

# **Can your Customers Afford to Share it?**

## **Screen Devices "Sharing Affordance"**

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### **Abstract:**

Today, retailers are facing crucial decisions about digital investments in store, in order to engage their customer in a more appealing experience in stores, tangling the digital and physical realm together. This new attempt to incorporate digital in stores has given birth to "stores of screens", also called "phygitalisation".

Thus, retailers have made large investments to provide digital screens in stores not only for customers' self-service use but also for supporting shop assistants in their selling process. Shop assistants are then expected to use the screens while exchanging with their clients. Nevertheless, a question can be raised: are customers really inclined to go on a screen with shop assistants in stores?

This paper aims at identifying firstly the motivations of customers to go on a screen with a shop assistant and secondly the most suitable screens according to their "perceived sharing affordance". This paper shows that these screen-devices categories are associated with screen-sharing motives.

### **Key words:**

Phygital, shop assistant, joint shopping, screen, selling process

## INTRODUCTION AND OBJECTIVES

Shopping together on the same screen has become a common practice. Whereas screens already forms and deforms most aspects of daily lives<sup>1</sup>, physical interactions facing the same screen<sup>2</sup> became a standard and pervasive habit. According to some researchers (Kennedy and Wellman, 2007), such a phenomenon can be explained by the general increased growth of the daily time spent on the internet. Sharing a screen for shopping (same place, same time, same screen) can take place at different places (at home, in a public space in a commercial space) and with different persons such as family members, friends, but also with shop assistants. Actually, while retailers have made large investments to provide digital screens in stores for customers' self-service use (Filsler, 2001), they have also done it recently for supporting the shop assistants in their selling process. Actually, some retailing brands<sup>3</sup> have attempted to encourage shop assistants to surf with their clients in store. But are customers really willing to surf on the web with a shop assistant? If numerous researches have been conducted on the motivations of consumer to use a digital device for shopping (Childers et al., 2001), very few research has been conducted about their motivation to share the same screen for shopping especially with a shop assistant in a commercial context (Vanheems, 2013).

The aim of the paper is to identify the reason why customers could be motivated to go with a shop assistant on a screen and the type of screens perceived as the most appropriate to do it. The concept of "Perceived Affordance" from Ecological Psychology (Gibson, 1979) and Human Computer Interaction (Normann, 1988) is applied to the screen-sharing devices. It demonstrates that the willingness of a customer to go with a shop assistant on a screen will depend on the perceived features of this screen and its ability to be coherent with the customer's sharing motivations.

This paper is structured as followed. Firstly, it presents a literature review about the reasons why customers shop shopping. The "Affordance" concept is also presented and adapted to categorize screen-sharing devices. It is used in this paper as a framework allowing understanding the perceived sharing features of the devices and their associations with the customer's motivation to go on a screen with a shop assistant. Secondly the research methodology is presented. Finally, the paper presents the main results of the research about the motivations of customers to share a screen with a shop assistant and the most suitable screens to be used according to theses motivations. Finally, implications and contributions are developed.

## Literature Review

### ***Why do People shop together on the same screen ?***

*Why do People shop together on the same screen?* Since there is no research on this issue, we need to answer two preliminary questions: "*Why do people shop?*" and "*Why do they shop together?*"

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<sup>1</sup> 48% increase in the number of smartphone users worldwide since 2014 - reference: statistica.com

<sup>2</sup> Surfing at the same screen, at the same time, at the same place

<sup>3</sup> For instance, the French retailing brands for home appliance and electronics: Darty and Boulanger

Some decades ago, Tauber (1972) conducted a qualitative research to understand the reasons why people shop. Several motivations to shop were identified and classified into personal and social motivations. More than twenty years later, Babin et al. (1994) showed that shopping can be motivated by utilitarian and hedonic factors. As an activity of shopping with someone else in store can be considered as a particular case of shopping, such a practice must also be motivated by utilitarian motives or emotional motives - "*a manner to cope with anxiety and stress in a meaningful decision process*" (Hartman and Kiecker, 1991). For instance, in the family context, Lim and Beatty (2011) showed that the decision of a couple to shop together can be motivated by hedonic reasons (expected shopping pleasure) or utilitarian reasons (purchase relevance, financial risk). Furthermore, it can also depend on situational factors (time availability) as well as personal/relational characteristics (gender, relation length) (Beatty and Talpade, 1994; Furse et al., 1984; Wagner, 2007).

