
	Food waste	Aesthetic packaging to the detriment of the preservation function
	Over-consumption	Replacement of existing packaging with more aesthetical packaging that is in additional expense
	Exclusion	Attractive merchandising packaging, but inaccessible to people with reduced mobility

5. Discussion

Our findings show that in the context of packaging-free product consumption, retailers and consumers implement strategies to reappropriate the packaging functions, and these strategies vary depending on the function that is primarily targeted (utilitarian, environmental, or aesthetic). Moreover, this appropriation can have potentially harmful consequences for consumers.

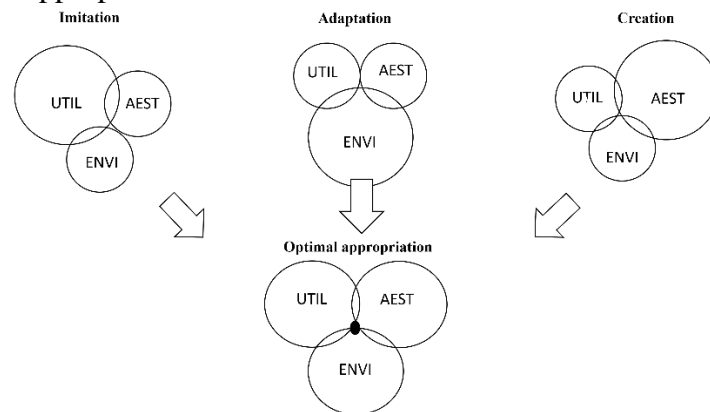
First, our findings reveal three main functions of packaging in the context of packaging-free product consumption, renamed herein as utilitarian, environmental, and aesthetic functions. The utilitarian function, which groups together what the literature identifies as the logistical and logistical-marketing functions, represents everything to do with product use. The environmental function, present in the packaging literature but more recently in relation to the other functions (e.g., Aydinliyim and Pangburn, 2012; Ketelsen *et al.*, 2020; Magnier and Crié, 2015; Monnot *et al.*, 2015; Zeng *et al.*, 2020), is at the heart of the packaging functions in this context because it involves elimination to avoid negative impacts on the environment. Finally, the aesthetic function refers not only to marketing functions, such as attractiveness and positioning, but also to the development of self-image, as packaging in this context is sometimes redesigned and personalized in one's image.

Second, to fulfill these functions in the context of packaging-free product consumption, our findings show that retailers and consumers implement three appropriation strategies – (1) imitation, (2) adaptation, and (3) creation – referring to the three categories initially identified by Sartre (1943) and transferred to marketing by Belk (1988). For some actors, appropriation takes the form of imitation, the strategy closest to the dominant model of packaged products, while for others, it favors creation, the most personalized appropriation strategy. Between the two, appropriation through adaptation is a strategy geared toward optimizing the packaging according to one's own needs. Echoing the literature on appropriation (Belk, 1988;

Sartre, 1943), we find that imitation is a strategy that relies on the appropriation of knowledge gained from past packaged product consumption experiences on how to store, handle, and consume products, through a transfer of knowledge from the manufacturer to the end consumer. Adaptation refers to controlled appropriation, in which the goal is to free oneself from constraints to best adapt consumption to one's needs. Finally, creation is the appropriation strategy that actors implement to express themselves and free themselves from imposed constraints. Our findings show that the strategies actors implement are intended to ensure one of the three packaging functions: utilitarian, environmental, or aesthetic. Thus, the utilitarian function is ensured by imitation, the environmental one by adaptation, and the aesthetic one by creation.

