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### ► To cite this version:

Julie Gobert, Romain Allais, José-Frédéric Deroubaix. Repair and reuse initiatives: which interactions between stakeholders. European Roundtable on Sustainable Consumption and Production Conference, Oct 2019, Barcelone, Spain. hal-02329857

**HAL Id: hal-02329857**

**<https://hal-enpc.archives-ouvertes.fr/hal-02329857>**

Submitted on 23 Oct 2019

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# Repair and reuse initiatives: which interactions between stakeholders

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## Abstract

Reuse practices were studied and analysed by different researchers, in order to understand the possible resistance to the second hand consumption and to draw emblematic types and profiles of re-users. Conversely, the repair universe is less known, despite the growing making culture against throwaway society. Repair contributes to design a new pathway for the object and to an ecology of care. According to several researchers, reuse and repair can also be interpreted as ways of challenging the current economic rationale based upon accelerated cycle of production-consumption-disposal.

The RECYLUSE research explores these practices from different points of view: the representations of reuse and repair initiatives, the expectations of inhabitants, who can be possible customers of the initiatives. Apprehending “the intermingling of space, place, and ethics in the constitution of a cultural economy of alternative” activities like repair appears to be decisive to analyse how repairers, holders of repair structures, consumers can share set of practices and which kind of rational and affective emotions take place. The project combines different scientific disciplines: engineering sciences and social sciences with quantitative and qualitative approaches (i.e. survey, semi-directive interviews, observation, and organisation of living labs). It relies on two French case studies: Coeur de Savoie and the Basque Country.

A particular question tackled in this paper is how the new initiatives concerning the upcycling, repair and reuse of “waste” conceive the future or current users of their business or activities and if and how these representations and associated goals meet with inhabitants and possible users’ expectations. The encounter between these outlooks seems less a question of shared values than of geographical and cognitive proximity, as well economic godsend. Indeed, ressourceries/recycleries/repair cafés are frequented by a little part of people in their catchment area and not well identified.

The transformation of what is considered as rubbish or no more functional can be translated into different actions: Repairing, fixing, mending, upcycling. This diversity also reveals a specific relationship with the object, which is differently appropriated by R&R (repair and reuse) organisations and do not automatically match people’s expectations.

Keywords: Repair and reuse initiatives, second hand goods, ressourceries, recycleries, repair cafés, repair practices

## 1. Introduction

In order to go beyond the recycling strategies and consistent with the European directives, different institutional initiatives have recently emerged in France to encourage Circular and Cooperative Economy. Energy Transition

for Green Growth Act, calls of projects from the Environmental Agency... provide more space for reuse and re-employment through product repair or upcycling. Foreexample, for furniture waste, the rules specify that it is appropriate to "encourage the re-use of elements whose functional and sanitary status is satisfactory." Numerous local and national initiatives are tested and implemented from the associative sector or the Social and Solidarity Economy (SSE). These initiatives promote reuse, reemployment and repair, sometimes for a long time (like the Emmaüs network) as pointed by (Horne et Maddrell 2002), (Defalvard et Deniard 2016) or the French environmental agency (ADEME). Despite the diversity of the existing solutions, repair and reuse (R&R) activities remain limited and the causes for this weak deployment are multiple.

First, the lack of 'recognition' of institutions and consumers raises difficulties. Practices developed by the SSE and particularly by associations promoting re-employment do not necessarily have a positive image and this may hamper second-hand products consumers to trust and concur with reuse principles (Schmidt 2015). Moreover, SSE initiatives (often located far away from the urban centres) suffer from the lack of public sensitivity and weak institutional recognition due to negative representations (Gregson et Crewe 2003). In addition, audiences of consumers and/or users remain small due to an awareness deficiency and a sometimes negative vision of citizens to donation practices and deposits of objects for repair/reuse (Ortar et Gessat-Anstett 2017; Rumpala 1999).

Second, path dependencies contribute also to the under-deployment of repair and reuse activities. In fact, the current technological and organisational structuration of waste processing and recycling channels leaves little room and legitimacy for these emerging networks (Pacreau 2016). In addition, consumers' habits and formatting are counterproductive for repair and reuse deployment: «values associated with ownership and accumulation appear to be important development brakes to new forms of economy» (consumerist habitus, developed in particular by Herbert and Collin-Lachaud, 2017). Moreover, traditional business models (i.e. wealth creation thanks to selling of products) constraint the product development process: design to cost strategies implies the use of low-quality components and the 'irreparability-by-design' prevents any form of product maintenance or repair. Market-driven design leads to different types of (planned) obsolescence (aesthetic, technical, technological...), a core mechanism of the consumption society that create ready-to-dispose devices with the constant increase of waste and their associated socio-ecological issues.