Shopping together also may vary across context and according to partners (Kiecker and Hartman, 1994, Borges et al., 2010). In fact, Lindsey-Mullikin, and Munger's, (2011) study about companion shoppers revealed that they may "*perform many duties traditionally performed by the retail salesperson*" (p.7), leading the customer to be less dependent on the presence of shop assistants in the store. Additionally, following the extended use of customers' smartphone in the stores, shopping companions can be considered to be also virtually present during the shopping journey of the customer in the store, sharing their shopping decisional stages online by instant message applications (e.g., Messenger, What's app).

In terms of consequences, shopping with another person in physical stores has been recognized mainly as having a positive impact on purchases in terms of both volume and sales (Granbois, 1968; Mangleburg et al., 2004; Sommer et al., 1992; Woodside and Sims, 1976). Nonetheless, Borges et al., (2010) suggested that the positive valence of such a shopping experience would depend both on the motivation of the consumer to shop jointly and on the identity of the shopping companion. This literature review about the reasons why people shop together in physical stores may confer a first understanding of people motivations to shop together on the same screen.

Then we can expect that such a behavior will be driven also by different motivations (hedonic, utilitarian) and that these motivations will vary according to the partners. Nonetheless, motivations to shop jointly on the same screen could also depend from the "shopping orientation" of the customers (Gehrt and Carter, 1992).

### ***The perceived Affordance of Screens to surf conjointly***

If Screen-sharing activity has been mainly investigated in the field of education (Dillenbourg et al., 1996), there is a need to understand it when it occurs in a commercial activity. When different person share the same screen, they are involved in a "hybrid interaction" as they interact in the physical world (sharing a physical place in which they are close to each other while) as well as in the virtual one (sharing a digital place where they surf together). Such "hybrid interaction" creates complexity and involves various

dimensions<sup>4</sup>. Screen sharing processes” may be considered as “new hybrid interactions combining Human-Human Interactions with Humans-Computer Interactions” (Roten and Vanheems, 2017b). Its practice can occur via different tools (display screen, screen table, service kiosk, personal computer, laptops, tablets, smartphones, etc.). As the characteristics of such tools can be important to better understand motivations to interact together, we applied the theoretical concept of "Affordance" (Gibson, 1979) in order to discern individual sharing conceptions of distinct screen devices in the same way as ElAmri (2015) used the affordance concept in order to classify New Connected Hybrid Products. The theory of affordance suggests that objects need to be assessed in terms of what they enable to do and not only relatively to their technical physical or even digital components (e.g. see Wells, 2002 extensive review on affordance and computation). This ecologic psychological theory (Gibson, 1979) theory has been developed and applied to Human Computer Interaction (HCI) field by Donald Norman (1988) to understand the affordance of a medium. He described it as the mediums' "action possibilities" perceivable by an actor. The “affordance theory” helps to evaluate the fit of the "technology" as it is perceived by the actors. In this research, it allowed evaluating the fit of the "screen": Is a specific screen perceived as adapted for shopping together with the shop assistant in the store? Does this perception vary according to the motivation to share a screen?"