Third, our findings uncover the ambivalent nature of packaging-free product consumption, as its inherent environmental function, as mentioned in the literature (Beitzen-Heineke *et al.*, 2017; Fuentes *et al.*, 2019; Rapp *et al.*, 2017), is not always fulfilled. Packaging-free product consumption can thus represent a non-ecological and non-responsible practice, as illustrated by the dark sides we highlighted previously. Indeed, our research shows that packaging-free product consumption can generate negative health, environmental, and social impacts. The packaging artifact can, de facto, be irresponsible and call into question the sustainability approach that is inherent in packaging-free product practices. As soon as one function takes precedence over the others, dark sides can emerge. Therefore, the freedom given to retailers and consumers in terms of packaging can have counter-productive effects that go against the values of packaging-free product consumption. A balance of functions could limit such excesses. Shifting the focus from aesthetics alone to the utilitarian and environmental dimensions simultaneously could, for example, help alleviate some dark sides. Figure 10 summarizes the types of appropriation and the most optimal appropriation.

Figure 10 Types of appropriation



5.1. Research contributions

This research mainly contributes to the packaging literature. First, previous marketing studies on packaging generally follow a tradition of quantitative and predominantly cognitive research (e.g., Underwood *et al.*, 2001; Wansink, 1996). They often focus on consumer reactions to packaging and analyze the attributes that enable it to perform its various functions. In this research, we take a different perspective, as the packaging is removed and the consumer is treated as an individual with an active role who creates his or her consumption experience with the retailer. The qualitative approach adopted herein enabled us to highlight how actors appropriate the packaging functions when the usual frameworks are turned upside down. In this respect, we regarded packaging not as a product-object in the sense of a material accessory but as a service-object in the sense of an experience. Thus, this research treats packaging not as a simple object but as a service to be created within a servicing logic. This approach emerged by

mobilizing the appropriation theoretical framework to examine packaging-free product consumption as an experiential practice implemented by actors. This research thus offers a more original approach than other articles on packaging. Moreover, by showing how actors appropriate packaging functions in the context of packaging-free product consumption, we provide new insights into the value creation process. Our aim was to show how consumers, who are traditionally passive when faced with packaging at the time of purchase, become real actors and participants. The strategies they mobilize enable them to progressively extract themselves from the packaging object to create the service that best suits their needs.

Second, our research especially contributes to studies on the environmental function of packaging or its eco-friendliness (Ketelsen *et al.*, 2020; Magnier and Crié, 2015; Monnot *et al.*, 2015; Schwepker and Cornwell, 1991; Zeng *et al.*, 2020), as it questions its sustainability and responsibility. According to the literature, by eliminating packaging and promoting its reuse and recycling, actors limit their environmental footprint. By contrast, our research gives nuance to this literature by concluding that packaging, in the context of packaging-free product consumption, is not always environmentally friendly. Our work also contributes to the still limited literature on packaging-free product consumption (Beitzen-Heineke *et al.*, 2017; Fuentes *et al.*, 2019; Louis *et al.*, 2021; Zeiss, 2018). It shows how actors reconfigure packaging functions when packaging disappears, but also that environmentally oriented packaging cannot be taken for granted. Our research shows that many actors indeed view packaging-free product consumption as a way to tackle the environmental function of packaging. However, for some, such consumption is also a non-environmental practice. For example, the creative strategy that mainly serves aestheticism reveals the “hidden face” of packaging-free product consumption. Some actors indeed perceive this practice as a new type of fashionable, playful, and aesthetic consumption that enables them to satisfy their hedonic needs. For these consumers, the priority is thus not to reuse old packaging but rather to buy new options, some of which are produced on the other side of the world, to test new products that will not always be consumed in full and to equip their kitchens with a multitude of materials only for decorative purposes. The result is massive waste that is the opposite of what the practice represents. This research shows that the packaging experience thus serves consumers’ quest for identity, rather than the quest to reduce the environmental and social impact of their consumption. This leads us to distinguish our study from previous studies on packaging-free product consumption that present it as an intrinsically ecological practice.