For this paper; once the salient elements concerning repair and reuse (R&R) and the research project have been described, the method is set out. Following that, the preliminary findings are presented. The discussion explores the discarded object and the moment/place for repairing it as possible intermediaries between professional cultures and regimes of commitment.

## **2. Repair and reuse: the necessity of a dedicated research**

Reuse and consumption of second-hand goods have been studied by different disciplines and investigations. These studies have attempted to clarify the reasons for people turn to alternative shopping channels, to know why some consumers are interested in second-hand goods (Gullstrand, Lehner, et Mont 2016), whether are satisfied by the offer they find in their surroundings. Their motivations are widespread: hunting for items unavailable in traditional channels, engaging in discussions with sellers, bargaining (Gregson et Crewe 2003)

defining relevant and rational solution to bypass traditional retailing (Guiot et Roux 2010)... This choice is based on several dimensions: Critical (against the current economic system), economic (difficulties to have access to new commodities) and environmental (awareness of the resource depletion).

Scientific researchers dealt with the diversity of initiatives and organisations promoting reuse, as well, which can target specific customers or a larger panel of people; Horne and Maddrell (2002) detailed for example how charity shops work. These intermediaries can offer reliability, assurance and guarantee (Chantelat et Vignal 2002) from users' point of view, because they are supposed to clean and select products. Moreover, their role diminishes the contamination worry, partly because the customers do not see the previous owner.

The activities of repairing, fixing, mending, upcycling, renewing were less observed and analysed (Graziano and Trogal 2017, Bond, DeSilvey, and Ryan 2013; Gregson, Metcalfe, and Crewe 2009). However, in order to make reuse and reappropriation possible, once one person/one entity discards an object, a social, technical and/or economic process is often necessary. Repair is one of these possible actions, one way to restore a relationship with an object to extend its lifecycle (repair by/for its owner; repair enabling the selling or the donation) or to give him a second life (transformation and upcycling of an object or of its components/stuffs; selling by an intermediary like a recyclerie, charity shops) (Chapman 2010).

Repairing requires a set of material and immaterial: Space, time, tools and skills for crafting, making, fixing, upcycling (Bridgens et al. 2018). Besides, enabling the expression of creativity (Lapolla et Sanders 2015) and co-creation can attract new volunteers.

Repair contributes to design a new pathway for the object and to an ecology of care (Jackson, 2014). According to several researchers, reuse and repair can also be interpreted as ways of challenging the current economic rationale based upon accelerated cycle of production-consumption-disposal ((Martínez 2017, p. 349). They would consequently contribute to the construction of political alternatives (Graziano et Trogal 2017). 'Reuse can be understood as a deliberative project of value transformation that challenges dominant paradigms and cultural constructions while building alternative social and physical structures from the 'ruins of modernity'' (Crocker et Chiveralls 2018, p. 5).

Actually, repairing have different objectives and meanings (Gharfalkar, Ali, et Hillier 2016). Fixing an object may enable to restore, to conserve (and then to extend the lifetime of its functionalities for its owner-user), to transform, to aesthetically or technically enhance it, to make a re-appropriation worth considering (Chapman 2010). Feelings of attachment and proudness play an obvious role for usual or punctual repairers, as this was analysed in the consumption behaviours (Ball, 1992). This plurality of possibilities does not facilitate the understanding of this process, which currently takes new forms, occurs in new spaces and reveals the creation of new communities (community of knowledge, know-how and practices, where skills can be exchanged, transferred, strengthened) (Wenger, 1998). These communities (grass-roots movements or planned initiatives) propose either do-it-yourself practices where people can seek or share skills and know-hows in specific locations (repair café...), or do-it-yourself with online documents, or fixing donated/discarded objects by paid staff, volunteers or workers in insertion in order to sell or give them. Sometimes, they develop these different ways of fixing.

The stakeholders acting in the repair field are more and more tempted to “create” third places (Oldenburg, 1999; Burret, 2017), mixing publics and craft activities. They then become providers of different immaterial and material services: lending tools, equipment or their premises for repair workshops, organising repair events...These third places can become specific spaces and communities of resistance against the throwaway society (Mitchell 2018).