## Method

The objective of this research is to identify the motivations of people to surf on the Internet with other persons for shopping. The results must enable shop assistants to identify the situations that are the most appropriate to share a screen with their customers. Since it is the first research exploring the consumers' screen-sharing motivations and their perceptions of the sharing devices that can be used in stores, a qualitative approach was chosen.. Twenty customers were interviewed through semi-structured interviews (See appendix 1-Sampling). They were first required to describe a recent shopping experience in store in order to understand their shopping orientations. Then, using a funnel methodology, they were asked about their shopping digital habits, before, during or after visiting a store. Finally, they were asked to remember firstly an experience of surfing on the Internet with a friend or family members and secondly with a shop assistant in stores. As all respondents succeed to recall a sharing screen interaction with relatives or friends, only a bit more than half remembered such an interaction with a shop assistant. A content analysis has been carried out according to the methodological recommendations of Evrard et al., (2009) and Bardin (1977) (See appendix 2- Interviews guide and content analysis procedure).

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<sup>4</sup> Sharing a screen aggregate personal, emotional, interactional, physical and technological dimensions

## **Findings: “Why are willing people to surf (or not) to surf with someone else on the same screen?”**

### ***The reason why people shop together on the same screen***

Three types of motivations to share a screen were identified in the content analysis: a utilitarian, social and individual motive.

The utilitarian task-related dimension stems from a need for functional assistance in order to succeed at the shopping task in the most efficient manner. The social activity-related component expresses an intrinsic motive for social bonding and togetherness. Regarding the individual control-related third motives, it stresses a more individualist need, either active (i.e.: the willingness to have an impact on the shopping process) or reactive (i.e., a reaction to hinder a potential loss of control in the process). These motivations are conform with McClelland (1985) motivational psychology theory called "The three big needs theory", claiming that every human behavior may be addressed within three basic needs described as "achievement, affiliation and power" (Sokolowski et al., 2000). These dimensions described respectively as transactional, relational and personal action/reaction-oriented continuously evolve and change in their intensities according to past experience and contextual perceived cues (i.e., an adapted P.O.S. interactive paradigm<sup>5</sup>). Furthermore, the result shows that an expectation of a physical interaction of two persons around a screen, intensifies either positively or negatively the motivational components to share a screen (i.e. utilitarian/ achievement, social/ affiliation and control/power motives) as well as the influence of perceived contextual factors.



(Images: Thinkstock)

### ***Are screens suitable for joint shopping?***

Concerning the screen devices, they were described in terms of what they allow or not to perform jointly. Three dimensions have been identified: the visibility convenience of the screen, its belonging and its web open access.

#### **1. The visibility convenience of the screen**

The first dimension that has emerged from the content analysis is related to the visibility convenience of the screen. Two visual themes appear: the size of the screen and its angle. Firstly, the size of a screen illustrates the actor's perception whether a specific screen "affords" more than one person to look at it simultaneously:

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<sup>5</sup> See the Partner, Object, Situation perception of the actor (Roten and Vanheems, 2017a, 2017c, 2017d, 2018a)

- *"Since on smartphones, it's a small screen ..., on the computer it's still more (...) pleasant". (M., 18),*
- *"I was next to him (to the shop assistant), so it's not easy because anyway if it's in front of the screen, you're still a little bit aside relatively to the screen because the screen is not monumental"(C., 60)*
- *"Anyway smartphones, it's a screen, made for one person" (M., 18),*
- *"It's not convenient to be 7 people in front of a small screen" (M., 18).*

The perceived size of the screen appears to be linked directly to the possibility to share it with another person:

- *"It is above all that they see better 'so, visually, it is preferable" (L., 16),*
- *"To watch on a big screen, it would be nice, you may have an image that is better than that on a small portable screen"(D., 55).*

The second visual theme that has come into light is the possibility to change the screen's angle, also to enable a better visibility.

