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Understanding consumer appropriation in access-based consumption as the creation of meanings : an investigation trough design

Adèle Gruen-Martin

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THÈSE DE DOCTORAT

de l'Université de recherche Paris Sciences et Lettres
PSL Research University

Préparée à l'Université Paris-Dauphine

Understanding consumer appropriation in access-based consumption as the creation of meanings: an investigation through design

École Doctorale de Dauphine — ED 543

Spécialité **Sciences de gestion**

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DAUPHINE UNIVERSITÉ PARIS | PSL RESEARCH UNIVERSITY PARIS

L'université n'entend donner aucune approbation ni improbation aux opinions émises dans les thèses : ces opinions doivent être considérées comme propres à leurs auteurs.

A ma grand-mère,

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RÉSUMÉ EN FRANÇAIS

Aujourd'hui, les vacanciers n'ont guère besoin d'acheter une maison de vacances, de louer dans une résidence de bord de mer ou de réserver une chambre à l'hôtel. Des compagnies comme Airbnb ou Couchsurfing proposent à tous de loger directement chez l'habitant aux quatre coins de la planète, tout en louant son propre appartement pendant ce temps-là. De même, pour se déplacer, il n'est plus nécessaire d'investir dans l'achat d'une voiture : Zipcar, Blablacar, Uber ou encore Autolib' fournissent un accès à un véhicule moyennant une certaine somme. Pour monter son entreprise, enfin, plus besoin de louer des locaux à des prix exorbitants : les espaces de coworking proposent des bureaux en libre-accès à des prix attractifs et avec une grande flexibilité. L'économie de l'accès a permis des transactions à hauteur de 28 milliards d'euros en 2015. Ce chiffre est estimé à 570 milliards en 2025[1]. Uniquement sur les espaces de coworking, Deskmag estime que fin 2016 environ 10 000 espaces ont déjà été ouverts[2]. Ces nouveaux modes de consommation donnent à l'accès la primauté sur la propriété. Appelée parfois consommation collaborative (Botsman et Rogers, 2010), ou encore partage (Belk, 2010), ce mode de consommation privilégie l'accès à l'objet sur la possession de celui-

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[1] http://www.pwc.co.uk/issues/megatrends/collisions/sharingeconomy/future-of-the-sharing-economy-in-europe-2016.html, consulté le 5 décembre 2016

[2] http://www.deskmag.com/en/2016-forecast-global-coworking-survey-results, consulté le 20 décembre 2016

ci. C'est pourquoi l'on parle plutôt de consommation par l'accès (Bardhi et Eckhardt, 2012 ; Eckhardt et Bardhi, 2016 ; Rifkins, 2000). En marketing, les recherches portant sur ces nouvelles façons d'envisager la consommation montrent que les motivations principales sont à la fois réduction des coûts et la facilité d'accès (Bardhi et Eckhardt, 2012 ; Lamberton et Rose, 2012). Dans ce contexte, il semble difficile pour les consommateurs d'entretenir une relation avec l'objet de consommation au-delà de l'utilitaire. En se basant sur le concept d'appropriation et au travers des théories du design, c'est précisément cette perspective que nous explorons dans cette thèse.

APPROPRIATION

Au travers de ce travail doctoral, nous cherchons à étudier le rapport qu'entretiennent les consommateurs avec les objets ou espaces auxquels ils accèdent. En particulier, nous nous intéressons à la relation d'appropriation. Etudier l'appropriation dans un contexte de partage peut paraître paradoxal. En effet, le mot appropriation provient du latin *appropriare* « faire sien quelque chose », qui lui-même trouve ses racines dans le mot latin *proprius* : « que l'on ne partage pas avec d'autres, propre » (Dictionnaire Le Robert, 1995). Il y a donc un paradoxe à vouloir étudier les processus rendant propre un objet que l'on partage avec d'autres. Ce travail va ainsi nous amener enrichir la définition de l'appropriation, au travers ce nouveau cadre qu'est la consommation par l'accès.

En marketing, nous pouvons identifier deux principales approches de l'appropriation. La première, surtout appliquée en marketing des services et en distribution, est celle de la psychologie sociale de l'environnement de Gustave-Nicolas Fischer (1981, 1989, 1992, 2011). L'approche de la psychologie environnementale nous invite à penser l'appropriation comme le contrôle par l'individu de son environnement : « L'appropriation est un processus

psychologique fondamental d'action et d'intervention sur un espace pour le transformer et le personnaliser » (Aubert-Gamet, 1996). Pour s'approprier un espace les individus utilisent, manipulent et agissent sur des objets physiques, des lieux, des idées (Kolenc, 2008). Selon Fischer (1981) l'appropriation de l'espace se fait à travers des opérations de nidification (se créer un chez-soi), de marquage (aménager l'espace) et d'exploration de l'environnement. Ces travaux vont être repris en marketing des services et en marketing expérientiel. En marketing des services, l'approche de l'appropriation par la psychologie sociale contribue à comprendre la création de l'expérience de magasinage comme un processus dialectique de co-production entre le distributeur et le consommateur (Bonnin, 2002, 2006). L'appropriation ne résulte plus uniquement des actions de l'individu sur l'environnement mais aussi de la façon dont l'environnement interagit avec l'individu consommateur (Aubert-Gamet, 1996, 1997). En marketing expérientiel, les travaux de Fischer sont utilisés pour comprendre l'appropriation du cadre expérientiel comme un prérequis à l'immersion du consommateur dans l'expérience de consommation (Carù et Cova, 2003, 2006, Ladwein, 2002). L'appropriation peut aussi s'expliquer par la ritualisation de l'expérience mise en place dans le lieu de consommation (Badot et Lemoine, 2009).

La seconde approche, en parallèle des approches psychosociales, est une approche qualifiée de plus philosophique du concept d'appropriation (Brunel et Roux, 206), qui trouve ses racines dans l'œuvre de Jean-Paul Sartre (1943). Avoir un objet, nous dit Sartre, c'est *être* à travers lui : « Le lien de possession est un lien interne *d'être* » (Sartre, 1943, p.634). Ainsi, posséder, c'est faire sien quelque chose. Par ce processus l'objet devient soi. Il existe selon Sartre plusieurs moyens de faire sien quelque chose, qui sont la création, le contrôle et la connaissance. Ces moyens constituent autant de *pratiques* d'appropriation. Ces travaux sont adaptés en marketing pour expliquer la construction identitaire du consommateur au travers de ses possessions (Belk, 1988). Les objets possédés sont appropriés au travers de la connaissance,

du contrôle, de la création, et de la contamination, c'est-à-dire l'appropriation involontaire (Argo, Dahl et Morales, 2006). Ces objets constituent alors le « soi étendu » de l'individu (Belk, 1988). Cette approche de l'appropriation a permis de comprendre l'appropriation des services hospitaliers par les patients (Mifsud et al., 2015), ou bien encore la consommation alimentaire (Brunel et Roux, 2006 ; Brunel, Gallen et Roux, 2013).

Ces différentes approches ne sont pas contradictoires. La première apparaît plus appropriée dans le cadre de l'étude des pratiques d'appropriation de l'espace. La seconde apparaît plus adaptée à l'étude de l'appropriation des objets. Adopter deux approches complémentaires apporte à ce travail doctoral une triangulation théorique du concept d'appropriation.

DESIGN

25 ans après le *Que Sais-je : Le Design Industriel* de Denis Schulmann (1991), est sorti le premier « Que sais-je » consacré uniquement au design (*Que Sais-je : Le Design, 2015, PUF)*, écrit par Stéphane Vial. Qu'il ait fallu attendre 2015 pour que ce livre voit le jour est une illustration d'un design souvent négligé en tant que discipline. En marketing, le design est fréquemment perçu comme un moyen permettant d'adapter visuellement l'offre aux désirs des consommateurs (Beverland et Farrely, 2011 ; Bloch, 1995 ; Heilbrunn, 2006). Or, le design tel que considéré par ses actuels penseurs est à séparer de la simple esthétique d'un artefact. Il s'agit d'une véritable discipline scientifique, comportant différents courants (user design, design des services, design industriel, design thinking, design culture, etc.), légitimée par plusieurs journaux scientifiques (Design Issues, Design Studies) et s'intéressant à des thèmes allant de la production à la distribution, en passant par à la consommation de produits ou de services (Julier, 2000/2014). Pour certains, le design est envisagé comme une discipline permettant de résoudre des problèmes complexes impliquant des relations entre des objets ou

services et des êtres humains dans des contextes divers (Buchanan, 1992, 2001). Aujourd'hui de nombreux designers ne savent pas particulièrement dessiner, mais apportent de nouvelles façons de penser certains problèmes et de concevoir des solutions. En ce sens, le design nous invite à réfléchir aux objets et à leurs utilisations, aux actions et relations qu'ils entretiennent afin d'apporter des solutions à des problèmes complexes (Buchanan, 1992 ; Dubuisson et Hennion, 1996 ; Simon, 1973). En conséquence, l'intérêt du marketing à s'allier aux recherches en design apparaît comme évident. Pourtant, bien qu'en hausse, les recherches alliant design et marketing restent peu nombreuses (Luchs et Swan, 2011). Pourtant, la recherche en comportement du consommateur s'intéresse aux relations que les consommateurs établissent avec les produits, et la discipline du design peut s'avérer être un précieux allier dans cette optique. Ainsi, la combinaison de recherches en design et marketing peut apporter un éclairage nouveau sur des situations de consommations complexes, à l'instar de la consommation par l'accès.

Dans ce travail de thèse, nous nous intéressons précisément à la discipline du design en tant qu'éclaireur de la relation consommateur-objet dans le cadre de la consommation par l'accès. Au fil des travaux présentés dans cette thèse, notre conception du design évolue. Dans un premier temps, nous nous attachons à étudier comment des éléments précis de design permettent l'établissement de pratiques d'appropriation (Essai 1). Le design ici est envisagé comme un moyen de créer une relation consommateur-objet ; c'est un connecteur. Dans un deuxième temps, le design de l'objet en soi s'efface pour laisser place à l'étude des pratiques que le consommateur engage envers l'objet dans un espace donné (Essai 2). Le design ici est à trouver dans une perspective matérielle de l'étude des pratiques d'appropriation. Par la suite, le design est envisagé en amont de l'usage, lorsqu'il est entre les mains des fournisseurs de services (Essai 3). Nous comparons alors deux approches de gestion du design afin d'évaluer leur capacité à générer des pratiques d'appropriation. Enfin, c'est à la pratique du design elle-

même que nous nous intéressons (Essai 4). Au travers d'un travail collaboratif avec un designer, nous avons tenté de comprendre comment un designer s'y prendrait pour favoriser l'appropriation d'un lieu partagé.

Tableau 1. Perspectives adoptées sur le design

Essai	Perspective
Essai I	Les éléments de design du produit et du service jouent le rôle de connecteur vers l'appropriation du consommateur
Essai II	Perspective matérielle de l'étude de la relation consommateur-objet-espace
Essai III	Comparaison de deux perspectives différentes du design et de leurs capacités à générer des pratiques d'appropriation
Essai IV	Perspective pratique du designer sur les pratiques d'appropriation

PROBLEMATIQUE

L'augmentation des offres de services de consommation par l'accès (Bardhi et Eckhardt, 2012 ; Belk, 2010 ; Lamberton et Rose, 2012 ; Lawson et al., 2016) nous invitent à repenser la relation que les consommateurs entretiennent avec les objets dans ce cadre de consommation. Dans cette perspective, l'accumulation et la possession des biens utilisés n'est pas centrale à la consommation (Bardhi et Eckhardt, 2015). Les consommateurs utilisent ces services pour diverses raisons (Lawson et. al, 2016), la principale étant de réduire les couts liés à la consommation (Bardhi et Eckhardt, 2012 ; Lamberton et Rose, 2012). Selon ces travaux, les

consommateurs qui souscrivent à ces services ne cherchent pas à retenir de valeur au-delà de la valeur utilitaire, ils ne créent pas de lien avec l'offre de produit ou de service. Cependant, nous avons vu que l'appropriation était une composante fondamentale du comportement humain (Fischer, 1981) et qu'elle pouvait s'envisager sous l'angle des pratiques. Nous tenons donc ici un problème complexe, qui se synthétise dans les mots « appropriation d'un objet en accès ». Dans cette thèse, nous nous attachons donc à comprendre le concept d'appropriation par le consommateur dans le cadre de la consommation par l'accès. Nous allons nous intéresser à cette question sous trois angles : le « quoi », le « comment » et le « pourquoi ». Notre problématique pose la question du « quoi », et se présente comme suit :

Comment définir l'appropriation, du point de vue du consommateur, dans le cadre de la consommation par l'accès ?

Cette problématique se décline en deux questions de recherches, qui traitent à leur tour du « pourquoi » et du « comment » :

- Quelle est la valeur de l'appropriation pour le consommateur dans la consommation par l'accès ?
- Quels facteurs facilitent l'appropriation dans la consommation par l'accès ?

Afin de répondre à ces questions de recherches, ce travail doctoral adopte une structure différente des thèses dites « en monographie ». Le corps de la thèse est structuré en quatre articles de recherche. Chaque article possède sa propre question de recherche et présente un terrain ou une méthodologie différente. Avant de présenter un résumé de chacun des articles, le tableau suivant (Tableau 2) apporte un éclairage quant aux différences principales de chaque article. Adopter une perspective « sur papier » nous permet de triangulariser à la fois les

théories, les terrains et les méthodologies avec lesquels nous abordons le sujet de la thèse (Decrop, 1999 ; Denzin, 1978).

Tableau 2. Critères de triangulation

Essai	Essai I	Essai II	Essai III	Essai IV
Titre	**Le design et la création de significations dans les pratiques de consommation par l'accès**	**Activer la valeur périphérique d'une offre de service basée sur l'accès au travers de l'appropriation : le cas d'un espace de coworking**	**L'influence de l'approche design adoptée sur les modes d'appropriation : une étude comparative de deux cas de consommation par l'accès**	**L'appropriation dans un service basé sur l'accès vue par la pratique du design**
Terrain de l'étude	Autopartage : Autolib', Paris	Espace de Coworking : le Sensespace, Paris	Comparaison de l'autopartage et du coworking	Espace de coworking : le Sensespace, Paris
Théorie adoptée	Approche philosophique de l'appropriation de l'objet (Sartre, 1943 ; Belk, 1988)	Approche par la psychologie sociale de l'environnement de l'appropriation de l'espace (Fischer, 1989, 1992, 2011)	Design Thinking et Design as Practice	La pratique du design
Méthodologie	Entretiens avec des consommateurs	Observation participante	Comparaison d'étude de cas	Processus de design
Type de données collectées	Transcriptions des entretiens, court récit d'observation, quelques photos et vidéos	Notes de terrain, transcriptions d'entretiens, photos, vidéos, données secondaires	Comparaison des deux ensembles précédents ; données secondaires	Notes d'observation, dessins, personae, cartographie, scénarios

RESUME DES ARTICLES

ESSAI 1 : LE DESIGN ET LA CREATION DE PRATIQUES SIGNIFIANTES POUR LE CONSOMMATEUR DANS LE CADRE DE LA CONSOMMATION PAR L'ACCES

Dans cet article, nous nous intéressons au phénomène de l'autopartage. Nous nous attachons à comprendre le rôle du design de la voiture et du service dans la création d'une relation porteuse de sens pour le consommateur. La littérature sur la consommation par l'accès indique que les consommateurs de ce type de service n'essaient pas de construire une relation avec les objets qu'ils partagent (Bardhi et Eckhardt, 2012). Particulièrement, Bardhi et Eckhardt (2012) étudient le service d'aupartage en boucle Zipcar à Boston. Elles trouvent que les consommateurs utilisent ce service pour des raisons principalement utilitaires. Ceux-ci ne cherchent pas à créer d'expérience de consommation, ne retirent pas de valeur de signe de cette consommation (Baudrillard, 1968). Les auteurs expliquent cela notamment par le manque d'identification aux voitures. L'accès à durée limitée, l'anonymat de l'usage et la médiation par le marché empêche les utilisateurs d'incorporer ces véhicules dans leur soi étendu (Bardhi et Eckhardt, 2012 ; Belk, 1988).

Quel est alors le rôle du design dans la restauration de sens dans la relation consommateur-objet dans ce contexte ? Nous tachons de répondre à cette question de recherche au travers de l'étude des pratiques d'appropriation. Du Gay et al. (1997/2013) ont développé le concept de la chaine du sens : ils observent les liens entre le design et la création de nouvelles identités du consommateur. Au travers de l'exemple du Walkman®, ils montrent que les designers, qui

proposent de nouveaux objets, peuvent influencer le mouvement des pratiques culturelles. Celles-ci à leur tour changent les représentations que les consommateurs se font de ces objets. De nouvelles représentations amènent de nouvelles significations sur lesquelles les consommateurs s'appuient pour créer de nouvelles identités. Ils expliquent ainsi l'émergence de l'identité du « jeune nomade urbain » suite à l'implémentation du Walkman. Nous adoptons cette perspective pour comprendre le rôle joué par le design dans la création de pratiques d'appropriation des voitures partagées.

Le terrain d'étude de cet article est le système parisien d'autopartage Autolib'. Au travers d'entretiens avec des consommateurs de ce service, nous montrons le rôle d'éléments de design dans la création de pratiques d'appropriation (Selon Sartre, 1943 et Belk, 1988). Nous montrons que le moteur électrique et la boîte de vitesse automatique favorisent la prise en main du véhicule et renforcent un sentiment de contrôle. L'uniformité du modèle de voiture proposée, la Bluecar, ainsi que la personnalisation induite par l'ordinateur de bord permet aux consommateurs de connaître les véhicules et d'avoir l'impression de toujours monter dans la même voiture. Enfin, le design du service force les consommateurs à s'impliquer physiquement dans le fonctionnement du service dans une pratique de co-création. Le contrôle, la connaissance et la création, ici permises par le design des voitures et du service, sont des pratiques d'appropriation (Sartre, 1943). Au travers de ces pratiques les consommateurs créent des significations autour des voitures et du service Autolib'. Ainsi, une emphase sur le design des objets permet de recréer des pratiques d'appropriation signifiantes avec les objets dans le cadre de la consommation par l'accès.

ESSAI 2 : ACTIVER LA VALEUR PERIPHERIQUE DES SERVICES DE CONSOMMATION PAR L'ACCES GRACE A L'APPROPRIATION : LE CAS D'UN ESPACE DE COWORKING

Les espaces de coworking sont des offres de services basées sur le mode de l'accès qui offrent à des travailleurs indépendants, la plupart entrepreneurs ou employés de start-ups, un lieu de travail (Spinuzzi, 2012). Un tarif à l'heure, à la journée, ou au mois est fixé en échange duquel les consommateurs bénéficient d'un accès à un espace de travail. L'offre totale de service des espaces de coworking comporte deux parties, une offre centrale et une offre périphérique. L'offre centrale est l'accès à un espace de travail. Les consommateurs de ces espaces ont accès à un bureau, du café, des toilettes, une photocopieuse, etc. Mais ce n'est pas la seule chose que ces espaces offrent. Ils permettent aussi à leurs coworkeurs d'accéder à un réseau socioprofessionnel d'entrepreneurs (Blein, 2016). La construction d'un réseau professionnel est cruciale pour un entrepreneur. Celui-ci lui permet d'entrer dans un système d'échange de bons procédés (Blein, 2016), de bénéficier d'un système d'innovation ouverte (Fabbri et Charue-Duboc, 2016) ou de rencontres intéressantes (Waber, Magnolfi et Lindsay, 2014). Ce système d'échange constitue une offre des espaces de coworking que l'on qualifie de périphérique, par opposition au lieu de travail, l'offre centrale.

Afin d'accéder à l'espace de travail, les consommateurs doivent débourser une certaine somme (entre 300 et 450 euros par mois). L'accès au réseau d'entrepreneur n'est pas aussi simple. Les mécanismes au travers desquels les coworkeurs accèdent à et bénéficient de ce réseau sont encore peu connus. Pour cette raison, cet article propose une réponse à la question de recherche suivante : comment les consommateurs activent-ils l'offre périphérique de valeur d'un espace

de coworking ? Nous proposons la notion d'appropriation comme moyen d'activation de cette proposition de valeur.

La première partie de cet article propose une revue de littérature autour de la notion d'espace de coworking et d'appropriation. Nous présentons les récents travaux effectués sur ces espaces afin d'explorer la nature des liens unissant les coworkeurs (i.e., Blein, 2016 ; Fabbri et Charue-Duboc, 2016 ; Toussaint, 2016 ; Suire, 2013). Nous détaillons par la suite les différentes perspectives s'intéressant à la notion d'appropriation. Nous détaillons l'appropriation selon l'approche adoptée de la psychologie sociale de l'environnement (Aubert-Gamet, 1997 ; Fischer, 1981, 1989, 1992, 2011).

Sur un plan méthodologique, l'étude consiste en journées d'observations participantes, s'étalant sur une année, au sein d'un espace de coworking parisien appelé le Sensespace. Le Sensespace, qui héberge environ 70 coworkeurs, est un espace à vocation solidaire et sociale. Environ deux tiers de ses coworkeurs font partie de cette économie solidaire. Les données collectées consistent en des notes de terrain, des entretiens courts avec des coworkeurs et des managers de l'espace, des photos, quelques vidéos et des données secondaires reçues des managers de l'espace.

La première partie des résultats de l'étude nous permet d'identifier trois étapes d'appropriation au travers desquelles les coworkeurs accèdent à et constituent un réseau d'entrepreneurs. Premièrement, les coworkeurs s'ancrent matériellement dans l'espace de travail partagé grâce à des pratiques d'appropriation individuelles (la nidification et le marquage, l'établissement de routines). Dans un second temps, les coworkeurs s'ouvrent aux autres par le don de nourriture ou de temps, dans une optique de don généralisé. Enfin, quatre pratiques d'appropriation collectives sont identifiées, au travers desquelles les coworkeurs attribuent des significations à

l'espace et bénéficient de la valeur du réseau d'entrepreneurs : la participation, le jeu, la ritualisation et la construction.

La seconde partie des résultats s'attache à comprendre l'ambiguïté des significations existantes dans l'espace. La dualité de l'offre et la recherche d'un réseau entraine un mélange de pratiques domestiques, sociales et professionnelles dans un même espace. Les significations attachées à l'espace sont multiples et leurs frontières sont troubles.

La dernière partie discute de la nature et de la valeur de l'appropriation dans un espace de coworking. L'appropriation apparaît ici comme un ensemble de pratiques permettant l'activation de la valeur périphérique de l'offre de service basé sur l'accès. La nature des liens unissant les coworkeurs est discutée. Enfin nous proposons des voies de recherches portant sur le design d'espace de travail flexible et l'appropriation dans d'autres services basés sur l'accès.

ESSAI 3 : DIFFERENTES APPROCHES DU DESIGN ET LEUR INFLUENCE SUR L'APPROPRIATION PAR LE CONSOMMATEUR : UNE COMPARAISON DE DEUX CAS DE LA CONSOMMATION PAR L'ACCES.

Nous explorons dans cet article l'impact de deux perspectives de design différentes sur les pratiques d'appropriation. Nous nous attachons à comprendre le lien entre ce qu'il se passe en amont de l'offre de service, lors du processus de design, et en aval lorsque le consommateur fait l'usage du service. Nous explorons les manières de designer une offre de services qui permettent l'appropriation dans une ère de post-propriété (Tonkinwise, 2016). Plus particulièrement, notre question de recherche se présente comme suit : quelle est l'influence

du mode de design sur l'appropriation des éléments matériels d'une offre de service par l'accès ?

Pour ce faire, nous comparons deux contextes de consommation par l'accès : un système d'autopartage (Autolib' à Paris) et un espace de coworking (Le Sensespace à Paris). Dans le même temps, nous comparons deux processus de design différents : le Design Thinking avec Autolib' (Brown, 2008) et le Design comme Pratique avec le Sensespace (*Design as Practice*, Kimbell, 2011, 2012). Le Design Thinking met en avant le design comme discipline permettant d'apporter des solutions à des problèmes complexes (ici, designer une voiture en partage). Le Design comme Pratique diffère en comprenant le design comme un ensemble de pratiques enracinées dans un champ spécifique. Dans cette perspective, les consommateurs sont aussi acteurs du design. De plus, les deux cas diffèrent quant à la rigidité matérielle de leur offre ainsi qu'à la créativité qu'ils permettent à leurs consommateurs d'exprimer.

Nous basons notre travail sur le cadre théorique proposé par Véronique Aubert-Gamet (1997) sur l'appropriation des services. Selon elle, plus l'environnement matériel de l'offre de service est rigide, moins le consommateur se l'appropriera. L'appropriation, argumente-t-elle, n'est possible que dans des cas ou la flexibilité matérielle et la créativité permise au consommateur sont élevées. Nous proposons une mise à jour de ce cadre en intégrant le rôle du design, dans des contextes de consommation par l'accès. Nous montrons qu'un niveau élevé de contrôle de l'environnement matériel n'entraine pas forcément une absence d'appropriation. De même, nous avançons que la combinaison flexibilité matérielle/créativité du consommateur ne facilite pas toujours l'appropriation. En résumé, nous mettons en lumière le rôle du de la pratique managériale du design dans la facilitation des pratiques l'appropriation.

ESSAI 4 : LA PERSPECTIVE D'UN DESIGNER SUR LES PRATIQUES D'APPROPRIATION DANS L'ACCES

Cet article diffère des précédent dans le sens où il ne s'agit par d'un papier académique à proprement parler. Nous proposons à l'inverse d'explorer la façon suivant laquelle un designer tenterait de répondre à la question de l'appropriation dans la consommation par l'accès. Pour ce faire, nous avons travaillé avec un designer dans un espace de coworking, le Sensespace à Paris. Cet essai rapporte le travail effectué tout au long du processus de design. Le but du travail était de designer des artefacts qui permettrait de faciliter l'appropriation de l'espace de coworking.

Nous avons suivi un processus en cinq étapes : la création de personae, le développement d'une cartographie de l'espace, l'écriture de scénarii, un brainstorm avec les éléments précédents afin de développer des solutions et un bouclage théorique sur les pratiques identifiées. Nous présentons le déroulement de chaque étape.

La première série de solutions avancées se concentre sur des moyens d'améliorer l'existant. Le processus a révélé ici des pratiques de « trimballage », de co-construction et la prévalence de l'oral comme moyen de communication. La seconde série d'artefact propose de nouveaux objets permettant d'aider les coworkers à s'approprier les bureaux flottants. Ces artefacts facilitent notamment les pratiques de nidification et de marquage. La création de ces objets a révélé la difficulté que les coworkers ont parfois à surmonter la norme du tout-partage dans l'espace de coworking.

Pour conclure, cet essai offre une perspective différente sur la question de l'appropriation dans l'accès. Il apporte des contributions managériales concrètes grâce aux artefacts développés. De

plus, cette méthode a mis en lumière des pratiques non révélées auparavant dans l'espace de coworking.

PRESENTATION DES CONTRIBUTIONS DE LA THESE

Au travers des quatre essais résumés précédemment, ce travail de thèse avait pour but de répondre à la question de recherche générale suivante : Comment définir l'appropriation, du point de vue du consommateur, dans le cadre de la consommation par l'accès ? Pour rappel, nous avions décliné cette problématique en deux questions de recherches : Quelle est la valeur de l'appropriation pour le consommateur dans la consommation par l'accès ? Quels facteurs facilitent l'appropriation dans la consommation par l'accès ?

Nous allons à présent offrir une réponse à ces questions en avançant les contributions théoriques et managériales principales de ce travail.

CONTRIBUTIONS THEORIQUES

DEFINITION DE L'APPROPRIATION DANS L'ACCES

L'appropriation dans le cadre de la consommation ne peut pas se réduire à « faire sien » l'objet de consommation. Bien au contraire, ce mode de consommation permet aux consommateurs de s'affranchir de la propriété (Bardhi et Eckhardt, 2012 ; Ozanne et Ballantine, 2010). Au contraire, nous avançons que l'appropriation dans l'accès est en lien avec l'idée de « faire sien » l'activité de consommation en soi. Nous nous basons sur les travaux de Fromm (1976) qui

distinguent deux modes d'existence : le mode d'être et le mode d'avoir. A première vue, de par sa proximité sémantique avec la notion de propriété, nous aurions tendance à rapprocher l'appropriation du mode d'avoir de l'existence. Le mode d'avoir contient les idées d'accumulation, de propriété, d'achat, de possession. Or, nous argumentons dans la discussion de la thèse que l'appropriation dans le cadre de la consommation par l'accès relèverait plutôt du mode d'être. Dans le mode d'être, les individus s'engagent dans des activités « non-aliénantes » et se définissent en tant que sujets de leurs actions. Il s'agit là d'un mode d'existence actif. Replacé dans le contexte de la consommation par l'accès, l'appropriation se situerait alors dans un mode de consommation actif. Les consommateurs qui s'approprient les objets partagés ne le font pas dans un but de possession. Au contraire, il s'agit de créer du sens (Essai 1) ou de favoriser le bien-être dans l'usage (Essai 2 et 3) au travers de pratiques. Nous définissons l'appropriation du consommateur dans le cadre de l'accès comme la création de significations (valeur de signe, valeur de lien, bien-être dans l'usage) grâce à un ensemble routiniers de pratiques entre les consommateurs et les éléments matériels de l'activité de consommation par l'accès.

EMERGENCE DE L'APPROPRIATION

Afin de comprendre comment envisager l'appropriation dans le cadre de l'accès, nous nous sommes penchés dans ce travail sur le rôle du design. Nous n'envisageons pas de définir une recette parfaite pour designer l'appropriation dans l'accès. En revanche, nous avons identifié des similarités dans les deux cas étudiés, mis en avant dans les articles de la thèse. Pour résumer, nous avançons deux éléments principaux permettant cette appropriation :

- *La possibilité d'établir des routines avec les éléments matériels du service* (les objets). La répétition de gestes, la création d'habitudes physiques entre le consommateur et l'objet permettent la création d'une certaine familiarité et d'un bien-être dans l'usage.
- *L'implication du consommateur par la pratique*. Dans les deux cas, c'était lorsque le consommateur s'investissait physiquement, qu'il *faisait* quelque chose, que l'appropriation pouvait émerger.

Nos travaux contribuent ainsi à la littérature dans le champ du design en apportant une compréhension du design d'objet utilisés par plusieurs usagers en accès.

VALEUR DE L'APPROPRIATION DANS L'ACCES

Au travers des deux premiers articles, nous apportons des éléments de réponse quant à la valeur de l'appropriation pour le consommateur de service en accès. Les théories de l'appropriation sur lesquels nous prenons appuie insistent sur l'appropriation comme moyen de construction de soi (Belk, 1988 ; Sartre, 1943) ou bien comme moyen de maitrise de l'espace (Fischer, 1989, 1981).

Le cas d'Autolib' et l'étude menée dans le premier article nous montrent qu'au travers de pratiques d'appropriation, les consommateurs attachent des significations à l'objet utilisé (ici, la voiture). Des phrases telles que « la voiture du futur » « tu voles » ou encore « la voiture des parisiens » nous amènent à penser que les consommateurs transfèrent à Autolib' une fonction sociale de signe (Baudrillard, 1968). Jean Baudrillard distingue deux fonctions de l'objet : la dénotation (fonction utilitaire de l'objet) et la connotation (fonction sociale de signe). Contrairement à Zipcar (dans Bardhi et Eckhardt, 2012), on trouve dans le cas d'Autolib' les deux fonctions. Ainsi, grâce à l'appropriation des voitures, permise par le design de celles-ci, les consommateurs perçoivent une valeur de signe.

Le cas du Sensespace nous montre la valeur des pratiques d'appropriation dans l'espace de coworking. Particulièrement, au travers de cet article, nous montrons comment au travers de l'appropriation les consommateurs accèdent à la valeur périphérique du service de coworking. Par des pratiques d'appropriation individuelles d'abord, puis collectives ensuite, les coworkers créent et bénéficient d'un réseau socio-professionnel d'entrepreneurs. Ce réseau leur permet d'échanger des informations, de tester leurs idées ou de partager des doutes. Ainsi, au travers de l'appropriation individuelle et collective de l'espace, les coworkers créent des liens interindividuels bénéfiques pour eux et leur business. Bernard Cova (1997) définit la valeur de lien d'un objet comme sa capacité à créer du lien social. Il apparaît alors que l'appropriation permet ici de libérer la valeur de lien des objets dans l'espace de coworking.

Ainsi, notre travail permet d'étendre la recherche sur le concept d'appropriation en montrant que dans le cas de la consommation par l'accès, l'appropriation crée pour le consommateur de la valeur de signe et de la valeur de lien.

CONTRIBUTIONS MANAGERIALES

Nous pensons que ce travail peut être bénéfique pour des entreprises du secteur de l'économie de l'accès. A ce titre, ces travaux ont été présentés à des managers des deux entreprises étudiées (Autolib' et le Sensespace) et ont reçu des retours positifs. Nous pensons qu'une réflexion sur l'appropriation de l'offre par les consommateurs peut être bénéfique à plusieurs niveaux : augmenter la fidélité à la marque, créer un bouche-à-oreille positif et surtout motiver les consommateurs à prendre soin de l'objet en partage, comme par exemple en reportant un dommage. Par ailleurs, les travaux sur l'expérience de consommation encouragent les marques à proposer des environnements marchands théâtraux, ludiques, expérientiels (Filser, 2002). Des marques comme L'Occitane ou Abercrombie and Fitch symbolisent bien ce courant. Or,

notre troisième article montre que les services de consommation par l'accès contiennent, de par leur nature fluide et en constante évolution, une part de flexibilité. Afin de permettre l'appropriation, nous encourageons donc les services par l'accès à offrir une certaine stabilité matérielle dans leur offre. C'est déjà le cas pour Autolib', avec les Bluecars. Pour les espaces de coworking, nous proposons dans l'article 4 la création d'artefacts permettant de re-créer un petit « mur » stable pour les coworkers.

En essayant de comprendre le rôle de l'appropriation pour les consommateurs de consommation par l'accès, ce travail doctoral offre donc plusieurs applications possibles aux compagnies de ce secteur.

LIMITES ET VOIES DE RECHERCHE

Ce travail de thèse comporte plusieurs limites. La principale limite provient du choix d'étudier deux types de services différents (autopartage et espace de coworking). Cela provoque des difficultés lors de la comparaison de ces cas (Essai 3) et empêche l'étude approfondie d'un phénomène unique (comme le coworking par exemple). Dans le futur, il serait intéressant de comparer plusieurs espaces de coworking au niveau de leur design et des pratiques qui en découlent.

Par ailleurs, les consommateurs étudiés dans cette thèse présentent tous un profil plutôt homogène de « jeune urbain aisé ». Dans le futur, nous souhaitons orienter nos recherches sur l'appropriation de services en accès par les populations moins aisées. En effet, l'appropriation par l'accès permet le bien-être dans l'usage qui, couplée à l'accès à des objets souvent chers à des prix plus bas (voiture, espace de travail), peut être bénéfique pour des consommateurs à faibles revenus.

Enfin, nous encourageons les recherches futures à étudier d'autres contextes de consommation par l'accès : les campings, les bibliothèques d'étude ou encore la colocation. La compagnie Airbnb offre dans ce sens un terrain intéressant pour l'étude des pratiques d'appropriation en accès : comment s'approprie-t-on le chez-soi des autres ?

CONCLUSION

Ce travail propose une exploration des méandres de l'appropriation par le consommateur, dans le cadre de l'économie de l'accès. Nous révélons le rôle que revêt l'appropriation dans la vie des consommateurs. Dans ce cadre, l'appropriation doit être clairement distincte des notions de possession et d'accumulation. Elle ne débouche pas sur la propriété, mais pousse au contraire les consommateurs à devenir acteurs de leurs expériences de consommation. Nous définissons l'appropriation du consommateur dans le cadre de l'accès comme la création de significations (valeur de signe, valeur de lien, bien-être dans l'usage) grâce à un ensemble routiniers de pratiques entre les consommateurs et les éléments matériels de l'activité de consommation par l'accès. Les consommateurs deviennent sujets de leurs activités de consommation. Le détour que ce travail prend par la recherche en design met en lumière le rôle des pratiques, artefacts, objets, et espaces dans ce mode d'existence active. Pour conclure, nous affirmons avec Cameron Tonkinwise, directeur du département design à la Carnegie Mellon University, dans l'un de ses récents projets, qu' :

« Il y a un espoir que le passage à l'usership [*jeu de mot entre ownership, propriété et user, usager*] post-industriel permette une société qui sera plus centrée sur le « faire », si ce n'est sur l'« être », plutôt que sur l'« avoir ». »

Nous pensons fortement que la recherche sur l'appropriation suit ce chemin en tentant de comprendre le bien-être des consommateurs dans ces modes « d'être » de consommation.

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GENERAL INTRODUCTION

The rise of the access economy has facilitated the possibility of usage without ownership. No more do we need to own a car to drive somewhere (ZipCar, Autolib', Uber), to own our clothes to go to a party (Curtsy), or to buy a country house to go on holidays (Airbnb, Couchsurfing).

In a recent study, PwC estimated that the value generated by platforms of the sharing economy amounted to 28 billion euros in 2015, and may reach 570 billion in 2025[3]. Between 2013 and 2015, the revenues of these platforms grew at the incredible pace of 80% and 97%. Even if growth slows down, this sector has a nice future ahead. In 2015, PwC estimated peer-to-peer transportations systems platforms to have generated the biggest revenues in the sharing economy sector.

Access economy is also disrupting the way we consume workspaces. Deskmag, an online coworking magazine, estimates that 2016 would be the year which will see 10 000 coworking spaces worldwide[4]. Rather than working at home[5], entrepreneurs invest these polyfunctional

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[3] http://www.pwc.co.uk/issues/megatrends/collisions/sharingeconomy/future-of-the-sharing-economy-in-europe-2016.html, consulted on December 5, 2016.

[4] http://www.deskmag.com/en/2016-forecast-global-coworking-survey-results, consulted on December 20, 2016

[5] http://www.deskmag.com/fr/les-membres-d-un-espace-de-coworking-524, consulted on December 20, 2016

spaces (Toussaint, 2016) to benefit from a professional and a social network (Fabbri and Charue-Duboc, 2016; Toussaint, 2016). The Research Group for Collaborative Spaces, a consortium of academics who study coworking spaces, hacker spaces and maker spaces in Europe, released their first White Paper on the topic, followed by the first RGCS symposium on December 16, 2016. They helped define controversies and paradoxes emerging through these disruptions in the workplace. One paradox of these collaborative spaces is the "social versus the economic orientation of both the city and the collaborative communities it can host" (p. 4).

This is a question often raised in discussion of the "sharing economy" or "collaborative consumption" (Botsman and Rogers, 2010). Celebratory discourses about third places (Oldenburg and Brisset, 1982; Suire, 2013, RGCS, 2016) or sharing (Belk, 2010) put the emphasis on the social and communal aspect of these new consumption modes. However, recent research contradict this view. Rather than to look for a feeling of community, consumers of these services or platforms do so for utilitarian reasons (Bardhi and Eckhardt, 2012). Bardhi and Eckhardt (2012) identify that the sharing economy is not about sharing at all[6]. Rather, they conceptualise this mode of consumption as access-based consumption, or access economy. Access are mediated transactions without transfer of ownership (Bardhi and Eckhardt, 2012; Eckhardt and Bardhi, 2016). Rather than buying, consumers pay a fee to use the product or service. This is the case for both car sharing and coworking spaces. The main value consumers

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[6] See also: https://hbr.org/2015/01/the-sharing-economy-isnt-about-sharing-at-all and http://blogs.wsj.com/accelerators/2014/05/07/myth-and-reality-in-the-share-economy/, consulted on December 20, 2016

look for and benefit from is the use value of the service (Bardhi and Eckhardt, 2012). They are driven to access mainly for utilitarian, cost-related reasons (Lamberton and Rose, 2012; Lawson, Gleim, Perren and Hwang, 2016).

The interest of consumer research for sharing (Belk, 2007, 2010), collaborative consumption (Belk, 2014a) or access-based consumption (Bardhi and Eckhardt, 2012; Chen, 2009; Lawson et al., 2016) is relatively recent. People getting together and sharing goods is not. Community living or neighbourhood sharing is not a new phenomenon (Price, 1975; Sahlins, 1972). The recent interest of consumer research for this phenomenon collides with a growth in those behaviours outside of the close circles of related consumers. Collaborative consumption was first coined to describe activities of joint consumption (Felson and Spaeth, 1978). Nowadays these acts of consumption are not necessarily joint nor collaborative (John, 2013). They involve consumers who live in different cities and who do not know each other: Airbnb is the most famous example. Access is often depicted as a liberating form of consumption as it frees the consumer from the domination of objects (Bardhi and Eckhardt, 2012) and even as a form of anti-consumption that allows consumers to express their rejection of the market (Ozanne and Ballantine, 2010). It is to be differentiated from sharing (Belk, 2010). Sharing is a non market-mediated type of access ruled by norms of reciprocity (Eckhardt and Bardhi, 2016).

Access products are not drawn away from the market to be domesticated (Epp and Price, 2010). Rather than being singularised, they are used and consumed on the marketplace directly. In some cases, however, the products of access are used daily. This is for instance the case for coworking spaces. In the case of car sharing too, the cars may be used several times a week, or even daily. These are products that are parts of consumers' everyday life. Hence, we believe that a certain relationship, observable in daily routines and practices, exists between consumers

and the objects or places they access. To be specific, we aim to observe the relationship of appropriation which may exist in access contexts.

The concept of appropriation seems to encompass all the characteristics of possessing, owning, having and accumulating. The definition of appropriation is rooted in common sense: actions enacted to make something, or somewhere, one's own (Sartre, 1943; Belk, 1988; Fischer, 1992, 2011). Making something 'mine' is, however, a meaningless goal in an access economy. The objects that are used and consumed are not to become anyone's own. Yet, these objects or spaces are used, manipulated, handled, touched and moved sometimes on daily basis. Everyday gestures and practices enacted with the objects are likely to create a consumer-object relationship. Do consumers make "theirs" things they don't own? And if so, how? What facilitates this relationship?

This introduction presents the general research question and the structure of the dissertation. First, we review the literature on collaborative consumption to differentiate it from access-based consumption. We then present discussions on consumer perceived value, appropriation, and design. Design research is introduced as a lens through which we observe consumer appropriation. We then define the general research question: What is consumer appropriation in access? We continue with a description of the organisation and conduct of this doctoral work (choice of contexts, access to the fields, methodological concerns). Finally, we provide extended abstracts of the four papers which constitute the body of this work.