### **Presentation of the Recyluse project**

Apprehending “the intermingling of space, place, and ethics in the constitution of a cultural economy of alternative” activities like repair (Goodman et Bryant 2013) appears to be decisive to analyse how repairers, holders of repair structures, consumers can share set of practices and which kind of rational and affective orderings take place as “there are no clear normative rules that unite production, sale and consumption – given that the alternative retailer does not control production” and reparation activities.” (Goodman et Bryant 2013). Understanding the context of these reparation/transformation activities requires to pay attention on geographical, cognitive and organisational resources (Allais et Gobert, 2019, 2017; Bridgens et al. 2018).

To observe how a repair culture can imbed territories at micro and meso levels, it seems relevant to analyse intermediary entities of second hand channels, which resort to repair actions. The RECYLUSE project aims to promote the ecological, economic and social transition to the circular economy through the deployment of repair and reuse. In contrast to the current waste management model, centralized and subject to the techno-economic imperatives of industrial means of waste processing, it is assumed that the repair and reuse future is not a unique place but a network of territorialized initiatives based on repair and reuse activities with high social and environmental values.

Recyluse is a research and operational project targeting a better understanding of the nature of stakeholders’ resistances and interests to repair and reuse (e.g. legitimacy deficit, representation). This project questions the collective capacity to build networks of repair and reuse, while taking into account local characteristics, path dependences and technical lock-ins. The project seeks first to understand the determinants and resistances by analysing the representations of the actors and singularly those of users/non-users. Then, to identify design modalities and multi-level organisation adapted to product repair and reuse. In operational terms, this means that the project tries to provide answers to the following questions: how can the different consumer profiles adhere to the repair and reuse of manufactured products? How to better integrate these consumers into repair and reuse networks? How to stimulate collaboration between heterogeneous actors (designers, repairers, consumers of second-hand commodities, social workers)? It is therefore a question of creating tools for decision-making regarding the structuring of “territorial repair networks” (Tyl et al. 2015).

### **Research question and theoretical framework of the paper**

A particular question which worth to be explored is how the new initiatives concerning the upcycling, repair and reuse of “waste” conceive the future or current users of their business or activities and if and how these representations and associated goals meet with inhabitants and possible users’ expectations. Users have to be considered in their large diversity: they can be concomitantly or solely consumers of second hand goods, providers of objects which do no match anymore their taste, whose functionality does not fulfil anymore the

user's expectations, occasional repairers (repair café). These users may be categorized throughout different criteria (e.g. their commitment in repair activities, their representations on fixed objects)<sup>1</sup>. Likewise repair and reuse activities can be differentiated, according to the motivations of the stakeholders involved and the types of services they give. The interactions between users and holders of R&R initiatives take place not only in specific places but also around discarded and repaired objects/goods<sup>2</sup>. Where, when, in which conditions are these interactions fruitful and satisfying for both sides?

To explore this specific aspect of the RECYLUSE project, a theoretical framework combining pragmatic sociology and *Sciences Technology Studies* has been employed (Boltanski et Thévenot 2008 ; Callon 1990). As a matter of fact, the involvement of people, as well the creation of organisations dedicated to repair and reuse lean on specific regimes of commitment, justifications and values. Moreover, this commitment is made possible and intermediated by one object, which worth to be fixed (by its owner or not, in specific places or not). This object does not have the same meaning according to the human being discarding, transforming or taking care of it. It is not handled and thought in the same way, according to the person, and however, this plurality defines its pathway (Akrich 1998).

### **3. Methods**

Recyluse combines different scientific disciplines: engineering sciences and social sciences with quantitative and qualitative approaches (i.e. survey, semi-directive interviews, observation, and organisation of living labs). This project relies on two French case studies and different work sequences: territorial diagnosis, organisation of living labs.

#### **3.1. Case studies presentation**

##### **Case study 1. Cœur de Savoie**

The association of municipalities Cœur de Savoie (CdS) (43 rural and urban municipalities, 35000 inhabitants) is an EPCI<sup>3</sup> created in 2014 after 10 years of cooperation between the four previous communities of communes around the themes of agricultural, tourism and economic development. CdS carries a territorial sustainable development project confirmed by the positive energy territory label (TEPOS) obtained in November 2015, coupled with a positive energy territorial certification for green growth (TEPCV) in July 2016.

In October 2016, Cœur de Savoie applied for territorial experimentation against long-term unemployment. Among the six fields of action identified as carriers of new activities and jobs, "the reduction and recovery of waste and the strengthening of the circular economy" is echoed in the RECYLUSE project. Indeed, Cœur de

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<sup>1</sup> It will be not possible for this paper to display a categorisation, as the survey is always in progress.

<sup>2</sup> They are differently named according to the stakeholder who manipulate them (owner, transformer, repairer, buyer) and the social statute they have<sup>2</sup> : waste, resource, device... Often these objects/goods can no more be considered as rubbish. Their no-monetary value evolves step by step (Thompson 1979) from the no more desirable object to a second "life" with new uses and performances.