- *"He had his computer's screen turned towards us and as he went along, he added other parts of the table, we could see everything he added" (S., 27).*

The possibility to turn the angle of the screen represents also a characteristic granting the possibility of a shared use of the screen. *"Well, with open screens bah at Darty, well we are with them, what is good is that they turn the screen, you see what they type (...), he was looking at the same time, and I saw everything that was displayed" (O., 38).*

It seems also easier to turn the screen toward the partner with a mobile device than a fixed one. *"I'll take the laptop for her, I'll tell her "look, what do you think, do you like it or not, look at the rooms, look at the location"(T., 48).* The effect of a fixed screen, on the contrary, seems to hinder the communication process between the dyad. *"The (fixed) computer, one cannot take it at hand to tell the other "look..."; the computer is fixed, people are fixed facing the computer and that's what bothers me "(S.,27).* Therefore, the possibility to turn the screen and variate its angle is perceived as a complementary affordance, allowing a shared use.

## **2. The belonging of the screen-device**

The second dimension is related to the belonging of the screen-device. It appears that the perceived possibility to actively operate the screen is associated to its perceived belonging

- *"It is the one to who the computer belongs that generally look at it..." (M., 18).*
- *"Honestly I will not, it's his, his computer, I will not touch it" (PJ, 78).*

Thus, a screen considered to belong personally to another person usually don't "afford" to operate it jointly

## **3. An open Internet access**

The third dimension that has arisen is related to the issue of open web access.

- *"(The stores' digital kiosk) It allows to see the characteristics or additional information on the product, but it don't allows you to compare with others" (S., 59).*
- *"The stores' digital kiosks, this is basically the websites of stores" (D., 34)*

A screen device without or with limited internet access, for instance, didn't enable to compare product from various brands or prices of distinct retailers.

### ***When screen are not able to satisfy the same motivations ...***

Distinct screens were perceived differently according to their ability to satisfy various sharing motivations. The screen "sharing affordance" seems to be linked with the motivations of the respondent to share the same screen. Actually, we can identify different kind of screen-devices that are perceived as more adapted for functional assistance ("**Display screen-devices**"), for interactions ("**Interaction screen-devices**") or for personal use ("**Individual screen-devices**").

#### **The "Display screen-device"**

Some devices were perceived as better adapted to functional assistance. What we call "**Display screen-device**" are characterized by a "good visual quality" for the partners (a larger dyadic size and a fixed opened angle), an open access to internet and conceived as belonging to the partner. Such display screen "affords" the completion of utilitarian task-related motives/ achievement needs of the consumer.

- *"if the screen (of the shop assistant), if I can see things easily or not. That will certainly be something that will make me join or go away and look elsewhere"(P., 55).*

#### **The "Interaction screen-devices"**

Another device that we named "**Interaction screen-devices**" has been defined to better "afford" mutual activity. These devices are constituted also by a "good visual quality" for both interlocutors (a larger "dyadic" size but with a fixed-opened angle) and perceived as a public or communal belonging (not a personal belonging of any of the partners). For instance, public interactive kiosks in stores with a touch screen enabling mutual activity are classified in those devices category.

#### **The "Individual screen-devices"**

They have been designated as "**Individual screen-devices**". These screen-devices enable only a unilateral control of the process. It may be the customer's smartphone when he is controlling the surfing. Such an "individual screen-device" might "afford" the fulfillment of active individual motives associated with the need of active control/power.

*"" if I'm surfing with my phone, uh, I can go and show something to someone but we're not surfing both" (S., 27).*

Nevertheless, it may be also the partner's personal device. In the commercial sphere, the shop assistant's personal mobile device or his/her work computer at the assistance point represents them. In this case, the "individual screen devices' sharing affordance may satisfy reactive individual motives associated with the need to react to a perceived loss of control/power.