LITERATURE EXCERPT

COLLABORATIVE CONSUMPTION, SHARING AND ACCESS

SHARING AND COLLABORATIVE CONSUMPTION

The terms collaborative consumption, sharing and access-based consumption are often used interchangeably. They do not however refer to the same activity of consumption. Collaborative consumption is the term that is most widely used in the media, to describe activities where "people participate in organized sharing, bartering, trading, renting, swapping, and collectives to get the same pleasures of ownership with reduced personal cost and burden, and lower environmental impact" (Botsman and Rogers, 2010). The authors divide collaborative consumption into three categories: product services systems, redistributive systems and collaborative lifestyles. Product service systems are about transforming a good into a service (Mont, 2002; Piscicelli, Cooper and Fisher, 2014). Car sharing falls into this category (Bardhi and Eckhardt, 2012; Jonsson, 2007; Katzev, 2003). John (2013) uses the term sharing economies of consumption to refer to collaborative consumption, and makes a distinction between sharing personal objects with others and accessing a third party good. Sharing is defined as "the act and process of distributing what is ours to others for their use and/or the act and process of receiving or taking something from others for our use" (Belk, 2007). Belk (2010) furthers this definition of sharing by comparing the phenomenon with gift-giving and market exchange. He distinguishes between sharing in, which happens in a close circle such as the family and sharing out which is when consumers are sharing outside of their extended selves (Belk, 1988). Car sharing for instance is identified as an instance of sharing out. Based on anthropological perspectives on gift-giving, Arnould and Rose (2015) offer a critique of Belk's

(2010) concept of sharing. They make the case that Belk's (2010) sharing fails to acknowledge the broader, social perspective of gift-giving. Belk (2010) remains in a dialectical view of gift-giving, motivated by direct reciprocity. Arnould and Rose (2015) propose an anti-utilitarian alternative to sharing, which they call mutuality or generalised exchange. Mutuality encompasses "action that entails the assumption that another party would act toward the first party in a similar, mutual, fashion if circumstances were reversed, as guaranteed by their mutual inscription in a common social frame, as kin, coworker, or colleague, for example, and vice versa, which is to say that such behaviour constructs that sociality" (Arnould and Rose, 2015, p. 14-15). Mutuality is gift-giving with the intention of receiving later, or that the receiver of the gift will give to another party. It is not necessarily altruistic. Acts of mutuality contribute to create common social frame between the giver and the receivers. Arnould and Rose's (2015) mutuality or Belk's (2010) sharing aim to understand consumption circulation practices outside of market-mediated exchange. Eckhardt and Bardhi (2016) conceptualise sharing as non-mediated access. Sharing practices, unlike access practices, are "embedded in social relationship" and "governed by community norms" (Eckhardt and Bardhi, 2016, p. 221).

ACCESS-BASED CONSUMPTION

Chen (2009) studies the difference in consuming possessed artwork with consuming artwork that consumers access at an exhibition. Chen proposes that access to experiential consumption could also offer consumers the possibility to build a relationship with object. She challenges the traditional view in marketing that we only create relationship with our possessions (Belk, 1988). She aims to understand the perceived values of an accessed exhibition. Her findings show that consumers can construct their sense of self in the context of access through "immaterial memories that enrich human sense and life experiences" (Chen, 2009, p. 938). Chen's findings are specific to aesthetic consumption. In day-to-day types of access such as

driving, consumers do not construct their sense of self through access (Bardhi and Eckhardt, 2012). Studying access practices in the context of car sharing, Bardhi and Eckhardt (2012) find that the main value that consumer look for in access is utilitarian. The experiential aspect of this type of access is meaningless to them. Users do not engage into practice to transform use value into sign value. Exchange systems which fall under access consumption have two characteristics. They are market-mediated and do not involve a transfer of ownership (Bardhi and Eckhardt, 2012). Bardhi and Eckhardt (2012) propose six dimensions on which types of access differ from one another (see table 1.

Table 3. Dimensions of access

Access Dimensions	Criterion for variation among access contexts
Temporality	- Duration of access: longitudinal (membership in a club) or short-term (renting a car or a hotel room) - Usage: hourly or long-term (car leasing)
Anonymity	- Level of interaction among users: anonymous, private or public, simultaneous. - Spatiality of the offering: close to home or not (users must travel to access the good)
Market Mediation	- For-profit (online borrowing, car sharing, home renting) - Non-for profit (peer-to-peer sharing)
Consumer Involvement	- Level of co-creation of the service
Type of Accessed Object	- Experiential or functional object - Material or digital
Political Consumerism	- Consumer choice as a political tool "to articulate and promote their ideological interests to society, business, and government." (Bardhi and Eckhardt, 2012)

The authors study the car sharing system Zipcar in the US. Based on Zipcar's model, they define car sharing as "longitudinal, frequently dormant access of limited duration; close to home and anonymous; market mediated; self-service; and based on a more functional and material object" (Bardhi and Eckhardt, 2012, p. 14).

In 2012, at about the same time as Bardhi and Eckhardt's access paper came out, Lamberton and Rose (2012) published their research on what they called "commercial sharing programs", which they define as "marketer-manager systems that provide customers with the opportunity to enjoy products benefits without ownership" (p. 109). They find that costs and the perceived benefits of "sharing" versus owning are the main drivers for consumer use of access system. Their findings also highlight that the perceived product scarcity greatly influences consumers' choice to use the access system. They introduce the idea that cost-related motivations only cannot explain consumers' choice of an access system. In addition, Lawson, Gleim, Perren and Hwang (2016) develop a typology of access consumers. They identify four consumer segments with varying disposition towards access: Fickle Floaters (mainly driven by price-reduction offered by access versus ownership), Premium Keepers (attracted to access as they seek variety and status), Conscious Materialists (environmentally conscious and attached to their possessions) and Change Seekers (variety seekers, not materialists).

These recent articles on access-based consumption are valuable as they highlight how different access is from sharing (Eckhardt and Bardhi 2016). Consumers are mainly driven to access for utilitarian, cost-related reasons. Lawson et al. (2016) show that even most non-cost-related reasons are self-oriented, such as variety seeking and status. Some consumers may be attracted to the environmental discourse around access, however no study has found this to be a primary motivation (Bardhi and Eckhardt, 2012; Lamberton and Rose, 2012; Lawson et. al, 2016).

Therefore, access-based consumption is not embedded in social dynamics. Its primary motivations are utilitarian.

CONSUMER PERCEIVED VALUE

Consumer value refers to the evaluation (i.e., the perceived benefit) of a product or service by a consumer or a group of consumers (Holbrook, 1999). Holbrook (1999) advances four facets of consumer value. First, value is interactive as it entails interactions between the consumer and the object of consumption. Second, value is relativistic; it involves comparison among products and varies across individuals and situations. Third, value is the expression of a preference. Finally, value is to be found in the experience of consumption rather than in the product itself (Holbrook and Hirschman, 1982). This last perspective highlights the crucial role of the service in creating value for consumers. Vargo and Lusch (2004) introduced the notion of co-creation of value as they developed the concept of service-dominant logic. Value was previously conceived as determined by the producer and embedded in a product (Slater, 1997). They oppose this view and argue that value is perceived by the consumer: it is value in use. The producer, in this perspective, is only able to make value propositions to consumers. It is the consumer who then creates the value from the value proposition of the producer. McColl-Kennedy et al. (2012) identify the practices that consumers do when they engage in value co-creation. They identify adapting, complying, partnering, managing teams and controlling as the main styles of consumer value co-creation practices. Therefore, value is not only created in exchange but also in use. Existing research on value in consumption have shown the different aspect of value: utility (Bardhi and Eckhardt, 2012; Zeithaml, 1988), hedonism (Hirschman and Holbrook, 1982; Chen, 2009), linking value (Cova, 1997), sign value (Barthes, 1957; Baudrillard, 1968).

Cova (1997) highlights the role of tribes in a postmodern era. Consumers' social links drastically diminished with the end of modern institutions and their quest for personal existence. For some, postmodernism is the prevalence of extreme individualism (Lipovetsky, 1983). Others, like Bauman (1992) defend that this extreme individualism is only a transition period, a late modernism, towards postmodernism. Cova (1997) argues that postmodern consumers look to re-build their social link in belonging to postmodern tribes. He develops the idea that consumers attach value to products or services depending on their ability to create social links. This is what Cova (1997) names the linking value of product and services. In stating that "the link is more important than the thing" (p.307), he affirms that objects have value in their ability to foster social links. Schau, Muniz and Arnould (2009) go further than Cova (1997). They acknowledge that communities create values for consumers (e.g. Muniz and O'Guinn, 2001) and aim to understand how this value is created. Their findings advance the role of practices to provide value to consumers via participation. They identify twelve common practices across communities through which consumers collectively derive value. They split these practices into four groups: impression management, social networking, community engagement and brand use. Their study highlights the role of practices in creating value. Marion (2013) advances that products gain or lose value with the evolution of practices. A tennis racquet, for instance, will have more value for those who practice tennis than for those who do not.

Scaraboto and Figueiredo (2016) move away from what they see as a consumer-centric perspective on value creation to adopt a circulation-centric perspective. Throughout the study of the consumer collaborative network Geocaching, they demonstrate how object circulation within the network creates value. They build on anthropological work (e.g. Malinowski, 1922; Munn, 1986) to understand how object acquire and register value when they move within

networks. Their research shows that value can be created systemically, not necessarily centrally managed or co-created. Objects create value as they circulate through the network.

VALUE IN ACCESS

Chen (2009) demonstrates that in experiential types of access (such as, in her case, an art exhibition), consumers can benefit from experiential and hedonic value. In contrast, consumers of access-based services based on a material object mainly look for cost-related, utilitarian benefits (Bardhi and Eckhardt, 2012; Lamberton and Rose, 2012; Lawson et al., 2016). This idea contradicts a common depiction of collaborative consumption which, by offering ecological or socially-oriented practices, would provide consumers with value beyond utility (Belk, 2010). Bardhi and Eckhardt (2012) argue that self-motivations prevail in access-based consumption. They deconstruct the relationship consumers build with the accessed material objects: consumers avoid identification with the accessed objects. This relationship appears as a symbol of the use value they seek. Their findings highlight a dual value perception in access: functionality and utility drive consumers towards access, yet, the society at large mainly attach sign value to these services.

APPROPRIATION

DEFINITIONS AND PERSPECTIVES

This dissertation studies the consumer-object relationship in different access contexts. We wish to study a specific relationship, that of appropriation. In the French Encyclopaedia Universalis, Rouhette notes that appropriation is a "general feeling", certified since the Palaeolithic period by "engravings made on bones weapons". The etymology of appropriation stems from the Latin

word *Appropriare* which meant "to make something own". *Appropriare* itself derives from the Latin word *propius*. *Propius* meant "that which we cannot share with others, own" (Le Robert, 1995). From this etymological perspective, consumer appropriation of objects in access-based consumption seems paradoxical.

Appropriation is a concept that contains different meanings depending on the context in which it is used. For musicians, appropriation refers to the borrowing of another musician's elements in the creation of a new piece (Born and Hesmondhalgh, 2000). This concept is close to the anthropological concept of cultural appropriation (cultural borrowing), which is closely related to assimilation. Cultural appropriation is the adoption of elements of a different culture (Ziff and Rao, 1997). Science and technology studies look at appropriation in relation to the adoption of new technology (Silverstone and Haddon, 1996). Appropriation encompasses the actions users undertake to integrate the objects in the home (Silverstone and Haddon, 1996; Silverstone and Morley, 1992). Finally, in consumer research, appropriation refers to actions through which consumers make something theirs the objects of consumption: possessions (Belk, 1988; Pierce, Kostova and Dirks, 2001), video games (Kolenc, 2008), music (Chaney, 2007), stores (Aubert-Gamet, 1997; Bonnin, 2002), second-hand objects (Dehling, 2013), experiences (Carù and Cova, 2006) or services (Mifsud, Cases and N'Goala, 2015). Özçağlar-Toulouse and Cova (2010) note that the study of appropriation is a specificity of the French Consumer Culture Theory movement. It emerged with Aubert-Gamet's (1997) work on service appropriation and moved to the appropriation of experience (Carù and Cova, 2003, 2006; Bonnin, 2002, 2006; Ladwein, 2003). Appropriation is defined as a necessary mean to access the consumption experience (Özçağlar-Toulouse and Cova, 2010). Outside of France, the authors note that this concept remains confined to re-appropriation of advertising meanings (Ritson and Elliott, 1999) and fashion image (Thompson and Haytko, 1997).

We identify two different theoretical perspectives on consumer appropriation. The first one is somewhat more philosophical and relies on the work done by French philosopher Jean-Paul Sartre, mostly in his 1943's book *Being and Nothingness*. For Sartre (1943), appropriation, the will to *have* an object, is a representation of the will to *be* in relationship with this object, to be connected. Behind having behaviours are wills of being. Making sense of objects through appropriation thus encompasses a fundamental dimension for self-identification. He identifies three "having modes": knowing, controlling and creating. Later, Belk (1988) then Pierce et al. (2001) applied these having modes, or ways of having, to their respective work on object incorporation to the self and psychological ownership. Mifsud et al. (2015) build on this view to develop a framework for service appropriation in the health sector. This perspective has also been used to understand food consumption experience (Brunel and Roux, 2006; Brunel, Gallen and Roux, 2013).

The second perspective emerges on work within the sociopsychology of the environment and is more attached to understand space appropriation. This perspective has been theorised mainly by French sociopsychologist Gustave-Nicolas Fischer (1989, 1992, 2011). To Fischer appropriation is a set of interventions on a place by an individual, or group of individuals, to personalise it. Like Sartre (1943), Fischer identifies specific practices through which consumers perform appropriation: personalisation, stamping (1992), exploration and nesting (1989, 2011). In consumer research, this perspective has influenced work on store appropriation (Aubert-Gamet, 1997; Bonnin, 2002, 2006), consumption experience (Carù and Cova, 2003, 2006; Ladwein, 2002), commercial places attachment (Debenedetti, Oppewal and Arsel, 2014) and shopping experience (Scordel, 2015).

In this dissertation, we build on both perspectives on appropriation. We show that consumer appropriation is a concept which explains more than how consumers make something theirs. It

is about feeling in harmony or creating a sense of wellbeing with the object or the service consumers use (Proshansky, 1976). We explore the development of such a sense of wellbeing with objects or places that consumers access. Our aim is to understand how consumer appropriation emerges within access contexts and what is its value. Consumer appropriation is a consumer-object relationship; we thus build on design research to understand the potential role and value of the object within this relationship.

OF UNDERSTANDING APPROPRIATION IN ACCESS

Appropriation of objects and places is a consumer-object relationship that is very much impacted by access. Less singularisation and less psychological ownership are characteristics of a liquid consumption mode (Bardhi and Eckhardt, 2015). In this consumption mode, the accessed object has low relevance to the self; consumers use them for their utilitarian value. Car sharing users do not build a relationship with the cars: they do not integrate them to their sense of self, they do not build sign value (Bardhi and Eckhardt, 2012). The relationship with accessed cars is mainly utilitarian. There is no identification with or no appropriation of the accessed object. Studying appropriation in the contexts of access-based consumption can seem paradoxical. After all, consumers who use access-based systems look for utility and embrace the monetary exchange system for what it is (Bardhi and Eckhardt, 2012, 2015). Why would consumers need appropriation if all they look for is the use value of such services? What this work intends to show is that appropriation is something consumers do when confronted to a material environment which gives them the ability to do so. Rather than being a conscious cognitive process ("I am going to psychologically own this car to create sign value"), we see appropriation as sets of semi-conscious, routinized practices. Through these practices consumers develop emotional attachment towards an object (Essay I) or a sense of wellbeing within a place (Essay II). With that in mind, it appears crucial to view the material environment

with scrutiny to understand what renders these practices actionable (Essay III). Design research, towards which we now turn, helps us doing so.

THE DESIGN PERSPECTIVE

DESIGN AND MARKETING

Marketing has a tradition of using design to improve objects visually and to make them more attractive to consumers (Heilbrunn, 2006). Heilbrunn (2006) deplores that marketing has replaced objects with products. Products are objects that are delimited, tamed. Their effects are determined. Objects on the contrary oppose a resistance. They exist independently of ourselves, in front of us[7]. Designers, in Heilbrunn's (2006) own words, are those who "express this violent taste for objects" (p. 390). Design thrives on that resistance. Marketing on the opposite aims to reduce object's resistance by adapting it to consumers' expressed tastes and desires (Bloch, 1995). In this perspective, design and marketing are opposed in their project for objects. Design aims to explore objects' own nature whereas marketing aims to domesticate them (Heilbrunn, 2006).

Research in marketing which focus on design mainly focus on the form and function of a product's design (Luchs and Swan, 2011). Luchs and Swan (2011) study "the emergence of

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[7] The word object derives from the Latin word *objectus (from ob: in front and jacere: to throw)*: "to throw, or to put before or against". See: https://en.wikipedia.org/wiki/Object_(philosophy)#Etymology and http://www.universalis.fr/encyclopedie/objet/

product design as a field of marketing inquiry". They identify three main topics of product design research in marketing since 1995: context and strategy, product design process (innovation and product development) and consequences. Consequences is the most consumer-oriented topic, where research focus on the impact of product design on consumer behaviour (i.e., choice, aesthetic evaluation). Studies have investigated the impact of cultural differences on consumers' response to brand visual cues (Pittard, Ewing and Jevons, 2007; Woo Jun and Lee, 2007). Others have focused on individual differences aesthetic orientations (Holbrook, 1986). Further studies attempted to define optimal designs for consumers. In that regard, Hung and Chen (2009) define the optimal level of novelty that a product should adopt to be aesthetically attractive: they encourage designers to design moderately novel products. Packaging is another field of research: authors encourage brands to design holistic (i.e., simplified) packaging to create consistent brand impressions (Orth and Malkewitz, 2008); or to combine haptic and visual cues to enhance brand evaluation (Littel and Orth, 2013).

The previous studies illustrate what Heilbrunn (2006) meant when he wrote that marketing aims to tame the objects. There would not be much design if designers listened to research encouraging them to reduce novelty and to adapt to consumers' desire. Whether Henri Ford uttered the famous phrase "If I asked people what they wanted, they would have said faster horses" or not[8], it remains true that marketing and design seem to have opposing goals (Beverland and Farrely, 2011). Consumer research offers a narrow view of design an aesthetic tool to develop products that are better adapted to consumers' needs (Beverland and Farrely, 2011; Bloch, 1995). Even design-focussed management research view design as visual tool

[8] https://hbr.org/2011/08/henry-ford-never-said-the-fast, consulted on December 15

when it comes to consumer research: "how should we appear, through design, to our customer in order to achieve our vision?" (Borja de Mozota, 2006, p. 47).

On the opposite, the discipline of services marketing seems to have integrated design beyond visual aesthetic. Cova (2004) defines three acceptations of design in services: design of the physical element, design of the experience and design of values. Services design go beyond visual aesthetics as they integrate consumers as participants (Vargo and Lusch, 2004). While services are interested in the offering, the customer and the process, design focuses on the thing, the user and the use (Cova, 2004; Dubuisson and Hennion, 1996). The two therefore are very close as they aim towards the creation of value-in-use (Ballantyne and Varey, 2006).

DESIGN AS PROJECT

The history of design often begins with the history of marketing, during the industrial revolution (Volle, 2011). However, Vial (2010, 2015) finds the roots of design in the history of the architectural plan. Fillippo Brunelleschi, architect of the Duomo of the Cattedrale di Santa Maria del Fiore in Florence, invented the architectural plan during the first half of the *Quattrocento*. His goal was to separate the conception in the workshop from the realisation on site. Vial explains that this separation resulted in two words in Italian: *progetto*, the intellectual activity of development and *progettazione*, the activity of production. Those two words later melted in the word *designo*, originating from the Latin *designare* which meant to designate something with a sign. *Disegno* later gave the English word design. Design thus implies the idea of conception as well as realisation: design is a project, a plan. The notion of project enables designers to bring some methods to the complex activity of conception (Vial, 2010). Design (de-sign) is an activity of conception which aims to attribute sign, i.e., meaning, to the object of conception (Baudrillard, 1968). In the French language, this duality of the word

design can be perceived more easily. The word design, in French, includes two homophones words "*un dessin*" (a drawing) and "*un dessein*" (a goal or purpose). These two meanings are included in the English word 'design'.

Design, therefore, is a discipline engaged in projects (Vial, 2015). Designing is a purposeful activity. The discipline of design focuses on the development of artefacts and the practices users develop with them (Du Gay et al., 1997/2013). For Buchanan (1992), design research is concerned with "signs, things, actions and thoughts" (p. 10). He identifies the four main focusses of design research to be 1) symbolic and visual communication, 2) material objects, 3) activities and organised services and 4) complex systems or environment for living, working, playing and learning (Buchanan, 1992). Design brings a new way of thinking about the user, the object and the use (Dubuisson and Hennion, 1996). In this perspective, designers are sociologists of objects (Dubuisson and Hennion, 1996), who study the "social lives" of objects (Appadurai, 1986).

DESIGN EPISTEMOLOGIES

Cross (1999) considers that design knowledge comes from people, processes and products. He classifies design research under three categories: design epistemology ("Designerly ways of knowing" [Cross 1982, 2001]), design praxeology (practices and processes of design) and design phenomenology (form and configuration of artefacts). To Findeli (2006), theories in design are relationships between theory and practice. This derives from his view of design as not being a scientific discipline per se. Rather, he states that: "in the classical sense of the word, it is a profession" (p. 81). Therefore, the nature of knowledge in design is situated in the *relationship* between theory and practice. He establishes a typology of theories in design research which identifies four types of relationships. These types constitute four

epistemological postures. They depict different relationships between theory and practice, therefore different nature of design knowledge.

- *Minimal theory model*. This model focusses on the transmission of know-hows and professional practices. Abstract theories and discourses on design are discarded; apart from descriptions of design practices (i.e., methodology).
- *Theory as interpretive framework*. This perspective is the opposite of the previous one. Here, discourses on design and design theories aim to provide a framework to comprehend and analyse design practices and objects. Roland Barthes (1957) and Jean Baudrillard (1968) are initiators of this perspective. Baudrillard, in *The System of Objects* (1968) uncovers the systems of sign and practices in which technical objects are embedded. More recently, Guy Julier's *The Culture of Design* (2000/2014) also aims to define a cultural framework to design research, at the interaction between design, production and consumption. This perspective is impactful today in design research. Journals such as *Design Issues* publish articles which situate design in cultural frameworks. The main inconvenient which Findeli advances regarding this perspective is the focus on the object as the result of design rather than focussing on designing as a practice per se.
- *Design as applied science*. This is a more technology-centred perspective where design practice follows scientific theories. However, there is not one science that this perspective encourages to follow. Rather, tenants of this perspective apply theories from engineering, physics, biology, economics, and more, to design practice. This is a technicist and functionalist perspective of design, which acts as the technical engineer of other scientific disciplines.
- *Design as situated theory and enlightened practice*. Findeli proposes here a dialectic between theory and practice. By situated theory, he advocates that design discourses should emerge from the practice of designing itself. Rather than drawing from other disciplines

such as sociology or ecology to develop a cultural framework for design (posture 2), design theories should be built in action, in the process of designing. The dialectic between theory and practice should result in an enlightened practice, in the sense that the practice of design should be directed towards how we live in the world. Design does not aim to develop technical objects per se, but: "technical object by and for humans, [and] the relationships of this object with its environment" (Findeli, 2006, p. 95).

In this dissertation, we mainly adopt the second perspective to see design as embedded in cultural practices. We focus on objects and how their designs are culturally embedded in a system of practices (Essay I and II). Furthermore, we also answer Findeli's main argument against this perspective by focusing on design practices (Kimbell, 2011, 2012) and how they shape consumption practices (Essay III and IV).

DESIGNING BEYOND OWNERSHIP

The rise of access-based consumption has had resonance in design research. Professor Cameron Tonkinwise, Director of Design at the Carnegie Mellon's School of Design, recently released a working paper in which he raises questions relative to "researching designing after ownership" (2016). In this essay, he develops ideas about the role of designers in what he calls a "post-ownership era". Interestingly for us, he states that:

> "Precisely because the designer is not looking for the comprehensive intention involved in owning, but merely for user engagement with a product-service, the research is less concerned with intentions and desires, and more with implicit biases and only ever semi-conscious habits."

To integrate users' habits into the designs, he encourages designers to focus on social practices. He foresees four challenges for design research consecutive to the rise of access:

- *From attract to persuade*: the visual attractiveness of product is likely to lose its relevance. Practices of nudge (Thaler and Sunstein, 2008) and affordance are crucial in designers' goal to design the use. Cameron writes about *usership* as opposed to ownership. Here, research must be "by design rather than for design" (p.9).
- *From display to perform*: Cameron envisages design research focussed on the activity rather than on the product's physical aspect. This a service-oriented perspective where the product act as carrier to the service (see Vargo and Lusch, 2004).
- *From learn to co-evolve*: Cameron involves users in sociotechnical innovation. The learning curve to innovative product is changing: consumers learn with time and in use and the object evolves alongside the practices. For instance, when we get a new Smartphone it is "empty" of apps. While we learn to use it, the phone evolves and learns new capacities (new apps).
- *From trust to becoming*: here, Cameron encourages design research to remain attentive to cultural identity changes that may be afforded by mobile connectedness and to understand the new kinds of socialites that emerge online.

Rather than being a guideline for this doctoral work, Cameron's ideas on design beyond ownership are useful to understand how design research faces the changes brought by the access economy. This paper highlights the relevance of studying practices, activities and doings in this disruptive environment.

GENERAL RESEARCH QUESTION

The rise in the economy of access (Bardhi and Eckhardt, 2012; Rifkins, 2000) questions the traditional consumer-object relationship. In this mode of consumption, possession and

accumulation of goods are not central to consumers' desires (Bardhi and Eckhardt, 2015). Some consumers simply do not wish own the objects of consumption any more, others are drawn to these services for their price value (Lawson et al., 2016). The work of consumer researchers Fleura Bardhi and Giana Eckhardt (2012; 2016) demonstrates that consumers are detached from the object of access. They do not try to develop specific relationship with it beyond utility. They do not engage in appropriation practices with the object. Those findings are coherent with the etymological roots of the word appropriation: "that we cannot share with others, own" (Le Robert, 1995). Consumer appropriation of objects or places that are shared appears difficult. Yet, appropriation is a fundamental characteristic of the human behaviour; as something that humans do when in presence of an object or a space (Fischer, 1981, 1992, Rouhette[9]). We wish to explore the concept of consumer appropriation as a possible mean to restore consumer perceived value beyond use value in access contexts. The general research questions guiding this dissertation is:

What is consumer appropriation in access-based consumption?

It unfolds into further research questions:

- What is the value of consumer appropriation in access-based consumption?
- How does consumer appropriation emerge in these contexts?

[9] http://www.universalis.fr/encyclopedie/propriete/, consulted on January 3, 2017

INTRODUCING FIELDS AND ESSAYS

In the rest of the dissertation we adopt the academic "we". At the beginning of the next section, we use the more story-telling pronoun "I" as we narrate the backstage of the PhD adventure.

CONTEXTS: MAKING CHOICES

The project for this dissertation began in 2013 with lectures on design organised by Professor Denis Darpy and design consultant Francoise Darmon at the Université Paris-Dauphine. As a marketing student, I knew close to noting about design. I was hooked instantly by the relevance of design's questions in today's world and the quest for "meaning in the useful" [*Du Sens dans l'Utile*] (Darmon, 1992). Having lived in a shared flat for years as a student, I was interested in how space and objects were used while shared. Questions like: "I bought this pan, but you use it as much as I do. Do I have primacy of use over it if we both need it now?" arose daily. The question of designing products and services beyond ownership quickly became the centre of focus of my PhD dissertation. However, as it turned out, I did not end up spending days in shared flats observing shower timetables and fridge organisations.

Paris offered a great opportunity for a PhD student to study access-based systems alongside design: Autolib'. Autolib' is Paris' car sharing system, a public-private partnership, run by the group Bolloré and the Mairie de Paris. The cars Autolib' proposes, the Bluecar, are designed by Pininfarina. This opportunity led to the first study of this dissertation, presented in Essay I. This essay, now published in the *Journal of Marketing Management*, presents the role of design

elements in Autolib's system and the role they play in consumer appropriation practices. For this research, interviews and short observations of Autolib' users were conducted.

Cars: objects or places?

This question deserves to have its own little box in this dissertation. Cars, because we "get into" them, could be at first identified as places. Etymologically, the word object refers to what is placed in front of: it indicates what we are aiming towards. This definition refers more to the object of a research for instance rather than to the physical object, the artefact. Wikipedia defines objects as things, entities, defined in three-dimensional space and that have a precise function. We can go around a car and see the whole of it. The delimitation of the object is precise. When talking about using one's car to go somewhere, we usually say "Let's *take* my car" rather than "Let's *get into* my car". While the opposite could be argued, in this dissertation, we chose to see cars as objects rather than as spaces.

Figure 1. On cars as objects

By the time the Autolib' project was done, a friend of mine began to work in a coworking space in Paris, the Sensespace. In 2014, coworking spaces were not numerous in Paris. This was a great opportunity to study a place where a lot of sharing and access practices may take place. This opportunity resulted in the second essay. Studying a different context provided me with ways to triangulate the dissertation work. Coworking spaces are spaces rather than objects. I adopted different theoretical perspective on appropriation (i.e., Fischer [1992] rather than

Sartre [1943]). This gave me a different theoretical framework to study consumer appropriation in access. This allowed for theoretical triangulation (see table 2 below).

Further, this second and different field of research enabled me to collect more data and to palliate to the first study's limitations. Indeed, while the first essay studies practices of consumer appropriation, these practices are mostly apprehended via interviews with consumers. A few on-site observations where conducted but did not constitute the main dataset. For the second field of research, I collected data through participant observation. This enabled me to triangulate the method used in this doctoral work.

The first two essays study consumer appropriation in access in a parallel way without directly confronting each other. The third essay brings the comparison to light. In this essay, data from the two studies are re-analysed in light of Aubert-Gamet's (1997) framework on service appropriation. By comparing the two contexts, this third essay analyses the role of different design approaches (Design Thinking and Design as Practice) in consumer appropriation of access systems.

The fourth and final essay differs from the other essays in its structure and contribution. The first three essays are academic articles which develop theoretical contributions. The third essay contributes in a managerial and practical way to answer to the research question. In this essay, we observed the views and practices of a designer on the question of consumer appropriation in access. Parallel to the participant observation conducted in the coworking space, we developed a project with a designer who worked in the space. Together, we asked the question "how to help coworkers to appropriate this shared space?" and answered it through a design-driven approach. The approach and the solutions found are described in the fourth papers. Managerial implications regarding design of shared offices are drawn upon our findings.

CRITERIA FOR TRUSTWORTHINESS IN QUALITATIVE RESEARCH

Triangulation means "looking at the same phenomenon, or research question, from more than one source of data" (Decrop, 1999, p. 158). Triangulation implements trustworthiness into qualitative research (Decrop, 1999). Denzin (1978) identifies four ways to triangulate a research: theoretical, methodological, data collection and researcher triangulation. Adopting a paper-structured dissertation enabled us to triangulate on theories, methods and data collection (Table 4). Researcher triangulation was not possible, but we got insights from a designer, which contributed to bring a view from another discipline to our findings.

Table 4. Triangulation (Adapted form Denzin, 1978)

	Essay I	**Essay II**	**Essay III**	**Essay IV**
Field of study	Car sharing: Autolib'	Coworking spaces: the Sensespace	Comparison of car sharing and coworking spaces	Coworking spaces / design perspective
Theoretical triangulation	Object appropriation (Sartre, 1943; Belk, 1988)	Space appropriation (Fischer, 1989, 1992, 2011)	Design Thinking and Design as Practice	Practices of appropriation emerging from design practices
Methodological triangulation	Consumer interviews	Participant observation	Case study comparison	Designers' perspective
Data triangulation	Interviews transcripts, short observation, pictures and videos	Field notes, user interviews, pictures, video, secondary data	Comparison of the previous data set; secondary data	Artefact creation process
Researcher triangulation	None	None	None	Designer's input

Further, the internal validity, credibility (Decrop, 1999) or "truth value" (Lincoln and Guba, 1985) of our research was assessed by confronting our findings to actors of the fields. We met and discussed our findings with managers at the Sensespace and Autolib', as well as with users of both services. Our findings were received with interest from actors within the fields.

The external validity, applicability (Lincoln and Guba, 1985) or transferability (Decrop, 1999) was assessed by confronting as often as possible our findings with the academic community. We presented our work at peer-reviewed conferences (e.g., Association Française du

Marketing, Association for Consumer Research Conference, Consumer Culture Theory Conference) and submitted the first essay to a peer-reviewed journal (*Journal of Marketing Management*). Our work on car sharing received feedbacks by Fleura Bardhi and Giana Eckhardt, central actors in the field of access research. Our work on coworking spaces was confronted to recent work on the topic (i.e., Toussaint, 2016) and to the Research Group for Collaborative Space Community at their symposium (2016), receiving positive feedbacks.

DEFINING CONTEXTS

The contexts studied in this dissertation, car sharing with a standardised accessed object (Essay I and III) and coworking spaces (Essays II, III and IV), differ from contexts previously studied in access (Bardhi and Eckhardt, 2012; Lamberton and Rose, 2012). We define those two contexts along Bardhi and Eckhardt's (2012) dimensions of access (see table 3). The table below highlights in grey the main differences between the original Zipcar context (Bardhi and Eckhardt, 2012) and the contexts studied in this doctoral work.

Table 5. Access contexts in this dissertation (adapted from Bardhi and Eckhardt, 2012)

Access dimensions	Car sharing (Zipcar)	Car sharing (Autolib', Essay I and III)	Coworking (the Sensespace, Essays II, III and IV)
Temporality	Longitudinal, frequently dormant access of limited duration	Longitudinal, frequently dormant access of limited duration	Longitudinal (continuous), daily access of long duration
Anonymity	Close to home and anonymous	Close to home and anonymous	Collective and not close to home
Market mediation	Market mediated	Market mediated	Market mediated
Consumer involvement	Self-service	Self-service	Participation and co-construction
Type of accessed object	Based on a more functional and material object	Based on a more functional and symbolic, material object	Based on a functional and experiential space
Political consumerism	None at the individual level	Ecological dimension	Opportunity for pro-social behaviours/ Social entrepreneurship

The main difference between Zipcar and Autolib' lies in the type of accessed object. In the context of Autolib', the accessed cars have been designed for car sharing by Pininfarina. All the cars of the system are of the same model, the Bluecar. This design element is likely to greatly influence the consumer-objet relationship in the case of car sharing. Also, as Bluecars

are all electrical cars, the ecological dimension of car sharing is likely to be more salient in Autolib' than in Zipcar. In the case of the coworking space, almost all dimensions of access vary. First, by comparison to car sharing, where the duration of usage is of limited duration, users of coworking spaces stay all day within the space. This is probably one of the most important difference as it changes completely the relationship between users and the accessed object (here, a space). Consumers are in the space for several hours each day. A second dimension has a crucial impact is non-anonymity. In the case of car sharing, users do not interact with each other. In the case of coworking spaces, consumers are all in the space at the same time. They are more likely to interact and to develop collective practices. Third, the involvement of consumers in the good functioning of the service is higher in the coworking space than in car sharing. Users invest the space with their own possessions, they cook their own meals in the kitchen, use the toilets, wash their dishes and have daily chats with members of the organisation. As such, rather than a self-service type of service, coworking co-construct the service with their users. The fourth dimension that differs is the type of accessed object. In car sharing, the object is a car (standardised model or not). In coworking, the object is a space. This changes the appropriation practices associated with access. The practices are likely to encompass a stronger experiential aspect, as consumers immerse themselves into the consumption space (Carù and Cova, 2006). Also, coworking spaces are often innovative spaces that aim to foster a creative, stimulating environment (Toussaint, 2016). The physical and material environment in the coworking space is very important. Finally, the political consumerism dimension is likely to vary with coworking. Bardhi and Eckhardt (2012) advance that the public use of access might influence this dimension, as users are consuming the space collectively. Users interact with one another and therefore pro-social behaviours may emerge. What is more, the context of our study, the Sensespace, is managed by MakeSense, a social entrepreneurship organisation.

DESIGN PERSPECTIVES

The different access contexts of this research offer the opportunity to adopt different views of design research. Essay I views design as a connector. Specific design elements of product and services are discussed in their ability to foster consumers' practices of appropriation. In the second paper, design is a theoretical lens through which we see objects and places as actors of the consumer-objects relationship. The third paper compares the two design perspectives of the contexts of Essay I and II, in their ability to shape consumers' appropriation practices. Lastly, the fourth paper develops managerial insights based on a designer's perspective on consumer appropriation in coworking space.

Adopting different views of design enables us to grasp a wide potentiality of design perspective: design is in turn a connector, a theoretical lens, a managerial tool and a practice. We therefore enhance the knowledge on access and consumer appropriation by approaching the fields with different design frameworks. There is an evolution in this doctoral work in the way design is understood. In the first paper the understanding of design remains very tangible. Specifics elements of product design are discussed. As we learned more about this rich discipline, our vision of design became more theoretical. In the second essay, it is apprehended as an object-oriented theoretical lens. The third essay encompasses practical and theoretical implications regarding how to design consumer appropriation in access. Finally, our will to understand the day-to-day practices of designers and how they enact their work led to a practice-oriented view of design.

Table 6. Design perspectives

Essay	Vision of Design
Essay I	Product and service design elements act as connectors between the consumers and the artefact.
Essay II	Design is an object-oriented theoretical lens to understand consumer appropriation practices.
Essay III	Comparing two design perspectives and how they shape consumer's appropriation practices
Essay IV	A designer's perspective on consumer appropriation of coworking spaces

EXTENDED ABSTRACTS

ESSAY I: DESIGN AND THE CREATION OF MEANINGFUL CONSUMPTION PRACTICES IN ACCESS-BASED CONSUMPTION

This first paper looks at the field of car sharing and tries to understand the role of design in creating meaningful relationship between consumers and the accessed cars. The literature on access-based consumption indicates that consumers do not engage in a relationship with objects in this context (Bardhi and Eckhardt, 2012). Specifically, Bardhi and Eckhardt (2012) study

the car sharing system Zipcar in Boston, Massachusetts, and find that consumers of Zipcar use the system only for utilitarian purposes and do not engage in specific practices to transform this use value into sign value. Consumers' lack of identification with the accessed cars explains this. Short-term duration of access, anonymity of the use of the service and market-mediation prevent users from incorporating accessed car to their extended selves (Bardhi and Eckhardt, 2012; Belk, 1988).

This article aims to understand the role that design can play in restoring this relationship through the activation of meaningful practices of appropriation. Du Gay and al. (2013) develop the concept of the chain of meaning: they look at the relationship between design and the creation of new consumer identities. Designer can force the movement of cultural practices, which in turn changes consumers' representation of an object. New representations create new meanings upon which consumers can build new identities. This view is adopted to understand the role of design in creating appropriation practices in car sharing.

Specifically, we look at consumers' practices of appropriation of cars in Autolib', a French car sharing system. We wish to understand how specific design elements enable practices of appropriation of accessed vehicles through controlling, knowing and creating the product and the service. We question the extent to which design can create meaningful practices in the context of access. Our result show that contrary to Zipcar, consumers create meaningful relationships with the cars. We conclude by stating the importance of a design project at the core of product-services systems in access.

ESSAY II: ACTIVATING THE PERIPHERAL VALUE OF ACCESS-BASED SERVICES THROUGH CONSUMER APPROPRIATION: THE CASE OF A COWORKING SPACE

Coworking spaces are access-based services systems which offer independent individuals a place to work (Spinuzzi, 2012). Consumers pay a daily, weekly or monthly fee to access a workplace. The total offering of a coworking space comprises a core and a peripheral part. Their core offering consists in providing access to a workplace environment: coworking consumers can use desks, coffee machine, printers, etc. Their peripheral offering is to provide their consumers with the possibility of accessing a network of entrepreneurs (Blein, 2016). Building such a network is crucial for entrepreneurs: it can lead to exchanging best practices or entering open innovation schemes (Fabbri and Charue-Duboc, 2016; Waber, Magnolfi and Lindsay, 2014). However, the mechanisms through which coworkers activate the network for their own purpose are unclear. Our research question thus asks: how do consumers activate the value of the peripheral offering of coworking spaces? In this paper, we propose to analyse consumer appropriation as a mean to activate this value proposition.

The literature section of the paper builds first on the emerging field of research on coworking spaces (Blein, 2016; Capdevila, 2013; Fabbri and Charue-Duboc, 2016; Toussaint, 2016; Suire, 2013). We then delve into the literature on the concept of appropriation. We adopt a social psychology of the environment approach to this concept. We analyse the practices and representations of appropriation to comprehend the role that consumer appropriation could play in enacting participatory practices.

The study consists in regular participant observation in a Parisian coworking space throughout the course of a year. The space, called the Sensespace, hosts on average 70 entrepreneurs, with two third of them working in the solidarity-based economy. We collected primary data on several support types: field notes, interviews, pictures, short videos. We also received many secondary data from the managers of the space (survey results and managerial documents).

The first part of the findings identifies three steps through which consumer appropriation allows coworkers to activate and benefit from the peripheral offering (i.e., the network). First, coworkers anchor themselves within the shared space through personal appropriation (practices of nesting and stamping). Then, coworkers open themselves to others via gift-giving (mutuality). Finally, coworkers enact four collective appropriation practices to fully activate the network: participation, play, ritualization and construction.

The second part of the findings focuses on the ambiguity of the meanings associated with the space. The duality of the offering forces a merging of domestic, professional and social practices within the coworking space. The three practices appear necessary for the network to exist. However, practices overlap and create conflicts.

The paper ends with a discussion on the nature and value of appropriation within access-based services systems. Consumer appropriation appears as a mean to activate the linking value of such services. The discussion then extends to the nature of the social relationship that unites consumers of a coworking space, mixing practices of a small village with motivations of a big city. Finally, we examine contributions regarding the design of flexible office spaces.

ESSAY III: DESIGN PERSPECTIVES AND THEIR INFLUENCE ON CONSUMER APPROPRIATION: A COMPARISON OF TWO CASE STUDIES IN ACCESS-BASED CONSUMPTION

How do different design processes influence consumer appropriation of the material elements in access-based services? This paper explores how different design perspective impact consumer appropriation. We aim to explore the relationship between what happens upstream of the service, in the designing process and how it impacts consumers' practices. This paper is interested with understanding how to design in a post-ownership era (Tonkinwise, 2016) to allow consumer appropriation of access-based services.

We compare two different access contexts: a car sharing system (Autolib' in Paris) and a coworking space (The Sensespace in Paris). At the same time, we compare two different design processes: Design Thinking with Autolib' (Brown, 2008) and Design as Practice with the Sensespace (Kimbell, 2011, 2012). Both cases vary in term of material rigidity and the extent to which they integrate consumers' creativity in their offering.

We build on Aubert-Gamet's (1997) theoretical framework, which studies appropriation of services. She finds that the more rigid the material environment, the less appropriation by consumers. To her, consumer appropriation is possible in cases of high flexibility of the material and high creative possibilities for consumers. We propose an update of this framework by showing the crucial role of design in the context of access-based services. We show that high level of control does not necessarily mean absence of appropriation. Furthermore, we show that high flexibility and creative possibilities do not necessarily mean that users

seamlessly appropriate the space. Overall, we highlight the crucial role of design over material control, in allowing consumer appropriation.

ESSAY IV: A DESIGNER'S VIEW ON APPROPRIATION PRACTICES IN ACCESS

This essay differs from the previous ones in that it is not a theoretically-oriented, academic paper per se. Rather, we propose to explore how would a designer tackle the question of designing appropriation in access. To do so, we have worked together with a designer within a coworking space. This essay reports the work that has been done throughout the process of designing. The goal was to design artefacts to enhance users' appropriation of the space.

We conducted a five-step process: creating persona, developing a mapping, writing scenarios, brainstorming to develop new artefact, and making the practice loop. We describe each step in the report and then detail the solution we developed.