<sup>3</sup> A public institution of intercommunal cooperation (EPCI) is a French administrative structure combining several communes in order to exercise some of their competences in common.

Savoie is considering the creation of ressourceries in local waste disposal centres with the aim of creating three jobs. CdS has identified the creation of these ressourceries as a mean to support the coherent project of sustainable development of the territory.

### **Case Study 2. Basque Country**

The conurbation of the Basque Country is a territory comprising 158 municipalities (including Bayonne, Anglet, Biarritz and Mauléon), or 309 723 inhabitants. Bil Ta Garbi, the swaste management syndicate of the Basque Country has shown particular interest in being the project's study area. This territory presents for the RECYCLUSE project two major interests: (1) the union responsible for waste treatment, Bil Ta Garbi is currently conducting a reflection on a policy favouring the repair and reuse of products at the end of life. In 2013, it opened two recycling centers, Canopia and Mendixka, which reduce landfill by an half. It is a particularly dynamic territory with regard to the number of actors operating in the field of 3Rs (Reduce, Reuse, Recycle); (2) the project carried by the syndicate was labelled in 2015 "Zero Waste Territory, Zero Wastage" by the Ministry of the Environment. This project aims to integrate all the actors of the territory (project leaders, citizens, businesses, communities) in the waste management in the Basque territory.

### **3.2. The deployed methodology**

The first part of the project, the territorial diagnosis aims at determining the socio-genesis of ressourceries/recycleries<sup>4</sup> projects thanks to semi-structured interviews and observations. Face-to-face, detailed, in-depth interviews were conducted with actors directly or indirectly involved in the creation of recyclerie or charity shops. A semi-structured interview guide was drawn up consisting of five sections: the stakeholders were first invited to narrate the birth of their idea and their project, then to explain how it works and if the current processes have been evolving. They were questioned about the extent and the place of repair in their business. They were requested to describe the relationships they have built and their future expectations. During these interviews, researchers identified what resources the stakeholders mobilize and what are the obstacles encountered both organizational and institutional. The interviews were conducted in 2018 and lasted between ninety minutes to three hours each. They were fully recorded, transcribed and coded (Lejeune 2015).

The table below presents the agents interviewed during the territorial diagnosis phase in CdS. Some were part of the initial TZCLD project, others developed projects of repair or upcycling. The interviewees were selected by the researchers as key stakeholders in waste management or because of their influence was underlined by the other interviewees (snowball sampling).

*Table 1. Interviews conducted at Coeur de Savoie*

<b>Struture</b>	<b>Function of the interlocutor</b>
Company	Carpenter & designer (upcycling activity)
Structures working in the waste recovery	Co-director - Insertion association
	Site director - waste recycling company

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<sup>4</sup> Workshops which integrate the selling of second hand commodities and often repair activities, and then encourage reuse.

	Designer and site director - Ressourcerie
	Director - waste collection company
	Director - Syndicate of municipalities managing for household waste
	Director – insertion association
Public institutions	Mayor and project leader Zero long-term unemployed, former project holder of a recyclerie
Community representatives	Waste service manager - Coeur de Savoie
Elected officials	Circular economy project manager in charge of the zero waste territory initiative – regional agency
	Business development project manager- regional agency
Repair – reuse initiatives	Recyclerie project holder – La Salamandre
	Bike workshop manager
	Textile workshop manager
	Repair café manager
Territorial association	Director – animation
	Member – Restoration and Maintenance Trail paths
Digital tool developers (not included in the study)	Recyclerie consultant - training for project holders and stock management software
	Market place founder specialized in reuse and upcycled products

The table 2 displays the different interviews completed in the Basque Country: numerous stakeholders developing and having developed reuse and repair initiatives; public institutions supporting these kinds of initiatives...