- *" I place myself next to him and I look at the screen" (M., 63),*
- *"She was in front of the screen and I looked like that from behind, uh" (P., 79)*

## Discussion

These results show that the different screens may be more or less appropriate to fulfill the distinct motives to share a screen. Gaver (1992) claims that "*Social activities are situated in their environment: if collaboration depends on complex, subtle social relations, it also depends on a medium in which these relations can work*". In our case, the medium is represented by the perceived "sharing affordance" of the screen device. Such an affordance naturally depends on the situation. For instance, the nature of the links between the surfing partners may have an impact on this sharing affordance. A screen-sharing situation with strong-ties partners (Kiecker and Hartman, 1994) appears naturally to moderate the effect of belonging. People feel usually more convenient to operate the device of an "intimate partner" than the one of a stranger or a "weak ties" partner. Thus, it can be expected that **the screen size as well as the belonging effect** have less influence in screen-sharing practices between intimate partners than in a commercial context between shop assistants and customers. In the commercial sphere, the impact also depends on the customer's perceived professional roles of the shop representatives. This role conception might depend on the consumer's cognitive script and accepted social norms of interaction in a commercial context (Goudarzi and Eiglier, 2006). It may also vary notwithstanding according to the personal motivational disposition of the customer (i.e., his shopping orientation) and cultural factors of proximity (Hall, 1967). However, the fit of the device to the first dominant motive to share a screen (utilitarian, social, personal) will be one important factor affecting the decision and the manner to share a screen. Actually, the perceived "sharing affordance" of the device may evolve and change with the intensity of the different motives to share a screen, shaping also the decision to pursue the joint shopping activity at this specific screen-device, or to continue it alone or together at a same or separate screens.

The theoretical implications of this research lie in the applications of the affordance theory to screen-sharing hybrid interactions. It reveals which sort of screen might be perceived as enabling specific "possible actions" (Norman, 1988), while sharing it. Since it anticipates "possible actions", while sharing it; this new "sharing affordance" concept can be accounted for as tightly related to the consumers' screen-sharing motives.

## Conclusion

Retailers are trying to provide customers a more engaging and coherent shopping journey, resulting in an enhanced satisfaction. Nonetheless, when investing in self-service devices intended for customers, they did questioned first why a customer will be willing to use the screens of the store (Glérant-Glikson, and Feenstra, 2017), when he has at least one personal screen at his immediate disposition<sup>6</sup>. However, when providing efficient digital tools to their sales' staffs enabling them to check stock availabilities on line or to show brands characteristics and compare models online, they assumed that customers will be more satisfied when looking with the shop assistants at the screen. Nonetheless, some recent research have shown that the introduction of technology during interaction with service encounters may constitute either a barrier or a benefit (Giebelhausen, et al., 2014). But no research has been conducted to analyze the motives of customers to share a screen

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<sup>6</sup> In 2014, already 42% of consumers were using their smartphone to conduct a research online while being in stores - <https://www.thinkwithgoogle.com/consumer-insights/how-digital-connects-shoppers-to-local-stores/> Moreover, a study from 2017 claims that nearly 60% of shoppers look up product information and prices while using their mobile phones in stores - <https://www.retaildive.com/news/how-shoppers-use-their-smartphones-in-stores/444147/>



with a shop assistant. Similarly, the screens in the stores are rarely chosen in a customer centric perspective. In fact, the shop assistant usually imposes the use of a specific screen, even if it is not exactly the willingness of the customer. That issue can create dissatisfaction especially when the screen is perceived as not suitable for the situation, that is to say when it cannot "afford" the customer's dominant sharing motives.

The managerial contribution of this paper is to understand customers' perception of screens according to "what they afford to do" on it. Training shop assistants to discern the main motive inducing a customer to share a screen could allow him to choose a compatible screen-device, having a corresponding sharing affordance. In this manner, amplified positive instrumental, social or individual values expected from this joint activity could be fulfilled (Roten and Vanheems, 2018b). One of the limitations of this study remains in the level of analysis, focusing only on the customer's perspective without taking into consideration the shop assistant appetite to share a screen with a customer. Even if it seems like a complex task, considering a dyad perspective of screen-devices sharing affordance in an interdependence perspective<sup>7</sup> might enable to understand the crossing of two similar/ opposite or complementary partner's affordance of the same device. Furthermore this paper has only illustrated an association between screen-devices perceived sharing affordance and motives to share a screen. As a matter of fact, upcoming researches might also focus at understanding the congruence of screen-sharing motives, screen-sharing affordance and screen-sharing modes. Indeed, the impact of this engaging screen-sharing practice on customers' perceived values and satisfaction<sup>8</sup> constitute an intriguing issue with important theoretical and managerial potential contributions. Similarly, while the scope of this study stands at the private customers in retailing stores, its perspective might be enlarged to B2B and applied to global customers in future research.