A first set of artefacts focusses on improving the existing settings. The process of designing revealed practices of carrying things around, co-construction and the prevalence of oral communications. The artefacts aim to facilitate these practices. The second set of solutions proposes new artefacts which could help coworkers engage in nesting and stamping at the hotdesks. This step revealed the difficulty that coworkers face to engage in appropriation of the hotdesks. Sharing artefacts within the space (such as hotdesks) impedes coworkers' appropriation practices.

In sum, this essay offers a different perspective on the question of consumer appropriation in access. It contributes managerially in a very concrete way with the propositions of artefacts.

Furthermore, the design process highlighted consumption practices that were not revealed before.

CONCLUSION

The next four chapters present the four essays that constitute this dissertation. The last chapter answers the general research question and provides discussion of the papers' contributions. The discussion develops the contributions of the papers regarding the definition of consumer appropriation in access, its value and how it emerges. It also presents managerial contributions, limitations and research avenues. We provide below the structure of the dissertation. Each essay will be introduced by a short abstract, keywords and a summary of its "public life" (i.e., conference presentations and publication).

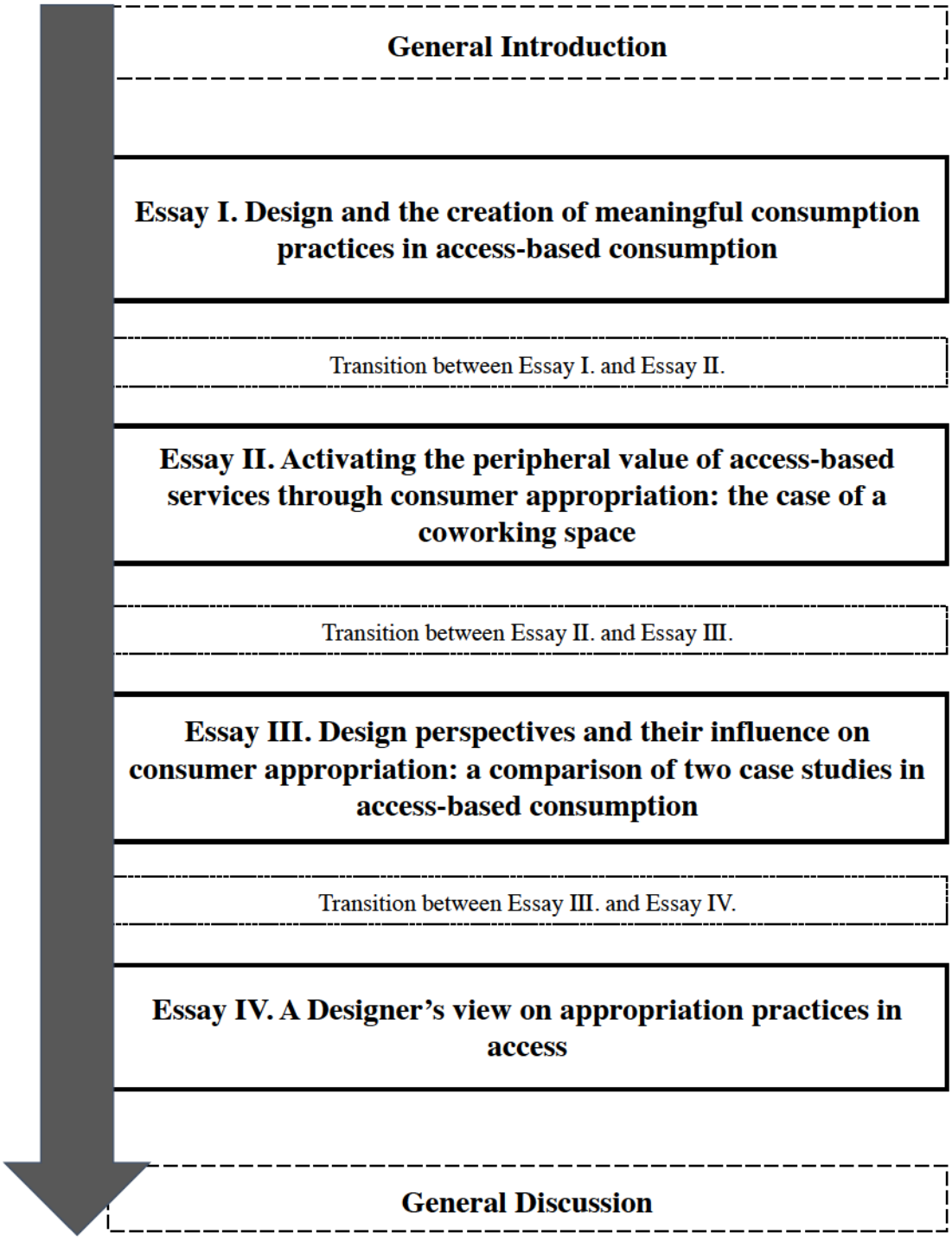

Figure 2. Structure of the Dissertation

ESSAY I. DESIGN AND THE CREATION OF MEANINGFUL CONSUMPTION PRACTICES IN ACCESS-BASED CONSUMPTION

ABSTRACT – Previous research on access economy and car sharing indicates that consumers do not construct a relationship with objects in this context. This article aims to understand the role of design in restoring consumer appropriation through the activation of meaningful practices. Previous research on access economy and car sharing indicates that consumers do not construct a relationship with objects in this context. The article looks at consumers' practices of appropriation of cars in Autolib', a French car sharing scheme. Underpinned by practice theory and design research, this article illustrates how specific design elements enable practices of appropriation (controlling, knowing and co-creating) of the shared vehicles.

KEYWORDS: access-based consumption; design; practice theory; car sharing

PREVIOUS LIVES OF THE ARTICLE –

- Adèle Gruen (2016): Design and the creation of meaningful consumption practices in access-based consumption, *Journal of Marketing Management*, DOI: 10.1080/0267257X.2016.1229688
- Adèle Martin-Gruen and Denis Darpy (2015),"The Role of Design in the Appropriation of Shared Objects: Autolib in Paris", in *NA - Advances in Consumer Research* Volume 43, eds. Kristin Diehl and Carolyn Yoon, Duluth, MN : Association for Consumer Research, Pages: 388-392.
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- Martin A. and Darpy D. (2014), Design and Identities – the Case of Carsharing, *the 19th DMI: Academic Design Management Conference*, London, 2-4 September 2014

INTRODUCTION

Can design change the practices of access-based consumption? Access encompasses "transactions that may be market-mediated, in which no transfer of ownership takes place" (Bardhi & Eckhardt, 2012, p. 1). Consumers have access to goods or services in exchange for a fee. Bardhi and Eckhardt (2012) studied the car sharing system Zipcar in Boston, Massachusetts, and find that Zipcar consumers use the system only for utilitarian purpose. They do not engage in specific practices to transform this use value into sign value. Consumers' lack of identification with the accessed cars explains this lack of meaning. Specifically, short-term duration of access, anonymity of the use of the service and market-mediation prevent users from incorporating the accessed car to their extended selves (Bardhi & Eckhardt, 2012; Belk, 1988). This has strong implications for the consumer-object relationship in access contexts. This research aims to answer Bardhi and Eckhardt's call to "examine access contexts in which identity and the hedonic value of the object are more salient" (2012, p. 16). In this research, we look again at the context of car sharing. However, we examine a context which differ from Zipcar in that the system we study, Autolib' in Paris, incorporated a design project at its core. In doing so, we isolate the role of design in creating sign value for consumers in access contexts. We show that design is powerful in helping consumers to develop appropriation practices even with cars that they access.

Design research is concerned with the development of artefacts and user practices. It is interested in signs, things, actions and thoughts (Buchanan, 1992), as well as in the user, the object and the use (Dubuisson & Hennion, 1996). This vision of design integrating the user, the technology (product or service), and the relationship between them is grounded in science and technology studies (STS). STS is concerned with the social, cultural and technical aspects

of an innovation (Akrich, 1992). To understand these cultural changes, we need to examine an object's circuit of culture (Du Gay, Hall, Janes, Madsen, Mackay & Negus, 2013). This involves studying an object's representation, identity, production, consumption and regulation. Designers can force a change in consumption practices by creating new artefacts. This change in practices leads to the development of new representations and meanings attached to the object. This link between design and consumption practices shows the chain of meaning created by design (Du Gay et al., 2013).

This paper studies a car sharing system in which design plays an important role. Zipcar has no specific design project. For example, there is no uniformity in their fleet of cars (Bardhi & Eckhardt, 2012). The present research focuses on the car sharing system Autolib'® in Paris, France. Autolib's fleet consists of one model of vehicle, the Bluecar®, designed by Pininfarina, the designer of Ferrari. The aim of this paper is to understand how a design project can foster user practices of appropriation in an access context. Practices of appropriation are important to enable users to create new representations and meanings (Arsel & Bean, 2013; Du Gay et al., 2013; Magaudda, 2011; Reckwitz, 2002a, 2002b). Can design, through the creation of new appropriation practices, create meanings for consumers in a context of access-based consumption?

The literature section first builds on Bardhi and Eckhardt (2012) to identify a theoretical gap between access-based consumption and design. Second, it provides insights in the link between STS, design, and the chain of meaning and practice theory (Arsel & Bean, 2013; Du Gay et al., 2013; Fallan, 2008; Silverstone & Haddon, 1996). Third, it focuses on appropriation as a practice, in a consumer research perspective (Belk, 1988; Magaudda, 2011; Reckwitz, 2002b; Sartre, 1943-1984). The next sections present the context of this study and the research question and describe the research method and the findings. The findings deconstruct the practices of

appropriation and look at key design elements and their role in the enactment of these practices. The paper concludes with a discussion of the findings, the limitations of the study, and proposes avenues for future research.

LITERATURE REVIEW

ACCESS-BASED CONSUMPTION

The recent rise in collaborative forms of consumption such as access and sharing invites us to re-examine the consumer-object relationship. The role of consumption as a possession-based activity allowing consumers to build identity(ies) has long been studied in marketing (Ahuvia, 2005; Belk, 1988; Firat & Venkatesh, 1995; Richins, 1994). However, this has recently been disrupted by the emergence of the sharing economy (Botsman & Rogers, 2010; John, 2013). Firms like Airbnb, Couchsurfing, and BlablaCar have millions of users. Collaborative consumption can be seen as a new consumption phenomenon. However, Felson and Spaeth first used the term in 1978 to describe joint activities of consumption. The sharing of goods, experience, time and care among family members, neighbourhoods or communities' members is not new (Price, 1975; Sahlins, 1972). Yet, in the last decade, the scale of these consumption modes has expanded beyond families and neighbourhoods due to the rise of the Internet (Belk, 2014; Botsman & Rogers, 2010). Consumers, who are geographically apart, can now swap, share and exchange goods or services in a click. A new focus has emerged in consumer research in the contexts of the sharing economy (Belk, 2007, 2010, 2014; Lamberton & Rose, 2012; Ozanne & Ballantine, 2010), mutuality (Arnould & Rose, 2015) and access-based consumption (Bardhi & Eckhardt, 2012; Chen, 2009; Eckhardt & Bardhi, 2016; Lawson, Gleim, Perren & Hwang, 2016).

Access differs from sharing and ownership on several dimensions. First, access encompasses transactions in which no transfer of ownership takes place. A third party owns the object of consumption and consumers do not become owners of the object. In the case of sharing (Belk, 2010), the ownership of the object is shared jointly by consumers. Belk (2010) distinguishes between *sharing in, which* qualifies sharing behaviours existing in close, intimate circles such as family or friends; and *sharing out*, which is when sharing happens outside of the extended self of the individual. The case of ownership is different in that there is a special relationship between consumers and their possessions, involving the integration of objects into their extended self (Belk, 1988). Ownership also results in obligations and privileges for consumers towards the object (Belk, 1988).

Bardhi and Eckhardt (2012) developed six dimensions of access-based consumption: temporality, anonymity, market mediation, consumer involvement, type of accessed object and political consumerism. The authors study the context of car sharing and characterise it as "longitudinal, frequently dormant access of limited duration; close to home and anonymous; market mediated; self-service; and based on a more functional and material object." (Bardhi & Eckhardt, 2012, p. 5). The authors ground their research in Boston, Massachusetts with a case study of Zipcar consumers. Zipcar members have access to a fleet of cars. Cars are parked close to users' residence or place of work. Members can rent a car by the hour or for the day in a system of loop circuit: they have to return the car to its permanent parking space at the end of the rental period. Zipcar possesses a fleet of about 30 models. There is no uniformity in the cars they offer: they range from the most basic models to green hybrid models and luxury brands. Bardhi and Eckhardt (2012) find that the relationship between Zipcar consumers and the accessed cars is utilitarian. Zipcar members use the service for its use value. This finding contrasts with the ecological and trendy image of car sharing in society. Zipcar members do not engage in practices to transform this use value into sign value. This means that users do not

create any relationship with the vehicle. They do not identify with it nor do they appropriate it. Bardhi and Eckhardt (2012) report that this lack of relationship results from short duration of access, anonymity and market mediation. These dimensions prevent users from incorporating accessed cars, by comparison with owned cars, to their extended selves (Belk, 1988). For example, users do not take the time to adapt the car to their preferences by changing the radio. The duration of use is not long and it does not seem necessary (Bardhi & Eckhardt, 2012, p. 9). Feeling of contamination and negative reciprocity also play a role. Feeling of contamination occurs when consumers feel disgust when they are aware that someone else physically touched an object (Argo, Dahl & Morales, 2006); users do not identify with other users. Negative reciprocity occurs when consumers engage in the exchange of goods only in self-interest; they feel no responsibility towards the company or the cars. In sum, in the context of car sharing, users do not engage with the object, the service or the company beyond use value. Bardhi and Eckhardt (2012) do not question the extent to which the design of the product and service plays a role. The chain of meaning shows the importance of design in creating meanings for consumers (Du Gay et al., 2013).

DESIGN AND THE CHAIN OF MEANING

Implementing a design project implies thinking about the product itself but also about the actors of the object (the users), and the situation of usage (the consumption context) (Dubuisson & Hennion, 1996; Findeli & Bousbaci, 2005; Vial, 2015). The discipline of design is concerned with "the accomplishment of [human beings'] individual and collective purposes" (Buchanan, 2001, p. 9). Design research links insights from social sciences with the development of new products and product features (Buchanan, 2001). Marketing practitioners often depict design as a mere product development activity (Beverland & Farrelly, 2011). For designers, marketing is often too concerned with cost and managerial issues to be interesting. This situation creates

misunderstanding between the two disciplines (Beverland & Farrelly, 2011). Yet when they work hand in hand, they can achieve interesting results (Beverland & Farrelly, 2011; Bruce & Daly, 2007). Design is a discipline that integrates elements from production to distribution, from consumption to waste and from demography to consumer culture (Julier, 2014). Science and technology studies is a multidisciplinary field of research concerned with the role of innovation and design in the development of social relationships (Sismondo, 2010; Woolgar, 1991). Technologies, objects and innovations are pivotal in daily lives of consumers. The design of these technologies shapes consumers' practices and social interactions (Sismondo, 2010). At the same time, technologies are socially constructed. The development of a new product is indeed a long process involving numerous actors (Akrich, 1987, 1992; Fallan, 2008; Silverstone & Haddon, 1996). Fallan (2008) encourages researchers to study the script of an artefact to understand "how producers/ designers, products, and users negotiate and construct a sphere of action and meaning" (Fallan, 2008, p. 63). STS considers objects as non-human actors (Akrich, 1987, 1992; Akrich, Callon & Latour, 2006; Law, 2009) who "act as mediators, transforming meaning as they form and move through networks" (Fallan, 2008, p. 62). The physical aspect of technologies requires special attention to grasp the consequences it has on the structuration of social relationships and individual practices.

Du Gay et al. (2013) propose the concept of the chain of meaning to link the development of a new product to the creation of meaning. Taking the example of the Walkman®, they describe how designers force the movement of cultural practices via new artefacts. New technologies change the way consumers interact with the product, and change their gestures, actions and movements. In turn, these new practices associated with the artefact create new representations. Through the use of sign and language, representations construct new meanings upon which consumers build new identities. Du Gay et al. (2013) show how the Walkman became part of the identity of the young urban nomad through development of new practices of listening to

music outside the home. This idea of design as the starting point of the creation of meaning through practices shows that the theory of practice and science and technology studies are somehow intertwined (Reckwitz, 2002a). Both reject the ideas of a rational *homo economicus* and of a *homo sociologicus*, which "explains actions by pointing to collective norms and values" (Reckwitz, 2002b, p. 245). For practice theory, consumers are "agents bounded by socioculturally constituted nexuses" (Arsel & Bean, 2013, p. 901). A STS's view of practice differs from a sociologist's view like Bourdieu's (1977, 1990) in that it includes non-human actors such as artefacts in the activity of practice (Magaudda, 2011; Reckwitz, 2002a; Shove & Pantzar, 2005).

APPROPRIATION AS PRACTICE

Appropriation is a concept that contains different meanings depending on the context in which it is used. For musicians, appropriation refers to the borrowing of another musician's elements in the creation of a new piece (Born & Hesmondhalgh, 2000). This concept is close to the anthropological concept of cultural appropriation (cultural borrowing), which is closely related to assimilation. Cultural appropriation is the adoption of elements of a different culture (Ziff & Rao, 1997). Design researchers within STS study appropriation in relation to the adoption of new technology (Silverstone & Haddon, 1996). Appropriation encompasses the actions users undertake to integrate the objects in the home (Silverstone & Haddon, 1996; Silverstone & Morley, 1992). Finally, in consumer research, appropriation refers to actions through which consumers make something theirs: objects (Belk, 1988; Pierce, Kostova & Dirks, 2001), stores (Aubert-Gamet, 1997; Bonnin, 2002), experiences (Carù & Cova, 2006) or services (Mifsud, Cases & N'Goala, 2015).

These different perspectives have in common a dynamic view of appropriation. Appropriation implies actions from individuals who wish to make something theirs. In this sense, appropriation is a practice. A practice is "a routinized way in which bodies are moved, objects are handled, subjects are treated, things are described, and the world is understood" (Reckwitz, 2002b, p. 250). Practice theory understands consumption through the analysis of daily routines between consumers, objects, and the environment (Shove & Pantzar, 2005). Practices are about objects (technology and material culture in general), doings (competences and activities) and meanings (Arsel & Bean, 2013; Magaudda, 2011). Consumers engage in activities with objects to produce meanings. The concept of appropriation is close to that of perceived ownership. Perceived ownership is "that state in which individuals feel as though the target of ownership (material or immaterial in nature) or a piece of it is 'theirs' (i.e., 'It is MINE!')" (Pierce et al., 2001, p. 299). Simply touching an object contributes to a perceived sense of ownership (Peck & Shu, 2009). Touching relates to appropriation: it is an action (a 'doing') resulting in the feeling that the object is *mine* (meaning is attributed to the object). Appropriation is thus a set of practices through which consumers achieve perceived ownership of an object, a place, or a service. Concepts such as perceived ownership (Pierce et. al., 2001) or attachment (Ball and Tasaki, 1992; Thomson, MacInnis & Park, 2005) differ from appropriation as they are cognitive constructs. They express an emotional bond or a feeling between a consumer and another person or an object (Thomson, MacInnis & Park, 2005). Appropriation is by comparison a practice, always in the making. It is not a cognitive state. The set of practices, or *routes* to reach perceived ownership are threefold: knowing intimately, controlling and creating (Belk, 1988; Pierce et al., 2001). They originate from Jean-Paul Sartre's ways of having (1943). To Sartre (1943), wanting to *have* an object means wanting to *be* in a relationship with this object. Sartre does not write of practices, yet he refers to activities done with objects in order to *be*. This reveals the three dimensions of the circuit of practice: doings, objects and meanings

(Magaudda, 2011). Consumers engage in practices of appropriation to create relationships with the objects they use. Sartre (1943) identifies three appropriation practices: creating (making something to possess it), knowing (knowing something intimately contributes to its existence for me) and controlling (being able to use, destroy or modify the object). Belk (1988) adds a fourth appropriation practice, which he identifies as symbolic contamination. Contamination is a passive form of appropriation, and in this regard differs from the three other practices. Contamination occurs by involuntarily incorporating others into one's extended self (Argo, Dahl & Morales, 2006).

In access-based consumption, the question of appropriation is crucial (Bardhi & Eckhardt, 2012). Appropriation of accessed objects and services could lead to perceived sense of ownership through the creation of representations and meanings for consumers. Creating a perceived sense of ownership encourages consumers to care for the accessed objects.

CAR SHARING IN PARIS, AUTOLIB' AND THE RESEARCH QUESTION

Cars are traditionally owned objects that play a strong part in consumers' extended selves (Belk, 1988). It has been the object of extended research in marketing, especially in the case of social identity such as brand communities (Cova, Kozinets & Shankar, 2012; McAlexander, Schouten, & Koenig 2002; Muniz & O'Guinn, 2001). Car sharing in France is successful, especially sharing between individuals: Blablacar, a French company, is leader in this sector and reached 10 million members worldwide in 2014. Car sharing schemes are spreading in many French cities such as Lyon, Paris and Bordeaux. French cities, especially Paris, seem to offer a fertile ground for car sharing. In Paris, most inhabitants do not own a car. In 2011, 64%

of Parisians used mainly public transport to go to work and only 15% drove a car (Insee, 2015). When Bardhi and Eckhardt (2012) conducted their study on the car sharing system Zipcar, they noticed that Zipcar was the first market-mediated access service in Boston. Consumers were not used to this type of service when it was first launched. In Paris, inhabitants had experienced access before car sharing. Vélib', a self-service bike-sharing system, has offered bikes in free access for a small fee since 2007. In 2011, it had an average daily ridership of around 85,000. The popularity of Vélib' paved the way for the car sharing system Autolib'. In French, Vélib' is a mix of the words bike (*vélo*) and freedom (*liberté*). Autolib' followed that by combining automobile and *liberté*. When Autolib' was launched, four years after Vélib', every Parisian was already familiar with the service: Vélib', but with cars. Another cultural element that favours the integration of Autolib' in Paris is the structure of the city's streets. The streets are narrow by comparison to the US with many small vehicles including scooters, bikes, compact cars and two-seater electrical cars such as Renault's Twizy®. Autolib's cars are small and grey and fit perfectly in the Parisian landscape.

Figure 3. A Bluecar in the streets of Paris

Image Credit: By Mariordo (Mario Roberto Durán Ortiz) (Own work) [CC BY-SA 3.0], via Wikimedia Commons

Autolib' is a public service company run by the Bolloré group. It was launched in 2011 and today has around 4,000 cars and more than 900 charging stations. In 2015, it had 75 thousand users in Paris and its suburbs. Autolib', like Zipcar, is, 'longitudinal, frequently dormant access of limited duration; close to home and anonymous; market mediated; self-service' (Bardhi & Eckhardt, 2012, p 5). However, Autolib' and Zipcar differ in the type of accessed object they offer. Zipcar offers a functional and material object (Bardhi & Eckhardt, 2012). All the cars are different: there is no uniformity or design involved. In contrast, Autolib' only has one model, the Bluecar, designed by Pininfarina for the Bolloré group. The cars were then adapted so they could be used for daily use by different drivers. The doors and the seat

structure were reinforced. The Bluecar is 100% electric and has automatic transmission, two features that are not yet common in France. It is equipped with an on-board computer that gives users access to all kinds of information related to the smooth running of the car, as well as GPS, FM radio, and a button to contact the call centre in case of an emergency. There are several subscription packages but the Autolib' Premium plan costs €120 a year for access to a car 24/7, with unlimited reservations for both car and parking place, and €6 for every half-hour trip. In February 2016, Autolib' launched a new subscription package called Ready to Drive. Subscription is free but the hourly rate is higher (€9 per half-hour). Users can book the nearest available car via an app on their smartphone. They then go to the charging station to pick up the vehicle. Autolib' users can return the car at any charging station of their choice, whereas Zipcar users have to return the car to its home location. The uniformity of Autolib's fleet, the design of the Bluecar by Pininfarina, and the adaption made to the car show the strong design attitude of the company. Bluecars are associated with Autolib'. When you see a Bluecar in the streets of Paris, you can be certain the driver is an Autolib' member. Due to these product and service design features, questions of "identity and the hedonic value of the [accessed] object" (Bardhi & Eckhardt, 2012. p. 16) are expected to be more salient in Autolib'. Our main research question is: Can design, through the creation of new appropriation practices, create meanings for consumers in the context of access-based consumption? This unfolds into two further questions: Can the design project embedded in Autolib' create user appropriation practices with accessed cars? If so, do these practices contribute to the creation of meanings for consumers?

METHOD

This research focuses on practices of appropriation of accessed objects. The aim is to understand the role of design in the enactment of the practices and in the creation of meanings. A qualitative methodology is adopted, coherent with the comprehensive nature of the research question. Throughout data collection, we referred to the literature to order the findings, while allowing new insights to emerge from the field (Strauss & Corbin, 1990). We collected data at two different times. We conducted 13 interviews with Autolib' users in Paris and its close suburbs (see Table 1.). An analysis of the interviews indicated that we reached saturation. Later interviews did not generate any new ideas and it appeared that no further information would be collected with a larger number of interviews. Previous research studying consumer practices and experiences were successful in interpreting smaller sample sizes (i.e., Bonsu & Belk, 2003; Holt, 2002; Fournier, 1998; Thompson, 1996). Like Zipcar users (Bardhi & Eckhardt, 2012), Autolib' users are young, professional and urban (Ademe, 2014). The sample consists of seven men and six women, all between the ages of 20 and 32. Nine of them are young professionals and four are university students. The sample is consistent with the demographic profiles of Autolib' users. We contacted the first users through word-of-mouth and then benefited from a snowball effect. Indeed, several users had acquaintances who were also Autolib' drivers. For instance, in the table below, we recruited Johanna via word-of-mouth. She introduced us to Carla and Lionel. Johanna had been introduced to Autolib' by Lionel, and then herself introduced Carla to the system. Then some informants were recruited directly at Autolib' stations. There, we also benefited from a snowball effect. Gaelle, who was recruited at a station, put us in contact with Jean-Marc. Each interview lasted between forty and seventy minutes. Eight interviews were conducted in café or cafeterias, two in the informant's office, one in the informant's home and the last two in a Bluecar during the second part of the data collection.

Discussions focused on sharing in general, on the relationship with the company' and on the Bluecar itself. The second part of the data collection comprised observations and an interview with an Autolib' manager. This was done to bring depth to the interviews by observing practices that were described in the first round of data collection. Practices are activities done with objects, which is why it was important to combine interviews with onsite observations of Autolib' users. We accompanied two informants for an hour each to observe their practices with the Bluecar from the moment they booked the car to the moment they returned it. We also observed users at charging stations. We made five videos and took twelve pictures throughout the process. Finally, we conducted an interview with a high-ranked manager at Autolib', which lasted an hour and a half. This interview allowed us to triangulate the data and to understand the history and context of the company, its future projects, and the company's point of view on design.

Table 7. Informant demographic characteristics

Name	Age	Profession	Place of residence	User for	Frequency of use	Previous relationship with cars
Carla	27	Student	Suburbs	6 months	Several times a week	Owned a car which broke down, replaced it with Autolib'.
Marianne	25	Intern	Paris	2 years	Several times a month	Used her parent's car before. Never owned a car herself
Olivier	27	Consultant	Paris	4 months	Weekly (mostly weekends)	Never owned a car, used his parent's car before moving to Paris
Tristan	22	Intern	Paris	1.5 years	Several times a month	Never owned a car
Johanna	26	Student	Paris	2.5 years	Mostly weekends	Never owned a car

Jean-Marc	31	Employee	Paris	1.5 years	Several times a week	Owned a car before, sold it when moved to Paris
Lionel	29	Engineer	Suburbs	2.5 years	Several times a week	Never owned a car
Jean-Baptiste	28	Engineer	Paris	7 months	Several times a week	Never owned a car
Mélissa	23	Student	Suburbs	6 months	Weekly	Never owned a car
Christophe	30	Engineer	Suburbs	1.5 years	Rarely (once every few months)	Owned a car before but did not use it so sent it back to countryside (2 years ago). Would consider buying a car if drove more
Gaëlle	32	Employee	Paris	2 years	Several times a week	Owned a car before, sold it when moved to Paris (4-5 years ago)
Sacha	20	Student	Paris	10 months	Several times a month	Never owned a car; used his parent's car before
Valérie	27	Lawyer	Suburbs	1 months	Several times a week	Never owned a car before; used her parent's car
Alexandre (round 2)	28	Consultant	Paris	9 months	Several times a week	Recently bought a car. Uses both his own car for travel and Autolib' in Paris
Julie (round 2)	28	Teacher	Paris	3 years	Mostly weekend	Never owned a car

We categorised the interviews transcripts both deductively (appropriation as an existing concept) and inductively to identify emerging themes (Spiggle, 1994). Deductively, we focussed on identifying elements of knowing, controlling and creating. A few themed emerged inductively throughout the analysis: Autolib's image and the idea of ephemeral appropriation. Guided by the constant comparative method of analysis (Spiggle, 1994), we compared each incident in the data with other incidents of the same theme to identify similarities and differences within each theme (Spiggle, 1994). Incidents refers to elements of the appropriation practice. For instance, in the practice of knowing the role of the car's uniformity appeared as central after the analysis of the first few interviews. We then checked horizontally through all interviews how this element was perceived and talked about. The analysis focussed on understanding the appropriation practices and the relationship with the Bluecar and the service. Specifically, we identified key design features involved in each appropriation practices. This analysis was then coupled with the observational data (interview transcripts, videos, pictures and field notes).

FINDINGS

INTRODUCTION: A PERCEIVED SENSE OF OWNERSHIP

In accordance with Bardhi and Eckhardt (2012), the main reason that motivates consumers to subscribe to Autolib' is utilitarian. It is a practical service and that is why it is used. However, our findings also indicate that utilitarian value is not the only value users get from using the service. Indeed, in contrast to Bardhi and Eckhardt's (2012) findings that Zipcar users have no engagement with the car, Autolib' users seem to experience a perceived sense of ownership

(Pierce et. al, 2001). The informants express the feeling that the cars they use are theirs. Johanna, a Parisian student who has been using the service for over two years, clearly states:

> Yes, when I'm in the car, I switch on the music and I feel like I'm in my car. I don't feel as though I'm in someone else's car. I'm settled, once I've adjusted all the settings, I start the engine of and I really have the feeling of being in my car. […] I'm in control, it's my car. I adjust the car to my settings, I do my things, I'm in charge, I drive the car… it's my car. It's mine until I put the plug back on and I leave it. I leave and I tell myself I hope it'll be here when I come back. Otherwise, as soon as I press, as I put my feet on the pedal and I start, it is mine. (Johanna, 26)

Johanna expresses a feeling of perceived ownership over the Bluecar: "I feel like I'm in my car". This feeling seems to emerge from several of her own actions: "I put the music on"; "I've adjusted all the settings"; "I am in control"; "I'm in charge, I drive the car"; "I adjust the car to my settings"; "I do my things". All these actions, these activities done in the car result in one feeling: "it's my car". Thus, utility is not all there is to the relationship between users and Autolib' cars. Johanna's words show her feeling of ownership. In the next sections, we examine the route that leads to this feeling by deconstructing consumer practices of appropriation. For each of the appropriation practices, i.e. knowing, controlling and creating (Belk, 1988; Sartre, 1943), we identify key design features that enable them and look for the meanings and representations that are created through these practices. We begin with the practice of knowing, which is enabled by the uniformity of the vehicles' design and personalisation. Uniformity allows for routinisation and the creation of habits, whereas personalisation creates emotional bonds. We then move to the practice of controlling, which is enabled by two design elements: the electrical engine and the automatic transmission of the vehicle. These two features create a game-like sensation when driving the Bluecar. Finally, the design of the service enables the practice of creating by making users invest time and energy in the service.

KNOWING

Knowing is a practice of having, which in the case of Autolib', is enabled by the uniformity of the Bluecars design. Objects exist for users when they become aware of them (Belk, 1988; Sartre, 1943, 1984). Sartre develops the idea of the dissolution of the known object in the self and writes: "The known is transformed into *me*; it becomes my thoughts and thereby consents to receive its existence from me alone" (Sartre, 1984, p. 579). One of the design features that enables the practice of appropriation is the uniformity of Autolib's cars. Users recognise the Bluecar in the streets from afar, know the specificities associated with driving them and can describe the vehicles' interior. Because of this consistency in design, users can engage in daily routines with the vehicle. The same gestures are repeated every time they use the service. Reckwitz's (2002b, p. 250) defines practices as "routinized ways in which bodies are moved, objects are handled, subjects are treated, things are described and the world is understood". This routinised movement of the body is enabled here by Autolib's decision to offer only one car model. Having a single model establishes the impression of always getting into the same car. Habits are created between the users, the cars and the service:

> Yes, I'm very familiar [with the car]; I know that the first thing to do is to switch it on because the built-in computer can sometimes be slow. So, I switch it on to get it started and in the meantime I adjust the mirrors and the seat. I do it in that order. (Lionel, 29)

This quote illustrates the routine sequence of actions performed by Lionel when he gets into the Bluecar. Once seated, he first switches on the built-in computer, then adjusts the mirrors and finally adjusts the seat. Autolib' users can describe the sequence of activities they do before starting the engine in precise details. We also observed this sequence of gestures during our observations. These routines diverge slightly, but users feel the necessity to go through these in a specific order to feel comfortable. For instance, Lionel's sentence "I do it that order" shows

how important these routines are to him. They follow a script. Scripts are parts of rituals (Rook, 2985; Goffman, (1956). Rituals are "meaningful aspects of both everyday and extraordinary human experience"; "expressive, symbolic activities" that are sequential and repeated over time (Rook, 1985). Here, these routines are not rituals per se. They are not as embedded in meaning as rituals are. However, for some users, they may play a meaningful role. Some users, like Johanna, take Autolib' mainly during weekends to visit her family in Paris' suburbs. To her, Autolib' is a part of the family's Sunday lunch ritual.

Designing smart technology in the context of access also appears important. The design of the built-in computer reinforces familiarity with the Bluecar. Its most important feature is the storage of favourite radios and destinations. When users get in the car, the radio stations are always the same as the previous time, just as if the car had been waiting for them:

> I arrive, it recognizes me so I've got all my stations on the GPS, everything is automatic. I don't have to search all the time, my radio is on. If we'd have to look for our favourite radio program every time, it wouldn't be as great. This way, it's true, it does feel as though it's more yours. (Mélissa, 23)

Here the built-in computer reduces the routinisation: listening to her favourite radio does not require any action from Mélissa. The computer's design integrates parts of the routines in place of the user. Zipcar users do not take the time to adjust the radio to their favourite stations and thus do not settle (Bardhi & Eckhardt, 2012, p. 9). In Autolib', the computer performs its own routines (i.e., recognizes the user, says hello, remembers stored radio stations, and proposes favourite destinations) while users go through their installation routines. The installation routines thus appear to be a co-constructed process between the car, the computer, and the user.

Figure 4. Autolib' user showing me that her favorite station starts automatically

As Melissa further talks about the car, we observe how the co-construction of these habits creates an emotional relationship between the user and the car:

> Oh yes, I'm fond of it, I take my little car, I'm happy, I like driving Autolib'. It's practical because it's small, you can manage it easily, it's automatic… You arrive and your radio is already on because the car recognizes that it's me: 'Hello Mélissa!' (Mélissa, 23)

Mélissa expresses attachment towards the vehicle ("I'm fond of it") and uses possessive pronouns: "I take my little car". These elements of discourse show a perceived sense of ownership of the car. She builds a relationship with the car, and creates representations around it. The car is "small", "easy", "automatic": a great urban car. The personalisation created by the design of the built-in computer is crucial. It creates an emotional bond between the car and the user (Mugge, Schoormans & Schifferstein, 2009). The observations of users renting a

Bluecar revealed the importance of the moment the radio is switched on. It marks the instant when everything is ok and ready to go.

CONTROLLING

Practices of appropriation via controlling is enabled by Autolib's choice to offer only electric and automatic vehicles. Appropriation by control implies overpassing a difficulty or mastering the matter (Belk, 1988; Brunel & Roux, 2006; Sartre, 1943). Materiality is important. Control happens when one has a strong hold over an object. This notion of control is apparent from Olivier's reaction. He is a Parisian consultant who has been using Autolib' for four months:

> It may be the electrical aspect. The electrical aspect makes it bland; it's a piece of metal… But it's pretty funny because it's you who's in control, there's no engine, no machine ready to dominate. It's there and it works. There's a real feeling of possession (Olivier, 27)

Olivier expresses the power he feels over the vehicle, which runs on an electric motor and has an automatic gearbox. Both features are not common in France: adopting them changes the practice of driving. Electric cars are quieter than conventional internal combustion engine cars, which produce noise and petrol fumes. Olivier feels that the car is somehow hiding to give full space for the user. He feels in control over the vehicle. Driving a Bluecar is smooth and quiet. The car is domesticated and not "ready to dominate" (Olivier). New ways of doing with the object are created through the implementation of these two specific design features. According to Sartre, one can appropriate something through "sliding" (1943, p. 629). By sliding Sartre means a gentle touch over the matter without compromising oneself into it. For instance, hiking to the top of the mountain will not force a hiker to slide into the mountain; (s)he will simply stay on top of it. Yet a feeling of ownership occurs when reaching the top because the hiker can dominate the mountain. Sartre (1943, p 627-631) also gives examples of games and sports

to explain the notion of sliding. Jean-Baptiste experiences this game-like sensation when he drives a Bluecar:

> It's interesting that the car's quite high, a bit like a 4x4, so that the driver's seat is quite high, higher than most other cars, and this reinforces the game-like sensation. (Jean-Baptiste, 28)

Although the car is quite small and urban, the driver's seat is higher than usual, giving Jean-Baptiste a feeling of control. Informants compared the small, silent and easily manoeuvrable Bluecar to a toy-car, and used words such as karting and bumper car to describe it. Users are empowered by the height of the driver's seat, which "reinforces the game-like sensation" (Jean-Baptiste). When playing games, consumers immerse themselves into an experience (Brown & Cairns, 2004; Chen, 2007; Choi & Kim, 2004), which leads to appropriation (Carù & Cova, 2006) and the feeling of flow (Csikszentmihalyi, 1997).

Compared to a manual car, driving an automatic car appears to be easier and smoother. Many people find it difficult to drive manual cars and drivers feel they have to learn to domesticate them. A gas engine is said to 'roar' like a wild beast. This is not the case of the electric and automatic Bluecar. What Olivier and Jean-Baptiste express is that the route towards domestication of the object does not have to be very difficult. Bluecars seem to work collaboratively with users to allow practices of appropriation. Through their design features, the cars help users to feel in control. Thus, users easily tame them and float in them:

> You feel that it's made to travel in the future, you feel like the car is teletransporting, really. And it really makes the sound of the future. It does viiiioooooouuuuuuuu. So I don't know how to explain… You really have the impression that the car's flying over… You don't feel anything. It's really smooth, you see. (Marianne, 25)

The notion of sliding is apparent in Marianne's quote. It is not something she does on her own: the car "teletransports" her into the "future". Elements of design such as the electric engine and the automatic gearbox change the representations associated with the cars. The sound is different: "it does viiiioooooouuuuuuuu"; the driving also is different: "It's really smooth, you see". The practice of driving changes, which creates new representations of the Bluecar as the "car of the future". Consumers can draw on this representation to see themselves as drivers of the cars of the future.

CREATING

Creating is the third practice of appropriation. In the case of Autolib', this practice is enabled by the design of the service, which forces users to invest time and energy. Sartre (1943) acknowledges that investing time, money and energy participates to the practice of appropriation via creation. In the case of Autolib', first, the perspective user needs to spend time and energy in researching the service and the subscription. "It's really a peculiar process. You must really want to use them to try it out, you have to take a personal badge" (Tristan, 22). Looking for information about a product or service already contributes to its creation (Brunel & Roux, 2006). Second, understanding how the system works takes time, as Mélissa reports:

> You just have to understand the mechanisms. After a while, it becomes routine, but in the beginning it's a bit complicated and you have to understand how it works. You can't just pick up the car and drive off. You have to use your personal badge to unlock the car things like that. (Mélissa, 23)

It is interesting to see here that practices must be learnt before becoming routines activities. Practices become routine activities through their enactment. This is what Mélissa said. First, she had to "understand the mechanisms", and only "after a while" did it become automatic i.e.

routine. This "after a while" shows that the user needs to invest time for the enactment of appropriation. Specific gestures and movements must be performed to use the service and these create habits between the user and the car. These habits are energy consuming for users:

> I think everyone does pretty much the same. You scan your card, you enter your code […] then your Bluecar starts flashing, you put your card on the detector to open the small shutter, you unplug and put back the electrical supply, you get into your car […]. So I push all the buttons very, very quickly [...] and then there's a whole thing that remembers your radio stations, there's your GPS that starts up. You hurry to fasten [your seatbelt], you put the key in the thing and then you start the engine, very simply. Oh and there's all the adjustments to make, that kind of thing to adjust the seat. (Tristan, 22)

Tristan's quote illustrates the set of knowledge and skills users create when using the car. The user has to do several activities in order to be able to drive. These gestures, or activities (doings) are illustrated by all the verbs Tristan uses: "scan", "enter", "put", "unplug", "put back", "get into", "push", "hurry", "fasten", "put", "start", "make", "adjust". In the picture below, we see an informant unplugging the electrical cord from the charging station. She then has to pull it quite hard to bring it all the way to the car.

Figure 5. Autolib' user dragging the eletrical cord from the charging station

Users have to adapt to the design of the system. They cannot simply open the door, sit down, turn on the ignition and drive off, but must undertake a series of sequential, routine actions to start using the service. These actions require a certain amount of energy from users. The design of the car and the service contributes to build users' practices of appropriation via creation.

EPHEMERAL APPROPRIATION

At the beginnings of the findings, Johanna expressed a feeling of perceived ownership towards the cars. At the end of the quote she states that the car is hers "until I put the plug back on and I leave it". Several consumers express this ephemeral appropriation of the cars. For Tristan for instance:

> So when you've got your Autolib', you are in charge and you take good care of it. You don't feel like you're sharing it. It's my car for limited duration. After, I won't care for it. But nevertheless here it is. (Tristan, 22).

Tristan's feeling of ownership is intense during the driving but ends once the car is parked back at the charging station. In this sense, perceived ownership in the context of access differs from traditional ownership. Here the feeling of ownership is contingent to the duration of use. Bardhi and Eckhardt (2015) note that one of the characteristics of liquid consumption is the ephemeral value of objects. This finding is in line with what they advance. When the object is not in use, it seems that the appropriation users have develop with it vanishes. However, even when not in use consumers are still attached to the brand. Thanks to the cars' specific shape, consumers look up when a Bluecar passes them in the street. Some of them also engage in positive word-of-mouth. In our small sample, Jean-Marc heard of Autolib' through Gaelle, Carla via Johanna and Johanna via Lionel. Appropriation in the case of Autolib' is ephemeral but brand attachment is retained also when the object is not in use.

DISCUSSION

This research looks at the role of design in enabling consumers' practices of appropriation in the context of access-based consumption. The research answers Bardhi and Eckhardt's (2012, p. 16) call to examine "access contexts in which identity and the hedonic value of the object are more salient". Specifically, the findings show that consumers of access-based consumption services can achieve perceived ownership of accessed objects when a design project is embedded in the core of the service. This research furthers the understanding of the consumer-object relationship in the context of access. In contrast to Zipcar users (Bardhi & Eckhardt, 2012), Autolib' users retain more than just utilitarian value when using the service. New

meanings are associated to driving Autolib': smooth and silent, ecological, Parisian, futuristic. Appropriation seems to be more salient during the effective use of the object. When the object is not in use, users forget about the specific objects. However, they remain attached to the brand.