*Table 2. Interviews conducted on the Basque Country conurbation*

Structure	Function of the interlocutor
Company	Director – sailing manufacturer
	Environmental project manager & sustainable development manager – large sportswear company
Public institutions	Mission manager – waste management union
Community representatives	Director and mission manager- territorial development organisation
Elected officials	Deputy mayor of Hendaye - Community councillor of Agglomeration community
	Sustainable development and social and solidarity economy project managers – Conurbation
	Mission manager – Social and solidarity economy territorial incubator
	Director in charge of waste- Agglomeration community
Territorial association	Members - Environmental association
Repair – reuse initiatives	Recyclerie project holder – under development



	Technical supervisor – bicycle repair association
	Director – furniture upcycling company
	Chairwoman and seamstress – sewing collective
	Recyclerie project holder – failed project
	Second hand market director – humanitarian and charity association
	Recyclerie project holder – repair, upcycling, multi-product
	Director – insertion association
	Recyclerie project holder – under development
	Sport recyclerie director – repair, second hand, upcycling

One survey was launched in October 2018 and is still in progress. It counts 251 respondents, coming from the Basque Country or Savoie/Isere (the 2 departments where CdS is located). For the moment, this sample does not enable the researchers to make a deep statistical exploitation, but draws a first view of what repair means for people, how they are engaged in this kind of activity, if they work alone or with others, and which expectations they have. The testees were consequently requested to answer thirty-one questions concerning their inclination to collect discarded objects to reuse items and to repair them. At the end, they were more specially questioned about recycleries. To be able to define categories, their age, revenues, gender, type of involvement into associations or organisations and professional status were asked.

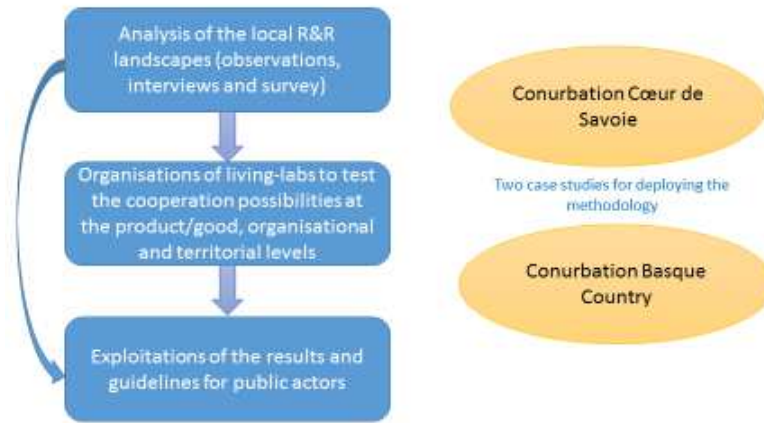
The second part of the project encompasses the organisation of *ad hoc* living labs<sup>5</sup>. These living labs ambition to create co-design spaces for a large number of stakeholders as citizens, industrials and community employees or elected representatives. They can design together *modus operandi* for the emergence of territorial repair networks in a multi-level perspective. At the product level, participants have to imagine, describe and prototype new products (i.e. repair and upcycling of textile or furniture). At the workshop level, they have to define their missions according to their shared values and imagine the business model and internal organisation of their own repair workshop. At the territorial level, they have to consider existing actor's networks and collaborate for territorial resource pooling. After each living lab in PB and CdS, survey enables the evaluation of the knowledge transfer and interest of the participants. Some information on living labs design, realization and treatment are presented in Tyl and Allais (2019).

The figure 1 resumes the methodology deployed for the project.

**Figure 1.** Methodology used for the research.

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<sup>5</sup> Regarding design activities, even if co-design has been little invested in a repair-reuse logic (Tyl *et al.* 2015); (Liedtke *et al.* 2012), its deployment during living labs should suppress some of stakeholders' resistances. Co-design is a participatory design process involving directly all relevant stakeholders. In fact, living labs allow the exchange of practical, empirical and theoretical knowledge between the parties involved. Living labs seem to be an appropriate modality to change representations, unblock certain resistances and thus create paths for territorial innovation. Observations during the living labs provides insights on the motivations of each actor, its integration to the collective, its ability to pass on its skills and collaborate to improve the repair of products and the multi-level organisation of the territorial network.



## 4. Results

The findings presented below describe first what it could be retained and analysed from the interviews conducted with committed stakeholders of our two case studies. Secondly, relying on the data resulting from the survey performed on the two territories, the inhabitants' expectations are displayed. This confrontation brings into light the difficult convergence between the diverse representations and projections of repair organisations and the practices and wills of inhabitants.

### 4.1. Repair organisations: a very diverse set of actors

The activity of repairing is often more present than supposed by public stakeholders, particularly in the Cœur de Savoie conurbation. The relating activities (mending, sewing, etc.) are often already proposed through formal<sup>6</sup> or informal<sup>7</sup> / specialized or more integrative channels and are prospering. This plurality reveals the initiatives and the correlated organisations are based on different motivations and business models ; they cannot be seen as presenting a unified statement as underlined by Graziano and Trogal (2017).