This research highlights the need to consider the responsible function of packaging, including both the environmental and social dimensions, in marketing research, as well as firms’ managerial decisions. While the literature increasingly considers the environmental function, it generally ignores the social function – that is, the ability to improve the well-being of stakeholders, particularly consumers, by making products more accessible and by reducing health risks. We observed that in the quest for appropriation of the functions of packaging it was a misappropriation that could take place to the extent that the actors can do wrong. The dark sides we presented herein thus constitute limits to packaging-free product consumption that actors must unquestionably consider. They also contribute to the literature on how sustainability may backfire (Acuti *et al.*, 2022).

5.2. Managerial implications

From a marketing and sales perspective, the identification of packaging appropriation strategies suggests opportunities that retailers can seize to encourage, facilitate, and develop packaging-free product consumption among consumers. Retailers need to determine the priority they are targeting (i.e., utilitarian, environmental, or aesthetic function). To support the imitation strategy that some consumers implement, retailers could offer in-store reproductions of packaging that are traditionally designed by manufacturers. This would be a useful way to favor

the product recognition function, not only through the packaging shape but also through the information it offers. This could apply in particular to packaging whose protective and usage functions are central (e.g., washing powder cans, oil bottles). To support the adaptation strategy, retailers could ensure that they offer a variety of containers to suit the different needs linked to the different products or consumption phases, including transport and storage. In addition, to provide the necessary information, retailers could affix labels containing only the essential information to the packaging chosen by consumers or even blank labels that consumers could fill out themselves with the information they need. Ensuring the transfer of information from the store to the point of consumption is critical, as is considering what is important to consumers, over and above the mandatory legal information. Finally, for the creation strategy, retailers could market a range of decorative products while taking care to ensure their environmental impact. Doing so would enable them to create value for customers, differentiate themselves from other retailers, and generate additional sales. For customers who prefer to follow their imagination, do-it-yourself kits or tutorials could also be considered. Whichever strategy retailers choose, they should provide customers with resources and then become true purchase partners.

From a sustainable marketing perspective, the ideal situation is one in which the three packaging functions are balanced and coexist. The ideal packaging then (1) facilitates use, product recognition, and preservation and, in doing so, consumer health and well-being (utilitarian function); (2) is sustainable (i.e., can be reused), avoids waste, and has a positive or neutral impact on the environment (environmental function); and (3) meets the hedonic needs of attractiveness and personalization (aesthetic function). Thus, retailers could work to support consumers in a “hybrid” approach to packaging appropriation, taking up the usual packaging codes (imitation) and changing certain attributes according to consumer needs or modifying unnecessary packaging elements (adaptation), while not neglecting the aesthetic function (creation). For the ideal packaging to exist, retailers and consumers must be aware of the health, environmental, and social consequences of packaging-free product consumption. This practice is not virtuous in itself; it depends on the packaging, which could be a more or less responsible artifact. The way actors do it has an impact on the life cycle assessment (Scharpenberg *et al.*, 2021).

5.3. Further research

A possible avenue for extending this research on the appropriation of packaging functions in the context of packaging-free product consumption would be to consider the interweaving of the consumer’s appropriation process, on the one hand, and that of the retailer, on the other hand. While we considered both actors herein, we did not examine how they co-create value together. Future research could undertake this by drawing on the service-dominant logic framework (Vargo *et al.*, 2020), a service-centered orientation that reframes the purpose and process of economic exchange. As the various actors of packaging-free products use their resources to create the service together, this theoretical framework could be relevant. Using it could involve determining how the value is created through the integration of resources by multiple actors in a specific context, rather than manufactured and then delivered (Vargo *et al.*, 2020). In the context of packaging-free product consumption, products are not standardized, as in traditional distribution, but are made available to customers without the artifact of packaging. To seize this opportunity, actors (i.e., manufacturers, retailers, consumers) need to reinvent themselves by contributing with their own resources. Exploring how they deploy and articulate their resources in a logic of co-creation or even co-appropriation would be insightful.