This research contributes to the discussion between the disciplines of consumer research and design. Both focus on consumers (users) and their relationship with objects. While the number of research on product design in marketing journals is slowly increasing (Luchs & Swan, 2011), the two fields do not collaborate easily (Beverland & Farrelly, 2011). Research that combines both approaches contributes to narrow this gap. The findings also contribute to the design literature on product service systems when objects are used by multiple users. This research is useful for companies in access-based consumption as it helps them in designing meaningful products and services. First, developing objects that force a change in the practices associated with the type of object can create meaning for users. In Autolib', the cars are electric and automatic, two features that were new for almost all our informants. Due to these design features, new meanings are attributed to the car such as the "car of the future". Second, uniformity in the design of the product is key in this context, as it enables users to engage in practices of appropriation through knowing the object. Uniformity enables habits and familiarity between users and the accessed cars. Finally, when objects are shared, co-creation and personalisation of the service appear necessary to create emotional bond (Mugge, Schoormans & Schifferstein, 2009). In Autolib', the role of the built-in computer is crucial in this regard. Because the on-board computer saves the user's favourite radio stations, users feel as though they always get the same car. Recommending designers to design both uniform and personalised products can seem paradoxical. On the one hand, we encourage designers to offer standardised, uniform products, and on the other hand, we acknowledge the importance of

personalisation, i.e. adaptation. The findings suggest that the combination of a consistent product design with a personalised service design is crucial in the context of access.

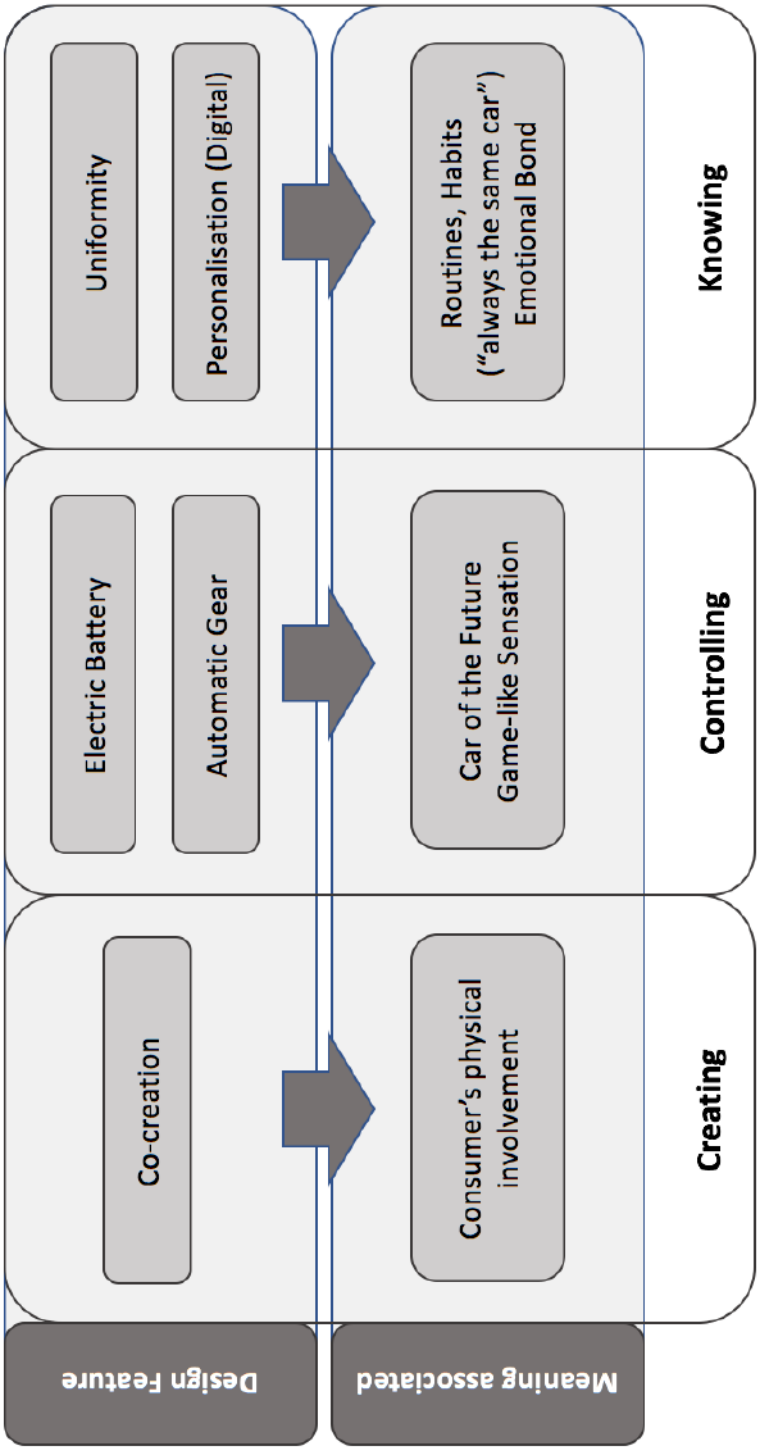

Figure 6. Design features, meanings and appropriation

It is interesting to look at the findings of the present study through the brand concept management framework developed by Park, Jaworski and MacInnis (1986). The authors identify three brand concepts: functional, symbolic and experiential. Zipcar can be identified as a functional brand (Bardhi & Eckhardt, 2012), whereas Autolib' is a more experiential, even symbolic brand. Through the new experience consumers build new meanings which are associated with the brand. The experience of driving these new electrical cars in an access-based system and the practices of appropriation developed upon it create sign value. Sign value in turn contributes to developing the symbolic aspect of the brand Autolib'. The findings contribute to creating connections between design and branding. Future research should examine the connections between design and branding in the context of access-based consumption. The role of design in defining a brand concept should be strong in the introductory, the elaboration and the fortification stages of a brand life cycle (Park, Jaworski & MacInnis, 1986). Indeed, design research shows that design is a culture that should be integrated in all the stages of brand and product development (Julier, 2014).

This research has several limitations. First, the number of interviews is limited to identify variation in the findings among informants who are early-adopters of Autolib' and those who just started using the service. Second, the number of observations conducted in the field are limited. This provides opportunities for future research to study consumers' practices in access-based consumption. An ethnographic, longitudinal approach could look at the evolution of practices in car sharing over a longer period.

The context of the study is Paris, France, which constitutes a fertile ground for Autolib'. First, Parisians were already used to accessing transportation modes when Autolib' started business. Second, Bluecars are small and grey and thus fit well in the busy Parisian urban landscape. In 2015, the Bolloré group launched Autolib' in Indianapolis, Indiana, and it is planning to launch

its service in London in 2016 and in Singapore in 2017. The use of the service is expected to vary with different cultural contexts. In Indianapolis for instance, journeys are longer as consumers drive to the airport or to university campuses. Bluecars intended for the US market are made to cover longer distances. Their design has been modified: the car is heavier, longer and more robust. Further research should focus on the adoption of this Parisian car to different cultural contexts and city layouts.

It would be interesting to compare the appropriation practices of accessed objects and accessed places. Place attachment shares many characteristics with object attachment (Debenedetti, Oppewal & Arsel, 2014; Kleine & Baker, 2004). Both objects and places are central for the consumer's definition of self (Belk, 1988). For example, these dynamics could be examined in coworking spaces. The office is often assimilated to a "home away from home" (Tian & Belk, 2005). This feeling of homeyness (McCracken, 1989) could be disrupted in the case of coworking spaces, especially if coworkers do not have their own desk. Further research should investigate the practices of appropriation of hot desks in coworking spaces. The role of design in the enactment of these practices could be a key issue.

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TRANSITION: ESSAY I TO ESSAY II

The first essay explores appropriation in the context of car sharing. It shows the importance of design in the enactment of consumers' practices of appropriation. First, uniformity of the vehicles allows consumers to familiarise with the cars. Second, the electric battery and automatic gear give control of the cars to the users. Third, the design of the service fosters a co-creation process between consumers, the cars and the company. The main difference with owned objects is that appropriation of the accessed cars is limited in its duration; the full extent of appropriation is perceived while driving.

Essay I studies consumer appropriation in an access context where objects are standardised and where users access the service anonymously. The second essay looks at appropriation in a coworking space, a non-anonymous access context where consumers access the space simultaneously and which offers high material flexibility. We observe individual and collective practices within a coworking space to understand the value of consumer appropriation within this access-based service.

ESSAY II. ACTIVATING THE PERIPHERAL VALUE OF ACCESS-BASED SERVICES THROUGH CONSUMER APPROPRIATION: THE CASE OF A COWORKING SPACE

ABSTRACT – This paper studies coworking spaces as access-based service systems. Coworking spaces offer independent individuals a place to work, but they also offer the possibility to access a socio-professional network of entrepreneurs. Through participant observation in a coworking space in Paris (the Sensespace) this research aims to understand how coworkers activate and access the network. We define consumer appropriation as a set of practices through which consumers activate the network for themselves. The findings deconstruct personal (nesting, stamping, gift-giving) and collective (ritualization, play, construction and participation) practices of consumer appropriation. We then set out to understand the mechanism through which the access to the network is kept open. The findings are discussed with regards to the definition and value of consumer appropriation, communities and the design of office spaces.

KEYWORDS – consumer appropriation, coworking space, practices, entrepreneurs

PREVIOUS LIVES OF THE ARTICLE –

- Gruen A. (2016) Collective Practices of Appropriation in a Coworking Space, *1st International RGCS Symposium*, Paris, France, December 16
- Gruen, A. (2016) Understanding the appropriation of shared artefacts as activities of routine resistance to sharing, *Consumer Culture Theory Conference*, Poster Track, Lille, France, July 6-9
- Gruen, A. (2016) L'appropriation de l'artefact partagé comme une forme de résistance au partage, *32è Conférence de l'Association Française du Marketing*, Lyon, France, May 19-21

INTRODUCTION

Coworking spaces offer independent individuals, or groups of individuals a place to work (Spinuzzi, 2012). They offer a suitable working environment for entrepreneurs, providing them access to a desk and traditional office furniture. This service is accessible through monetary exchange on the marketplace. Individuals pay a fee to be able to access the coworking space, on an access-based mode of exchange (Bardhi and Eckhardt, 2012). Toussaint (2016) advances that coworking spaces are polyfunctional spaces, where different functions coexist. She identifies "work" as being the main function. We focus in this essay on another function of coworking spaces which we label the "peripheral offering" by opposition to the "core offering" which is the workspace. This peripheral offering consists in offering entrepreneurs a place to build a professional network (Blein, 2016; Waber, Magnolfi and Lindsay, 2014) and entering open innovation circles (Fabbri and Charue-Duboc, 2016). This peripheral offering is not accessible through monetary exchange. Entrepreneurs cannot pay to have a network of start-up ready to share ideas and best practices. What are the mechanisms through which coworkers activate the value of this peripheral offering? This paper develops the concept of consumer appropriation as a mean to activate and benefit from the peripheral value of access systems. By looking at micro-practices enacted daily within the coworking space, we aim to unpack the hidden value of consumer appropriation. In coworking spaces, we show that appropriation activates access to a network of entrepreneurs. Coworkers benefit from the available professional network through a system of participatory practices.

The first section of the literature explores the recent academic research on coworking spaces. Coworking spaces in this paper are conceptualised as access-based services where individuals or groups of individuals pay a fee to have access to a workplace. We draw from Wittel's (2001)

theory of network socialities to define the peripheral offering of coworking spaces as access to a network of entrepreneurs. The second section of the literature conceptualises consumer appropriation. We adopt a social psychology of the environment view of appropriation which we couple with a focus on the material. We develop a concept of consumer appropriation which aims towards individuals' wellbeing within an environmental setting. Further, we describe the context of study, a coworking space called the Sensespace in Paris, France. The method of the research consists in participant observation in this specific coworking space. The findings are presented in two parts. First, we deconstruct the practices of appropriation in three steps which allow coworkers to activate and benefit from the access to the network of entrepreneurs. The second part focuses on the different meanings created by the practices and associated with the space. We argue that these meanings coexist and enable coworkers to maintain access to the network open. The last section provides a discussion on the value of consumer appropriation in access-based services, the nature of coworking spaces and the design of office spaces.

LITERATURE

COWORKING SPACES

COWORKING SPACES: AN EMERGENT LITERATURE

Coworking spaces emerged in the 2000s to offer independent professionals a place to work "alone, together" (Spinuzzi, 2012). Users of coworking spaces do not work for the same organisation and not even necessarily in the same sector. They work in an independent way but share a workspace. Users pay a fee to have access to a coworking space; they are usually provided with a desk and traditional office facilities (printers, coffee, etc.). Gandini (2015)

distinguishes between *coworking*, "the practice of working individually in a shared environment" and *co-working* (with hyphen), which indicates the activity of working collectively on a project. Throughout this report, we will adopt this lexical rule by using *coworking* and *coworkers* without hyphen.

Toussaint (2016) conceptualises coworking spaces as polyfunctional service spaces, where people live, experience, work and consume. Polyfunctional spaces as defined by Toussaint (2016) are driven by openness, flexibility, the space's design and the coexistence of several functions in one space. The main function of coworking space is to provide a working environment. Coworking spaces also offer multiple experiences to coworkers. Toussaint highlights the role of non-work-related, collective activities (such as lunches, discussions, events) and how they create the consumption experience of polyfunctional services spaces. Specifically, she identifies the spatial environments as ludicrous experiential facilities. Coworking spaces also promote collaboration, community building and entrepreneurial spirit (Spinuzzi, 2012; Fabbri and Charue-Duboc, 2016). One benefit of accessing a coworking space for entrepreneurs is to build a professional network (Blein, 2016; Gandini, 2015; Waber, Magnolfi and Lindsay, 2014) or to benefit from open innovation mechanisms (Fabbri and Charue-Duboc, 2016). Consequently, coworking spaces often describe themselves as collaborative, offering a community of practitioners, a sense of belonging and openness (Capdevila, 2015; Moriset, 2013; Spinuzzi, 2012; Suire, 2013). These discourses are appealing for entrepreneurs who wish to share resources and to connect with other entrepreneurs. Consequently, coworking spaces are often conceptualised as third places, or "working third places" (Boboc et al., 2014), due to their purpose of stimulating creativity and social interactions (Moriset, 2013; Suire, 2013; Oldenburg and Brissett, 1982). Boboc et al. (2014) highlight the role that coworking spaces can play in helping individuals out of isolation. Third places are places that are neither the home (first place) nor the workplace (second place). The

primary goal of such places is social (Oldenburg and Brissett, 1982). Most common examples of third places are neighbourhood café (Thompson and Arsel, 2004) or association premises.

We agree with Toussaint (2016) that the conceptualisation of coworking spaces as third place seems ill-fitted. The sometimes playful and creative atmospheres of these places (Toussaint, 2016) should not hide the fact that coworking spaces are primary workplaces. They do differ from traditional organisations' offices, but entrepreneurs go there to perform job-related activities. Second, Oldenburg and Brissett (1982) specify that third places are open access spaces. Everyone can enter a café. In the case of coworking today, access to these spaces is often regulated. They are not free to access, there is a daily or monthly fee. Third, it is the assumption that entrepreneurs are somewhat driven by pro-social motivations that supports this body of literature (Moriset, 2013). Yet, even though discourses of openness and sharing are prevalent, we argue that it is self-interest that primary motivates entrepreneurs to access coworking spaces.

COWORKING SPACE AS SITUATED NETWORK SOCIALITIES

Capdevila (2013) offers a network-based perspective on coworking spaces as microclusters. He shows that they are a rational milieu, in which entrepreneurs go to build a social standing for themselves and their business. The reason behind the use of coworking spaces appears instrumental: social network is a key for success in the entrepreneurial business (Aldrich and Zimmer, 1986; Blein, 2016; Gandini, 2015; Wittel, 2001). In the creation of a business reputation it appears crucial for entrepreneurs to be in the right place with the right people. Coworking spaces encourage collision and discussions between entrepreneurs (Waber, Magnolfi and Lindsay, 2014). They may be "accelerator for serendipity" (Moriset, 2013, p. 8) and sometimes act as intermediaries to open innovation (Fabbri and Charue-Duboc, 2016).

Coworkers help one another via exchange of advices, best practices or technical support (Blein, 2016). Of course, over time, coworkers develop relationships of friendship. Yet, what defines social ties within coworking space is not who coworkers "are", but what they "share" in a situated context (Kozinets, 2015, p.11). Rather than being a community, coworkers' social relationships are closer to "Network socialities" (Wittel, 2001) or to consocialities (Kozinets, 2015, p. 11). Network socialities are characterised by individualisation (individuals must be active to create social ties), ephemeral and intense social bonds (intense when working on a common project for instance, but which quickly wind down when one leaves), exchange of information rather than narratives, assimilation of play and work (blurring of boundaries between work and private life, friends and colleagues, colleagues and clients) and the importance of technology (Wittel, 2001). In this perspective, entrepreneurs are consumers of a place to which they are drawn by utility, to be part of a network sociality. The main differences with the network socialities that Wittel (2001) describes is that coworking spaces are situated, geographically-defined places which consumers access on the marketplace. The coworking space's network sociality has monetary and physical borders (which include the online platform that coworkers share). Therefore, we see coworking spaces as situated, market-based workplaces in which consumers-entrepreneurs can access a network sociality.

Toussaint (2016) identifies two profiles of coworking consumers: the pragmatics who wish to benefit from a (net)working environment and the romantics looking for enchantment and rupture. For the former, Toussaint (2016) and Blein (2016) both insist on the importance of the creation of relationships for coworkers. Coworking spaces answer to a need of coworkers to expand their professional network. For the latter, this perspective is also existing but is closer to real socialisation. These coworkers distinguish the coworking space from their real workspace which is often the home. To them, coworking spaces are closer to places for "life"

or "conviviality" (Toussaint, 2016, p. 216). Building a professional network is not excluded nonetheless (Blein, 2016).

To sum up, the offering of coworking spaces is twofold. Their core offering is a workplace environment, accessed via monetary exchange. On the periphery, they offer entrepreneurs the opportunity to build a professional network. The utilitarian motivations of entrepreneurs are not consistent with a conceptualisation of coworking spaces as third places. Because entrepreneurs pay a fee to have access to the space, we see coworking spaces as manifestations of the access economy.

COWORKING SPACES AS ACCESS-BASED SERVICES SYSTEMS

Access economy encompasses market-mediated exchange without transfer of ownership (Bardhi and Eckhardt, 2012). Consumers are drawn to access by utility (Bardhi and Eckhardt, 2012; Eckhardt and Bardhi, 2016; Lamberton and Rose, 2012; Lawson et al., 2016). They pay a fee to get access to a product or a service. In the case of coworking, consumers pay a fee to get access to a working environment and a desk. Coworking spaces offer daily, continuous duration of access. It is market-mediated since the coworking companies are for-profit. Coworkers are involved in the good functioning of the service (they signal when something is broken or repair it themselves; they are implicated within the space: to get their coffee, to book meeting rooms, etc.). Coworking spaces are non-anonymous places: the level of interactions amongst coworkers is high and the use is often collective (Toussaint, 2016). Coworking spaces are often innovating working spaces that give lot of importance to the physical environment (Toussaint, 2016; Spinuzzi, 2012). Last, coworking spaces provide fertile grounds for pro-social behaviours, since consumers access the space together (Bardhi and Eckhardt, 2012). We define coworking spaces as access-based services systems which comprise the following

dimensions: continuous, daily access of long duration; market mediated; collective and not close to home; based on an innovative and functional space and providing opportunities for pro-social behaviours.

When access is market-mediated, as it is in coworking spaces, it is guided by market norms (Eckhardt and Bardhi, 2016). In theory, consumers are motivated by utility and avoid identification with others and with the object of access (Eckhardt and Bardhi, 2016; Lamberton and Rose, 2012). If access is not market-mediated it is identified to sharing, embedded in social relationships and governed by norms of reciprocity (Arnould and Rose, 2015; Belk, 2010; Eckhardt and Bardhi, 2016). We have previously seen that the attractiveness of coworking spaces depends on their ability to provide entrepreneurs with the opportunity to create a professional network. To connect with one another, coworkers are likely to interact. These interactions should foster collective dynamics and identification with others. This is interesting, as collective, communal behaviours are usually enacted in situation of mutuality (Arnould and Rose, 2015) or community (Muniz and O'Guinn, 2001; Schau, Muniz and Arnould, 2009) rather than access (Eckhardt and Bardhi, 2016). We propose that coworking spaces therefore exhibit a hybrid nature, which mixes the values and motivations of access (utilitarian) with the practices of community (mutuality, generalised reciprocity). Wittel's (2001) notion of network socialities incorporates this ambivalence.

SPACE APPROPRIATION AS DOING AND BEING

THEORETICAL PERSPECTIVES ON SPACE APPROPRIATION

Appropriation is the act of making something *mine*. The word appropriation takes its roots in the Latin verb a*ppropriare*, derived from *propius*, which meant "That which we cannot share

with others, own" (Le Robert, 1995). The suffixe –ion distinguishes appropriation from ownership. A thing that is owned is appropriated: it becomes a Good by legal standards. Not all things that are appropriated are owned. Appropriation of objects is the process, the actions, that result in the feeling that the object is mine (Pierce et al., 2001). It implies actions from whom wishes to make something his. In the case of space, appropriation is a "fundamental psychological process of actions and interventions on a space to transform and to personalise it; this system of influence [*emprise*] on places comprises forms and types of interventions on the space which translate into relationships of possession and attachment" (Fischer, 1992, p. 93-94). The purpose of space appropriation, rather than to make some place *mine*, is to create a space of one's own, personalised (Fischer, 1981, 2011) or a home-like space (McCracken, 1989; Rosselin, 2002; Serfaty-Garzon, 2003). The process of appropriation enables to move away from an empty space, a non-place (Augé, 1995) to a meaningful place (Tuan, 1977).

Positivist perspectives on appropriation move away from this praxeological point of view to look at the effects of the physical environment on consumer behaviour and appropriation. The effect of the physical atmosphere of a store has impact on consumer's emotional states and thus on their shopping behaviour (Donovan and Rossiter, 1982). This perspective investigates the role of the physical settings on consumer behaviour, but fails to integrate the appropriation of the space or object by consumers (Aubert-Gamet, 1997). It appears that the relationship between a store and a consumer can only be engaged by managers, architects or designers. The constructivist perspective follows the work of Lefebvre (1974a, 1974b) to acknowledge the role of consumers in the construction of space. Appropriation appears as a constructed process (Aubert-Gamet, 1997; Bonnin, 2002, 2006).

In this paper, we adopt a social psychology of the environment approach to appropriation, which we couple with a focus on the material environment. Social psychologists of the

environment see appropriation as active individual practices (Fischer, 1981, 1992, 2011). While we agree that appropriation requires actions from the actors, we distant ourselves a little from the human-centred view of the social psychology. Appropriation is perceived by social psychologists as control over or mastery of the material environment. It implies individuals' desire to have power over the material environment. Rather, we advance that the material environment works together with the consumer to enable appropriation. We integrate non-human actors and their actions in understanding consumer appropriation (Latour and Woolgar, 1979). The perspective of science and technology studies gives artefacts a focal point in our analysis (Sismondo, 2010). Micro-practices of appropriation are analysed through the material environment (Blandin, 2002; Law, 2009). The daily actions and practices of appropriation are enacted among consumers, artefacts and spaces. They constitute a network which produces meaning for whom is part of the network. We wish to deconstruct this network and its mechanism to understand how appropriation activates the peripheral offering of coworking space.

APPROPRIATION AS PRACTICES AND REPRESENTATIONS

The anthropologist Daniel Miller (1988) studied appropriation in a British council estate. In a residential building where all apartments are the same, he observed how inhabitants altered, transformed and decorated the kitchen. Inhabitants engaged into creative consumption strategies to appropriate the apartments. Transformations in the material, physical environment enabled them to feel *at home* in an a priori blank, standardised space. Social psychologists of the environment look at the ways individuals make a space their own (Fischer, 2011). This activity of making a place one's own, like in Miller's kitchens, is space appropriation. There are two levels of appropriation: practices and representations (Lefebvre, 1974a, 1974b; Aubert-Gamet, 1997). Practices are means of appropriation while representations are ends

(Proshansky, 1976). First, practices of appropriation are all the consumer-artefacts activities which contributes to make sense of the consumer's environment. Fischer (1989, 1992) identified four practices: nesting, stamping, personalizing and investigating (or exploring). Nesting is the activity of building a space of one's own, a den (McCracken, 1989; Rosselin, 2002; Serfaty-Garzon, 2003). It is done through the settlement of the individual in the space: arrangement of one's stuffs, hiding, looking for protection. The individual undertakes actions to create a nest, a den away from the others. The second practice, stamping, is the activity of marking a space with personal inscriptions. Individuals inscribe themselves in the space. Through stamping, they separate what is "mine" and "non-mine" and create borders between the appropriated space and the rest. Goffman (1956) identifies three types of clues individuals use to mark the space as theirs: central-stamps (which represent the centre of the appropriated space), border-stamps (which define the territory) and bookmark-stamps (which represent the individual throughout the space). Nesting and stamping contribute to the personalisation of space (Fischer, 1989). Through the exploration of the space individuals get as much information as possible and interpret this information to make sense of the environment. Exploring also fosters interactions with others in different parts of the space (Aubert-Gamet, 1997).

Practices of nesting, stamping, personalising and exploring lead to the second level of appropriation: building representations of the space. Making sense of a space is to give it personal meaning. This inscription of personal meaning in the space contributes to its transformation into a place for the consumer. The appropriated space enters the mental and social universe of the individual. On a space empty of meaning one builds a meaningful place (Tuan, 1977). Space is openness and freedom when place is security and homeyness (Tuan, 1977). Space represents the unoccupied territory. It has no meanings nor landmarks. Through appropriation an empty space becomes a meaningful place (Fischer, 1981; Serfaty-Garzon,

2003). For instance, the local park is empty of meaning for someone who just moved in the neighbourhood. But for the person who has lived here all his life, it is not simply a park: it is the park where he learned to play tennis, where he used to play when he was a kid. He knows each corner and he wrote his initials on a tree trunk. To him this park is a place full of representations; whereas for the newly arrived neighbour, it is a space yet empty of meanings. Park dwellers create the park's atmosphere through the activity they do within. They develop place attachment of the park (McEachern, Warnaby and Cheetham, 2012). Space appropriation leads to place attachment. Place attachment is a strong "emotional bond between an individual (or a community) and specific location" (Debenedetti, Oppewal and Arsel, 2014, p. 905). Place attachment to focal places such as the home is strong. However, consumers also engage in creating a home away from home through appropriation practices in mobility (Bardhi and Askegaard, 2008). The concept of home-as-order (Bardhi and Askegaard, 2008) illustrates the idea that appropriation are practices which create the feeling of home rather than the practices of arranging one's home. Consumers also develop attachment towards commercial places such as neighbourhood's restaurants or coffee shops. Place attachment in commercial setting happens through developments of feelings of familiarity, security and authenticity towards the place (Debenedetti et al. 2014). Thus, we agree with Proshansky that the end or purpose of appropriation "is exactly in this sense that the person feels in harmony or a sense of well-being with this setting or space" (Proshansky, 1976, p. 34).

SPACE APPROPRIATION IN CONSUMER RESEARCH

The consumption experience

The discipline of marketing looks at appropriation mainly in the fields of services, retail and the experiential consumption of spaces. The shopping experience is a constructed process

between the store manager and the consumer (Bonnin, 2002, 2006). Consumers develop ludicrous or functional strategies of store appropriation, which are influenced by the layout of the store (Bonnin, 2002, 2006). For instance, a store that is rather closed with multiple micro-events might foster ludicrous appropriation. Consumers may deploy different strategies; but in this perspective appropriation begins when the consumers twist the service in any way (Aubert-Gamet, 1997). Ladwein (2002) studies the experience of holiday consumption through an ethnomethodology of an hotel-club. He observes consumers marking the deck chairs with their towels hours before going to the swimming pool. He finds that some consumers develop active practices of appropriation to become actors of their holidays rather than spectators. Carù and Cova (2003, 2006) study the experience of a classical music concert through introspective experience narratives. They deconstruct the practices of nesting, stamping and exploring and show the role that service elements play in this process. They highlight the roles of three services elements playing crucial role in the appropriation of experience: referents (elements of the experience with which the consumer is familiar), guide (a person who orchestrate the experience and whom consumer identify with) and rituals (which can integrate or exclude consumers depending on their knowledge of the rites). They show that appropriation is a subjective process of immersion into the experience. The ritual element appears crucial in the appropriation of experiential spaces (Badot and Lemoine, 2009; Rook, 1985). This body of research shows an interest in moving away from a focus on the pleasantness of the experience to a focus on the appropriation of the experience. As Carù and Cova (2003, 2006) show, appropriation of the experiential space allows consumers to immerse themselves into the experience. Immersion into the experience favours the state of flow (Csikszentmihalyi, 1997; Carù and Cova, 2003, 2006). Appropriation of space enables individuals to feel in harmony with the space. In experiential consumption appropriation enables consumers to sense well-being with the experience.

The collective dimension of consumer appropriation

The previous literature on space appropriation in social psychology of the environment, marketing, and consumer research take appropriation from the standpoint of single individuals. Even in social settings, such as stores (Aubert-Gamet, 1997; Bonnin, 2002, 2006; Badot and Lemoine, 2009), cafés and restaurants (Debenedetti et al, 2014; Thompson and Arsel, 2004) or concert halls (Carù and Cova, 2003, 2006), research on appropriation of space looks at the strategies and practices of every individual on their own. Behavioural psychologists integrate a collective dimension to appropriation, with research that focus on collective psychological ownership. Collective psychological ownership is "the collectively held sense (feeling) that this target of ownership (or a piece of that target) is collectively 'ours.'" (Pierce and Jussila, 2010, p. 812). The object of group psychological ownership can be material or immaterial (Pierce and Jussila, 2010; Hulland, Thompson and Smith, 2015). Collective psychological ownership implies that individuals who integrate an object as part of their extended self (Belk, 1988) recognize that others also have integrated this object in their own sense of self. The individual then shifts from *the object is mine* to *the object is ours* (Pierce and Jussila, 2010). Consumers perform a shift from *I* to *us* (Zouaghi and Darpy, 2003, 2006). These articles in behavioural psychology envision that appropriation can be collectively felt by a group of consumers. However, they do not question the practices of such collective appropriation. They consider appropriation as a feeling, a cognitive process, rather than as a dynamic enactment of practices.

In interpretive consumer research, a few articles introduce the collective dimension of appropriation. Epp and Price (2010) look at collective identity practices and the role played by artefacts as they are singularised (i.e., taken away from the market) and re-commoditized. They take the unit of analysis of the family. They see this unit as a multi-relational bundle, and

develop a framework which integrates interplays of individual and collective identity (Epp and Price, 2008). Their study shows that objects can be the focal point of collective identities and practices. The dinner table in a family is an object that has collective representations; it is collectively appropriated. The individuals with whom this appropriation is shared all belong to each other's close, family circle. They are part of each other's' extended self (Belk, 1988; Epp and Price, 2008). Visconti, Sherry, Borghini and Anderson (2010) study how public place is consumed, shared, envisioned and negotiated between street artists and dwellers. They study how actors navigate between sharing in the common interest and private appropriation of public space. They use the word appropriation to describe private appropriation. Private appropriation of public space is when dwellers preserve their private property and when artists contest hypocrisy of a clean wall and look for self-affirmation or market exploitation. They identify forms of collectivistic appraisal and common appropriation of public space by dwellers and artists. The collective appropriation happens when artists and inhabitants are engaged towards creating a common place together. When, for instance, dwellers support the work of street artists by collecting money on their behalf to redecorate a local park. Bradford and Sherry (2015) describe the phenomenon of tailgating in the US to comprehend how individuals actively create public place communally. Tailgating is about re-creating a home at the back of one's car during game days. Domestic practices are enacted and lived in the tailgating experience such as location, construction of a place, customization and inhabitation. The authors show that these practices "turn[…] the household inside out [to] creat[e] public place" (p. 146). The situated domestic practices facilitate the emergence of a public place.

Practices of appropriation are enacted in private (Epp and Price, 2010; Bardhi and Askegaard, 2008; Dion, Sabri and Guillard, 2014) or public settings, such as neighbourhood streets (Visconti, Sherry, Borghini, and Anderson, 2010), local restaurants (Debenedetti et al, 2014), coffee shops (Thompson and Arsel, 2004) or tailgating events (Bradford and Sherry, 2015).

Consumer appropriation enables develop consumers' sense of wellbeing within a place. It also enables a collective of individuals to develop shared meanings upon a physical environment. Consumer appropriation also appear to foster engagement towards others in the appropriated space. Bradford and Sherry (2015) expose the practices that consumers enact at vestavals. Consumers re-create their home at the back of their cars during football weekends. Through practices of location, construction, customization and inhabitation, which could be labelled practices of appropriation, consumers build a public place based on these domestic practices. Consumer appropriation enables them to engage with a broader, public dynamic at play. This is also the case when dwellers engage with street artists to create a common place (Visconti et al., 2010). Consumer appropriation enables both the development of a sense of wellbeing within a place and the active engagement in the social dynamics of the place.

Dwelling in coworking spaces

Toussaint (2016) studies dwelling practices of coworkers in coworking spaces. Her work advances the theoretical knowledge on coworking spaces as polyfunctional service spaces. She conducted ethnographic studies in three different coworking spaces. She identifies the role of the aesthetic of the material environment, especially minimalist design, in the enactment of "liquid practices" (Bardhi and Eckhardt, 2015). The degree of flexibility of the material appears important to create a liquid space which conveys impressions of flexibility and access (Toussaint, 2016, p. 233-238). Flexibility and modularity of the material appears to be central in coworking spaces. Consequently, she identifies DIY and handiwork as common practices of appropriation in those spaces, through which coworkers seem to settle.

She studies coworkers dwelling in coworking spaces through the lens of collective appropriation. She identifies dwelling as the symbolic result of appropriation. First, she identifies stamping from an individual's point of view, as practices through which coworkers

wish to participate in the space's arrangement and to dwell in the service space. She then identifies collective appropriation as "conception and personalisation of space as a whole" (p. 280). She thus identifies collective appropriation as every practice which produces the service space. They are practices intended toward the creation of a collective space rather than practices which are collectively enacted. The notion of dwelling thus includes the collective creation of a home.

Our work joins Toussaint's (2016) in observing how practices of appropriation contribute to the creation of a collective and meaningful place. However, Toussaint (2016) focusses on appropriation as means to produce and to dwell into space. Rather, we propose to conceptualise consumer appropriation as processual practices through which coworkers activate the peripheral value of coworking spaces. Through appropriation, coworkers do not only produce the space, they activate a network sociality. Our findings analyse the steps through which coworkers activate this socio-professional network and the role that appropriation plays. Further, we answer Toussaint's calls for future research by engaging in a somewhat longitudinal (though only one year) observation of a coworking space and adopting a material view on consumer appropriation.

CONTEXT: THE SENSESPACE

THE SPACE: THE BUILDING

The study was conducted in a coworking space called the Sensespace, located in the 12th arrondissement of Paris, France. The Sensespace is a 550-square metre, two-floors coworking space (see figure 2). We enter the space through a large kitchen and a lounge space with sofas

and tables. From the kitchen, we can see the main coworking space, which is separated from the lounge and kitchen by a large window pane. On the left of the lounge is a corridor that leads to the main coworking space. The main coworking space is large and there are between 5 to 10 large tables to work on. A large platform stands in the middle of the main coworking space. On the platform are two stairs that lead to the first floor. There are seven meeting rooms (4 downstairs, 3 upstairs). Upstairs, there are about 12 large tables.

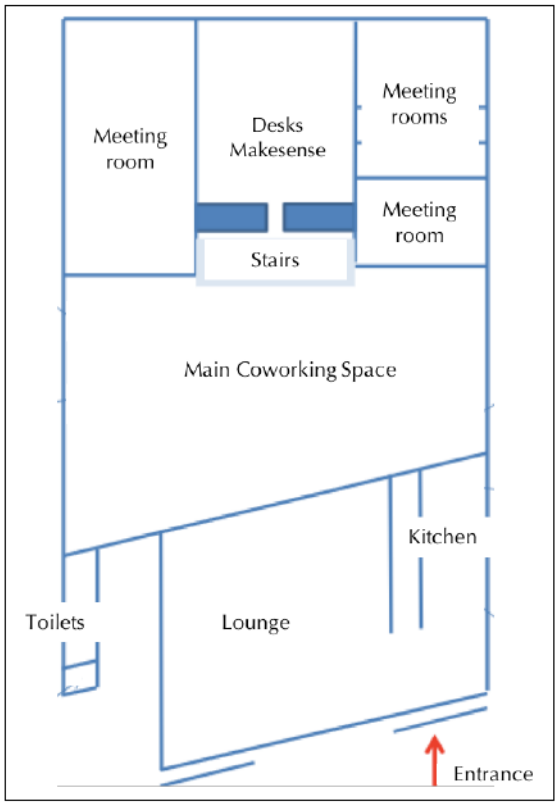

Figure 7. Map of the ground floor of the Sensespace

KITCHEN AND LOUNGE

The kitchen is situated directly at the entrance of the Sensespace, on the right. It is an open kitchen that faces the lounge. Two large wooden counter are positioned in the centre of the kitchen, were coworkers cook. About a meter away from the counters are the kitchen

equipment: two large sinks, a gas stove, a small counter with a small coffee machine and condiments, two fridges and many cupboards with cups, plates, glasses and kitchen utensils. On the side opposite the entrance, a piece of furniture holds a large coffee machine with sugar. Coworkers can store their own food in the biggest fridge. The other one is called the *free-go*: anyone can put or take items from it. Opposite the kitchen is the lounge, which consists in two spaces. First, on the left of the entrance and close to the windows are three wooden tables. Coworkers can work, chat, or eat on those tables. Opposite the tables, closer to the large window pane separating the lounge and the main coworking space, are several sofas. The arrangements of the sofas often vary. They are arranged around several heavy, white coffee tables. The sofas are disparate; some have been brought by coworkers, one was built by coworkers with wooden palette.

Figure 8. The Sensespace's kitchen

Figure 9. The lounge during an event

MAIN COWORKING SPACE

In the main coworking space, between five and ten large tables are available to work on. Like the sofas, these tables are disparate. Two of them are foldable ping-pong tables, four of them are made in wood by one of the start-up, the others are regular school tables. The arrangement of the tables changes almost every day due to the numerous events that take place in the main coworking space in the evenings. During those events, all tables in the centre are put away in the largest meeting room. Some tables on the corners stay even during events. On the entrance of the main coworking space, on the left, are several shelves containing tools (post-its, tape, pens, papers, etc.), a large printer, a sofa and a coffee table.

Figure 10. Main coworking space

ORGANIZATION

The Sensespace can host 70 full-time individuals at its maximum capacity. It was created in December 2014. When the observation began, the space was only a month and a half old. It is called Sensespace because it is linked to the organisation MakeSense, which connects start-ups of the social and solidarity-based economy. The aim of the space is to become Paris's hub for social innovation. About twenty-five start-ups share the space. The turnover is quite large, the number of people who work at the Sensespace changes all the time. Over a third of the coworkers are attached to MakeSense (a ratio that tends to grow), a third are part of MakeSense's incubator program called the Sensecube, and the rest are not attached to MakeSense and are called Roommates. Many Roommates start-ups do not even belong to the solidarity-based economy.

Most the Sensespace's revenues come from the Roommates, as MakeSense's teams and the Sensecube are accommodated free of charge. Roommates pay a fee of 300 euros a month (when the observation began, it then moved up to 350 in November 2015) per coworker to have a desk, use the meeting rooms, the shared lounge and kitchen. The Sensespace also gains revenues by renting spaces to companies for special events. The main space is available for events over the weekends and in the evenings during the week. The main space or the lounge are lent for a price that range between 300 euros for a friendly organisation (social and solidarity based, non-for profit organisation) to 5000 euros for corporations. This price also varies depending on time, duration of location and number of people present. The meeting rooms can also be rented, depending on their size, for 30 to 70 euros per hours.

Coworkers at the Sensespace are between the age of 20 and 35. Most of them recently graduated. Their role can be founder or co-founder of a start-up, employee, intern or freelance.

One common trait shared by coworkers at the Sensespace is that they opted for a job more meaningful to them than a classic managerial job in a firm. The myth of the 9 to 6 office job is clearly present in their mind when we discussed what job they wouldn't want to do, and why they chose entrepreneurship. Being in the social and solidarity-based economy seems to connect them by creating a sense of belonging, participating to an adventure bigger than them:

> We share an adventure together and a common will to change things and to contribute to solve society's big challenges. Concretely, it translates in many ways. (Coworker).

The vocation of the Sensespace is to be a centre for social innovation. In that regard MakeSense's members do not see the place as being only a place to work but more as a third place. In the Sensespace's handbook we received from managers, they define the four values of the space:

1) Being an innovative "Fablab": "a space to work, organise events and experiment. A place looking for a strong environmental and social impact".
2) Accelerate collaborative projects and synergies: coworking space, common convivial spaces.
3) A place for exploration and citizen actions: collaborative kitchen, Disco soups against food waste.
4) A place for open events: hold-ups, brainstorms, drinks, lunches, trainings, etc.

This view of the Sensespace as being a third place impacts the way managers want to develop the space. They do not see the Sensespace as a simple workplace:

> Besides, as third place, it is expected from the Sensespace to be a kind of "office of the future", an innovative work environment that integrates new and necessary modalities and functions in order to make resident start-ups more efficient and productive. (Guide to the Sensespace)

Toussaint (2016) identifies three modes of management for coworking spaces:

1. *Self-governance*: the consumption experience is driven by a collective of coworkers. There is not an individual to act as a facilitator of a manager.
2. *Participative management*: there is a manager/facilitator who plays the role of an educator to help coworkers to settle and to foster collaboration.
3. *Permissive management*: the management of the space is more rigid; the managers define users' experience.

The Sensespace is situated in the second mode of management. There are managers within the space who facilitate coworkers' experience. They also promote collaboration between users and arrange the physical surroundings. As Toussaint (2016) highlights, they also include coworkers in the co-designing of the space. The space, the artefacts in the space and the meeting rooms have been developed with the goal of fostering a creative, efficient workplace for start-ups. The aim of the Sensespace is to be innovative, to be the office of the future. Consequential to this view of coworking, sharing and co-construction have been developed by the space managers as the two main values conveyed in the Sensespace.

SHARING

At the beginning, in early 2015, there were no attributed desks. All tables were shared. Newcomers were invited to choose a spot where they found space. A year later the number of tables that were available for hot-desking had been drastically reduced. The value of sharing is instilled by several other practices. During lunch, coworkers are encouraged to cook large meals for other coworkers to share. The leitmotiv of MakeSense, *You upload more than you download*, is a good image to understand how important sharing is for them. It means that members ought to give more to the community than they receive from it. The Sensespace

managers also want to create a sense of community by instigating rituals such as the Roommates' Drinks on Fridays. Of course, none of these activities are compulsory. Yet, they appear to be crucial if one wants to be a part of it.