#### Social or environmental motivations

While analysing the motivations and the business models of the different grass-roots initiatives, whose holders were interviewed, it is noticeable that very diverse forms and worldviews are present. The traditional charity shops (like Emmaüs) deploy an activity of retailing and selling used goods, to get money to accommodate the homeless, to implement specific actions for vulnerable persons. They may have developed a repair/overhaul activity, if one of their beneficiaries or volunteers have the necessary skills. But fixing is a side-task, in comparison with collecting, sorting, cleaning and selling, very dependent of the involved persons.

The new incomers in the R&R field have two main motives. Some organisations would like to develop non-competitive activities to create jobs for the unemployed: it was the case for the TZCLD project in CdS. Others first expressed clear environmental ambitions: finding pathways to rehabilitate what is considered as waste, prolonging the lifecycle of goods, or giving them new functionalities. Often, they put into question the current

<sup>6</sup> Dedicated associations.

<sup>7</sup> Special events promoting reuse and repair.

economic system. To resume, either they principally consider this system creates unemployment and difficult situations for the jobless and first try to tackle this social issue. Or they mainly contend the consumption acceleration and the increasing production of waste and expect to “play a significant role in resisting the commodification of the everyday” (Graziano et Trogal 2017). Some of the new stakeholders on repair and reuse are more radical than the previous ones; they do not want to be an acceptable niche in the current economic system. They intend to develop and disseminate alternative ways of consuming, moving, sharing, throwing away.

The combination of both motivations are possible but the analyses of the stakeholders’ discourses often shows a principal sensitivity, which then leads the different actions and the kinds of cooperation searched by holders.

### **Who repairs?**

A part of the R&R communities promotes the ‘Do It Yourself’ and proposes tools, places, advice, for a modest contribution (subscription to the R&R association). As researchers underline it, a shift from DIY to DIT (from Do It Yourself to Do It Together) or DIO (Do It Ourselves) cultures (Ratto and Boler 2014) can be noticed. This was the case for example of the R&R bicycles’ workshops in the Basque Country. These communities share good practices and try to overcome technical obstacles that can arise from the products (Mitchell 2018). They may also be the place to advocate and promote specific practices (e.g. cycling) and organise public events, expecting a political resonance.

Other R&R communities make repair donated or discarded objects by skilled volunteers or social workers: developing this activity is a way to teach workers in insertion new skills, that can be valorised in the labour market or to valorise an ability they already possess, but they were unable to exploit. The major objective in the two cases is not similar: on the one hand, it is ambitioned by the syndicate of waste management to promote repair and reuse, while empowering all voluntary people. On the other hand, restoring the human and social dignity of people through the care given to an object or through the money collected by the selling of second-hand items is aimed. Some R&R communities try to intermingle the different processes, as volunteers can repair with workers in insertion and repair events can mix the different kinds of repairer. Some difficulties can emerge between volunteers and paid staff of the organisations and as a consequence, new management schemes may be created (steering committee of creation).

However, the share of skills, the pedagogy and the dialogue between committed actors are the most essential challenge in each configuration. These stakes constitute a major goal of the communities seeking for improving the social and economic insertion of vulnerable workers. These communities thus employ specific staff for accompanying them (technical advisor, social worker) and lean on specific tacit and explicit rules. In the context of repair events (like repair café), the distinction between the different roles is more permeable, even if the skilled member is a key and rare player. Sometimes, domination relationships between those capable to repair (who can take a leadership position), and those who expect to learn or to make their item repair appear. But, mainly, the purpose is to create a peer to peer exchange, without judgement and to overcome together difficulties that repairing can raises.

### **Reparation vs. creative design from waste?**

Repairing may mean to restore the initial functions of the item or to transform it in order to invent new uses. Sometimes only the matter or one piece of the donated or abandoned object is employed and diverted. The upcycling activity can be either one of the R&R occupations of the organisation or the main activity. In the last case; it may have artistic and aesthetic ambitions (creative works made by crafter or designer) for a targeted population, a firm or aiming all potential consumers. The creation from waste appears to be an inventive niche, even though the prices are not always accessible for all. From a marketing point of view, R&R stakeholders engaged in this transformation and re-design do not speak from reparation, but underline the creative aspect of the task.

More generally, the new incomers of R&R field feed their project with the representations they have about previous stakeholders. Even if they do not want to create competition and affirm being in good terms with charity shops, they often emphasize the messiness which prevails there and their ambition to break with this common representation, because this supposed disorder would prevent second-hand business growing, according to them. They search for an image of order (an interviewed project holder wanted to match with the IKEA shops' spatialization) and attempt to disconnect their project from the idea of spaces dedicated to poor persons. They explain they wish they would create immersive space with aesthetic and commercial dimensions. They strive to make evolve the social representations associated with charity shops. They stage their shops as famous retail chains, as they reconstitute home spaces in a friendly and comfortable atmosphere. They organise events, workshops, they can have a space dedicated to coffee/tea times.