Moreover, the concept of appropriation can refer to a logic of disposition to generate practices, in the Bourdieusian sense of habitus. Thus, to extend this research, it might be worthwhile to mobilize social practices theories by examining the practice elements (Schatzki,

1996; Shove and Pantzar, 2005; Warde, 2005): materials, skills, and meanings. Moreover, in terms of this direction, our research did not consider the actors' level of familiarity with the practice of packaging-free products; yet this level of familiarity could have an impact on the way they appropriate packaging functions. From a longitudinal perspective, actors might first appropriate by imitation and then, over time, develop the practice by adopting an adaptation strategy. This argues in favor of an analysis of possible appropriation trajectories – in other words, of an evolution in the way practices are appropriated. This would be consistent with the appropriation literature, which considers appropriation both a result and an evolving process. It would also be highly relevant to apply the appropriation framework to a broader set of sustainable practices, beyond packaging-free products, such as returnable products. By replicating the study with other responsible practices, research could then examine whether tension exists between an environmental priority and a more hedonic one, as in the case with packaging-free product consumption.

Finally, by revealing the dark sides of packaging-free product consumption, particularly packaging misappropriation, we invite researchers to explore key topics that are still under-investigated in consumer research. First, with regard to health risks, our findings echo research on the law of contagion, which shows that consumers evaluate a product more negatively when it has been touched by others (Argo *et al.*, 2006). This phenomenon is driven by a mix of concerns about the transmission of microbes and beliefs that the properties of one entity are transferred to another by simple physical contact (Rozin and Nemeroff, 1990). The upcycling practice (i.e., repurposing products for uses other than those they were originally intended for; Wilson, 2016) is another example that could present such risks. The issue of conservation in consumption that has an impact on hygiene and on consumer health (Moorman, 2002) thus could be further explored. Second, regarding the waste generated through packaging (Brennan *et al.*, 2021) and over-consumption, further research could examine the boomerang effects of sustainable consumption, which may be a source of waste in itself. Finally, further research could explore possible forms of social exclusion in the case of consumption practices that are intended to be responsible (Williams, 2007).

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Appendix. Informants

Consumers	Pseudonym	Age	Job
1	Albane	45	Teacher
2	Alex	33	Operations manager
3	Aline	21	Student
4	Amandine	38	Dentist
5	Annabelle	25	Accountant
6	Anne-Laure	38	Nurse
7	Arthur	36	Project manager
8	Bérangère	34	Manager
9	Camille	24	Graphic designer
10	Clothilde	35	Bank project manager
11	Colette	61	Store manager
12	Danielle	66	Retired
13	Dorothée	42	Project manager
14	Elodie	37	Teacher
15	Eva	63	Retired
16	Fabienne	39	Teacher
17	Germaine	59	Financial manager
18	Hortense	43	Teacher
19	Isaure	46	Chief financial officer
20	Judith	24	Doctoral student
21	Julia	22	Student
22	Lara	34	Bank manager
23	Léonore	34	Osteopath
24	Madeleine	36	Doctoral student
25	Maëlle	55	Accountant
26	Maité	43	Head of innovation
27	Manuela	32	Trainer

28	Marjorie	62	Retired
29	Marthe	34	Consultant
30	Marylou	20	Student
31	Mathias	26	Unemployed
32	Maya	24	Merch manager
33	Melchior	27	IT project manager
34	Nadège	28	Civil servant
35	Nadine	66	Retired
36	Régis	26	Student
37	Roxane	21	Student
38	Sabine	40	Jewelry designer
39	Salomé	50	Educator
40	Samantha	27	Doctoral student
41	Sigmund	22	Student
42	Solène	34	IT project manager
43	Vanessa	40	Head of program
44	Zoé	20	Student

Retailers	Number and status of informants
1	2; store manager, packaging-free product department manager
2	1; store manager
3	2; network sales manager, network packaging-free product referent
4	2; store manager, packaging-free product department manager
5	2; store manager, packaging-free product department manager
6	3; store manager, packaging-free product department manager, packaging-free product department assistant
7	4; store owner, store managers, packaging-free product department manager
8	2; store manager, packaging-free product department manager
9	1; store manager
10	1; store manager