CO-CONSTRUCTION

Aside from the sharing value, managers of the Sensespace greatly encourage users to actively modify their working environment. They offer to buy furniture that coworkers can build themselves. They organise *Pimp My Space Weekends* during which coworkers participate to the reorganisation and refurbishment of the space. Managers want their users to appropriate the space through their involvement in building it. The goal is to have coworkers themselves offering to start a project in the Sensespace. Here are two examples of such projects that originated from coworkers:

- The kitchen was built by an entrepreneur who is involved in building collaborative kitchen in office buildings to reduce ready-meal consumption. The Sensespace paid for the material but the construction of the kitchen was a co-constructive job between the entrepreneur and a space manager.
- In January 2015, there was a project of creating a shared library. Users would bring books and would be able to borrow any other book any time. This project originated from a coworker who took upon himself the project of building the library. The project also involved developing an online platform where users could see the available books and book in advance the one they wanted. A year after, there is a library in the lounge but the online platform did not see the light of day.

In sum, the Sensespace is a coworking space, mostly for social entrepreneurs, with a will to foster bonds between coworkers. The creation of bonds is encouraged via sharing between coworkers and co-constructing the workplace.

METHODS

DATA COLLECTION

Starting in January 2015, we conducted participant observation in the Sensespace (Mariampolski, 2006; Peretz, 2004). From January to July, and in November and December, we spent a total of sixteen days at the Sensespace. On observation days, we stayed between 3 and 7 hours in the coworking space. In April, we managed to stay an entire week (5 working days) in observation. It was important to do regular observations throughout a long period to grasp the evolution of users' practices within the spaces. We went back to visit the space in March and November 2016.

We got access to the field thanks to an acquaintance who works there. On our first day, she introduced us to the person who managed the space at the time. During the observation periods, we mainly sat at tables and sofas, either in the main coworking space or in the lounge, writing down what was happening around us. We paid attention to what coworkers did and how they manipulated artefacts. We also stayed very open to any invitation to participate to events. Besides observations of everyday life in the Sensespace, we participated to four pop-up brainstorms, two Roommates' Drinks, several common or informal lunches, one Pimp-My-Space weekend. We also cooked meals several times and were often present in the kitchen during meal preparations.

To look for data triangulation (Denzin, 1978), we collected primary and secondary data on several support types:

- We kept a journal in which we wrote daily observations and thoughts. We wrote down both observational notes and analysis notes of on-site observations. We followed the concept of thick description to have as much depth as possible in the data (Geertz, 1994). A total of 85 pages were collected.
- We conducted 11 interviews with users of the space and 4 with managers. However, due to the sometime informal nature of the interviews, we only managed to record and transcribed 10 (3 managers and 7 coworkers). We wrote down what we remembered of the remaining interviews as well as many informal conversations in our field notes. Interviews were short, between 15 and 35 minutes.
- We sent an open-ended questions online form that our acquaintance sent to all coworkers on our behalf. We received 12 furnished responses that we integrated to our data set. The questions we asked were:

    1) Is there a spot where you feel the most at ease, the most "at home"? Why?

    2) Would you say that something here is yours?

    3) Did you participate to the space's development? How do you feel about this?

    4) What do you feel you are sharing the most here, and why?

    5) Since when do you work here? What do you do (role, company)?

- We took 235 pictures and eight short videos. Pictures were very important to observe the evolution of the space arrangement. Pictures were also central to observe artefacts manipulation. We took several videos of one coworker, following her as she settled at her desk in the morning, grabbed a coffee after lunch or washed her dishes.

- We follow daily publications on the Sensespace's Facebook group: Sensespaceparis crew, since April 2015. We took snapshots of several posts which mentioned or showed coworkers building artefacts.

Furthermore, we received a data and information from the Sensespace managers. These secondary data from managers were important to grasps the ideology behind the space. We also better understood their business model. The secondary data set consists in:

- A floor plan of the space
- A Guide to the setting-up of the Sensespace: this guide has been set up to help other coworking spaces who would want to copy the business model of the Sensespace.
- A Guide for renters of the Sensespace: This is a small guide intended for companies who rent the main space for their event (what to expect, how to use the space and the objects).
- Responses they received from a survey they sent in August. They had 16 respondents. There were 23 questions divided in three themes: Wellbeing at the Sensespace, Working at the Sensespace and the Kitchen.

DATA ANALYSIS

The logic of this research is interpretive and aims to further our understanding of an existing concept, that of appropriation, in a new context, that of coworking spaces. A grounded theory approach to the field is followed (Glaser and Strauss, 1967; Corbin and Strauss, 1990). As Otnes and Fischer (2006) advance, grounded theory in consumer research can answer "questions about the adequacy or prior conceptualizations of facilitators or implications of a construct" (p. 22). Appropriation has been discussed previously in the literature. However, we wish to advance our knowledge and conceptualisation of appropriation under the access-based

consumption framework. We wish to understand the role of consumer appropriation in coworking spaces.

We analysed the transcription of interviews and field notes using the Nvivo software. We first applied a "geographical" coding (Saldaña, 2013) to separate between the different subspaces (i.e., the lounge, the kitchen, the main coworking space, etc.). Then, we analysed the data within each subspace with a theoretical coding approach (Glaser, 2004; Point and Voynet, 2006). Theoretical coding is helpful to analyse qualitative data (Strauss and Corbin, 1990). Coding progressively deconstructs the data set in "incidents" (Glaser and Strauss, 1967). Then, incidents are compared (Spiggle, 1994) to "generate initially substantive, and later theoretical, categories" (Glaser, 2004). Practices within each space (the kitchen, the meeting rooms, etc.), with each furniture (desks, tables, chairs, etc.) and each small object (computers, cups, glasses, etc.) were each carefully studied. We focused on the discourses of the different actors and the gestures used to engage with the identified artefacts. For instance, we identified the key role of electrical cables (small object) on hotdesks (furniture) in the main coworking spaces (sub space) in the process of nesting. We identified practices that were enacted individually (such as nesting) and collectively (such as playing). The second set of themes that comprises miscellaneous emerging themes such as the Sensespace's organisation, values and business model or informal discussions with coworkers.

In a second time, we analysed our pictures and videos. Picture are helpful in "the identification of the meaning of a situation or to draw research hypothesis long after taking the shot" (Dion and Ladwein, 2005). We integrated pictures into our analysis, as they fixated in time the use of artefact by users in the space. Pictures were ordered and classified by space, and each artefact in the pictures were identified and its role analysed. The analysis of the pictures highlighted the role of artefacts in the enactment of appropriation practices.

FINDINGS

The findings aim at understanding the role of consumer appropriation in a coworking space. We deconstruct the practices of appropriation. We find that consumer appropriation is a mechanism through which coworkers activate and maintain access to a socio-professional network of entrepreneurs. The first part of the findings identifies three steps towards the activation of this access: personal appropriation, opening to others and collective appropriation. We deconstruct how practices of appropriation happen at the three different levels. The second part focusses on how users negotiate and maintain access to the network of entrepreneurs. We discuss the different representations of the space and how they overlap.

PART 1. ACTIVATING THE NETWORKS

STEP 1. MATERIAL ANCHORING

Nesting

The workstation is a home away from home (Tian and Belk, 2005). Tian and Belk (2005) show how important personal effects are in creating a homey place at work. Arranging, displaying, ordering objects on one's desk enhance wellbeing at work (Monjaret, 1996). Monjaret (1996) highlights how practices of appropriation contribute to create meaningful place for employees, enhance wellbeing and develop a feeling of security. In the Sensespace, coworkers do not have their own desks. With a few exceptions, they are hot-desking: each morning they sit where they can, depending on availability. Contrary to traditional workplace, coworkers cannot leave pictures of landscape or their family; cannot leave small objects. They cannot invade the desk.

In the centre of the main coworking space are two ping-pong tables that are used for hot-desking. When they arrive at the hotdesk, coworkers need to adapt the seat height and to install the electrical connections. They then take their computers, phones, pens and notebooks out of their bags, place and arrange them on the table. This settlement takes a few moments and sometimes requires energy:

> Wassim arrives and settles on the second ping-pong table. To get the electrical extension cable, he has to put a chair on the table and to climb upon it to bring down the cable which is hidden in the ceiling. Morning gymnastic! (Field notes, 150420)

Through daily reconfiguration and re-arrangement of the desks, coworkers engage in a routine to create a space of their own. This practice is called nesting. Nesting is the activity of creation of a home-like space (McCracken, 1989), a space of one's own (Fischer, 1989, 2011). It is quite a visual metaphor, as one can easily imagine a bird arranging pieces of wood around itself to build its home. Nesting is arranging objects and artefacts around oneself to create a homey feeling, a den (Monjaret, 1996). By homey feeling we understand that this nest becomes a shelter and a retreat (Aubert-Gamet, 1997; Carù and Cova, 2003, 2006; McCracken, 1989).

Each morning settling at the hotdesk requires sequential actions from coworkers. Because they cannot leave personal paraphernalia on a desk overnight, they must reconfigure their workstation daily. These routines help coworkers in the creation a safe place. They mark the first point of the process of appropriation at the coworking space. These practices are enacted daily in the mornings and ended in the evening. At the end of a work's day, all objects are put in a bag and taken back home. Therefore, the practice of nesting at hotdesk differs from nesting at permanent office space (Monjaret, 1996; Tian and Belk, 2005) and happens through routines of settlement, reconfiguration and re-arrangement.

Stamping

Stamping is the activity of registering oneself into the space: leaving personal objects, writing one's name on a chair for instance (Fischer, 1989, 1992). It encompasses the set of activities done to inscribe personal information in (or on) the space (Fischer, 1992). Users "brand" the space with a part of themselves by leaving their mark on the space. The role of the objects on the hotdesks are crucial in this practice. The hotdesks are large and can host 4 to 8 people. As soon as coworkers are settled the objects play the role of markers (Fischer, 1992; Goffman, 1956). The specific positioning of objects on the table creates borders and allows coworkers to define their own space by opposition to the unoccupied space.

Figure 11. Ping-pong table being used as a hot-desk

The figure above shows two coworkers working at one of the ping-pong table. We can identify the specific role of each object:

- The computers play the role of *central-markers*: positioned directly in front of the coworkers, they indicate that these spots are occupied by those two coworkers specifically. Central-markers represent the user. They label this hotdesk as occupied. Other coworkers who come along identify this space as being this user's desk on this day.
- Smaller objects such as phones, pens, notebooks and cups are *border-markers*. They indicate the boundaries of the occupied space on the shared desk. Other coworkers can invade the space still available on the desk beyond the borders. In the picture above, we see how the coworker on the left places her phones and tissues on her right to mark the border between her space and the other's. The coworker on the right places his notebook and phone on his left, defining his space as well.

Coworkers cannot leave their stuffs on desks due to the practice of hot-desking and to the many events that take place in the evening which prevent them to do so. The main space if often rented for large company events, and all desks are put aside during those events. Some of the coworkers, however, have managed to inscribe a more permanent stamp on some objects. One of the coworkers for instance marked a chair:

> I also appropriated an office chair: I have got very bad back pain and so I managed to find a chair on which I feel at ease. Because they all look alike, I glued a small coloured label to recognise it easily when all furniture is mixed up after an event. (MakeSense employee)

This coworker created a specific relationship with the chair, which is the only one that allows him to feel at ease. Though he is not the owner of the chair, he marked it to recognise it and to use it. Other coworkers have brought plants that they leave on tables overnight. The plants mark the tables as occupied. Plants also "book" the tables for them in the morning. One

freelance worker who had been in the Sensespace for four days expressed his annoyance towards this practice:

> For instance, yesterday they [*translation note: "they" is undefined]* told me there's two part, one is coworking and the other I don't know but it looks occupied by two companies, where they are 8 or 10. And in fact they told me that, actually, on the other side there's lots of available spots. But actually, the desks do not look really available. There are stuffs there, where people have they habits and all. And so you wonder, you know, are you sure it's available?

These acts are small acts of resistance to the sharing of artefacts in the space. They are strong acts of appropriation as they prevent other users, such as this freelancer, to use the object. All coworkers do not feel at ease to share they workstations and to change seats every day. Some resists the practice of hot-desking put in place by the Sensespace's managers by territorialising. They leave personal stuffs, plant, papers and pens on a hotdesk overnight. The picture below, taken early in the morning before the arrival of coworkers, illustrates this practice.

Figure 12. Permanent stamping of hotdesks: a plant, a computer cable, papers, pens, scissors, bottles and glass

Being at the heart of the "Town square"

Some coworker need to engage in territorialising or marking specific artefact as theirs to develop a sense of wellbeing at the coworking space. Other coworkers, on the opposite, fully embrace the communal aspect of the coworking space. One of the coworkers explains how she chooses her seat to be at the heart of the activity in the space:

> I feel 'at home' when I'm at my ping-pong table: one of the tables I work on at the heart of the space. […] Sometimes there's movement, I change seat depending on availability; but I like to be in the centre because there is traffic, friends walk pass me, I see almost everybody, people stop to chat. It's a little like the 'town square' actually. (Roommate)

She likes to be at the centre of the space (i.e., the "town square") because of its communal aspect. There is "traffic", "friends walk pass" her, she sees "everybody" and "people stop to chat". She enjoys the busy atmosphere that this spot allows. At the same time, she says that she feels "at home" there. Her personal appropriation of the space and feeling of homeyness are not impeded by the collective. Rather, she embraces it. When at her seat, she feels "at the centre". She is nesting in the whole of the space.

Appropriation at the coworking space mobilizes a network of objects (computers, pens, notebooks, tissues, ping-pong tables, chairs, bags, plants) and actions (stamping, arranging, reconfiguring, nesting). These actions contribute to the personal appropriation of the workplace: coworkers feel more at home, they develop familiarity with the Sensespace. They anchor themselves materially within the coworking space. Coworkers must develop tactics to achieve material anchoring, as more classic practices of nesting and stamping (Monjaret, 1996;

Tian and Belk, 2005) are impeded by the necessity to share the space and the desks. The role of routines and borders is crucial in this regard. Routines create a feeling of familiarity through the repetition of the same actions every day. Building borders allows for the territorialisation of one's space. Some coworkers go further than that by marking artefacts with personal stamps to render their use by others difficult. Other go beyond personal marking and engage in nesting within the whole space.

STEP 2. SOCIAL ANCHORING VIA MUTUALITY

Gift-giving to the community is another practice, enacted individually, which contributes to coworkers' appropriation of the space. However, as nesting, stamping and being at the heart of the town square were directed toward one's own wellbeing via material anchoring, gift-giving is directed towards others via social anchoring. Through acts of mutuality or generalised exchange (Arnould and Rose, 2015), coworkers position themselves towards the community. The act of giving something to the community both anchors the individual in the space and contributes to creating common social frame. It anchors the individual in the space by affirming his own existence. Making an offering to the group allows other members to acknowledge the giver's existence and presence. The individual who made the gift exists in the space in the eyes of others. The giver marks the space with a personal item, s/he affirms his/her existence in the space. Mutuality occurs when one gives something to a group, with the assumptions that the act will be reciprocal but not immediately and not necessarily towards oneself: the aim of the gift is social. It creates a sociality, a common frame between the parties (Arnould and Rose, 2015; Mauss, 1923). By making an offering to the group, one creates a frame for generalised reciprocity: it is expected that the gift will be returned some other time, by and to any other member of the group. Food and time are the two most enacted types of gift in the Sensespace.

Food is often left on the kitchen counter. It is accepted and known by all that anything that is left unattended on this counter falls into common property:

> A woman arrives from outside with a jacket and a bag pack. She greets people, goes directly towards the sink, takes a cup from the dish rack, fills it up with water. While she leaves she takes a biscuit from a pack on the counter. This surprises me, as she did not ask the two other persons who were there; she assumed directly that it was for everyone. Likewise, yesterday there was some chocolate cake: C. said "Well if it's there then it's for everybody". (Field notes)

It is common shared knowledge in the Sensespace that every piece of food that is left on the kitchen counter is for everyone to take. Most of the time, it consists in leftovers from someone's lunch. Other times, like with the chocolate cake mentioned in the notes above, a coworker made something with the intention of offering it to others. The woman in the notes does not ask for permission. Neither does she ask who the gift originated from. In the case of a baked cake, coworkers inquire who the baker is to thank him or her. Through one gift enacted individually in a common area (the kitchen), a relationship of shared sociality is created (Arnould and Rose, 2015). Those who benefited once from the gift will later offer a gift to the community. The return of the gift is not necessary the same type of gift (a cake for a cake) – it can be cooking a common meal, building furniture or sharing a solution to a work-related problem. The first gift enacted individually contributed to create common shared practices in the space. This informal shared practice establishes common frame in a space and contributes to transforming it into a common place. The next part focusses on the collective practices enacted within this common social frame.

STEP 3. PARTICIPATORY PRACTICES

In this section, we identify practices which, enacted collectively, produce the peripheral offering of the coworking space, that of a socio-professional network of entrepreneurs. These practices contribute to generating a collective sense of place: they are collective appropriation practices. Personal appropriation (step one and two) gives access to a network which materialises through collective practices of appropriation. Four practices are identified: 1) participation to events, brainstorms, common drinks and lunches, 2) ritualization of rendezvous such as Roommate's Drinks on Fridays, 3) construction of artefacts (such as during Pimp-My-Space weekends), and 4) playing games by twisting the furniture's roles or bringing games to the space.

Participation to events

Participating to collective working practices

Professional events, formal or informal, happen daily in the Sensespace. Entrepreneurs who face a challenge can get help from others by organising brainstorming sessions (called "pop-up brainstorms"). They can also participate to "hold-ups". Hold-ups are more organised than pop-up brainstorms and are conducted by a Gangster at MakeSense. Gangsters are MakeSense's entrepreneurs who have achieved a certain social status through their experience and who can moderate hold-ups. Brainstorms and other collective working practices often happen in the meeting rooms, which, at the beginning, were empty and white. When a new space manager was hired in April, she wanted to make the Sensespace a creative and innovative centre. She wanted to help entrepreneurs to conduct creative and efficient brainstorms and hold-ups. To her, this would happen through a change in the physical environment of the meeting rooms:

For instance, if we want to set up a meeting in the "Challenge Room", how can we offer start-ups methods that MakeSense uses and put them on the walls… I don't know, it's very embryonic-stage of reflexion, but actually how can I make my space a learning space that stimulates people to have such and such professional practice? […] Makesense develops a lot of methods, and it's very useful actually, about the search for virtuous, effective and creative work practices." (Sensespace manager)

The idea is to design the meeting rooms to communicate on MakeSense's practices and to encourage coworkers to use them and to be creative. The managers arranged the meeting rooms with post-its and decorations on the walls (figure 13).

Figure 13. Wall of the meeting room Challenge Room

Collective working practices are encouraged by the managers of the Sensespace, enacted by coworkers and enabled by the meeting rooms walls, and artefacts such as post-its or posters. If one coworkers participates to another's brainstorm, he or her expects his co-worker to return the favour someday. As such, dynamics of reciprocity in the participation to each other's event

is created. This leads to an entanglement of participatory practices to professional events in the Sensespace. Spaces such as the Challenge Room are physical manifestations of this. On the walls, best practices and past event post-its tell the history of the brainstorms and hold-ups enacted within.

Participating to collective meals

Coworkers do not only participate to professional events. Managers often try to foster group dynamics outside of work-related activities by organising ritual events. Coworkers themselves set up informal events such as collective meals. Sometimes, a small group of coworkers will cook large portions. They either advertise this on the Sensespace Facebook group or go around to ask who would want to join. Those who cook define how many meals will be served and at what price (usually between 2 and 5 euros), and then anyone can sign up. After lunch, the «system» also implies that coworkers who benefited from the meal and who did not help in its preparation should wash the dishes and clean the kitchen. Many reported, and we have observed, that it is often the same people who end up doing it, especially the managers of the space. Whether they are cooking or just eating, all coworkers who are ready to eat at the same time eat together in the lounge around the coffee tables. Of course, the seating arrangement is a question of affinity. Yet, the sofas and chairs, arranged in a circle, create opportunity for networking. Through cooking and eating together coworkers transform the lounge into a dining place where anyone can sit and talk to anyone who is seated next to them.

Play

Play is one of the collective practices enacted in the Sensespace. Coworkers of the Sensespace do not feel as though they are colleagues or coworkers. The words *colleague* is not used. To designate other coworkers, words like *people*, *persons*, *folks* or *everyone* are used. The

Sensespace has a non-serious, ludicrous atmosphere. One of the coworker described it several times as a "merry mess".

Toussaint (2016) finds that play is at the heart of mode of management in coworking spaces. Playing create ludicrous zone which fosters change and rule arrangement (p. 218). She finds that coworking spaces are "ludicrous experiential facilities" (p. 262), which offer a "playground" to coworkers. She also notes that play is a collective means of space appropriation (p. 106). Thus, collective appropriation via play is at the heart of coworking spaces' dwelling practices. In the Sensespace, the ludicrous experiential facility creates opportunities for coworkers to engage in playing. We find that this ludicrous atmosphere is mainly created by the ping-pong tables. These tables, as we have seen previously, are used as hotdesks. Each morning, coworkers arrange their belongings on the tables. On some occasions, however, these tables go back to their original purpose of being a classic ping-pong table. In a few minutes, the tables can mutate from a workstation to a game artefact. There are specific times in which ping-pong can be played on the tables: usually in the evening, mostly on Fridays or after social events.

Figure 14. Coworkers playing ping-pong

To play ping-pong, coworkers must remove all objects from the table. Working tools such as papers, computers, electric cables or chairs that surround the tables are put away. Once removed of all tools, the tables lose their identifications as desks. They go back to being ping-pong tables. The picture above shows two ping-pong tables at the centre of the main coworking space. On the one closest to us, there is a bottle of water, and two coworkers are playing ping-pong. On the other one, at the back, lay cups, glasses, pens and papers. At least 7 chairs are positioned around the second table. The two tables are physically the same, yet the practices enacted upon them differ. All the artefacts that made it a desk have been removed of the first table. The two coworkers, by playing together, transformed their daily workstation into a game artefact. While they are playing, the main coworking space transforms into a playground to them. The coworking space mutates with on practices enacted within. From workplace, it becomes a playground. The web of material artefacts enables this ludicrous practices to be performed. Placing working artefact on a ping-pong tables makes it a desk to the eyes of

everyone. Removing working artefacts and using a ball and ping-pong racket changes the function of the table and makes it a gaming tool. The nature of the table seems to be fluid. The function of the object evolves with the practices enacted upon it. The nature of the space in which the artefact lays also mutates with the artefact: from a coworking space it becomes a playground. The fluid nature of artefacts facilitates the creation of a "ludicrous experiential facility" (Toussaint, 2016).

Ritualization

Anyone in the Sensespace can cook a common meal, bring a game, or advertise a pop-up brainstorm. The role of the managers of the Sensespace takes more importance with ritualization. The Sensespace appointed a new manager in April, with the aim of developing a community of coworkers. As we interviewed her in April, she told us that one of the first things she wanted to do was to implement rituals:

> With the idea of ritualising, so that people remember and integrate the concept faster, there are MakeSense's hold-ups. From May, we are going to try to do one hold-up every Tuesdays to say that Tuesdays are hold-ups days. So that people know, even neighbours. We can think about it faster. So you remember, you know that every Friday is roommate's drinks and every Tuesday there's a hold-up. And it gives rhythm to the collective life, you know that if you've been underground all week you might come and grab a drink on Friday evening before going about your own business. (Sensespace's manager)

The manager wishes to implement rituals to orchestrate everyday life in the Sensespace. She feels that it will be easier to create dynamics between the coworkers if everyone knows and accepts a collective timetable. She also has questions of efficiency in mind. Rituals, she expresses, enables people to "think [...] faster". The way the managers see it, the more participation to the rituals, the more interactions between coworkers. The more interactions the

better as it gives the coworking space a reputation for enabling coworkers to put together a professional network (their peripheral offering).

Rituals are "positive and meaningful aspect[s] of both every day and extraordinary human experience" (Rook, 1985, p. 252). They differ from habits as they are more meaningful and often follow a script. Ritual encompass four tangible elements: artefacts, script, performance roles, and an audience (Rook, 1985). In small groups, the types of rituals expected are office luncheons, business negotiations or fraternity initiation (Rook, 1985). In the Sensespace, rituals such as Movie Nights encompass all the elements identified by Rook. The artefact (the movie, the chairs, the screen), the script (starts at 8:30pm, everyone brings food and drink, watch the film, ends around 11pm), the performance's roles (the organizer, the projectionist) and the audience (the people who attend the event). These rituals organise everyday life in the Sensespace. They participate to the collective appropriation of the space by creating roles for everyone and a common diary.

Constructing

Every piece of furniture in the Sensespace seems to be hand-made. This prevalence of handcrafted materials is one of the first thing that we noted down in our field notes at the beginning of the observation period, a month or so after the opening of the space. Stools around the kitchen were made from cardboard and handcrafted by a coworker. MakeSense's team built the sofas in the lounge with wooden boards nailed together. When our acquaintance gave us a tour of the space, she recounted the story of the dozen white coffee tables:

> This we got from the 'Salon de l'automobile' [*French's Automobile Fair*], it was a real mission to take them in the evening, there are 16 of them, they're really heavy! I came home I was exhausted. Everything is from recycling, I think the kitchen might have cost 100 euros in total

> you see. [...] Anyway and then all the furniture, it's all of us who built it, with wooden palette and all. Everything's been built, retrieved, nothing's been bought. This little stool as well. Anyway, it was like afternoons of handiwork. (Coworker)

As a social entrepreneur, this coworker was enrolled in MakeSense's incubator program before they opened the Sensespace. She was amongst the first ones to move in. She participated a lot to the construction of the space, as everyone else who was there from the start. Constructing could be a solitary practice. However, in the Sensespace it entails a collective dimension. First, the constructed artefacts are for everyone to use. Second, the activity of constructing is often a collective one. As the coworker puts it: "It's all of us who built it". The Sensespace managers regularly organise what they call "Pimp my Space week-ends" where they invite coworkers to come to the Sensespace on a Saturday with the aim of building furniture, tidying up, arranging or decorating the space. Not all coworkers participate to these days. Yet, once every couple of months, a few of them dedicate their Saturday afternoon to the rearrangement of their workplace.

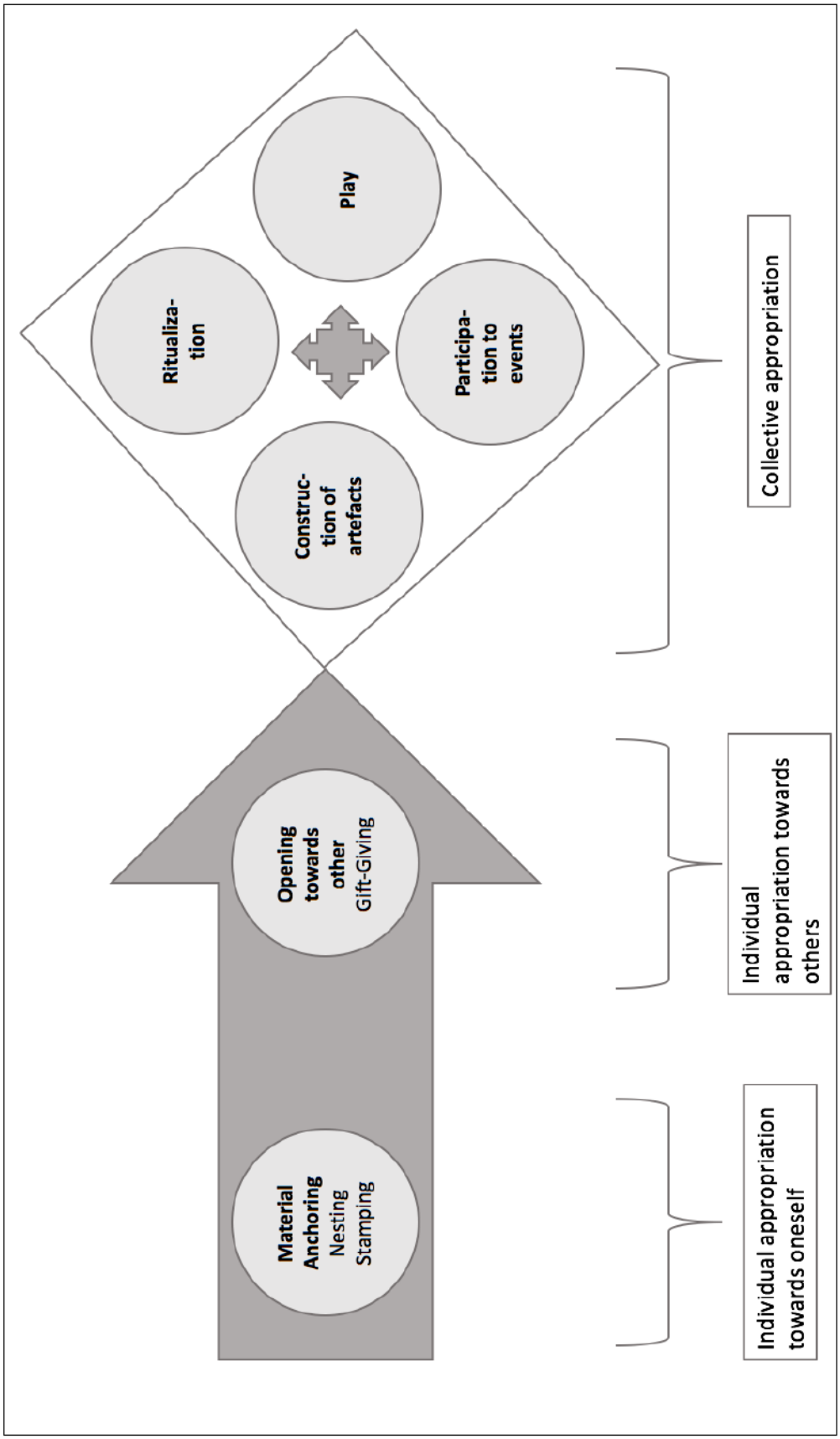

Figure 15. Individual and collective practices of appropriation in the Sensespace

PART 2. MAINTAINING THE NETWORK: EQUILIBRIUM BETWEEN CORE AND PERIPHERAL SERVICE OFFERING

ONE SPACE, THREE PLACES

Consumer appropriation, through manipulation, arrangement and use of objects and spaces transform an empty space to a collective, meaningful place. The Sensespace, as a geographically defined, closed space, is constituted of several sub spaces in which different practices are enacted.

- The kitchen and the lounge are primary collective, social places. The kitchen counters foster collective cooking practices as well as gift-giving. The lounge is used mainly for eating and chatting. Yet, coworkers also nap sometimes on the lounge's sofas.
- The main coworking space is both individual in the case of nesting and stamping at hotdesks and collective in the case of playing and constructing. The ping-pong tables allow coworkers both to work and to play. The meeting rooms are collective, but used for professional purposes. Collective working practices are enabled by the collective arrangement and decoration on the walls.

This entanglement of practices contributes to create several representations of the collective place: it is primary a workplace, but it is also a home and a playground. These representations are created by domestic, professional and social practices:

- *Domestic practices*. Artefacts are manipulated in the Sensespace to create a "home away from home" (Fischer, 1992; Rosselin, 2002; Tian and Belk, 2005) in this buoyant

atmosphere. To create a home-like place in a shared material environment coworkers engage in nesting, stamping and the creation of routines at the hotdesk. Furthermore, we have observed coworkers napping on the lounge's sofas. Nesting, stamping and napping practices are intimate practices performed at the workplace. They help coworkers to re-create a homey feeling.

- *Social practices*. Gift-giving, constructing furniture and artefacts, participating to collective meals, playing and cooking for others are practices that reveal a social dimension of the Sensespace. The bonds that are created through those practices are at a private level: it is practices that are usually enacted with friends and family. Coworkers who participate to collective meal and who come to Pimp-My-Space weekends seem to enjoy the communal, fun, playful atmosphere. They come as friends rather than colleagues or coworkers. As these practices are performed, coworkers' aspiration to build a professional network is not revealed.
- *Professional practices*. Participating to other start-ups' events and brainstorms are matters of the workplace. Even the orchestration of collective life through the establishment of rituals such as drinks are matters of the workplace (Monjaret, 2001). They are practices associated with the professional aspect of the space, as Monjaret (2001) explained in the case of office parties. Coworkers, to build a professional network must participate to those events. The manager of a coworking space, to attract coworkers, must organise them.

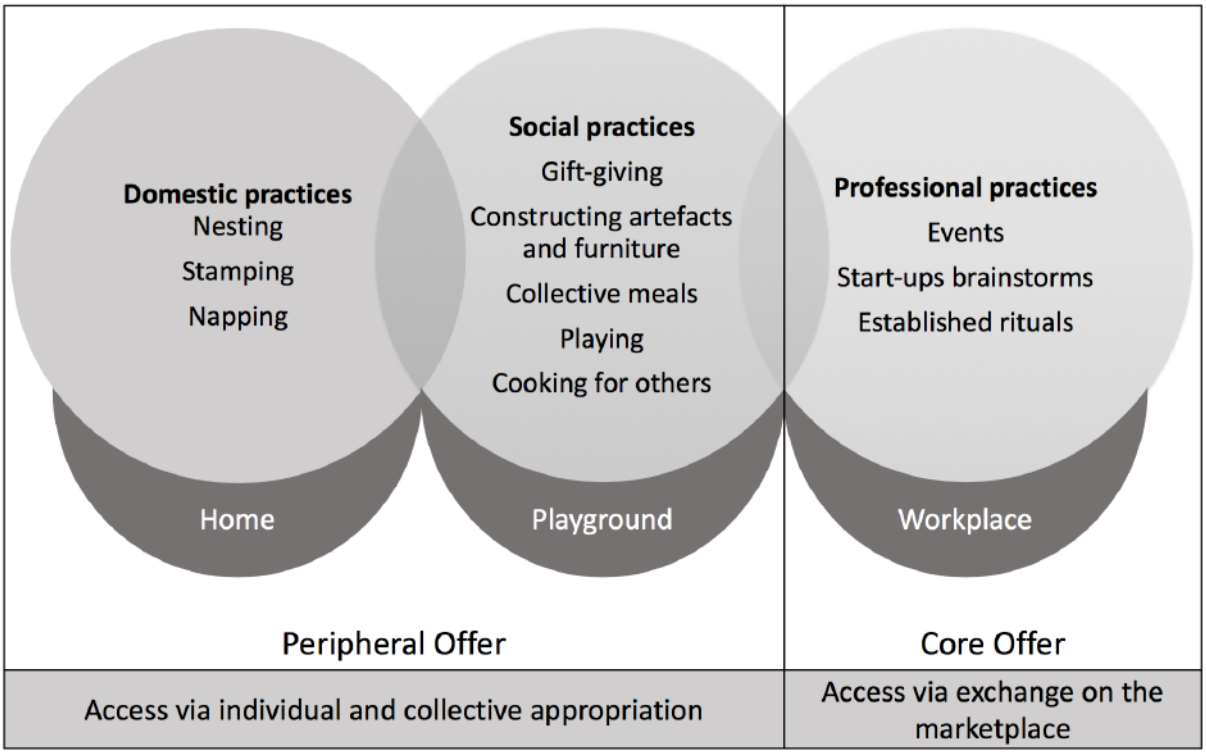

Figure 16. Collective representations at the Sensespace and the practices they are built on

The domestic, the social and the professional co-emerge and merge in the Sensespace. Coworking space are polyfunctional (Toussaint, 2016) and their offering is dual. They are selling a workplace, but they advertise and offer access to a socio-professional network of entrepreneurs. Within the space itself, these offerings are mixed. It is unclear for coworkers where the borders are between what they get in exchange for their money and what they can access via individual and collective appropriation. This situation creates misunderstandings, conflicts and overlaps between practices and representations. The next section deconstructs practices that overlap between different representations.

OVERLAPPING PRACTICES

Overlapping practices disrupt the typology above, as they move objects from one place to another. In the Sensespace, these practices are salient when a coworker manipulates an artefact for a purpose other than what it is intended for. Overlapping practices tend to merge the three representations of the place. Three common practices in the Sensespace illustrate this merger: playing ping-pong, napping in the lounge and working in the pillow room.

The ping-pong tables in the centre of the main coworking space were designed and intended for ping-pong playing. Yet in the Sensespace they are desks. The use that coworkers make of those tables twist their intended purpose. When one sees a ping-pong table, one first associate it with playing. In the Sensespace, this meaning is removed from the object. The main indicators that the ping-pong tables are not there to be played upon are the chairs that surround them. Seeing a ping-pong table with chairs around transform the meanings and representations of the object. It is no more a game, it becomes a regular table in a workplace, i.e., a desk. This representation can mutate once more. When coworkers play ping-pong on Friday evenings, the role of the ping-pong table evolves again (see figure 14). It goes back to its intended purpose of being a ping-pong table. Objects move from one place to another, in the same space, depending on their use. One object in one space, the main coworking space, enacts the different places of the coworking space depending on its functionality. It is interesting to note that this mutation is also depending on time: playing ping-pong during the day is not accepted. During weekdays, the main coworking space is a space intended for working. It can become a playground in the evenings or weekends.

A second common overlapping practice is napping on the sofas in the lounge. The sofas are used mainly to eat and to chat. They are placed in the lounge. This space is the communal area,

where people cook together, eat together, have a break, chat, laugh. However, it is common to see coworkers nap on the sofas in very comfortable postures. For instance, we noted down one day that "The man who is napping [on the sofas in the lounge] took his shoes off" (Field notes). Where would it seem natural to take our shoes off? The most natural answer is at home, or at friends'. This practice is associated with the domestic with the re-creation of home. Napping and removing shoes are domestic practices enacted, in this case, in the social space of the Sensespace.

The third most common overlapping practice is to work in the pillow room. The pillow room is a very small room where a hundred small pillows have been thrown onto the floor. The pillow room is, unlike the lounge's sofas, intended for napping. It is supposedly an intimate space. However, as Franck, a roommate, expresses:

> It's been awhile since I've been there but when we set it up I used it a lot. I used to make phone calls there, and think that if the client, or the person at the other end of line knew where I was… When I called clients or someone from outside sometimes I wonder... if they knew where I called from! (Roommate)

This pillow room, intended for napping and relaxing, is very often used to make professional phone calls. In this room, coworkers seek to escape the noisy environment of the Sensespace. Here, we observe a working practice being performed in a homey space.

Overlapping practices highlight the mutating role of objects as places merge. Ping-pong tables are used to work and then to play; sofas are used to eat, chat and then to nap; pillows are used to nap and then to make professional phone calls. These overlapping practices show the fluid nature of such objects. Depending on their use objects can transform a space into different places. They are boundary objects which can endorse different roles. The main coworking space is a workplace when the ping-pong tables are used as desks. But when they go back to

being ping-pong tables, the main coworking space mutates into a friendly playground. The lounge is a communal area when coworkers eat and chat on the sofas. But when one coworkers sleeps on it with his shoes off, it suddenly looks a lot like a living room at home. Finally, the pillow room is a hidden nest where coworkers can relax and nap. But when professional phone calls are made in it, it becomes a meeting room. In the literature in management, boundary objects are objects that are used and understood by different actors in different world. They "inhabit several intersecting social worlds [...] and satisfy the informational requirement of each of them" (Star and Griesemer, 1989, p. 393). These objects move knowledge from one world to another. The concept of boundary object is used in management research to understand how knowledge circulates between the different teams of the same project (Carlile, 2002; Barrett and Oborn, 2010). In our case, these objects seem to circulate between the different places of the same space. Rosselin (2002) has shown how the system of objects in a studio flat can be used to mutate the space. Studio inhabitants transform a bedroom to a living room or a dance floor by relocating and moving objects around (Rosselin, 2002; Garabuau-Moussaoui and Desjeux, 2000). In the Sensespace, boundary objects circulate and activate different places. They move the coworking space from a home to a playground to a workplace.

These overlapping practices may appear as pure enactment of space appropriation. There is a discrepancy between the rational, functional aspect of spaces as they are thought of by designers, architects or managers, and the human tendency to arrange and to personalise space (Fischer, 1992). A discrepancy between the conceived space and the lived space. Appropriation, here as active individual practices, compensate this discrepancy:

> Appropriation imposes itself as the affirmation of a strong hold and a stamping that define personal inscription as a revealing sign of a fundamental asymmetry between functional conception and the human model. (Fischer, 1992)

The three examples of overlapping practices reveal how coworkers make use of the given artefacts and space despite their intended use. They twist their environment. In this view, appropriation is a form of resistance to the environmental constraint that one cannot change (Fischer, 1989; Aubert-Gamet, 1997). However, these diversions in usage are collectively accepted by coworkers. They are aware of these practices and most of them occasionally participate to their enactment. These diversions are not acts of resistance: they are inherent to the ludicrous experiential facilities that that coworking spaces are.

DISCUSSION

CONSUMER APPROPRIATION IN COWORKING SPACE

SUMMARY OF FINDINGS

This research redefines the concept of appropriation through the scope of access-based services systems. Appropriation enables consumers to develop a sense of wellbeing and a symbiotic relationship with the network of objects and individuals within the space. This harmonious relationship opens access to the peripheral offering of access system. In the case of coworking spaces, coworkers access a network of entrepreneurs. In this sense, appropriation unlocks the linking value of coworking spaces (Cova, 1997), as it connects entrepreneurs together. It enables coworkers to fully benefit from the "network sociality" (Wittel, 2001) they access. From the firms' point of view, consumer appropriation activates the full extent of the value of their offering.

In the Sensespace, activation of the peripheral offering happens in three steps: personal appropriation, opening to others and collective appropriation:

- First, consumers anchor themselves within the space through personal appropriation. In the coworking space, this practice is impeded by the fact that coworkers share desks and cannot leave their personal stuffs overnights. Thus, daily routines of settlement play an important part in allowing the consumers to nest at the hotdesk. Small objects are crucial in the development of borders and stamping of the hot desk. Some coworkers find it more difficult than others to engage in nesting. They will territorialise by marking chairs of tables as theirs.
- Second, once coworkers have anchored themselves materially within the space they open themselves to others. Here, appropriation practices participate to being in the space through the eyes of others. Acts of mutuality, or generalised gift-giving, contribute to acknowledging their presence in the space in the eyes of others, to enter a common sociality.
- Third, appropriation is enacted at a collective level through four practices: play, construction, ritualization and participation. The peripheral offering of the coworking space, access to a network of entrepreneur, is fully activated here through the enactment of collective appropriation.

Most of the practices of appropriation that allow coworkers to activate the network for themselves necessitate active behaviour from them. Coworkers nest, stamp, territorialise, choose a spot, make gifts, play, construct artefacts or participate. Managers of the coworking space also have a few strings to their bow: they install rituals and offer opportunities to construct artefacts. In sum, consumer appropriation practices activate the peripheral value of the service. In the case of coworking space, the enactment of such practices give coworkers access to a network of entrepreneurs.

The second part of the findings highlights the difficulties in the coworking space to maintain this access open. Different representations and meanings coexist. Domestic practices create a home, professional practices a workplace and social practice create a playground. These three representations co-emerge. Nesting, stamping and napping are domestic practices that contribute to the creation of a home-like space. Participation to events and ritualization within the space are professional practices creating a workplace environment. Last, gift-giving, construction, play and collective meals are social practices that contribute to establish the Sensespace as a social, friendly playground. Overlapping practices such as napping in the lounge (a social place) participate to the appropriation of the space. The co-emergence of different meanings in the coworking space creates many tensions and conflicts. Coworkers sometimes face difficulties in balancing the many representations this place can handle.