Aesthetic and creative work at the product or organisational level becomes a way to attract new publics and display a trendy style. These efforts are not always rewarded, because they do not answer what usual consumers await.

### **Values and justification**

Inspiration, worldviews and "orders of values" or cities (Boltanski et Thévenot 2008) play a major role in the possible coordination between actors for this kind of environmental and human-centred activities. Each stakeholder involved in a Recyclerie project would like to make progress repair and reuse, but different core values stir them. Public actors and syndicates are mainly driven by the principles of efficacy and efficiency their values essentially match the "industrial city". They attempt to defend their investments because they are aware of not being able to rapidly adapt their technical infrastructure and administration. For instance, in the CdS case, one part of the conurbation, managed by a public syndicate, has limited capacities to transform its waste public policies, as they have recently invested in the renovation of their incinerator. They need to make it profitable. This creates a technological lock-in, preventing them to strongly develop other modalities of waste diversion.

Conversely, numerous project holders consider that society has to be radically reformed and particularly the ways of consuming, producing and wasting. Their main objective is to diminish the human footprint on the environment. Their values correspond to the "civic city" (as they refer to participation, adhesion...) and the "inspired city" (creativity) (*ibid.*). Two ways of considering repair and reuse activities bring into opposition: Those who considered that initiatives must lead to traditional economic activities, becoming independent on public subsidies (public institutions, firms), those who prefer building an alternative social and environmental economy.

Some compromises between these values and the communities defending them are possible, often at the territorial level and after unfruitful attempts. These local trajectories will be explored in other communications. However, these values and challenges do not entirely match with consumers/customers' expectations.

#### **4.2. Repair practices and expectations from testees concerning repair and reuse activities**

At the question to know the outcome of a damaged object, which does no more fulfil its functionalities, the answerers mainly answer they deposit it in the recycling center (95%) and repair or make it repair (75% and 67%). They can also reuse some stuff of this object for mending or enhancing another good.

Clothing, bicycles and electrical and electronic equipment are the main objects people try to fix. For repairing by themselves, people rely on their own know-how, but they can also ask relatives. When people are not able to mend a good by themselves, they require the help of skilled parents or friends and specialized crafters. This means that the family circle and relations are decisive to be involved in repair activities.

Different motivations encourage people to resort to repair: Firstly, they consider this action as environmental-friendly. Repairing is seen as less expensive than buying a new good (74%). Moreover, many respondents deem themselves to be against the consumer society (74%)<sup>8</sup>.

For fixing objects, they use their own tools (97%) or borrow them from their relatives (60%). Buying new equipment to specifically repairing one good is relatively rare (20%). However, people seldom purchase tools. They would be interested in having tools or spare items at their disposal in a specific location. The people skilled for repairing are not particularly keen on sharing their knowledge, while the non-repairers would be motivated to learn to repair in specific locations.

Few individuals recognise that they do not repair their damaged goods (10% of the respondents). They firstly mention their lack of specific skills and then they do not know professionals or relatives able to repair.

The option "repairing in a specific place like Ressourceries/Recycleries, repair workshops, repair café" is relatively little developed (24%). A minority of respondents reveals to be frequent users of these initiatives, 34% do never go to there and 55% are punctual visitors.

The users spend time in these places in order to buy products (56%), and also because they can share good practices and know-how (41%). Besides, these organisations create a convivial atmosphere (30%), where it is likely to get good deals (39%). People who declare not being customer of this kind of shops underline they do not know these organisations. Whereas people know where they can make their bicycles repair, they do not identify the places or the professionals that can restore their furniture (70%), their sport items (63%) or even their electrical and electronic equipment (58%).

A first analysis of the survey allows to show that even if recycleries or repair café suffer from an image problem and not well-known or perceived as far away from potential users, they could be a place, a moment where people could find peers to share about repair and exchange advice to fix their objects. Although they intend to repair their items, the potential users do not identify the intermediaries, the organisations, where they can learn

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<sup>8</sup> We guess here that the survey situation has certainly<sup>8</sup> increased the percentage.

or develop their ability to repair. As a matter of fact, the R&R organisations are often located far from city centres and their customers need to come with a car. Moreover, our study notices they are often not easily visible. Indeed, they are dependent on the availability of extensive premises (for selling, repairing and storing) and their economic accessibility.