REFLEXION ON THE NATURE OF APPROPRIATION

It may be argued that participation, ritualization, construction and play are not manifestations or acts of appropriation. Appropriation is often reduced to the cognitive process of making something mine (Pierce et a. 2001). The connections between this definition and the practice of playing may seem remote. However, Sartre (1943) and Fischer (1981) already advanced that play, ludicrous activities and sports are acts of appropriation. Rook (1985) showed the importance of rituals in creating meaningful everyday life. Through participation and construction, individuals immerge themselves physically within the space. Their bodies and gestures become part of the meaningful place they are creating through their activities. Appropriation is more than simply making something ours. The *something* does not have to be a tangible artefact. Proshansky (1976) differentiate between the means (i.e., the practices) and the ends of appropriation. He states that the ultimate end, or goal of appropriation is harmony and a sense of wellbeing. This view is shared by environmental psychologists or

anthropologists when studying appropriation of the home (Serfaty-Garzon, 2003; Rosselin, 2002; Miller, 1988). However, in marketing and in psychology appropriation is too often reduced to making something mine (Pierce et al. 2001). Throughout our study, appropriation emerged as acts of meaning creation. Through appropriation of a space consumers make their lives theirs as they exist within the space as individual. Appropriation is not about having or wanting to possess something. Rather, it is about being in harmony with the things we use. The German social psychologist Fromm encourage us to move from a *having mode* to a *being mode* of existence (1976). This research shows that appropriation, which at first glance has more to do with having rather than being, is about being. Appropriation is not about accumulation, possession, ownership or private property. It is about creating a symbiotic, harmonious relationship with the objects, spaces and individuals which constitute our daily environment. In the end, appropriation of the environment enhances individuals' wellbeing within this environment.

HYBRID SPACES

We advance our discussion by reflecting on the nature of coworking spaces. On the one hand, the discourses and practices in the space, both by managers and coworkers, seem to put the emphasis on the peripheral offering of the coworking space. Openness, sharing and collaboration are values which are present on all communications in the Sensespace. However, coworkers identify networking as the main reason for success in their business. Collision with other entrepreneurs are looked for in coworking spaces (Fabbri and Charue-Duboc, 2016; Waber, Magnolfi and Lindsay, 2014). This creates situation of provoked serendipity, where casual encounters may always be beneficial for business (Blein, 2016). When tensions emerge, such as cleaning issues, it is not unusual to see coworkers claim their rights as consumers of a workplace.

Entrepreneurs buy access to a place where they can both work and grow their professional network. One of the characteristics of access economy is that consumers are driven by utility (Bardhi and Eckhardt, 2012; Lamberton and Rose, 2012; Eckhardt and Bardhi, 2016). Access is ruled by norms of exchange and non-reciprocity. Social relationships and community norm govern non-mediated form of access, i.e., sharing (Belk, 2010) and mutuality (Arnould and Rose, 2015; Eckhardt and Bardhi, 2016). Coworking spaces blur the frontiers between social relationships and norms of exchange. One the one hand, consumers are drawn to coworking by utility and instrumental motives. On the other hand, the practices within the space are embedded in social relationships, collective norms and community values. The participatory practices work based on generalised reciprocity, where participation to one's event will benefit the community, and where each beneficiate in turn from the community (Arnould and Rose, 2015). Scaraboto (2015) defines as hybrid economies the context which mix market and non-market modes of exchange. Hybrid economies mix mutuality and interdependence with self-interest. Coworking spaces are thus hybrid spaces which fluctuate between norms of exchange and practices of community. The core offering, the workplace, is ruled by norms of exchange; whereas the peripheral offering, access to the professional network, is ruled by norms of generalised reciprocity.

DESIGNING SHARED OFFICE SPACE

Collective practices are also enacted in traditional office spaces. However, office spaces are designed and furnished before employees arrive. Employees usually are attributed a desk. Besides their own desk, they do not have the possibility to change the environment, to personalise or to adapt it. Fischer (1981) situates appropriation as acts done between the functional, rational conception of the space and the lived, human space. In traditional offices, there is not much space for movements; the office space is usually rigid and appropriation is

assimilated to acts of resistance (Fischer, 1989). In the Sensespace, the physical environment is not rigid. Coworkers can use and manipulate objects, move things around, cook, nap, play, work, chat, hang posters or build furniture. Therefore, appropriation in such spaces is not resistance to a rigid environment. It is a set of consumers-artefacts practices both individual and collective which, when enacted, render the use of the space meaningful. The physical environment works with the users towards the establishment of appropriation practices. On the opposite, appropriation sometimes appears as resistance to the fluidity of the environment, when coworkers try to establish their own territory in the shared space.

This has implications for the design office space. There is a change towards more flexible and open office spaces that foster collisions between employee to enhance performance (Waber, Magnolfi and Lindsay, 2014). Office design websites such as Knoll.com propose furniture to organise the office plan by activity: the refuge, the enclave, the team meeting, the assembly, the community[10]. The idea behind these new office plans is to remove personal space: in the morning, depending on the activity they have planned for the day, employees choose to use one space or the other. Big companies have started to adopt flexible office design: Sanofi in France, Microsoft in the Netherlands, Unilever in Switzerland, etc. When employees work in a flexible office their personal space is often reduced to a locker. Rather than going all-flexible, this research shows that allotting personal space is important. Some coworkers need to have their own space to anchors themselves in the space. Only then can they use this anchorage as a pivot point to engage in collective practices. In designing office space, we recommend to have one fixed workstation that coworkers can set up and arrange as they wish. When this is not

[10] http://www.knoll.com/design-plan/planning/activity-spaces, consulted on August 9, 2016

possible, or when hotdesking is still favoured, it is crucial to provide a material environment to help coworkers to engage in practices of appropriation. This research shows that coworkers go through extended routines, border creation and stamping to create a home-like space in which they feel a sense of wellbeing. Theses routines and practices could be helped by designing *homey* hotdesks for instance. We encourage future research, especially in the discipline of design, to develop tools that could help nesting practices at the hot desk. On another context, places such as libraries could benefit from this research. Though users do not access the library every day with the same people, they are sharing a desk for a few hours. Library users also create borders with their personal objects to delimitate their own appropriated space on the table. Developing tools to facilitate the nesting routine could be interesting. In sum, developing office space and furniture that users can physically modify to adapt to their own use is crucial. In the Sensespace this is the case of the ping-pong tables that can be used both as desks or as games depending on how the coworkers manipulate them. This artefact is central in the collective representation of the space.

MANAGERIAL CONTRIBUTIONS

To attract entrepreneurs to their spaces, coworking spaces managers put the emphasis on the network on entrepreneurs they host. As one of the Sensespace's managers explained, the reputation of a coworking is not based on how they accommodate entrepreneurs but on who they host. Coworking space managers could benefit from our research. They could develop best practices to engage coworkers into appropriation of the space. First, they should make sure that each coworker can materially anchor within the coworking space. Some will require extensive routines and if possible a more stable environment. With that in mind, it would be interesting to work with a designer to develop ways to make hotdesks more stable. Second,

managers could use the typology of practices identified in step two and three (mutuality, participation, ritualization, play and construction) to advertise how they engage entrepreneurs to communicate with one another and to share best practices. Rather than simply stating that they foster interactions between entrepreneurs, they could advertise how they do so.

LIMITATIONS AND CONCLUSION

This interpretive research should be read within its socio-economic and material context. The study is situated in a Parisian coworking space which promotes social entrepreneurship. The socio-material environment is specific: there is a lot of craftsmanship and co-construction. The independence that Sensespace's coworkers have with the physicality of the space is central to their appropriation of the space. But it may be very specific to this coworking space. Future research could study appropriation in a coworking space that offers a somewhat more 'rigid' material environment.

Furthermore, we encourage future research to draw from other frameworks to further understand the nature of coworking spaces. With that in mind, the work of Boltanski and Thévenot (1987, 1991) on the economies of worth could be particularly pertinent. They propose to analyse the different "worlds", or "cités" within organisations and how agreements are reached. In the Sensespace, we could identify several of these cities: the commercial, the domestic, the civic. Further research could analyse how the different cities come about and co-exist in coworking spaces.

This paper contributes to define the concept of appropriation in the context of coworking spaces. Consumer appropriation emerges as a series of practices which activate the peripheral value of the access-based service. In the coworking space, consumer appropriation is a set of

processual practices which anchor coworkers in the space materially, socially and enables them to access a socio-professional network of entrepreneurs from which they benefit. We advance prior work on coworking spaces (i.e., Toussaint, 2016) by understanding value of consumer appropriation in coworking spaces. We also focus on the role of the material in the enactment of practices within coworking spaces.

In sum, this papers open avenues for future research to explore further the concept of appropriation in contexts of access. Consumer appropriation has the power to activate peripheral value within access-services systems. Other access contexts should be analysed to understand how the mechanisms of appropriation vary across access systems. Campsites, libraries, car sharing, peer-to-peer renting could provide interesting contexts to do so. Finally, we believe that it is important to keep studying consumer appropriation in order develop ways of (well)being within the utilitarian framework of access consumption.

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TRANSITION: ESSAY II TO ESSAY III

Essay II studies consumer appropriation within a coworking space. Consumer appropriation emerges as a set of processual practices through which coworkers activate access to a socio-professional network of entrepreneurs. The essay observes the enactment of individual and collective practices of appropriation with the material environment in the coworking space.

The first two essays of this dissertation focus on practices of appropriation enacted within access-based services. The role of design is clear in Essay I. In Essay II, it is to be found in the material flexibility of the space and the involvement of users in adapting the material elements to their use. Autolib' and the Sensespace differ greatly in the design projects they adopted throughout the development of their service. The next essay aims to understand how the different design perspectives adopted by Autolib' and the Sensespace impacted consumer appropriation. This essay addresses the question of how to design access-based services to foster consumer appropriation.

DESIGN PERSPECTIVES AND THEIR INFLUENCE ON CONSUMER APPROPRIATION: A COMPARISON OF TWO CASE STUDIES IN ACCESS-BASED CONSUMPTION

ABSTRACT – This paper aims to understand how different design management approaches impact consumer appropriation in the context of access-based consumption. We build on Aubert-Gamet's (1997) framework on service appropriation, which highlights the importance of material flexibility and consumer creative possibilities in the appropriation process. We compare two access contexts studied in the previous articles: a car sharing system and a coworking space. The contexts differ in their design approach: Design Thinking versus Design as Practice. We observe consumer appropriation in both cases. Our findings question Aubert-Gamet's framework by showing that, in the context of access-based consumption, high material flexibility and consumer creativity do not systematically facilitate consumer appropriation. Material rigidity can help consumers to engage in appropriation practices. Overall, we advocate that a third dimension, design management, should be added to the framework to understand appropriation modes in access-based services systems.

KEYWORDS – Design management perspectives, appropriation, access-based consumption, material flexibility, consumer creative possibility

PREVIOUS LIVES OF THE ARTICLE –

- The theoretical part of this essay on Design as Practice will be presented at the 9th *Workshop on Interpretive Consumer Research* (ICR) in Stockholm, Sweden, April 26-28, 2017

INTRODUCTION

The post-industrial prevalence of ownership led to a focus on visual aesthetics in the first half of the twentieth century which has influenced designers and design research greatly (Loewy, 1951/2002; Tonkinwise, 2016). In the 1990s, the focus of design moved away from the aesthetics of the object (1900 – 1950) and its function (1940 – 1960) to the user of the object (Findeli and Bousbaci, 2005; Vial, 2015). Today, as consumption modes beyond ownership arise (Bardhi and Eckhardt, 2012; Belk, 2010; Rifkins, 2000), the question of designing beyond product ownership becomes central (Tonkinwise, 2016). Tonkinwise (2016) identifies what this shift involves for design research. He emphasizes on 1) the necessity to design the practices, the activity of consumption rather than to focus on visual aesthetics and 2) the co-evolution of the objects and the users (both learn in use as their practices evolve). Designing beyond ownership implies focussing on the enactment of the consumer-product relationship, i.e., the practices, and how to ensure that this relationship evolves positively (Tonkinwise, 2016).

In this paper, we focus on the design of consumer appropriation within access-based services. Our main research question asks: How do different design processes influence consumer appropriation in access-based services? We aim to explore the relationship between what happens upstream of the service, in the designing process, and how it impacts consumers' practices with the material element. We understand consumer appropriation as the practices through which consumers engage with the product and service to experience wellbeing in use.

We compare two different access contexts: a car sharing system (Autolib' in Paris) and a coworking space (The Sensespace in Paris). At the same time, we compare two different design processes: Design Thinking and Design as Practice. Both cases vary in term of material rigidity

of their offering and the extent to which they integrate consumers' creativity in the offering. Aubert-Gamet's (1997) studies appropriation of services and finds that the more rigid the material environment, the less appropriation by consumers. To her, consumer appropriation is possible in cases of high flexibility of the material and high creative possibilities for consumers. We propose an update of this framework by showing the crucial role of design in the context of access-based services. We show that high level of control does not necessarily mean absence of appropriation. Furthermore, we show that high flexibility and creative possibilities do not necessarily mean that users seamlessly appropriate the space. Overall, we highlight the crucial role of design, over material control, in developing consumer appropriation.

First, we present a short literature review on appropriation in services marketing and design. Second, we introduce Aubert-Gamet's (1997) framework on space appropriation. We then detail the two case studies with regards to the literature on Design Thinking (case 1, Autolib') and Design as Practice (case 2, Sensespace). The findings question Aubert-Gamet's framework by deconstructing consumer appropriation in both cases. Finally, we provide a discussion on designing for appropriation in a post-ownership era.

Table 8. Presentation of Case Studies

	Case 1: Autolib'	**Case 2: Sensespace**
Access-based service	Car sharing	Coworking space
Access type (based on Bardhi and Eckhardt, 2012)	Longitudinal, frequently dormant access of limited duration, close to home, anonymous, market-mediated, self-service, based on a functional and experiential, material object and containing an ecological dimension	Continuous, daily access of long duration, collective and not close to home, market-mediated, high consumer involvement, based on a functional and experiential space and providing opportunity for pro-social behaviours
Design process	Design Thinking (Brown, 2008, 2009)	Design as Practice (Kimbell, 2011, 2012)
Material rigidity	High	Low
User creative engagement	Low	High

LITERATURE

PRACTICES OF APPROPRIATION IN SERVICES MARKETING

Different perspectives in services marketing study the impact of the service environment on consumer behaviour. Servicescape environment (Bitner, 1992) and store environment (Donovan and Rossiter, 1982) have been analysed with regards to the approach-avoidance behaviours they generate (Mehrabian and Russell, 1974). In this positivist approach, environment impacts consumers' cognition and behaviours. In a service co-creation perspective, consumers and service providers are developing the servicescape (Nilsson and Ballantyne, 2014) and the service experience together (Jaakkola, Helkkula and Aarikka-Stenroos, 2015; Vargo and Lusch, 2004). McColl-Kennedy et al (2012) analyse the practices of co-creation of value. McColl-Kennedy, Cheung and Ferrier (2015) identify a set of practices which co-create the service experience. Among these practices are assimilating, producing and personalizing, which could be understood as appropriation practices through which consumers make sense of the service. To co-create the service, consumers engage with the material element and adapt the service to their use.

Following the work of Holt (1995), studying consumption practices have gained popularity in consumer research. Studying consumption practices moves the focus away from mere cognitive or behavioural response to understanding how consumers consume (Holt, 1995). Practices are routinized activities that consumers do with objects and which produce meanings (Magaudda, 2011; Reckwitz, 2002). Auber-Gamet's work (1996, 1997) played a foundational role on the study of appropriation in the service environment. In France, the appropriation of experience became a major focus of French's Consumer Culture Theory research (Özçaglar-

Toulouse and Cova, 2010). Following Aubert-Gamet (1996, 1997), practices of appropriation have been studied regarding both their role in the consumption experience and in the shopping experience. Carù and Cova (2003; 2006) study the context of experience and show that through practices of space appropriation consumers immerse themselves into the consumption experience. They highlight the crucial role of narratives, design and consumer involvement in the production of the experience. Ladwein (2002) studies practices of appropriation in a Club-Med resort. He observes the occupation of space and the participation to activities. He establishes that through appropriation consumers become either spectators or actors of their holidays. Bonnin (2002, 2006) emphasises on the role of store designs in influencing consumers' appropriation strategies. Drawing on Moles and Rohmer (1977), he identifies how stores' micro-events and closures foster ludicrous or functional appropriation strategies. While Bonnin (2006) advances that appropriation plays a great role in the service experience, he acknowledges that further research are needed to understand what constitutes "an appropriable environment" (p. 62).

INTRODUCING AUBERT-GAMET'S (1997) FRAMEWORK

Aubert-Gamet (1997), drawing on Lefebvre (1974) and Foucault (1975), sees space appropriation as a power struggle between the service provider who defines the material space and the consumers who try to make theirs the environment by exercising a counter-power. To her, appropriation is an escape route. Through different practices such as bricolage, consumers re-create their own meanings on the environment to escape the pre-defined meanings. De Certeau (1990) names these practices "tactics" that consumers develop to adapt the environment. Fischer (1992, 2011) identifies four practices of appropriation: nesting, exploring, personalizing and stamping.

Aubert-Gamet (1997) proposes three strategies that service providers can adopt when defining their service's material environment, depending on the level of material rigidity: suggestion, seduction and prescription. The suggestion's strategy is to offer a space in which several possible meanings co-exists. There is not pre-defined meaning attached to the place. This, per Aubert-Gamet, enhances users' flexibility to move and engage in appropriation. The seduction strategy offers less flexibility. The service provider tries to nudge consumers into certain practices and towards specific meanings. To Aubert-Gamet, this strategy gives the "illusion of freedom" to consumers (p.34). The last strategy is that of prescription, where the material environment offers no apparent flexibility. It forces consumers into specific practices and, per this framework, does not allow for consumer appropriation. Aubert-Gamet pairs this typology of spatial rigidity with what she defines as consumer's creative space. It refers to the gap between the intentions of the material environment (i.e., the strategy of the service provider) and what consumers do or feel. This gap is high when consumers fully use their creative space and low when they do not. By crossing these creative gaps with the different strategies of spatial order, Aubert-Gamet identifies six modes of service appropriation (Table 9):

1. *Reproduction*: a situation where the space is flexible but consumers do not take advantage of it. They do not use their creative space; they reproduce meanings and practices from previous services. No appropriation exists here.
2. *Concession*: consumers engage in practices of appropriation but do not go beyond what the service provider allows.
3. *Submission*: consumers comply fully with what the material environment allows them to do. The material environment is flexible but consumers do not develop their creative space. No appropriation is conceivable in this mode.
4. *Creation*: consumers and service provider co-create the service space. Consumers are involved in designing the space and experience total appropriation.

5. *Diversion*: consumers engage in unexpected practices to re-appropriate the space. This mode of appropriation remains non-violent. Yet, it implies engaging in prohibited practices.
6. *Subversion*: like in diversion mode, consumers engage in unexpected practices. However, in this situation the practices are violent, deviant ones through which consumers exert the full extent of their counter-power.

Table 9. Aubert-Gamet's (1997) framework for space appropriation modes in services

Spatial Order / **Gap**	**Suggestion** **"space proposes"**	**Seduction** **"space influences"**	**Prescription** **"space forces"**
Low	**Reproduction** (no appropriation)	**Concession** (no appropriation)	**Submission** (no appropriation)
Medium	**Concession** (appropriation)	**Concession** (part appropriation / **Diversion** (re-appropriation)	**Diversion** (re-appropriation)
High	**Creation** (total appropriation)	**Diversion** (re-appropriation)	**Subversion** (total re-appropriation)

This framework implies that consumer appropriation happens only in highly flexible environments, where consumers have the possibility to modify the material elements in a highly creative way. While we agree that studying how the material environment impacts

consumer appropriation in interesting, we aim to question the extent to which only non-standardised, flexible environment could lead to consumer appropriation.

METHOD

To answer our research question, we compare two access-based service systems on their design project and on the consumer appropriation practices they convey. We compare data collected during two previous separated studies (see Essay I and II). The research method adopted for the first case, Autolib', relies on interviews with consumers. The second case, the Sensespace, relies on observation. The table below provides a summary of the data collected for the two cases:

Table 10. Data collection

Data collected	Autolib' (Mar 2014 – Jun 2014)	The Sensespace (Jan 2015 – Nov 2016)
Consumer Interviews	13 (40 – 70 minutes)	11 (15 – 40 minutes)
Manager Interviews	1 (90 minutes)	4 (15 – 60 minutes)
Observations	2 hours	16 days in 2015 2 days in 2016 (March and November)
Field notes	Two pages	85 pages
Pictures	9	235
Short videos	4	8
Managerial documentation	None	6
Online observation	Autolib' website, Bolloré's website, Pininfarina's website	Sensespace's Facebook group, Sensecube's twitter account

First, we focussed the analysis on the design approach adopted by both cases. We read and listened again to the manager interviews. We immerged ourselves into the online websites and discussions about the development of the services. The approach to design adopted by Autolib' is coherent with a Design Thinking perspective where design is a problem-solving activity. The Sensespace however did not have a clear design project and adopted a day-to-day, ad hoc perspective closer to Design as Practice. Both perspectives are presented with the case studies descriptions. Second, we compared the analysis of the practices of appropriation and the role of the material elements in the enactment of these different practices.

The next section introduces both case studies. We begin by presenting the design perspectives which best describes their design approach: Design Thinking for Autolib', Design as Practice for the Sensespace. We then move to description of the cases themselves to highlight their correspondence with the design perspective presented.

CASE STUDY 1: DESIGN THINKING AND AUTOLIB'

DESIGN THINKING

Design thinking emerged in the 1990s, after the movement Design Methods (Buchanan and Margolin, 1995). A design-driven discourse arose in multiple facets of contemporary society (Brown, 2008, 2009). Pushed by design consultancies like IDEO (Brow, 2008), Business Schools and organisations began to adopt design-driven processes. Design Thinking develops human-centred approaches to problem-solving (Brown, 2008). Cross (2001) talks of "designerly ways of knowing" and sees design as a discipline rather than as a science. Design

thinking integrates the user in the process of design. As Findeli and Bousbaci (2005) note, this represent a second shift towards the eclipse of the object. The first shift happened in the 1960s with the movement of Design Method and the emphasis on processes rather than functionality of objects (Vial, 2015). The second shift, in the 1990s, encourages designers to focus on actors of the object rather than on objects or processes. They integrate the perspective of the users, their needs and desires. The object of design, rather than being the object itself, becomes the user (Redström, 2005). Designers then borrow research method from the social science, such as ethnography, to better understand the users (Button, 2000).

Tim Brown (2008, 2009) and his design consultancy IDEO brought design thinking problem-solving processes to the managerial world. Their view of Design Thinking (with capital letters) is today the one that is most known. However, it differs from the research-oriented design thinking (without capital letters; Cross, 2011; Tonkinwise, 2011). Brown applies design processes such as the Double Diamond, an iterative process promoted by the Design Council UK[11], to solve complex managerial problems. The double diamond consists in two phases (the two diamonds): a problem space and a solution space. In the problem-definition phase, designers are invited to broaden their perspective and their knowledge of the problems, before narrowing down the issue to a more precise research question. It is during this phase that methods such as ethnography and observation are used. Once the problem is clearly defined, designers start the solution phase. During this phase, the same process of broadening and

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11 http://www.designcouncil.org.uk/sites/default/files/asset/document/ElevenLessons_Design_Council%20(2).pdf, accessed on January 4, 2017

narrowing down happens. First designers are invited to come up with as many prototypes and solutions as possible to answer the problem. It is the ideation phase. Then, the scope of possible solutions is narrowed to provide the best possible one. Throughout the process, designers follow the precept of empathy: they should think as if they were in the user's shoes (Brown, 2008). Brown sees Design Thinking as human-centred and encourages designers to conduct ethnographical research to understand the user. Brown places designers as expert interpreters of what users *need*.

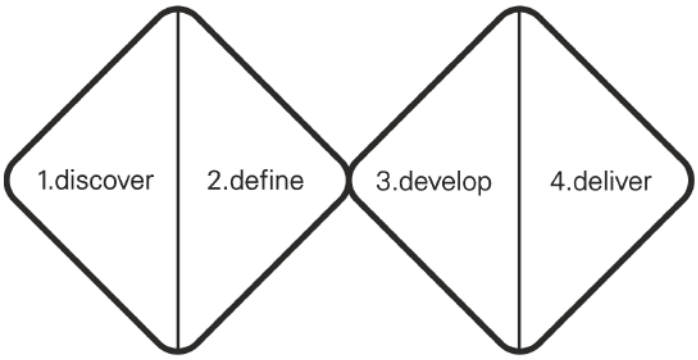

Figure 17. The Double Diamond, Design Council UK

The literature in management quickly picked up on Design Thinking (Dunne and Martin, 2006; Gruber et al., 2015). Venkatesh et. al (2012) adopted a grounded theory approach to understand how companies integrate design thinking and design orientation in their strategy. They found that design-oriented companies have the goal of capturing consumer "hearts more than customer's minds" (Venkatesh et. al, 2012, p. 303). Design thinking encourages imagination over rational knowledge. In this perspective, designers' intuitions are more valued than market-research data (Brown, 2008). Designers also acquire and store knowledge on industries, which they retrieve when thinking about new product development (Hargadon and Sutton, 1997). Chen and Venkatesh (2013) define design thinking as "the transfer of the organisation's design philosophy into design activities and outputs" (p. 1681). They identify strategies employed by

design-oriented firms to implement this transfer: creating end-user profiles, increasing collaborations, use the brand image to establish a "design language" and observing competitors' design output.

INTRODUCING AUTOLIB'S CASE

Autolib' is a public service company run by the Bolloré group[12] in collaboration with the Paris' City Hall. It was launched in 2011 and today has around 4,000 cars and more than 900 charging stations. In 2015, it had 75 thousand users in Paris and its suburbs. Autolib' proposes one model of car, the Bluecar, an electrical and automatic model. Bolloré develops the electrical battery that operates the car in its factory in Britany, France. The Bluecars' body has been designed by the renowned designer Pininfarina. The Bluecar's 100% electrical battery and automatic transmission are two features not yet common in France. The cars are equipped with an on-board computer that gives users access to all kinds of information on how to operate the car, the GPS, or the radio. It also provides the possibility to contact the call centre. Users can book the nearest available car via an app on their smartphone. They then go to the charging station to pick up the vehicle. Autolib' users can return the car at any charging station of their choice. There are several subscription packages but the Autolib' Premium plan costs €120 a year for access to a car 24/7, with unlimited reservations for both car and parking place, and €6 for every half-hour trip. In February 2016, Autolib' launched a new subscription package called Ready to Drive ("Prêt à Rouler"). Subscription to this plan is free but the hourly rate is higher

[12] https://www.autolib.eu/fr/, accessed on January 4, 2017

(€9 per half-hour). The uniformity of Autolib's fleet and the design of the Bluecar by Pininfarina show the strong design attitude of the company.

Figure 18. Autolib's Bluecar

Image Credit: By Mariordo (Mario Roberto Durán Ortiz) (Own work) [CC BY-SA 3.0], via Wikimedia Commons

Bolloré's decision to go with Pininfarina was perhaps influenced by the work done by the designers on designing cars adapted to urban landscape. On Pininfarina's website[13] we find his interest for the current evolution of transportation modes. He proposes to design cars to adapt to this change:

[13] http://www.pininfarina.com/en/pininfarina_bluecar/pininfarina_bluecar.htm, accessed on December 21, 2016

> "There is growing public awareness of the need for intervention to safeguard the environment, and use of the car is concentrated increasingly in towns and limited to daily transfers not exceeding 60 km; as a result, the car market is experiencing a cultural revolution that opens new and promising scenarios for hybrid or totally electric vehicles like the Pininfarina BLUECAR."

Bolloré and Pininfarina engaged in a design thinking process to develop Autolib's Bluecar. Bolloré asked Pininfarina to develop and adapt his Bluecar for the Autolib' project. Bolloré needed cars adapted to urban driving and which could integrate its electrical battery. The cars were made to answer to this demand of urban and environmentally-friendly modes of transports. Then, the Bolloré group made a few amendments to the cars themselves to adapt them to the sharing system: doors were reinforced, as well as door handles. In the first five years of their existence, Autolib's Bluecar have been modified many times. The seat's fabric, which soiled quite easily, has been replaced with faux leather in 2014-2015. The cars' bodies have recently been painted (they all were aluminium "naked" before). The built-in computer also benefited from a few updates: now users must rate the state of cleanness when they enter the car. Finally, the service itself expanded: new Autolib's stations are built continuously, and existing one were extended, from four parking places to six. Availability, interface and car's robustness are crucial design factors for Autolib'.

CASE STUDY 2: DESIGN AS PRACTICE AND THE SENSESPACE

DESIGN AS PRACTICE

Design Thinking is criticised in the design literature, for several reasons. First, it gives too much importance to the designer alone and forgets the material practices (Tonkinwise, 2011) and the socio-material environment in which the designer is embedded (Silverstone and Haddon, 1996). Second, it is viewed as "ahistorical" and "disembodied" by advocates of design as practice (Kimbell, 2011). Third, the aim to develop object tailored to users' need has been accused of reducing users' space to improvise (Redström, 2005). Furthermore, the development of this perspective mostly relies on the ideas of one design consultancy, IDEO (Brown, 2008).

Out of these critics emerged a movement which aims to move beyond user-centred design to acknowledge the material and social networks in which designers and the outcome of design (the object) are embedded (Kimbell and Street, 2009; Kimbell 2011, 2012; Silverstone and Haddon, 1996; Tonkinwise, 2011). These design researchers turn towards practice theory to do so (Reckwitz, 2002). Kimbell views design "as a situated, contingent set of practices carried by professional designers and those who engage with designers' activities" (Kimbell, 2011, p. 129). Design should be understood as a practice rather than as a process. This approach moves the focus away from the designer alone to encompass a wider range of actors and how they *do* design. By including "those who engage with designers' activities", Kimbell includes managers, producers, but also consumers in the activity of designing. This approach builds on

science and technology studies. Designers and artefacts are situated in specific contexts. The outcome of design, the innovation, involves several actors (Silverstone and Haddon, 1996). To understand an innovation, it is necessary to understand who the actors are and in which situation do they evolve. Actors are both human and non-human. Objects are non-human actors who play a role in the consumer-object relationship. They "act as mediators, transforming meaning as they form and move through networks" (Fallan, 2008, p. 62). Objects are granted agency through the script of design (Ingram, Shove and Watson, 2007). An artefact, via its design, can configure the user (Woolgar, 1991). Tenants of design as practices wish to understand the user-artefact activities, how they come about and how they develop. Users and artefacts are treated as two actors of the relationship. Design as practice performs another shift in thinking design. Going away from Findeli and Bousbaci's eclipse of the object (2005), it puts materiality back into design (Kimbell, 2013, in an interview of Graham Harman). The focus is no longer on the object, the process, or the user but rather on all of that as the same time.

Kimbell and Street (2009) then Kimbell (2011, 2012) pair two concepts to understand design as practice: design-as-practice and design-in-practice. Design-as-practices integrates the artefacts, the designer's bodies, bodily movements, minds and the material environment of the organization in which design is practiced. The activity of designing is situated in a specific context and embodied by designers, managers or whoever is doing the design. This view of design moves the object of analysis away from the designer's individual skills "to a set of material and discursive practices which are enacted during design activity" (Kimbell, 2012, p135). Kimbell pairs this conception of design-as-practice with design-in-practice. Design-in-practice is concerned with the outcome of design (such as the artefact) and the practices users enact with this designs (the noun). Once the designers, the engineers, the managers, the retailers have finished their work and the consumers buys the product, "the activity of designing is still

not over" (Kimbell, 2012, p. 136). The outcome of design is never complete. The user is involved with the product over time and enacts practices which constitute the design. Such practices can be domestication, i.e., the integration of the object in the home (Silverstone and Haddon, 1996), acquisition, appropriation, consumption, waste, disposal, etc. (Ingram et. al, 2007). Design-in-practice is a co-construction of the design between all the actors of the design's network. Design-as-practices and design-in-practices are to be understood as a pair (Figure 19). It encompasses the practices of design done by designers, manager, consumers or users. Design as practice moves away from the designer's work alone. It adopts a wider perspective that includes designers, users, managers, the organisation and the socio-material frame in which design is being practiced. Drawing from this perspective allows consumer research to see consumption practices as design activities. Practices creates meaning but they also, in this view, design objects. Viewing consumption as designing offers an empowering framework in which consumers make objects their own and relate to them as their designers.

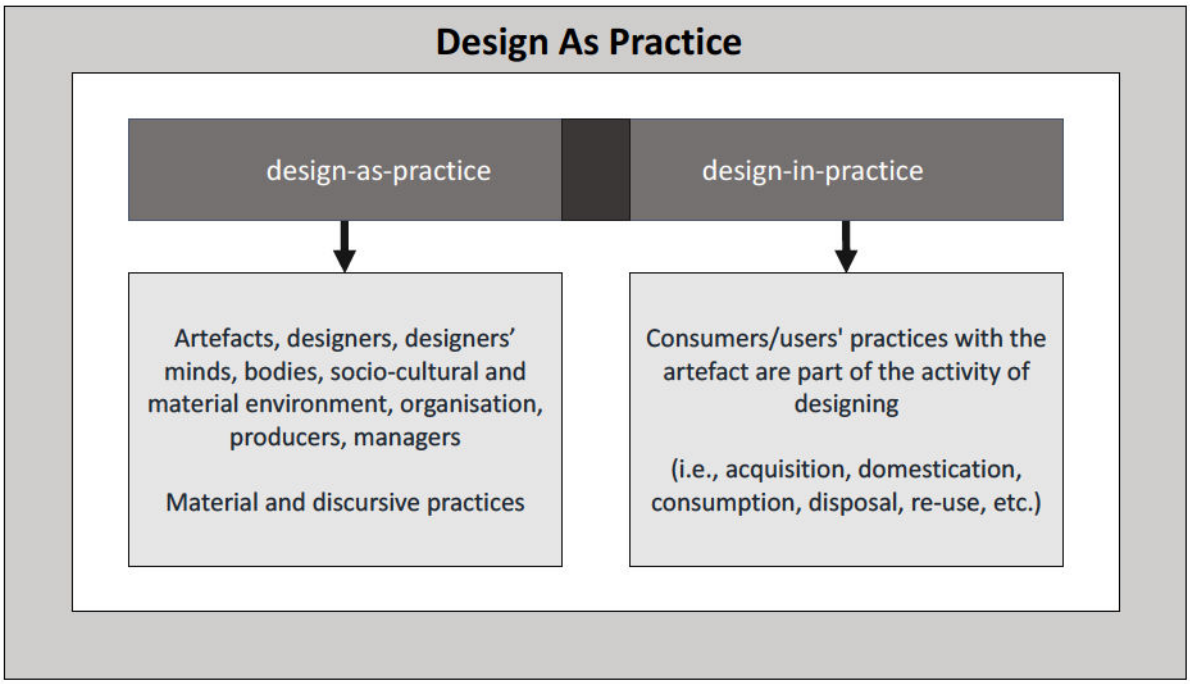

Figure 19. Design as Practice Framework, adapted from Kimbell, 2011, 2012

THE MAKING OF THE SENSESPACE

The Sensespace is a coworking space located in the 12th arrondissement of Paris, France. It can host 70 full-time individuals at its maximum capacity. It was created in December 2014. It is called Sensespace because it is linked to the organisation MakeSense, which connects start-ups of the social and solidarity-based economy. The aim of the space is to become Paris's hub for social innovation. About twenty-five start-ups share the space. About 40% of the coworkers are attached to MakeSense (a ratio that tends to grow), 20% are part of MakeSense's incubator program called the Sensecube, and the rest are not attached to MakeSense and are called Roommates. Many Roommates start-ups do not belong to the solidarity-based economy. The vocation of the Sensespace is to be Paris' centre for social innovation. In that regard MakeSense's members do not see the place as being only a place to work but more as a third place (Oldenburg and Brissett, 1982), that is, a fun, social place where people do more than work. In the Sensespace's handbook, managers define the four values of the space:

1. Being an innovative "Fablab": "a space to work, organise events and experiment. A place looking for a strong environmental and social impact".
2. Accelerate collaborative projects and synergies: coworking space, common convivial spaces.
3. A place for exploration and citizen actions: collaborative kitchen, Disco soups against food waste.
4. A place for open events: hold-ups, brainstorms, drinks, lunches, trainings, etc.

This view of the Sensespace as a third place impacts the way managers want to develop the space. They do not see the Sensespace as a simple workplace:

> Besides, as third place, it is expected from the Sensespace to be a kind of "office of the future", an innovative work environment that integrates new and necessary modalities and functions to make resident start-ups more efficient and productive. (Guide to the Sensespace)

The space, the artefacts in the space and the meeting rooms have been developed collaboratively with users/entrepreneurs, with the goal of fostering a creative, efficient workplace. The aim of the Sensespace is to be innovative, to be the "office of the future". They want to push creative thinking and collaborations between start-ups forward. This is physically translated in the space via 1) the sharing of practices and artefacts and 2) the promotion of construction and co-construction practices.

THE SENSESPACE'S DEVELOPMENT

2014-2015: DESIGN-AS-PRACTICE

Figure 20. The main coworking space at the beginning

This picture was advertised by the SenseCube, MakeSense's accelerator program, a few weeks before they moved to the Sensespace in December 2015. On this picture, we see the

Sensespace's main coworking space bare and yet to be constructed. Advertising this picture with the line "let's design it with us" shows the will to integrate future users into the development of the space. Here, the design of the space is not given to a designer in a Design Thinking perspective. As we observed, the space has been designed ad hoc by the individuals using it (managers and consumers). In the early days of the Sensespace, MakeSense provided basic elements such as a few tables, toilets and the Internet, but the coworkers were already involved. One of them, who was engaged in projects concerning food waste, built the kitchen. He benefited from the help of the Sensespace's manager at the time. Many of the artefacts and furniture in the Sensespace are built or brought by coworkers. A coworker developed an Aquaponie station (an aquarium feeding plants), another one built a library. In the kitchen, the stools on which we sat at the beginning were made from cardboard by one coworker.

Figure 21. Kitchen stools, Kitchen, January 29, 2015

Figure 22. Library, November 17, 2015

Figure 23. Aquaponie station, November 17, 2015

The Sensespace managers encourage these behaviours. They promote coworkers' initiatives. They organise "Pimp my Space week-ends", where coworkers come to the Sensespace on a Saturday to build furniture, tidy up, arrange or redecorate the place. In August 2015, they circulated a survey amongst coworkers to ask them feedbacks and suggestions regarding their material arrangement. In September, one of the start-ups residing in the Sensespace proposed a workshop to build proper tables to replace the old ping-pong tables on which they were working until then. In December 2015, the Sensespace set up a "Hold Up", an event that

resemble a large brainstorm, where they asked entrepreneurs "How to make our new space the best space ever?"[14].

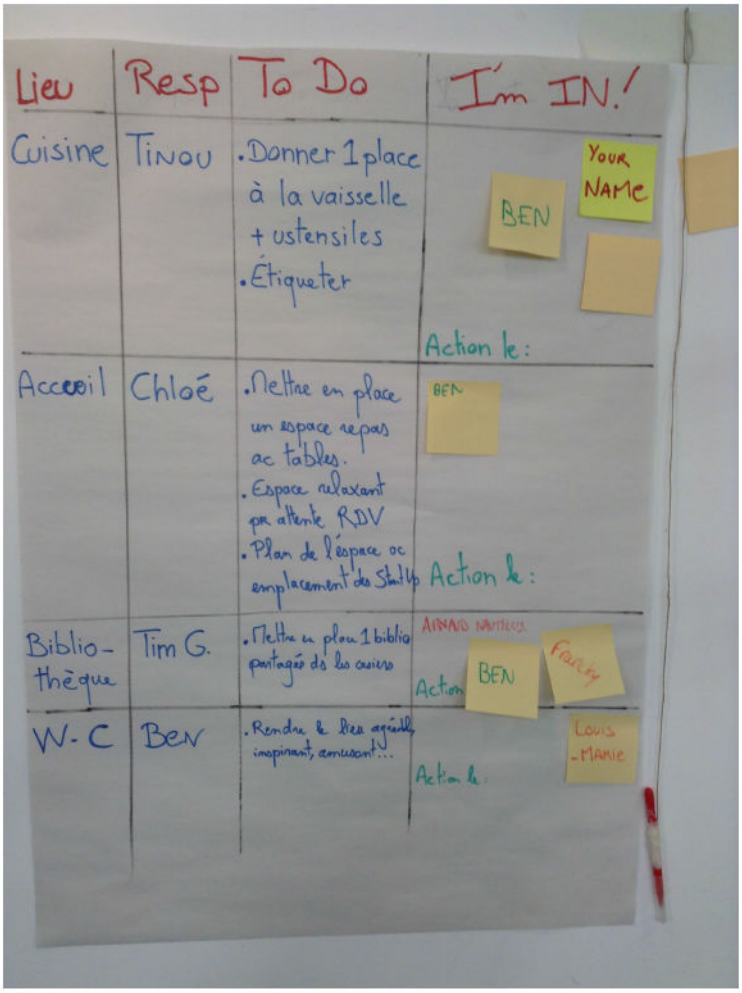

Figure 24. Brainstorm to motivate coworkers to get involved, the lounge, March 23, 2015

Overall, The Sensespace did not adopt a Design Thinking approach to developing the space, where they would have had to work with a designer beforehand. Rather, they collected ad hoc

[14] https://www.makesense.org/challenges/579, consulted on November 28, 2016.

feedbacks from users and encourage them to physically design the space too. Here, design is an ongoing practice enacted between managers, users and the material space. By the end of 2015, the space had visually stabilised (Figures 25 and 26). Most the furniture were made of wood and many plants have been brought to the place.

Figure 25. Kitchen, November 17, 2015

Figure 26. Main coworking space, November 17, 2015

2016+: DESIGN IN PRACTICE

Throughout 2015 the Sensespace saw a lot of changes following a design-as-practice approach. By the end of 2015 the material space had somewhat stabilised. However, every day, the space is still being designed. Just as Kimbell (2011, 2012) stated, the outcome of design – design-in-practice – is never complete. The space evolves everyday depending on who is using the space, how, and for what purpose. For instance, several times a week the main coworking space is rented to companies to host events. Everything in the main coworking space (tables, chairs) is stored away during those events, and put back in place after. Coworkers continue to adapt the space to their use and to decorate.

Figure 27. New Decorations in the lounge, November 15, 2016

Figure 28. Event in the main space (retrieved from Twitter, 3 March 2016)

FINDINGS

The two case studies vary greatly both in the material rigidity (spatial order) and creativity dimensions of Aubert-Gamet's (1997) framework. In Autolib', the material environment is rigid: users do not have the possibility to modify the cars or the structure of the service. They can change the radio and move their seat closer to the steering wheel, but not much more.

Therefore, the creative space they are given is low. They do not have the possibility to adapt or change the service. Their opportunities to have an impact on the service is through feedbacks and complaints to the service provider. Hence, their impact is indirect. Change to the material environment comes from the service provider and users must conform to use the service. Therefore, Autolib' is situated in the prescription strategy, with low creative gap. Per Aubert-Gamet (1997), this puts Autolib' into the submission mode of appropriation. On the opposite, the material environment in the Sensespace is highly flexible and ever changing. Depending on their need users can directly modify elements of the space, and even the whole space. The service provider is also involved, but in what appears to be a suggestion strategy. The creative gap for users is high. Per Aubert-Gamet (1997), the Sensespace should lead to the creation mode of appropriation (total appropriation).

The next sections focus on the practices of appropriation enacted by consumers in each case. We pay attention to the role of design on these practices and question Aubert-Gamet's framework.

Table 11. Adapted from Aubert-Gamet (1997). Space appropriation modes in service. Per this Framework, Autolib' (orange) should lead to a submission mode with no appropriation; the Sensespace (green) should lead to a creation mode with total appropriation

Spatial Order / Gap	Suggestion "space proposes"	Seduction "space influences"	Prescription "space obliges"
Low	Reproduction (no appropriation)	Concession (no appropriation)	**Submission** (none appropriation)
Medium	Concession (appropriation)	Concession (part appropriation / Diversion (re-appropriation)	Diversion (re-appropriation)
High	**Creation** (total appropriation)	Diversion (re-appropriation)	Subversion (total re-appropriation)

CONSUMER APPROPRIATION IN AUTOLIB'

In Autolib', the cars and the structure of the service push the users into certain behaviours. Consumers perform the gestures and practices enabled by the cars' design. There cannot be tremendous variations across consumers' usages. The gap between what the service provider proposes and what users do is tight. Per Aubert-Gamet's framework, this puts Autolib's into a submission mode of appropriation where she identifies no possibility for appropriation.

However, in the first essay of this doctoral work, we advance that the Bluecar's design allows Autolib' consumers to develop practices of appropriation with the cars. By opposition to a car sharing system with no design project like Zipcar (Bardhi and Eckhardt, 2012), Autolib' consumers draw sign value from the car sharing service. Specifically, the uniformity of the vehicles' design and personalization of the service allow consumers to know the vehicles. Uniformity allows for routinisation and the creation of habits. Personalisation, via the computer (radio, storage of personal information) creates emotional bonds. Then, the electrical engine and the automatic transmission of the vehicle enable user to control the cars. These two features also create a game-like sensation when driving the Bluecar, which empowers the drivers. Finally, the design of the service enables the practice of creating by making users invest time and energy in the service. Knowing, controlling and creating are practices through which individuals build appropriation of objects (Sartre, 1943).

What did Autolib' do differently? Autolib' and Pininfarina developed a rigid material environment, but an innovative one. Many elements in the design of Autolib's cars and service were new to their consumers: electrical battery, automatic gear and the sharing system. This suggests that they created a novel experience for consumers upon which users had to develop and attach new meanings. The new cars and new service structure led to the creation of new meanings associated with the driving experience. Therefore, it appears that using Autolib' itself is an experience in comparison with using one's own car. This experiential mode of consumption is illustrated in Olivier's quote below. In the quote, Olivier retrieves the feelings he experienced when he began driving Bluecars:

> And I discovered electrical cars. I love cars, and it's something I did not know, I was reluctant, I thought it would not move forward. But in reality, it moves fast. At the beginning – now I don't notice it that much, but at the beginning it's like you're on a cloud rather than on a

> pavement. It's another way of driving in fact, and that's what I find wicked. You completely change your relation with the mechanical aspect of the car.

Olivier's quote illustrates the importance of the new driving practices induced by the cars' design. Driving a Bluecar is a novel experience. Consumers driving those cars develop new practices. Thanks to the uniformity of the experience, they associated these new practices with driving Autolib', reinforcing the brand's value. What the study of Autolib's case shows is that despite a somewhat rigid material environment, consumers develop appropriation of the object and service. This is possible thanks to strong design statement from the service provider. Here, it is the novelty of both the cars and the service structure that contributed to consumer appropriation and the development of new driving practices. Therefore, in contradiction to Aubert-Gamet's (1997) framework, consumer appropriation can happen under a prescription strategy giving low creativity space for user. In the case of Autolib' this is possible thanks to a design-driven project, following a Design Thinking approach to service development. Autolib's case shows the power of design in creating consumer appropriation is a rigid material environment, when consumers have little latitude to modify the service.

CONSUMER APPROPRIATION IN THE SENSESPACE

The presentation of the Sensespace case highlighted the involvement of users in the ongoing arrangement of the space. The Sensespace's design story follows a Design as Practice trajectory (Kimbell, 2011, 2012) rather than a Design Thinking one. Per Aubert-Gamet (1997), the strategy adopted by the managers of the Sensespace is one of suggestion. They give propositions to coworkers, await their feedbacks, and all actors build the place together. Coworkers are encouraged to actively modify the space, without necessarily asking managers first. As examples, one of them built a kitchen, another brought an aquarium, another built a

library. Hence, the creative gap is high for consumers. Per Aubert-Gamet (1997), this puts the Sensespace into a creation mode of appropriation where consumer appropriation should be total. Our data indicate that while practices of appropriation are performed in the Sensespace, too much "chaos" prevents consumer appropriation from being total, as Aubert-Gamet would suggest.

Practices of nesting, stamping and personalizing, identified by Fischer (1992) as manifestations appropriation, emerge from our data. First, we analyse practices which seem to indicate total appropriation of the space. These are practices where consumers take full creative advantage of the flexibility of their material environment. In a second time, we identify practices which are difficultly enacted due to the injunction of sharing all the material space.

PRACTICES SHOWING TOTAL APPROPRIATION

Stamping and nesting

Our data suggest that some coworkers benefit fully from the flexibility of the material environment. They manipulate artefacts in the space and adapt the space to their personal use. Below are two extracts from field notes, taken in the main coworking space.

> In front of me is the corner for entrepreneurs of accelerated start-ups. Two of them went upstairs to get a supplementary table. They try to set up a bigger space, move tables. In fact, they have replaced two small tables with a bigger one. Straight away they lay down their little green plant and water it.
>
> A friend of C. migrates from MakeSense's space to sit next to us. The ping-pong table is not very comfortable on the sides because of the iron bar. But he says he came because there is not enough light at the back (that is, behind the stairs).

These extracts show that coworkers do not hesitate to adapt the material environment to their need. When start-up members needed more space to accommodate everyone, they went upstairs and brought down a table. They did not ask permission for it, nor did they ask a Sensespace manager to get it for them. They spontaneously adjusted the space to their need, creating a nest for their group. By directly placing a plant on the table, it becomes occupied, it becomes "their" table. Placing a plant on a table to prevent any other Sensespace consumer to sit there is an act of stamping (Fischer, 1989). Furthermore, coworkers do not hesitate to migrate to the different part of the space depending on their work or their preferences. Many, for instance, prefer to work in the lounge to get more light, as there are no windows in the main space. Others are more comfortable on the lounge's sofas, especially for informal meetings and discussions (Picture below).

Figure 29. Two coworkers meeting on a sofa, November 17, 2015

Personalisation and creation

Coworkers do more than using artefacts and adapting the spatial order to their use. Some of them actively contribute to creating the space by developing artefacts, attending "Pimp My Space" events in the weekends. We demonstrate this with the example of Thomas, a coworker who built the kitchen. Thomas works for a start-up which is involved with reducing food waste and improving food consumption in company offices. He is a strong advocate of cooking meals at lunch rather than buying ready-made food. To him, the kitchen is "a social ferment that allows people to meet and discover each other" (Thomas, April 24, 2015). He came to see the Sensespace's manager with the project, asking only for a small budget. They both worked together and transformed what was a fridge and a microwave into a fully equipped kitchen. Thomas calls his experience "Culinary Design Thinking", which shows how invested he is. He sees himself as a designer within the Sensespace. Of course, Thomas' example is one of the most salient in term of showing consumer creative involvement within the space. Yet, many other coworkers have developed their own ideas or made their own contribution to the space. Among consumer-emerged projects we can identify an aquarium, a library, wooden tables to replace the ping-pong tables, a swing hanging from the first floor, coffee tables, many kitchen utensils and a few plants.

Figure 30. Thomas and a manager building the kitchen (retrieved from Facebook, 11 January 2017)

PRACTICES SHOWING DIFFICULT APPROPRIATION

This high level of flexibility creates difficulties, despite the ease with which consumers seem to appropriate the space. Our data show that the lack of material stability and the notion that all material is for sharing render appropriation difficult for some users. The fact that everyone supposedly can adapt the environment to their use creates ambiguity. To understand this, let us go back to the example of the entrepreneurs who brought a table down for their own use. Two days later after the coworkers settled at their new spot, the following event happened:

> The developer for the start-up 'X' (the one who is bare foot) has settled at the table where the accelerated start-ups have been for two days. As they just came back from a meeting, they looked a bit annoyed but sat next to and around him.

This extract from field notes shows that while the flexibility of the space allows users to adapt the material environment for their own purpose, it can also create tensions. Here, the nest that

these coworkers created has been involuntarily invaded by another coworker. To the latter, all desks are supposedly shared and it is ok to sit wherever he wanted. The start-up members conform to the norm of sharing by sitting around him. They do not "kick him out", as they cannot officially label these tables as theirs. However, they are annoyed and we can infer that their sense of wellbeing within the space is momentarily disrupted. The "invader", Adrien, is also lost in the process. In a short interview following this event, he recalls his difficulty of finding a free spot to work:

> For instance, yesterday they [*translation note: "they" is undefined]* told me there's two part, one is coworking and the other I don't know but it looks occupied by two companies, where they are 8 or 10. And in fact they told me that, actually, on the other side there's lots of available spots. But actually, the desks do not look really available. There are stuffs there, where people have they habits and all. And so you wonder, you know, are you sure it's available?

Adrien moved desk several times in just a few days, showing difficulties to settle in the shared working environment. Furthermore, our data suggests that not all coworkers welcome the lack of spatial order that results from sharing the space and the material artefacts. Below is a quote from a coworker who does not get involved in any construction of artefacts within the space. At the time this quote was taken, he had been working for seven months at the Sensespace:

> I feel frustrated not to have a fixed workstation, with the possibility to display more things, and to organise my workstation in a more permanent way. (coworker)

This coworker expresses his frustration vis-à-vis the flexibility of the space. Because desks are shared, no workstation is permanent. This is particularly the case in the main coworking space where all desks are hotdesks. As a results coworkers cannot put personal items or pictures on their desks. They cannot personalise nor create a nest, which are crucial practices in the establishment of a 'home away from home', that is, of appropriation at the workplace (Fischer,

1989; Monjaret, 1996; Tian and Belk, 2005). Therefore, while this all-flexibility might result in high involvement of users within the space, it also impedes appropriation practices for some consumers.

DISCUSSION

Our research shows that modes of designing are to be considered when studying modes of consumer appropriation within access-based services. Specifically, we challenge Aubert-Gamet's (1997) framework by showing that 1) a prescription strategy combined with low consumer creative gap can lead to appropriation thanks to specific design features and 2) a suggestion strategy combined with high consumer creativity gap can erect barriers to consumer appropriation due to too much spatial flexibility. We question the extent to which only highly flexible environment could lead to consumer appropriation. We demonstrate that level of control on the service's material environment (both the service provider strategy and consumer's creative gap) does not determine solely modes of appropriation. A third dimension, the design approach, should be considered.

Autolib's case study highlights that consumer appropriation does not necessarily results from higher consumer autonomy. Here, the object of consumption is rigid and so is the service. Rather than putting a break to appropriation, uniformity and rigidity guide the consumers' practices toward appropriation. Autolib' is an interesting case of design beyond ownership (Tonkinwise, 2016). It highlights how the design of a product-service system can nudge consumers into engagement with the product-service through practices of appropriation.

The Sensespace's case shows that low control also means the need for consumers to invest more to appropriate. If they do not get physically involved in co-designing the service it is

unlikely that appropriation will come easily. Relying too heavily on consumer creativity and willingness to engage with the material environment to create their own service experience may turn out to be counter-productive. As both cases show, there is comfort in stability. Some consumers may find it easier to engage in appropriation practices with a material environment which is meeting them half way.

This paper relies on a comparison of two very distinct services: car sharing and coworking space. Thus, we compare the practices of appropriation enacted with cars as objects within a product-service system, and those enacted within a polyfunctional space (Toussaint, 2016). Consequently, our findings are to be taken with care. While we believe that it is interesting to do this comparison as is highlights the role of design in consumer appropriation of access services, we acknowledge that further research is needed to address this limitation. For instance, a comparative study on several coworking spaces with different levels of material flexibility should address this issue. In this regard, the work of Toussaint (2016) shows that minimalist design in coworking space might be more appropriate. Minimalist designs, by proposing objects that are not marked (i.e., blank), might be better suited to foster appropriation. In the Sensespace, all objects are already invested with meanings: ping-pong tables, wooden tables made by coworkers, objects brought by coworkers, etc. Toussaint advances that blank (white) coworking spaces could foster creativity (p. 264). Further research should be conducted to understand the extent to which they could also foster consumer appropriation.

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TRANSITION: ESSAY III TO ESSAY IV

Essay III provides a comparison of the two fields under study in this doctoral work. Autolib' and the Sensespace are compared on their approach to design and their capacity to foster consumer appropriation. We question Aubert-Gamet's (1997) framework of service appropriation by demonstrating that high material flexibility does not necessarily lead to consumer appropriation. Autolib's case shows that consumer appropriation can be fostered by a standardised, rigid object.

The next essay is practice-oriented and thus differs from the other, theoretically-driven articles. The fourth essay aims to understands how a designer would tackle the question of consumer appropriation in access. We worked together with a designer within the Sensespace to answer this question. The essay reports the steps that we followed and details the solutions we developed to answer this question. We provide concrete, material solutions that could help managers of accessed spaces.

ESSAY IV. A DESIGNER'S VIEW ON APPROPRIATION PRACTICES IN ACCESS

ABSTRACT – This article is practice-oriented and focuses specifically on the practice of designing. We explore how a designer would tackle the question of consumer appropriation in access. To do so, we worked with a designer at a coworking space. We conducted a project in five steps: creating persona, developing a mapping, writing scenarios, brainstorming to develop new artefact, and making the practice loop. Each step is described carefully. A first set of proposed solutions focusses on improving the existing settings. The process revealed practices of carrying things around, co-construction and the prevalence of oral communications. The artefacts developed aim to facilitate these practices. A second observation is that sharing artefacts within the space (such as hotdesks) impedes on coworkers' appropriation practices. We proposed new artefacts which could help coworkers tackle this issue: repositionable notes and an 'open book tablet'.

KEYWORDS – design, design research, consumer practices, coworking space

INTRODUCTION

How would a designer tackle the issue of user appropriation in a coworking space?

To answer this question, we first refer to design activities as problem-solving activities (Buchanan, 1992). Design problems are perceived as "ill-structured problems" (Simon, 1973) or "wicked problems" (Rittel, in Buchanan, 1992). Wicked or ill-structured problems are indeterminate problems, that is, they do not have definitive formulation (Buchanan, 1992). Their solutions cannot be true or false, rather good or bad. To Dorst (2006), labelling design as problem-solving is paradoxical if the problem cannot be identified. Rather, he proposes to consider design as a situated problem-solving activity. This way, design deals with an aggregate of formulated local problems (Dorst, 2006).

The question of designing after ownership (Tonkinwise, 2016) itself could be a wicked problem. Rather than to try to address this issue, we followed Dorst's (2006) advice and formulated a situated problem. How to design consumer appropriation in a coworking space? The concept of appropriation of shared objects is not wicked, or ill-structured in the sense of Simon (1973). We clearly formulate the problem. Yet, this problem does not have a true or false solution. This is a complex problem, since appropriation's etymological roots are to be found in the Latin word *propius*, which meant "that we cannot share with others, own". Therefore, the question of how to design to allow for appropriation in a shared place is paradoxical. It is not about enabling users to possess the products, which are shared and used by several users.

In this essay, we proceed by working together with a designer to understand the practitioner's view on this question. We relate the steps through which we went to tackle the issue of appropriation in the coworking space. We begin by providing the context of the study. We then

explain our access to the field of research and the process followed. The rest of the paper describes the steps we followed and the solution we identified.

CONTEXT

We conducted our study in a coworking space located in the 12th arrondissement of Paris, France. The space is 550 square metres and hosts 70 full-time entrepreneurs at its maximum capacity. The space was opened in December 2014. It consists of two large coworking spaces, six meeting rooms, a large kitchen and a lounge space with sofas and tables. It is called Sensespace, as it is linked to the organisation MakeSense which is composed of actors of the social and solidarity-based economy. Twenty-five start-ups share the space. Seven of them are attached to MakeSense, seven are part of MakeSense's incubator program (the Sensecube), and the rest are not attached to MakeSense and are called Roommates. Most the Sensespace's revenues come from the Roommates as MakeSense and the Sensecube are housed free of charge. Roommates pay a fee of 350 euros a month per coworker to have a desk, use the meeting rooms and the shared lounge and kitchen. Most coworkers at the Sensespace are between the age of 20 and 35. The vocation of the Sensespace is to be a centre for social innovation. Consequently, sharing and co-construction are the two main values conveyed by the space managers. The organisation of the space is impacted by these values. For instance, at the beginning there were no attributed desks, all tables were shared. During lunch, coworkers are encouraged to cook large meals for other coworkers to share. The leitmotiv of MakeSense, *You upload more than you download* is a good image to understand how important sharing is in the Sensespace. It means that members ought to give more to the community than they receive from it. The Sensespace managers want to create a sense of community by instigating rituals such as the Roommates' drinks on Fridays. None of these activities are compulsory, yet,

they appear to be crucial if one wants to 'be a part of it' (see Essay II). Parallel to this sharing ideology, managers of the space greatly encourage their users to actively modify their environment. They offer furniture that users can build. They organise Pimp my Space Weekends during which users participate to the reorganisation of the space. Managers want their users to appropriate the space through their involvement (see Essay III). Making them feel at home is one of their challenge. This is however a difficult task as the space is often loud (there are over fifty persons working at the same time), and coworkers cannot leave their stuff on the desks overnight because of the hot-desking system.

ACCESS TO THE FIELD AND METHOD

As part of our doctoral dissertation, we conducted participant observation in this coworking space throughout 2015 (see Essay II and Essay III.). In April, we met D., a designer of creative ideas who intervened in the space as a mentor to entrepreneurs. Our encounter led to intense discussions about design and consumption. We decided to join forces to conduct a joint study within the Sensespace. Because the Sensespace aims to be a centre for innovation, it was not difficult for us to use the space as a field of research for our project. We met in April, July and November and corresponded by email. In December, we met at the Sensespace to conduct a final brainstorm. In the following spring, the results of this projects were presented to the managers of the Sensespace and received positive appreciations. The steps that we present below have been ordered for clarity purposes. However, the process we followed was much

less structured than that. It resembled more the description given on the Instructional Design Studio Harvard course online page[15]:

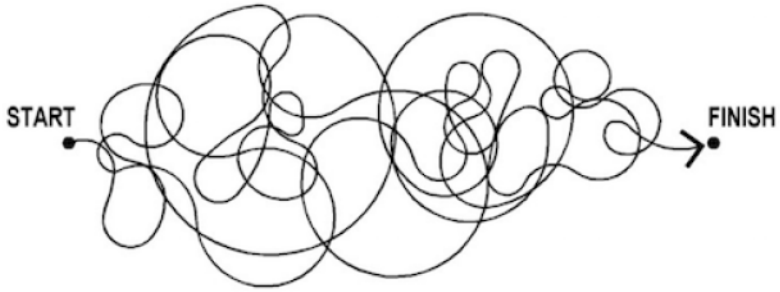

Figure 31. Design is a messy process

Below is a summary of the five-steps we followed throughout our study. Specific attention was given to the material and discursive practices. The findings give details of the socio-material environment in which we were embedded. The five main steps we followed were:

1. *Creating Personas*. Personas are designers' tools which embody the artefact's future users.
2. *Developing a mapping*. Mapping is a systematic approach to the physical environment. Every interaction between the users and the artefacts within the context needs to be accounted for.
3. *Writing Scenarios*. Each persona is taken through the map developed in the previous step. Scenarios allow to detect issues or misconceptions.

[15] https://canvas.harvard.edu/courses/8256/assignments/syllabus, consulted on October 04th, 2016

4. *Brainstorming to develop artefact*. This is the phase of product development through brainstorming with the tools (personas, mapping, scenarios). Each idea should be written down and if possible, sketched.
5. *Making the practice loop*. The proposition of artefact developed in step 4 reveal practices. There, the researcher identifies the practices at play. These practices are confronted to the existing literature to understand what new elements they bring to light.

METHODOLOGICAL INSIGHTS FROM DESIGN

PERSONA

Personas have gained popularity in the design process since the era of user-centred design (Brown, 2008, 2009). Personas are tools which help designers to represent and to communicate about consumer needs (Miaskiewicz and Kozar, 2011; Chen and Liu, 2015). They are "fictitious, specific, concrete representations of target users" (Pruitt et al., 2006: p 11). A persona represents an archetype of a user. They often are stereotypical. Personas invite designers to put a face on the users by substituting them with fictional characters. These characters should emerge from ethnographic research (Brown, 2008; Button, 2000). Personas are close to the notion of consumer typology in marketing. However, personas are used to tell the story of the relationship between the artefact and the consumer. Typologies are used to identify different consumer profiles. Typologies represent the different profiles of consumers and classify the population per specific criteria. A persona has a fictional name, a picture and is described in the narrative form. It does not try to represent a segment of the target population.

The narrative form is crucial in developing personas as it helps designers to immerge themselves into the context of use of the product by the user (Brown, 2008; Miaskiewicz and Kozar, 2011). Personas improve communication on the end user among the different projects stakeholders and increase the focus on the specific needs of the user by building empathy (Brown, 2008). Personas help to create a connection between the designer and the consumers. They act as a connector. The artefact, the product, is the medium through which designers speak to consumers. Personas, though not created by consumers, are media through which the needs of consumers are expressed to designers.

DEFINING CRITERIA

The first step we undertook was to create a list of the different criteria from which to choose to define our personas. The criteria were defined based on our knowledge of the Sensespace, based on discussions with managers and users. Our final criteria list was as follow (Table 12).

Table 12. List of criteria to develop personas

Time	- Daily - A few days a week - A few days a month	
Involvement	Construction: - has built several artefacts in the space - Has built furniture for his/her own use - Never built anything in the space	Participation (meals, events): - Participates as much as possible - Participates from time to time - Has organized an event/ a common meal - Has never participated
Work	Job: - Founder/co-founder - Employee - Intern - Freelance	Start-up: - Makesense - In MKS network (social and solidarity-based) - Incubated SU - Roommate (not SSB)
Space	Workstation: - Fixed workstation - Hot-desking - Upstairs - Central space - MKS space	Habits: - Only work at his/her desk - Likes to move (lounge, meeting rooms)

This list is not exhaustive and the criteria are not mutually exclusive. It was established in order not to forget an important criterion when defining personas while allowing for odd profiles to emerge. This is what we did first by randomly picking up criteria to define the base for our personas.

RANDOMLY DEFINING PERSONA

We created cards representing each of the above-mentioned criteria. Then the cards were assembled in piles on the table, and one card was picked from each pile. Several personas were created through this process. This enabled us to get rid of impossible profiles and to understand why they would not exist in the Sensespace. For instance, it would be incongruous that a freelance worker, who only came to the space a few days a month be granted a fixed workstation.

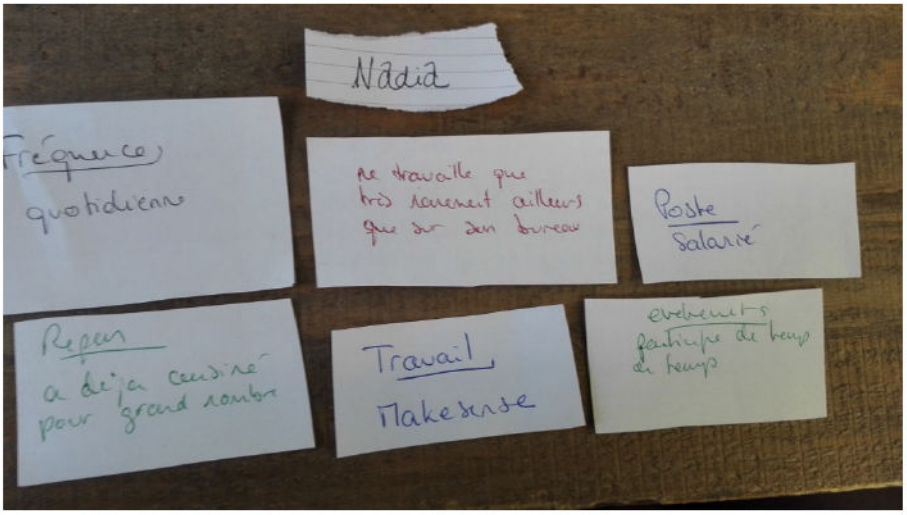

Figure 32. Playing with criteria cards to create personas

ADJUSTMENTS

Once the basis for the personas were created we defined the personas in depth. For each persona created, it was necessary to write a small biography, a name and to develop their story regarding the Sensespace. As stated before, personas are fictive characters. This step has proven very difficult and is a good example of the different mind frames in which designers and researchers evolve. In marketing, the tool that comes closer to design's personas is typology. Typology is a methodical approach to classify a set of consumers. It is being done through careful and

methodical study of the population. The population is segmented based on a set of carefully defined criteria. Afterwards, each consumer in the population classified accordingly. Contrary to typologies, personas represent one consumer of the target population. The set of persona does not aim to be representative of the population. Also, personas are well-defined characters. A name, a biography, a story is created for each of them. Building personas is a creative exercise by comparison to a more methodical definition of typologies. Researchers learn to be methodical and logical in the research process and to present findings that are based on data. Therefore, we were faced with issues at the time of inventing a biography, a 'story' for the persona. For instance, such sentences such as: "*Julie likes to sit in the lounge after lunch to drink her coffee*" was deleted because this is not something we observed directly and it appears difficult to engage in inventing what Julie likes to do after lunch. Even if Julie does not exist. After creating the personas, we realised they all were based on users interviews. This was an issue as personas are supposed to be completely fictive characters. From this, a meeting was set-up with the designer, who reviewed the personas. Personas should be fictive to explore the world of possibilities, and not just reflect data. We went back to the criteria table and did the exercise again. Together, it was easier. Working with a designer was crucial to create personas and to detach ourselves from the data.

Resulting from this collaboration, our fictive personas each comprised a real element that we observed in the Sensespace. We went back to the data collected to find supportive elements for each persona. Whether it was extract from interviews or field notes, we found data to collaborate each persona. In the end, we had nine personas. Below are a couple examples. All personas, as all the materials, are in French. Both personas are translated below.

Figure 33. Nadia's persona card

Table 13. Nadia, the hardworking employee

Profile	Frequency: daily Work: employee at Makesense Participation: occasionally Moving: she has a fixed desk behind the stairs. Very seldom works elsewhere
Further information	She is here to work; she has a life beside the Sensespace and it's important to her. She likes being here, she gets involved once in a while but know when to set limits. She brought personal stuff to the space (tea, cup). She uses the meeting rooms, the kitchen to cook with her friends. She likes to be at her desk, alone with her music.
Field add-on	- "Is there a place where you feel at home in the Sensespace? - My desk. I've got everything at hand, it's a space that stays static without been subject to events."

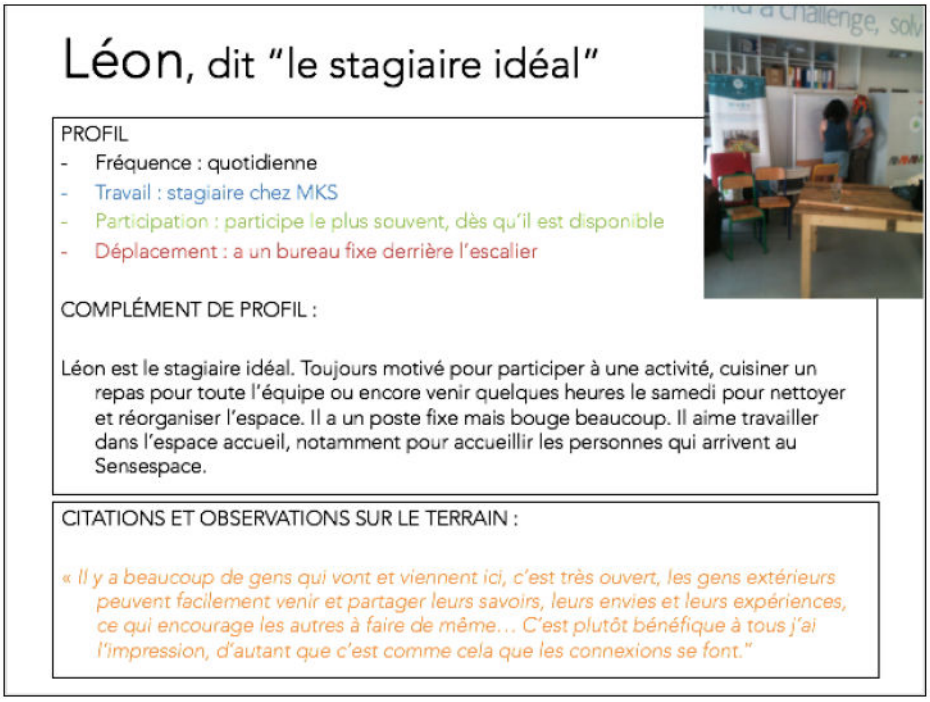

Figure 34. Leon's persona card

Table 14. Leon, the perfect intern

Profile	Frequency: daily Work: intern at Makesense Participation: as much as he can, whenever he's available Moving: has a fixed desk behind the stairs.
Further information	Leon is the perfect intern. Always ready to participate, to cook a meal for the team or to come around on a Saturday to clean and organise the space. He has got a fixed desk but moves a lot. He likes to work in the lounge. This allows him to welcome people who arrive in the Sensespace.
Field add-on	"There are many people who come and go here, it's very open, people from outside can easily come and share their knowledge, their experiences. That motivates others to do the same… I feel that it's quite beneficial to everyone, and that's how connections are made"

Creating the personas together, designer and researcher, has been rewarding. Our personas, thus fictive, also had strong roots in reality due to the data they emerged from. Coupling creative personas with extracts from the data gave depths to our personas. Also, thanks to real quotes, they appeared much more anchored in the reality of the Sensespace. Brown (2008) emphasizes the benefits of working with multidisciplinary teams. Creating the personas together as a consumer researcher and designer was a great example of this interdisciplinary success. The creative mind of the designer seems to be complementary with the more data-focussed mind of the researcher.

MAPPING

Mapping users' experience is a key tool in designers' everyday practices (Bohlmann and McCreery, 2015). In enables to understand each step of the users' journey. To be able to 'play' with our personas and place them in specific situation, we first had to define those situations. Upon a floor map of the Sensespace, we listed the interactions between the space and the users. To do so, we walked through the whole space together, stopping at each interaction and taking pictures of each point of connection. Whether it was a poster, furniture, a plant, we carefully noted down and took pictures of every interaction point (Figure 35). These interactions are listed by space: lounge, kitchen, main coworking space, meeting rooms, toilets, upstairs. In the kitchen for instance we identified the list below (Figure 36). One or two pictures are associated to each element.

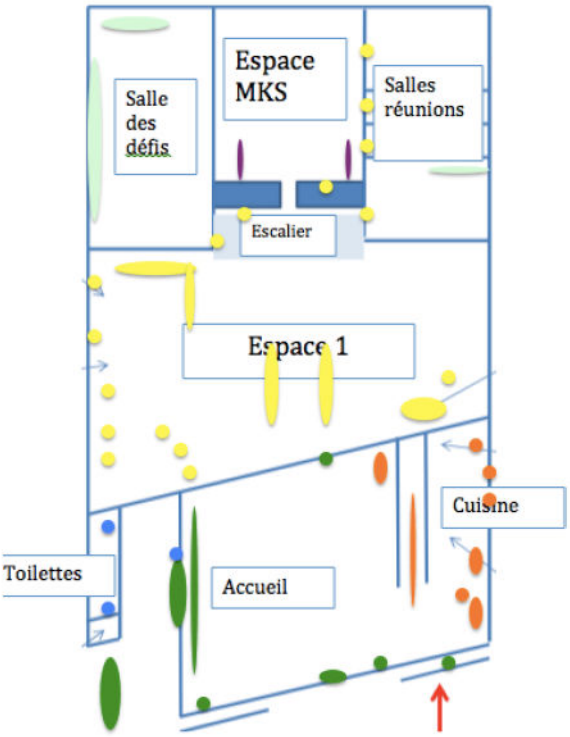

Figure 35. Mapping of the first floor

1. Cuisine

- #ENTREMIAM écrit en grosses lettres de carton, suspendu au dessus de la cuisine. Entremiam est la start-up qui a construit la cuisine.

- sur les placards de la cuisine, de la peinture craie a été posée : sert de communication pour les repas partagé et les règles de la cuisine.

- une plante, des affiches sont disposées à l'entrée

- une station de tri sélectif est disposée à l'entrée

Figure 36. First page of the kitchen's mapping list

Table 15. Full list of interactions in the kitchen

- ENTREMIAM, the name of the start-up which built the kitchen, is written in big cardboard letters hanging from the ceiling.
- On the kitchen cupboards, layers of chalk paint create a blackboard on which kitchen's rules and information regarding collective meals are displayed
- Close to the entrance are a plant and some posters and a waste sorting station
- There are two fridges with information display on the doors: one indicates the normal, shared fridge. The other is the free-go, where anyone can take what's in.
- On the kitchen counter are a microwave and condiments
- In the cupboards and drawers are kitchen utensils, cutlery and dishes
- To help everyone to find what they need, cardboard labels are glued on each cupboard
- On the left of the kitchen is a coffee station with a large coffee machine, boiler for tea, sugar and milk
- Above the sink, a poster reminds coworkers of the rules regarding the dirty dishes 'For a happy sink, 1 cup to wash = two cups washed and put away, thanks!'

The presence of the designer when doing the mapping is crucial to identify the interaction points. The designer paid attention to elements that the researcher would not have noticed. The designer developed a sense to observe and to grasp the physical environment. She has got an acute sense of perception of the material setting. Furthermore, coworkers in the Sensespace knew her: as a designer, she sometimes acts as a mentor for young start-ups. It was easier to walk around taking pictures, as they correctly assumed we were working on a design project. The pictures were crucial is this step. Simply writing down each interaction point is not enough to establish a visual mapping of the place.

SCENARIO

We set out to "play" with our personas in the space once the map of all the interaction points was established. The idea behind using scenario is to reflect on possible issues that users will be faced with, and to identify a vast as possible array of reactions. Scenarios are stories that tell the sequence of actions performed between the user and the artefact (Rosson and Carroll, 2002). The actor (in our case the persona) encounters an artefact (our interaction points) in a specific situation (the sub space, for instance the kitchen). The narrative form helps designers to emotionally understand what is happening in the scenario. Below is an example of a scenario involving Nadia. We follow her before she attends a brainstorm.

Table 16. Nadia participates to a brainstorm

Friday, 4:28pm. Nadia promised her friend Johanna that she would attend her pop-up brainstorm. Johanna's team has issues with the pricing of their new app and needs feedbacks. Nadia does not participate much too those things, but she likes Johanna and could use a break from her own work. She puts her computer to sleep and turns her desk lamp off. She takes her glasses off, grabs her phone, her notebook, a pen, her tea cup and a tea bag. The brainstorm takes place in the challenge room [the biggest meeting room]: she goes in and exchange a few words with Johanna who is already here, settling. Nadia puts her phone, notebook and pen down on a table and leaves the room. She goes towards the kitchen. On the left of the kitchen she grabs the boiler, fills it and turns it on. While she waits for the water to boil, she has a chat with another Makesense's employee who is resting in one of the sofas in the lounge. She offers some tea, which he declines. She opens her tea bag, pours the hot water in. She grabs a biscuit from an open pack on the kitchen counter and goes back to the meeting room.

From this example of scenario, we can see that coworkers move around with many small objects all day: pens, notebook, phones, tea cups, etc. These small objects are carried around through the space, from the desk to the kitchen, to the outside pavement when smoking

cigarettes, to the meeting rooms, to the toilets. Coworkers never leave their phone alone. Nadia's persona highlights the fact that she feels at home at her desk. This scenario shows that she takes care of it, arrange her personal stuffs on it. When she leaves her desk, she seems to perform a ritual of putting her computer to sleep and taking her glasses of. The desk is her focal point in the space, the one space that stays 'static'.

The analysis and use of design specific tools helped us to grasp the different practices and usages of the artefacts and the space. These tools were used and played with during a brainstorm session. From this brainstorm session emerged solutions which aim to ameliorate users space appropriation in the Sensespace. These solutions are twofold. First, we identified flaws in the existing initiatives implemented by the Sensespace managers. We came up with solutions to ameliorate these existing endeavours. Second, we developed propositions to create new artefacts in the space. For each solution, we then referred to the literature to perform a theoretical loop. We analyse the extent to which the literature explains our findings as well as how our solutions bring light to the existing literature.

MODIFICATION OF EXISTING ARTEFACTS

THE CORRIDOR

To go to the main coworking space from the lounge coworkers have to go through a corridor of around four meters long and about a meter and a quarter wide, in which the toilets are. Opposite the toilets door, a large cork bulletin board is displayed. Coworkers leave personal ads on this board. The Sensespace's agenda is also displayed here. Any start-up of the space can advertise their events on the agenda (pop up brainstorm, launching events). The first issue is that the corridor is quite dark; the light is not sufficient. As a result, one has to stop and to

look carefully in order to read the ads and to be aware of the future events. The second issue is that no one stops here. Coworkers use the corridor to go from the lounge to the main space or to go to the toilets. It is a passing space. We propose to transform this corridor from a space where people walk fast, to a space where they could pause and even stop to look at the agenda. To do so, we first propose that lights should be added atop of the board, so that the ads could be seen and read more easily. Second, we propose to add a single wooden board below the cork bulletin board. This wooden board would be a counter of fifteen centimetres. Coworkers, like Nadia in our scenario example, go to the kitchen to fill their cups with tea or coffee, and then go back to the main coworking space. In the corridor, they often stop to go to the toilets and have no choice but to leave their cup on the sink. This practice is neither practical nor hygienic. Placing a wooden board in the corridor opposite the toilets door would enable them to leave their cups outside of the toilets. Also, once they get out they would see the small ads and agenda, as they would have to stop for a second in front of it in order to take their cup back. Coworkers often move around with their phones, notebook and pen. A wooden board could create a pause in their movement and also free their hands of their paraphernalia. They could take the time to note down a date or a phone number.

COUNTERS

In the middle of the lounge and in the main coworking space are some poles. These poles hold the building together. They take a lot of space and are not used. We propose to create counters around those poles that would function as high tables. They have two objectives. The first one would be to regulate flux in the space, especially in the lounge: during lunch, the kitchen sometimes becomes crowded with people queuing to wash their plates. These tables could act as transitory spaces where coworkers could wait for the sink to be free without having their hands full. The second objective of these counters would be to create new stationary spaces.

Most of the poles are in passageways: in the lounge, they are roughly in the middle, and people walk along them to go to and from the corridor. In the main space, one pole is located at the exit of the corridor, once again a place where people walk to their desks. Creating stationary spots in those places could push coworkers to look at the space from new angles. They could get new information about the space or attach a new meaning to a specific space. A pole that they did not see before, a place where they did not stop before could become a new place to have a coffee or a chat for instance.

HIDDEN COMMUNICATIONS

Some very important user information in the Sensespace is not accessible. Coworkers, as entrepreneurs, often have creative working practice. They use many post-its, drawing boards, scissors and cardboard to create prototypes or to display information. In sum, they use a lot of tools in their daily work practice. It is important for them to know where things are without having to ask around all the time. We found that the map of the space with the indications regarding where to find all the tools is hidden from the view. This map is displayed in the right end corner of the main coworking space. To get to it, one must know that it's there and cross the entire main space, joggling through concentrated coworkers. This crucial piece of information should be moved to a central communication point. The corridor or the printers could be good spots. Creating an information point could help users to know where to go when they have a special need.

COMMUNICATION LABELS

To communicate information to coworkers around the space, the Sensespace uses labels with a coherent graphical charter. The names of the different meeting rooms or the checklist for the last person to leave the space in the evening present the same graphical elements. One of the

goals of the Sensespace managers is to promote user involvement in the space by encouraging personal initiatives. When a tool is broken, users are exhorted to fix it themselves rather that to ask a manager. This DIY practice is working rather well and coworkers do not hesitate to undertake actions when they see fit. For instance, one of the workers place the following post-it upstairs close to the stairs:

Figure 37. Post-it on a pole

The post-it reads: "Last one to go down? Do not forget to turn the lights off" and in small prints "! bright idea!". As this post-it shows, coworkers have ideas to improve the space. They have the will to do it but they do not have the tools to do it. We propose to develop graphical tools for coworkers who wish to get involve in the improvement of the space. Coworkers should have easy access to documents that follow the graphical charter, on which they could print some information such as this one. The Sensespace's material environment is co-constructed between the manager and the coworkers. But as each of them takes its own initiative, the overall

aspect is quite a messy hodgepodge. Both coworkers and managers wish to give a more professional impression to outside visitors or investors. Adopting a consistent graphical charter could be a first step towards this goal.

THEORETICAL LOOP

This first part of the solutions revealed different practices within the Sensespace. First, our reflections about the corridor and the poles highlighted the practices of carrying stuffs around. All day, coworkers move from one spot to another. They sit at their desk then go to a meeting room. They cook upon the kitchen counter then sit on a sofa in the lounge. They go to the toilet, they go upstairs to talk to someone, they go outside to have a cigarette. While moving around, they at least hang on to their phones. Often, they carry with them notebooks, pens and cups filled with tea or coffee. Guillard and Monjaret (2014) associate this phenomenon of hanging on to our things and carrying them around all day to a tortoise' shell. Objects that we carry around constitute a mobile home (Bardhi and Askegaard, 2008). Rather than a way to have with us what constitute ourselves (Belk, 1988), it appears that coworkers carry with them the object that they currently use (Smartphone, coffee, cigarettes) or are afraid to lose (Smartphones, note pad or tablet). This is more acute in studying daily journeys like between the home and the workplace. But we can observe this phenomenon at a small scale in the Sensespace where coworkers never have both hands free.

The third proposition we had concerned the hidden communication. From this we can infer two practices. First, it seems a though no one ever read these information posters. It is the same with the agenda in the corridor: no one ever seems to have read it. Information within the Sensespace circulates orally at focal spaces. When a coworker needs information, he is likely to go in the kitchen and ask around, or to ask his hot desk neighbours. Also, the Facebook

group of the Sensespace acts as a social place where coworkers share their questions or advertise events. Second, thinking about where things are stored in the Sensespace revealed the number of creative tools coworkers use in their daily work. Post-its, felt pens, tape, cardboard, paperboard, etc., are material used daily in the Sensespace.

Finally, the reflection we had on the communication label brought up the practice of co-construction. In the Sensespace, coworkers have built tables, desks, the kitchen, sofas, the library, a fish tank, a coat hanger, and more. Many have fixed burnt-out bulbs, repaired broken tools or furniture, or decorated the place (with plants or posters). Co-construction seems to be a central dynamic at the Sensespace.

PROPOSITIONS FOR THE CREATION OF NEW ARTEFACTS

The design process that we followed enabled us to do more than to propose solutions to improve the existing situation. Out of our brainstorms with personas, maps and scenarios, as well as our multiple observations around the space emerged the idea of two artefacts to develop. First, we present the two artefacts. Then in a second time we link our artefact to the literature and unpack the consumption practices that these artefact reveal.