This first view obviously necessitates to be strengthened with an advanced statistical study and semi-directive interviews to bring to light possible categories of repairers/re-users and qualitative interviews with consumers. We could then explain the different values and main references which leads people to consume new products or to resort to repair. However, it gives insights about a difficult convergence between costumers/users' expectations and the own challenges of R&R stakeholders.

## **5. Discussion**

The relationship between the R&R project holders, the providers of repairing skills, of discarded items, the costumers of repair services, the self-repairers and globally the consumers is structured around objects. It is then particularly relevant to understand what status have this item according to the concerned person and the hands which give it a second life, fix and transform it. As Chapman (2010) describes it, investigating repair and reuse demands to better know the objects' trajectories, the attachment and detachment processes (Bonnot 2002 ; Barbier, 2005).

With the collected data, we can enlighten discrepancies in the way to identify the repairable object, the useful matter for upcycling. What is considered as waste for some is diverted and becomes a resource for R&R organisations. They can deploy various ways to give it a new life. In R&R initiatives, the capacity to control if an object can be repaired, what pieces are necessary and if they are available, is decisive for many reasons (storage capacities, subsidies...). These organisations can refuse some donations, because they immediately assess that they could not sell or valorise by fixing or overhauling what is brought to them. Most of them – apart charities like Emmaüs, which are not afraid of suffering from the stigma associated to waste (Douglas 2005) - do not want to be seen as waste management centres. They would like to be acknowledged as transition spaces for objects in good state, just requiring a basic reparation and could then be re-appropriated.

The R&R organisations have to cultivate an ability to sort and select collected or donated objects. However, determining the quality of items or repair-friendliness is rather based on relative criteria through the experience cumulated and learnt, formal or informal rules shared in the community of repair practices. Consequently, the R&R organisations do not have the same expectations concerning “waste”/resources for upcycling or for selling. Even if each of them will transform waste into a usable/saleable object, some will seek for stuff (for example leather from furniture) or others for a leather sofa, which has to be cleaned and slightly fixed. Their look at the object fundamentally differs.

Sometimes the R&R resort to volunteers skilled for determining the value and the reparability of an object (professional leader of second-hand goods). But they often consider they may miss out on valuable objects, because they do not have the necessary resources.

At the same time, it is important to “control” the deposit and the “waste” flows, to have always stuff in sufficient quantity and quality, but also not to be overwhelmed by objects, waiting for a second life. And tackling this challenge creates difficulties. When they receive donations, they have to be pedagogical with donors, who can be reluctant to accept to see one object as not repairable or that the “quality” of their donation is not sufficient enough.

These confrontations or successful interactions put into evidence that the object is the holder of numerous meanings and intentions that have to be clarified before being brought for repairing. Otherwise, the trajectory of the object can be stopped. Meanwhile, this item resists pre-established qualitative norms, as it could come in very different stated of use, of degradation.

## **6. Conclusions**

This paper depicts the first results of an interdisciplinary research, RECYLUSE, dealing with repair and reuse practices and trying to know if recyclerie/ressourcerie/repair cafes may be relevant intermediaries for these activities. In addition, while focusing on two case studies and putting together different stakeholders (project holders, public institutions, waste management companies, repairers, consumers of second-hand stuff...), this research pursues at least operational objectives: extending the repair culture, contributing to local repair networks. In this article, it was targeted to better understand the expectations of repair and reuse organisations (providers of services or of specific moments for fixing), very diverse in their forms and justifications, and those of inhabitants, potential users of R&R services. The encounter between these outlooks seems less a question of shared values (as it is the case in the structuration of R&R organisations) than of geographical and cognitive proximity, as well economic godsend. That is why not only are ressourceries/recycleries/repair cafés frequented by a little part of inhabitants in their catchment area. They suffer from a deficit of image, although they try to change this thanks to traditional marketing tools (IKEA style, market places) and to disconnect it from previous 2<sup>nd</sup> hand market stakeholders. In fact, the way of seeing waste/objects, a plural non-human sphere, enables to put into evidence that some diverging interests exist between all the possible actors of a possible reuse and repair value chain.

Further research will address the trajectory of things in repair as repair is a plural practice that keeps or transforms the original object. Moreover, parallels with the crafter and maker universes will be explored, as it could bring new possibilities of apprehending the R&R activities (Colmellere et al. 2019; Sennett 2010).

## **Acknowledgments**

The authors wish to thank the region Nouvelle-Aquitaine for their financial support as well as the French national agency ADEME for its funding of the RECYLUSE project.

They are also grateful to their colleagues participating in this research: Benjamin Tyl and Cyril Baldacchino.

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