NEW ARTEFACTS

Open book tablet

Below is a picture of a hot-desk. It is late in the afternoon; some coworkers are still there, working, but most have left. There are no personal objects on the desks. One person is working on the right of the picture. On his left are his wallet and an empty cup. In front of him, his computer and a notebook on which he is working. On his right are some sheets of papers and

his phone. We also notice the abundance of cables: a phone cable, a computer cable, and an extension cord. But no personal objects such as a pictures, posters or goodies, as we expect to find in traditional offices (Monjaret, 1996; Tian and Belk, 2005). Hot-desking prevents coworkers from invading the desks with personal objects.

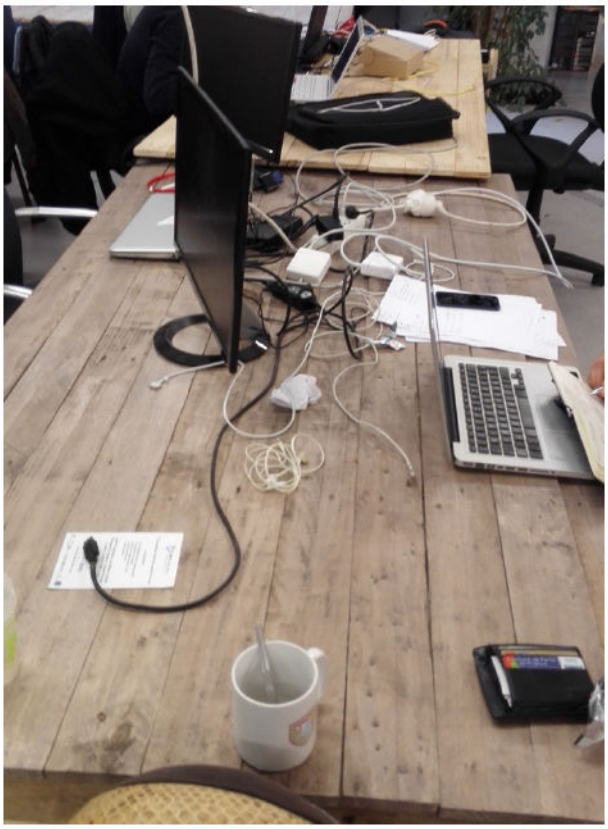

Figure 38. A hot-desk, late afternoon

We imagine an artefact that would help coworkers to create a home-like feeling when at their hot-desk. We keep in mind that they cannot leave personal objects on the desks overnight. We propose an object in the shape of a large book: two rectangles linked together on the width. Each side is roughly the size of a personal computer and should de made of Plexiglas. One side is to be transparent and the other should be plain colour. The object should be easily folded and opened, and should be very stable on a desk. It should be very light and moveable, so that users could use it very intuitively and quickly. The first intended use of the object is to be used on

desks, especially on hot-desks, as a working tool. Coworkers could place it in front of them or at their side. Coworkers who do not have a wall near them could use it to work: putting post-its on it, writing lists with an erasable pen, etc. The picture below represents a sketch of the artefact.

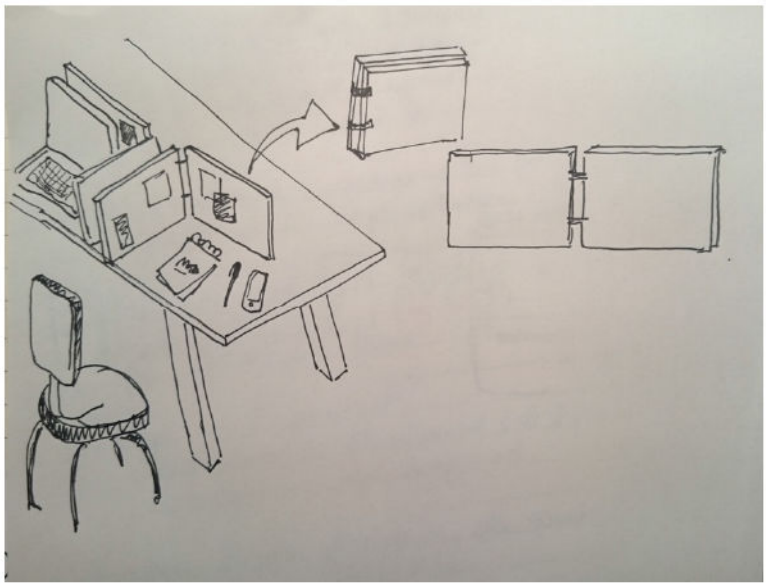

Figure 39. The open book tablet (one side is transparent), sketch by D., designer

In this drawing, we can see two workstations at a table. The two coworkers who work there have chosen to use the 'book' to delimitate a border between them. The aim is not to isolate a coworker completely from the rest of the coworkers. Rather, it is to give them a small corner that is hidden from everyone's eyes at the same time, hence the transparent side. It also gives them access to a small wall on which they can write to do lists or display post-its.

Repositionable notes

We propose to develop sets of repositionable notes to give to each coworker with the name of their start-up on it. Coworkers use a lot of post-its: this set of notes would act like a more

permanent post-it that they could fix to their desks, or to the door of a meeting room when they are using it.

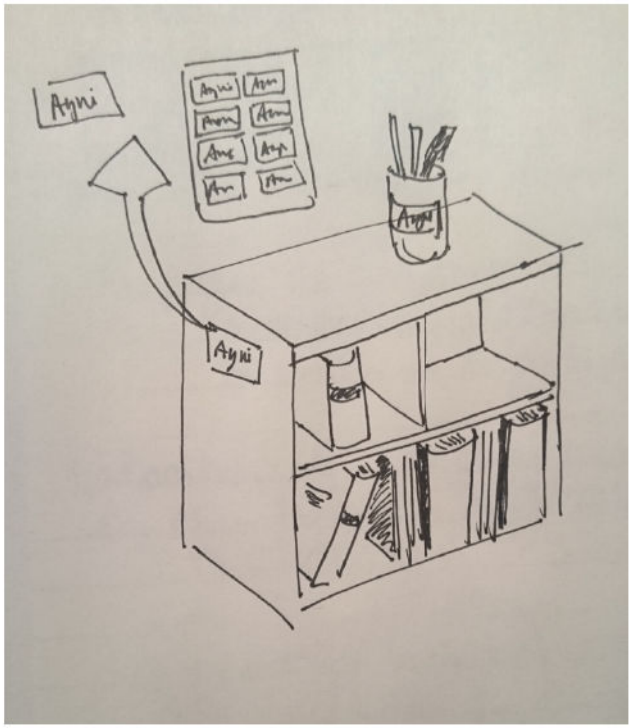

Figure 40. Repositionable notes, sketch by D., designer

The above picture is a sketch of what those set of notes would look like. Each start-up would be given several repositionable notes with their name and logo. It could be for instance part of a "welcome pack" for each new start-up integrating the space. For coworkers who are freelancing and who stay a few days or weeks, we could imagine a note with written 'Freelancer: …' on which they could write their name. These notes could help coworkers in the Sensespace to know who is who. The turnover rate is high and people are coming and going. It is hard to know who everyone is.

THEORETICAL LOOP

Sharing the space and artefacts imposes constraints on coworkers. Our artefacts revealed those constraints. Space appropriation can be defined as a set of "actions and interventions on a space to transform and personalise it" (Fischer, 1992). Appropriation is the practice of a control over one's environment; it is a physical transformation using artefacts in the environment. In this respect, it occurs through three practices: stamping, nesting and investigating one's environment (Fischer, 1989, 1992, 2011). Stamping is a way of signing one's environment with personal inscriptions that will indicate possession. Nesting is the creation of a 'home-like' space through the arrangement of one's space (Rosselin, 2002; Serfaty-Garzon, 2003). Investigating refers to the attribution of meaning via exploring the physical environment. The two artefacts we propose show that the practices of stamping and nesting are obstructed by the fact that the workplace is shared. The artefacts could help coworkers to overcome the constraint and to engage in appropriation of their workstation.

STAMPING

The set of repositionable notes reveals the need to know who is who in the Sensespace. Coworkers do not have time or the occasions to meet every newcomer. Many do not know who the person they are seating next to are. As for the newcomers, they do not even know where they can sit, if the desks are available or not. It is not very clear what space is available and which is occupied[16]. The set of repositionable notes would help to make sense of the space's organisation. Each occupied desk would be marked with the occupants' names. These notes

[16] For more on this grey area, see Essay III

would help the practice of stamping. Stamping encompasses the set of activities done to inscribe personal information in (or on) the space (Fischer, 1989, 1992). By leaving their mark on the space, users brand it with a part of themselves. It contributes to the users' will to make the space theirs. In the Sensespace, the notes could act as central-stamps. There are three types of stamps: central-stamps, which represent the individual's focal place; border-stamps, which define the borders of the appropriated space; and sign-stamps, which represent the individual in the remaining of the space (i.e., cups, scarfs, etc.; Goffman, 1956; Fischer, 1992). The notes could act as central-stamps. They identify the main focal space of each entrepreneur. When a coworker needs to talk to a start-up, it is easier to know where its 'headquarter' is.

NESTING

Nesting is the activity of creation of a home-like space (McCracken, 1989), a space of one's own (Fischer, 1981). It is quite a visual metaphor, as one can easily imagine a bird arranging pieces of wood around itself to build its home. It is the same in the case of humans: nesting is arranging objects and artefacts around oneself to create a homey feeling (Miller, 1988; Rosselin, 2002). By homey feeling we understand that this created nest becomes a shelter and a retreat (Aubert-Gamet, 1997). In the workplace, personal objects are crucial in this regard: by leaving them on their desks and arranging the settings (Fischer, 1989; Monjaret, 1996), employees engage in nesting practice and develop their extended selves at work (Tian and Belk, 2005). Employees extend their home-related selves at work via the display of pictures, posters or objects. Some employees need to fully re-create a home to feel a sense of wellbeing at work (Tian and Belk, 2005). This practice is impeded when users do not have a fixed workstation. In the Sensespace, at the beginning most people were hot-desking. They could not bring personal objects at work, nor could they leave anything on the desk overnight. This is

also prevented by the number of events taking place in the main coworking space during the evenings.

The 'open book tablet' reveals the impediment of nesting practices on hot-desks. This artefact is intended to help coworkers to create a den, a small spot hidden from everyone's glances. Of course, it will be used as a tool to work on: to write to-do lists, to take quick notes, to display post-its. But behind the working tool, the artefact will play the role of a border creator. By placing it on their side, coworkers will be able to delimitate 'their' space. It will act as a border-stamps, delimitating the boundaries of the appropriated space on the hot-desk (Fischer, 1989, 1992). The artefact has a plain side. It will only hide part of the desks from other's view. The idea is not to hide the coworker completely from anyone but to allow him to create a small place hidden from too many glances. We believe that such a tool could greatly help coworkers in creating a home-like sensation, to nest at the hotdesk. This open book could be left on desks overnight, and re-used in the morning by the same or by another coworker.

DISCUSSION

This paper proposes an answer to the question of consumer appropriation in shared space with a designer's point of view. Using designers' tools and following several steps, we identify constraints to coworkers' appropriation of hotdesks. We then develop solutions to help coworkers overcome this barrier. Below are the steps we followed:

1. *Creating Personas*. Creating personas is to develop a set of imaginary characters who would be likely to use the artefact. First, it is necessary that these personas do not represent existing individuals (though, as we did, they can be inspired by observations). Second, they should give a detailed account of the character. A persona is not a profile

(age, profession, etc.): it should embody the individual. Hobbies, personality, relationship with the space/object should be shortly written. Third, it is important to have some extreme, cliché persona. Personas are not typologies. The aim is to think of any possible users, and the different usages that exist in a context.

2. *Developing a mapping*. Mapping is a systematic approach to the physical environment. Mapping requires to note down and take pictures of every interaction between the user and the context. The idea is to have a general picture of all the elements that users will encounter during their typical use of the space or object.
3. *Writing Scenarios*. This step is about playing with the tools developed in the firsts two steps. Taking each persona through the mapping should enable the researcher to think of many possible scenarios. This step should identify how different personas would react to the same situation.
4. *Brainstorming to develop artefact*. Once the firsts three steps are completed, the phase of the product development begins by brainstorming with the tools (personas, mapping, scenarios). What are the issues faced by the personas? What possible artefact would help them? Writing down ideas and beginning to sketch the artefacts are crucial in this step. For each idea, it is important to imagine new scenarios where the personas encounter this new artefact.
5. *Making the theoretical loop*. This last step confronts the developed artefact with the practices it reveals and the literature on these practices. For instance, the importance of developing stationary spaces revealed the practice of carrying objects around. It is then interesting to go back to the literature to understand the meaning of the revealed practices. This step is a researcher add-on more than a designer's tool. It reveals the connections between the work of designers and that of consumer researcher. Here, consumption theories and practices were revealed upon design processes and outcomes.

We found that working with and in the shoes of a designer allowed us to understand and grasp consumption practices in a new light. First, the design approach allowed us to reveal practices: carrying stuff around, co-construction and the prevalence of oral communication. Second, this approach revealed the impact that sharing the workplace has on practices of nesting and stamping. Through the creation of artefacts to help coworkers to nest at the hot-desk, the importance of creating of home-like space at work was revealed.

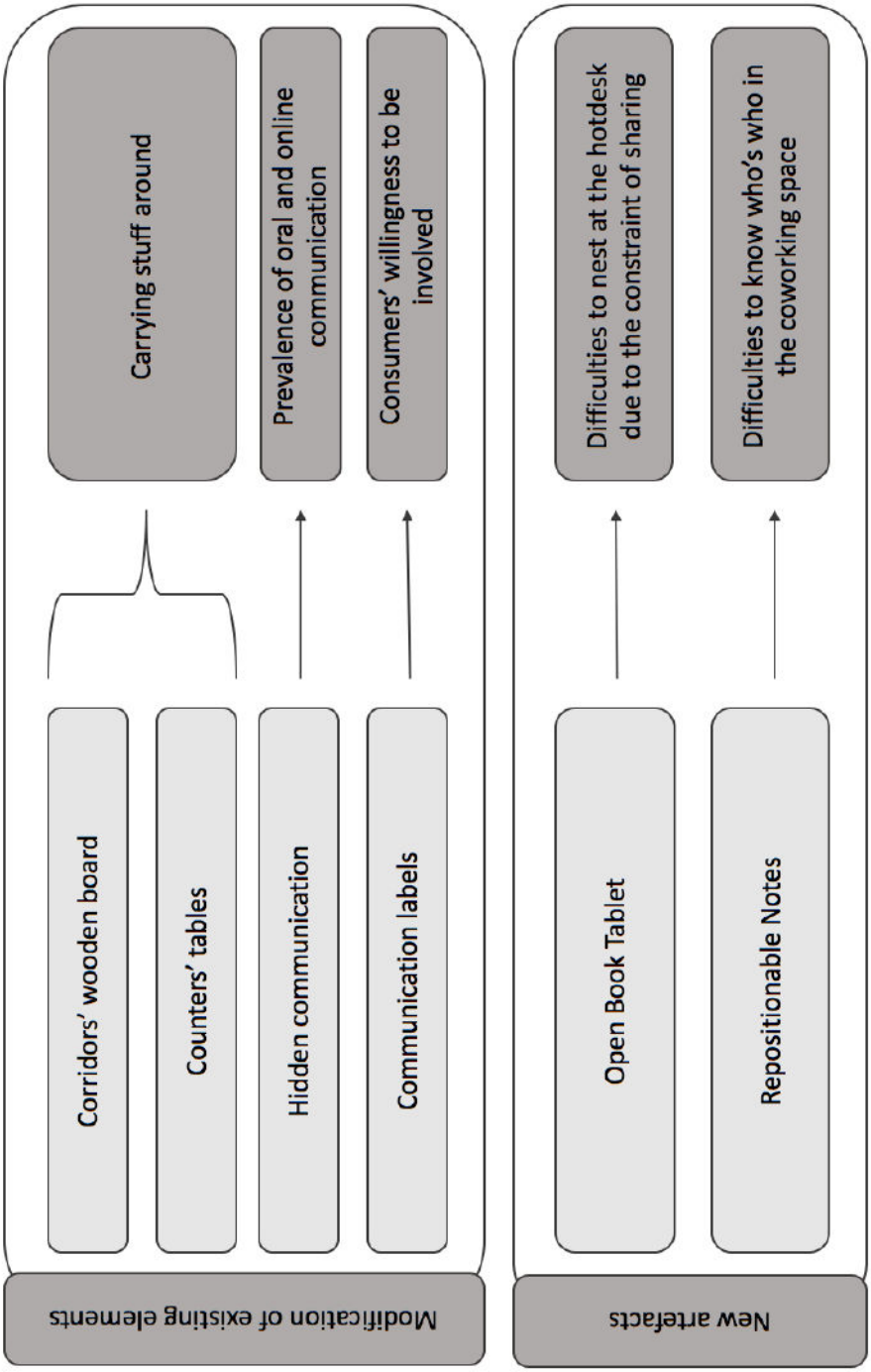

Figure 41. Practices revealed by the design's solutions

Throughout this project, we approach the question of consumer appropriation from the viewpoint of artefacts. Developing artefacts, thinking about artefacts and how they are going

to be manipulated, handled, used or consumed brings a novel way to study appropriation practices. Conducting this research has led us to experience the thin line between artefacts, concepts and theory. Thinking of artefact, developing artefact is also about thinking of concepts and developing new ones. Developing an artefact to help coworkers to nest at the hotdesk led us to think about the difficulty of creating a homey place in a shared space. This barrier between what is shared and what is appropriated is materialised in the artefact. We could bring the reflexion further by asking ourselves what does this artefact represent theoretically. It symbolises a barrier between what is mine and what not mine; yet, what appears as mine is not even mine. It is only mine for the day. What is the nature of such frontier? Future research should extend this notion and reflect on how artefact development questions and extends theory.

This project was done with the help of a designer. Working with a designer helped to overcome issues of creativity and to questions the researcher's frame of mind. However, to be performed, it requires to find a designer who is interested in the project. While these solutions have not yet been developed, they have been presented to the managers at the Sensespace. They received positive feedbacks: the managers even talked of presenting this for development at the next "Pimp my Space" weekend, when coworkers get together to create artefacts and arrange the space. Future research should test the external validity of this project by developing and testing the proposed artefacts.

To conclude, this papers relates a design project implemented within a situated context to tackle the question of consumer appropriation. It contributes by 1) proposing tangible solutions to enhance consumer appropriation within shared space and 2) exposing the benefits of multidisciplinary teams (in our case, designer and researcher) in studying consumption

practices. Future consumer research, especially those interested in the object, the material, should continue to explore the potential benefits of partnering with designers.

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GENERAL DISCUSSION

Throughout this dissertation, we explored the concept of consumer appropriation in access contexts. First, we understood how consumers make theirs objects that they do not own thanks to design features (Essay I). We then identified the value of consumer appropriation as opening access to a peripheral service offering in access-based services (Essay II). We compared the fields of car sharing and coworking space, Design Thinking and Design as Practice to understand the role of design practice in consumer appropriation (Essay III). Finally, we explored how a designer would tackle the question of designing consumer appropriation in a coworking space (Essay IV). In this final chapter, we unpack the theoretical (section 1) and the managerial (section 2) contributions of this dissertation. We then explore the limitations of this work, and the avenues for future research it opens.

THEORETICAL CONTRIBUTIONS

This work explores consumer appropriation in access with different conceptual frameworks and in different fields. In this general discussion, we combine the contributions of the four papers to answer the main research questions. As a reminder, the questions guiding this work are:

1. What is consumer appropriation in access?
2. What is the value of consumer appropriation in access?
3. How does consumer appropriation emerge in access?

In this section, we first define consumer appropriation in access, that is, away from the fields of ownership and possession. Second, we uncover the value of consumer appropriation: we explore sign value, linking value, meaning, wellbeing in use and consumer involvement. Third we investigate the role of design approach in the enactment of consumer appropriation.

DEFINING CONSUMER APPROPRIATION IN ACCESS

The two perspectives on appropriation present limits to understand consumer appropriation in access. The first perspective, that of Sartre (1943) and Belk (1988), defines appropriation as a mean to integrate the object in the self. Yet, consumer research on access demonstrated that consumers do not primarily wish to extend their self with access object (Bardhi and Eckhardt, 2012; Lawson et al., 2016). This perspective thus seems insufficient to understand appropriation in access. The second perspective, that of the sociopsychology of the environment, defines appropriation as actions on a space to transform and to personalise it (Fischer, 1992, 2011). Depending on types of access, consumers may or not have leeway to transform and personalise the consumption space and personalisation may not be their goal.

Building on the first perspective (Sartre, 1943; Belk, 1988), Essay I finds that consumers enact practices of appropriation of accessed cars through knowing, controlling the object and creating the service. They develop meanings upon these practices, making the consumption of the access-based service a meaningful experience. The second Essay, drawing from the second perspective (Fischer, 1992, 2011) demonstrates that practices of appropriation open access to a network of professional relationship within the coworking space. When coworkers engage in personal appropriation of the space, they open themselves to others and are involved in collective appropriation practices which open access to a network of professional relationships. The collective practices we identified are play, ritualization, construction and participation.

These two papers show that consumer appropriation cannot be reduced, in access, to making an object, or a place, a consumer's own. It has more to do with making the activities or experiences of consumption one's own. Fromm (1976) distinguishes between the having mode of existence, where possessions and accumulation are kings; with the being mode of existence, where experiences and activities prevail. At first glance, appropriation and its definition of *making something mine* falls into the first mode, the having mode. Having is about accumulation, singularisation, possession and ownership (Guillard, 2014). The having mode intends to fill an "empty self" with consumption and accumulation (Cushman, 1990). The being mode on the opposite does not rely on possessions. The being mode of existence, per Fromm, relies on being active (1976). He distinguishes between alienated and non-alienated activities. Alienated activities are passive activities. Individuals are merely "*acted upon* by external or internal forces" (Fromm, 1976, p.78); they do not engage with the activity itself and experience only the outcome of the activity. Through non-alienated activities on the opposite, individuals experience themselves as the subject of their own actions. This notion is close to Marx's notion of workers' alienation by the bourgeoisie who owns the means of productions (1867). To Marx, only if workers re-appropriate the means of production can they be freed from bourgeoisie's alienation. In this perspective, appropriation is the opposite of alienation. Appropriation of the means of production allows workers to develop a symbiotic relationship with the artefacts and with the outcome of their work (Marx, 1867). Appropriation de-alienates individuals by placing them as subjects of their own lives. Non-alienated (i.e., appropriated) activities in Fromm's view are productive activities, in the sense that they "denote a state of inner activity" (p. 79). Therefore, appropriation has more to do with the being mode of existence than the having mode.

When we shift appropriation from a framework of ownership and possession to that of being and experience, the concept of consumer appropriation in access does not appear paradoxical.

In access-based consumption, consumers do not wish to possess the object of consumption (Bardhi and Eckhardt, 2012). We argue here that this does not prevent them from engaging in appropriation practices towards this object and to draw value from this. Essay I demonstrates that appropriation enables consumers to develop meanings upon the activity of consumption, whereas Essay II shows how active involvement in appropriation creates value and wellbeing in use.

We define consumer appropriation as the creation of meanings (sign value, linking value, wellbeing in use) enacted through a routinized set of practices between the consumer and the material elements of the access-based activity.

In access-based consumption, consumers may not only benefit from the outcome of consumption, but also, through appropriation, draw value from the practice of consumption itself.

THE EMERGENCE OF CA IN ACCESS

We now turn to design and design research to understand the mechanisms through which consumer appropriation in access emerges.

Essay I highlights the role of specific design elements on the enactment of appropriation practices. We find that uniformity allows consumers to routinize their gestures and to create habits with the cars. Personalisation of the cars' features (like the on-board radio) enhances the feeling that consumers always use the "same" car. The electrical engine and automatic transmission, both somewhat new features in France, establish game-like sensations and give control to the drivers. Finally, the design of the service forces users to invest physically in the service to be able to use it. These appropriation practices lead to the establishment of a

meaningful consumer-object relationship. Consumers develop and attach new signs to their activity of consumption.

In the Sensespace, a different story is being told. Managers involve consumers in the creation of the material elements of the space, and of the space itself. Coworkers are free to manipulate, use, modify and adapt the space to their own use. This material flexibility enables them to define their personal space via the creation of borders and the stamping of the hotdesks. They are free to build a nest for themselves. This material flexibility also enables collective appropriation practices such as play or construction of artefacts. For instance, the hotdesks can mutate to become game artefacts upon which coworkers play ping-pong or solve a jigsaw puzzle.

Essay III summarizes the different approaches to design that both cases, Autolib' and the Sensespace, adopt. Autolib' provides a materially rigid product-service system which configures the user into certain practices (Woolgar, 1991). They adopted a Design Thinking approach, by working together with a designer on the realisation of the project (Brown, 2008, 2009). The Sensespace on the opposite give as much flexibility as possible to their users. The space is designed *ad hoc* by coworkers and managers. This approach is closer to the Design as Practice perspective promoted by Kimbell (2011, 2012). Based on Aubert-Gamet's (1997) framework on modes of appropriation, Essay III studies the impact of material flexibility on consumer appropriation in access. Contrary to Aubert-Gamet (1997), we find that higher material flexibility and the possibility for consumers to be creative does not necessarily leads to total appropriation. In the Sensespace, material flexibility also creates confusion and tensions. Furthermore, we discover that a low level of flexibility can lead to consumer appropriation. Autolib's case highlights the role of habits and routines in the enactment of

consumer appropriation. Therefore, there is no perfect way to "design consumer appropriation". Yet, some regularities appear in the two cases:

- *The possibility to establish routines with the material environment*. Both in Autolib' and the Sensespace, we observed how important it is for consumers to enter routinized behaviours when they use the service. At the beginning of the use of the service, small gestures are crucial. Adjusting the seat height and the mirror in Autolib', displaying the computer, doing the electrical plugins, getting a cup of coffee in the Sensespace, etc. Repetition of small gestures appear central in the establishment of consumer appropriation in both cases.
- *The physical involvement of the consumer*. Developing access services in which the consumers actively *do* things is crucial to allow for consumer appropriation. In both Autolib' and the Sensespace, consumers are involved in the practices of the consumption activity.

Overall, this doctoral work therefore contributes to the field of design research by proposing ways to develop objects which are not intended for possessions.

THE VALUE OF CA IN ACCESS

This work reveals that appropriation enhances the perceived value of access-based services for consumers in numerous ways. Essay I highlights the sign value that consumers build upon practices of appropriation. Baudrillard (1968) distinguishes between two functions of object, that of denotation (i.e., functional, utilitarian) and connotation (the social function of sign). In Zipcar, the sign value is absent from the objects (Bardhi and Eckhardt, 2012). In Autolib', the product and service design gives the possibility to develop sign value. Through appropriation practices consumers engage with these meanings, develop them and make them their own.

Expressions such as "the car of the future" or "the Parisians' car" gave us a glimpse of the signification Autolib' users build upon the service. We will not affirm that Autolib' is a symbolic brand, as no social obligations are embedded within the object as it would in a wedding ring for instance (Baudrillard, 1968; Mauss, 1923). We encourage future research to study the connections between appropriation and brand value. Autolib's consumers do perceive sign value when using the service. Consumer appropriation, enabled by design, has the power to create value beyond utility in the form of sign value.

Furthermore, Essay II shows that consumer appropriation can reveal peripheral access-based service value. Coworking spaces are polyfunctional (Toussaint, 2016) access-based services systems with a dual service offer. Their core offer is a workplace, yet, they also offer access to a social network of entrepreneurs. This peripheral offering is not accessible via exchange. Rather, it is through participatory practices that entrepreneurs can benefit from open innovation (Fabbri and Charue-Duboc, 2016) or sharing of best practices (Waber, Magnolfi and Lindsay, 2014). Essay II demonstrates that consumer appropriation enables coworkers to access and activate these participatory practices. Further, these participatory practices are themselves practices of collective appropriation. Through personal appropriation practices towards the socio-material space, consumers unlock the linking value of appropriation (Cova, 1997). Cova (1997) argues that consumers give value to object given their ability to create social links. Essay II shows that consumers engage in appropriation to access the linking value of objects within the coworking space. Consumer appropriation therefore unlocks the perceived linking value of access-based services.

In sum, consumer appropriation creates wellbeing in use and restores sign value and linking value for consumers of access-based services. To facilitate practices of appropriation, access-

based services should focus on consumers' physical involvement and the creation of routines with the material environment.

MANAGERIAL CONTRIBUTIONS

We can draw several managerial recommendations for companies in the access-based consumption sector. Recommendations are focused on how to design their offer to benefit from the value of consumer appropriation. Consumer appropriation creates meaning and wellbeing for consumers of access-based consumption. We believe that consumer appropriation will have several valuable impacts for the access-based company: increase loyalty, foster positive word-of-mouth, engage consumers in taking care of the products (report damage, etc.). These could be extremely beneficial consequences for companies in this sector. Zipcar, a car sharing system with no consumer appropriation, struggles to motivate its customer to care for the cars and suffers from poor image among its consumers (Bardhi and Eckhardt, 2012).

We have shown that the two common features of Autolib' and the Sensespace which participated to consumer appropriation were the possibility to establish routines with the material environment and the physical involvement of the consumer. Research on the consumption experience (Holbrook and Hirschman, 1982) shows the importance of the dramatization of the settings, the product's narrative and the consumer-product relationship in the production of the experience (Filser, 2002). Stores should be playful (i.e., Lego, M&M's), have a specific lighting (i.e., Abercrombie and Fitch) or smell (i.e., L'Occitane) to offer a rich consumption experience. Filser (2002) states that "the production of experience is hardly compatible with standardisation of shelf space, extreme form of the modernist rationalisation of the offer, and of the disenchantment that results for the consumer" (p. 19). By contradiction, we advance that some standardisation of the material element of the offer is necessary to allow

the production of experiences in access-based services. Access-based services are not stable services per se. In product services systems, consumers rarely access the same product from the same place. Collaborative spaces such as coworking spaces are flexible, ever changing spaces. Therefore, these services contain an inherent dimension of "chaos". Essay III shows that providing some consistency in the material elements of the offer restores a semblance of order and enables consumers to engage in appropriation of the service. Hence, we recommend some standardisation of the material element of access-based services systems. In that regard, the standardisation of the cars in Autolib' plays this stabilising role. In the Sensespace, the artefacts developed in essay IV aim to play this role.

Furthermore, we encourage practitioners to design services which involve the consumers into the creation of the service, in a co-creation perspective. Co-creation of service has proven its value (Jaakkola, Helkkula & Aarikka-Stenroos, 2015; Nilsson & Ballantyne, 2014; Vargo & Lusch, 2004). Our research shows that co-creation is crucial also in access-based consumption. Pushing consumers to perform with the objects of the service and to participate to its enactment should enhance their appropriation of the service.

Finally, while we advocate for some consistency and standardisation in designing material elements of the access-based service system, we also promote some personalisation in the service. Essay I highlights the importance of the built-in computer. The personal greetings when users get into the accessed cars and the favourite station radio that automatically starts to play both participate to consumer appropriation of the car. Consumers develop an emotional bond with the accessed object thanks to personalisation of the service. Essay IV also illustrates the importance of personalisation. The development of a set of repositionable notes personalises the consumer's workstation. We therefore recommend to combine both

standardisation and personalisation by standardising the material elements and personalising the digital elements within access-based services.

LIMITATIONS

This research presents several limitations. The main limitations derive from the choice to study two different fields, car sharing and coworking. This choice enabled us to triangulate our fields of study. Yet, it has forced us to adopt two approaches to appropriation and design, and to have two different data set. Rather than being an in-depths investigation of one access phenomena with regards to design and appropriation, this doctoral work is therefore an exploration. This work explores the link between design and consumer appropriation in contexts of access. In the future, we aim to pursue further the investigation.

We also regret that the collaboration with the designer presented in Essay IV could not have been extended further. It would have been necessary to craft the artefacts presented to test the validity of our proposed solutions. We presented our findings to the managers of the Sensespace, who manifested great interest in our work. While this gives us internal validity, it would have been interesting to develop the artefacts. Testing user manipulation could have given us the lacking external validity.

Learning is a long process. Throughout this doctoral work we learned a great deal about design. We regret that our view of design at the start of the project remained very marketing-oriented, that is, close to visual design and focussed on the object rather than on the practice. This evolution in our view of design can be felt throughout the dissertation. Therefore, we deplore a lack of focus on the practice of designing. Essays III and IV do put the emphasis on designing more than design, yet, our primary data collection was focused on consumer practices with

objects' designs. In the future, we aim to pursue our work in studying the co-designing and co-evolving of objects and practices in a Design as Practice perspective.

Finally, we regret that, for the moment, our work only applies to a certain type of consumers. The profiles of consumers in both fields of study are very similar. They are wealthy young urban, open to environmental issues. Their profile is exactly that of the author of this doctoral work, which denotes a certain ethnocentrism. Yet, access-based consumption offers a reduction of cost of use of everyday objects (Bardhi and Eckhardt, 2012; Lamberton and Rose, 2012). Low-income consumers should beneficiate the most from the access economy (Eckhardt and Bardhi, 2016). Yet, they represent only a small proportion of consumers using access services[17]. Our research is directed towards the creation of meaning and a sense of wellbeing in use for consumers. Our future focus should also be directed towards the integration of low-income populations into access-based services schemes.

RESEARCH AVENUES

To address the limitations of this research, we encourage future research to investigate designers' practices and their role in consumption. Designers are powerful actors of the consumption scape, as they shape the objects of consumption (Norman, 2013), but also services (Cova, 2004), and culture (Du Gay et al., 1997/2013; Julier, 2014). In this dissertation, we

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[17] https://www.washingtonpost.com/news/wonk/wp/2015/03/16/the-real-promise-of-the-sharing-economy-is-what-it-could-do-for-the-poor/?utm_term=.7759edccd0fa, accessed on January 2, 2016

adopted a view of design where design theories provide a framework to the analysis of practices (Findeli, 2006). Further research should adopt Findeli's (2006) "strong theory in design", which he defines as a situated theory for enlightened practices. That is, further research should delve into the practice of design to draw theory upon the practice itself, in a grounded theory approach to design theorising (Glaser and Strauss, 1967; Findeli, 2006).

Further, we introduced the theoretical framework of Design as Practice (Kimbell and Street, 2009; Kimbell, 2011, 2012). In this perspective, the activity of design includes designers, consumers/users, managers, organisations and the socio-material frame in which design is being practiced. Drawing from this, we may see consumption practices as design activities. Practices create meaning. In this view, they also design objects. We encourage future research to develop a framework to view consumption as designing. Such a perspective should offer an empowering framework in which consumers make objects their own and relate to them as their designers.

Our work also opens avenue for research in the field of wellbeing at work, when work is a coworking space. For instance, Boboc et al. (2014) investigated the capacities of coworking spaces to drew individuals away from isolation. Future research should study the connections between appropriation, both individual and collective, and different aspects of wellbeing at the workplace.

We also encourage future research to study consumer appropriation in other contexts of access:

- Libraries are open spaces where individuals sometimes go daily (in universities for instance), and where they access a desk for a small fee, at the same time than other individuals. In libraries, people study. Libraries therefore offer a relatively quiet environment. Yet, anyone who has spent long hours on library benches knows that it

can sometimes be difficult to get the needed concentration. Initiatives are now being developed to offer quieter experience in libraries, like in the library of Université Paris-Dauphine[18]. Like in flexible offices, the library has inaugurated individual booths that students can take to work alone. Future research could study the extent to which these solutions enhance the consumption experience in libraries.

- Further, we believe that Airbnb could be an interesting field to study consumer appropriation and design in access. Airbnb, on their website, provide guidance to host regarding what is needed to welcome guests[19]. Airbnb hosts design their apartment with the goal of making everyone feel at home. It would be interesting to study what guidelines Airbnb provides with regards to that, what Airbnb hosts do and if and how consumers experience "being at home" when they travel with Airbnb. In that regard, we believe that global retailers such as Ikea may play a role in creating a worldwide standardization of the experience of being at home. For instance, as we recently travelled to Rome with Airbnb, we were surprised how familiar we were with many kitchen utensils and decoration items. Ikea's water jugs are the same in Italy, France, or the UK. It would be interesting to study the impact of Ikea's standardization of kitchen and decorations on the consumer appropriation and experience of Airbnb.

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[18] http://la-lettre.dauphine.fr/es/janvier-2016/detail/article/comment-echapper-au-bruit-dans-un-open-space.html

[19] https://www.airbnb.co.uk/hospitality, consulted on December 16, 2016

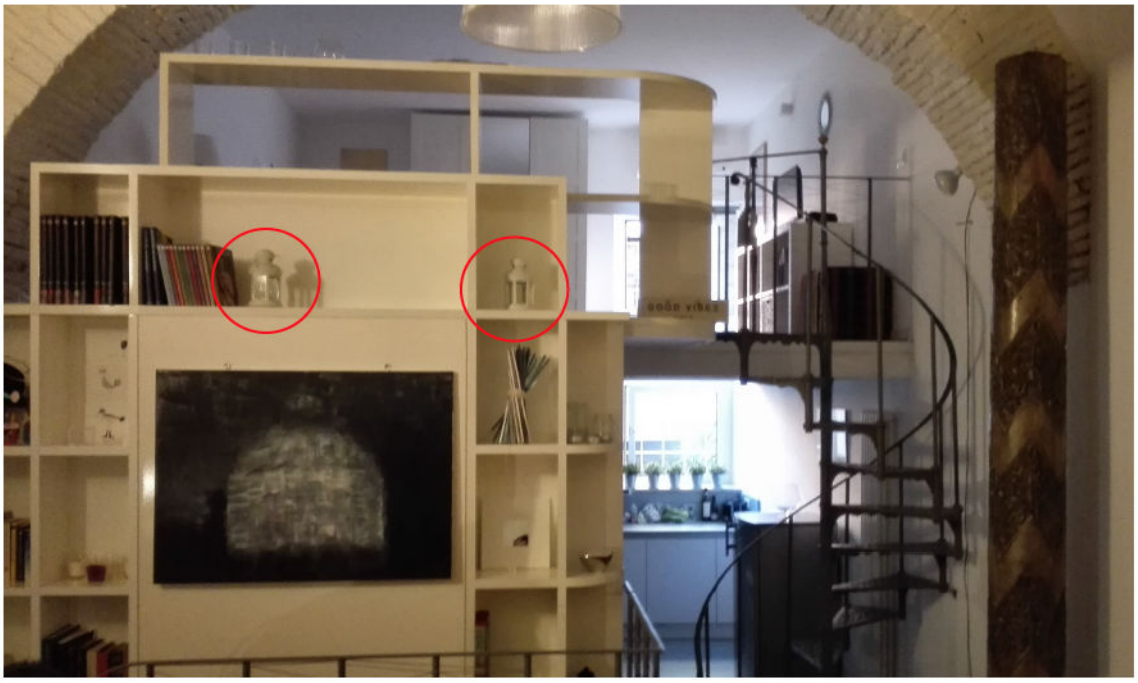

Figure 42. Ikea's ROTERA Lantern for Block Candle on shelves, Airbnb apartment, Rome, November 2016

- Finally, we have not forgotten where our interest for the topic of this work comes from: flatsharing. Miller (1988) studied inhabitants of UK council housing and the appropriation of their kitchen. The way residents arranged and decorated their kitchen said a lot about their wellbeing within the housing estate. In the same vein, we believe that future research should observe practices of appropriation in flatsharing. The last survey on housing by the French National Institute for Statistics, INSEE, shows that 11% of households are neither "person living alone", "single-parental families", "couples without children" nor "couple with children"[20]. Even though we must be

[20] https://www.insee.fr/fr/statistiques/1912703#consulter, CAR_T6 consulted on November 16, 2016

careful as INSEE does not use the term flatsharing, we can infer that about a tenth of the French population is flatsharing. Of which, per appartager.com, 52% of are students[21]. Flatsharing is expanding also in older population, according to the Guardian[22]. Therefore, studying how individuals manage the daily sharing of their intimate space is relevant. The role played by artefacts and consumption practices with in that regard should be crucial. What do people define as "truly theirs" in a flatshare? What is the nature of communal rooms?

Furthermore, our research opens avenues for future work to study the links between consumer appropriation and consumer loyalty. We highlight how consumer appropriation contributes to wellbeing in use. It is implied that consumers will be more loyal to a service which enables them to develop a sense of wellbeing. However, future research should assess the extent to which this relationship happens. Other variables should be considered, such as the relationship between consumer appropriation and positive word or mouth or willingness to pay.

CONCLUSION

This work proposes an exploration into the meanderings of consumer appropriation in access economy. It reveals the role that appropriation takes in consumers' lives. Consumer appropriation should be clearly separated from possession or accumulation. Rather than

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[21] http://www.appartager.com/s/barometre-colocation/, consulted on November 16, 2016

[22] https://www.theguardian.com/money/2015/sep/25/flatsharing-40s-housing-crisis-lack-homes-renting-london, consulted on November 16, 2016

promoting ownership, appropriation pushes consumers to become actors of their consumption experiences. In access, we define consumer appropriation as the creation of meanings (sign value, linking value, wellbeing in use) enacted through a routinized set of practices between the consumer and the material elements of the access-based activity. Consumers experience themselves as subjects of the activity of consumption. The detour this dissertation takes via design research highlights the role of practices, artefacts, objects, spaces and things in this active mode of existence. To conclude, we join Cameron Tonkinwise, director of design at Carnegie Mellon University, in his recent working paper on "Designing beyond Ownership" (2016), to acknowledge that:

> *There is the hope that the shift to post-industrial usership might afford a society that is more centered on 'doing' if not 'being' rather than 'having.'*
>
> Tonkinwise, 2016, p. 10

We strongly believe that research on consumer appropriation takes this route by understanding consumers' wellbeing in 'being' modes of consumption.

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Résumé

Cette dissertation a pour but de comprendre l'appropriation par les consommateurs d'objets ou lieux qu'ils partagent. En nous basant sur les théories de l'appropriation, de la consommation par l'accès et du design, nous questionnons la définition, l'émergence et la valeur perçue de l'appropriation en accès. Nous explorons les contextes de l'autopartage et du coworking au travers de quatre articles. Nos résultats mettent l'emphase sur le rôle des objets matériels dans la mise en pratique de l'appropriation par les consommateurs. Nous définissons l'appropriation du consommateur dans le cadre de l'accès comme la création de significations (valeur de signe, valeur de lien, bien-être dans l'usage) grâce à un ensemble routiniers de pratiques entre les consommateurs et les éléments matériels de l'activité de consommation par l'accès.

Abstract

This dissertation aims to understand consumer appropriation of objects and places shared with others. We draw from theories of appropriation, access-based consumption and design to question the definition, the value and the emergence of consumer appropriation in access. We explore the contexts of car sharing and coworking spaces through four research articles. Our findings highlight the role of material objects in the enactment of consumer appropriation practices. We define consumer appropriation as the creation of meanings (sign value, linking value, wellbeing in use) enacted through a routinized set of practices between the consumer and the material elements of the access-based activity.

Mots Clés

appropriation ; consommation par l'accès ; design ; pratiques ; espaces de coworking ; autopartage

Keywords

appropriation; access-based consumption; design; practices; coworking spaces; car sharing