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<sup>7</sup> i.e. when one person's motives and perceived affordance of a device, affects the motives and device's perceived affordance of the partner- (e.g., Cook and Kenny, 2005)

<sup>8</sup> The engaging effect of screen-sharing can be explained by the "simultaneous dyadic congruent and phigital practice", amplifying the impact of this shopping activity

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## Appendix 1: Interviews sampling

Our sampling choice, based on diversification (Michelat, 1975: 236) aims to achieve theoretical saturation threshold (Glaser and Strauss, 1967). External diversification has been achieved by interviewing men and women from distinct socio-economic level and familial situation. Internal diversification (Poupart et al., 1997) focused into respondents, leaving with a partner or/and with grown up children, which have experienced more numerous and various situations of screen sharing interaction with their family.

	Age	Birth place	Home town	Profession	Living situation	Gender
<b>R1</b>	48	Togo- Africa	Paris	Psychologist	Married + children	F
<b>R2</b>	18	Surenne	La Rochelle	Student	Bachelor, living with his parents	H
<b>R3</b>	60	Surenne	Anthony	Architect	Married + children	H
<b>R4</b>	39	La Rochelle	Bois Colombe (92)	Journalist	Divorced + children	F
<b>R5</b>	38	Joinville Manche	Bois Colombe (92)	Journalist	Divorced	H
<b>R6</b>	60	St Jean d'Angely	La Rochelle	Ludothecary	Married + children	F
<b>R7</b>	23	Luxembourg	Saint Cloud(92)	Student	Bachelor - living alone	H
<b>R8</b>	55	Paris	La Rochelle	Producer	Married + children	H
<b>R9</b>	55	Luxembourg	Paris	Cartoonist	Divorced	F
<b>R10</b>	60	Strasbourg	Paris	Teacher	Married	F
<b>R11</b>	34	Strasbourg	Paris	Journalist	Married + children	H
<b>R12</b>	27	Nice	Messe	Speech Therapist	Bachelor - living alone	F
<b>R13</b>	56	Paris	Paris	Accountant	Married + children	H
<b>R14</b>	48	Alger Algeria	Neuilly sur Seine	Surgeon	Living with his partner	H
<b>R15</b>	56	Marseille	Courbevoie	Building keeper	Divorced + children	H
<b>R16</b>	16	Paris	Palaiseau	School girl	Bachelor, living with his parents	F
<b>R17</b>	78	Reaux - Charente Maritime	La Rochelle	Retired	Married + children	H
<b>R18</b>	79	Déllys - Algeria	La Rochelle	Retired	Married + children	F
<b>R19</b>	59	Casablanca Marroco	Issy-les-Moulineaux	Accountant assistant	Married + children	F
<b>R20</b>	39	Strasbourg	Issy-les-Moulineaux.	Communication / Education	Married + children	H

	<u>Men</u>	<u>Women</u>	<u>Bachelor</u>	<u>Married + children</u>	<u>Divorced + children</u>	<u>Divorced</u>	<u>Retired</u>
	11	9	4	5	5	4	2
<u>Percentage</u>	55%	45%	20%	25%	25%	20%	10%

## Appendix 1: Interview guide and content analysis procedure

First, the respondents were required to describe a recent shopping experience in store in order to understand their shopping orientation, and more especially their attitude toward shop assistants. Then using a funnel methodology, they were asked about their shopping digital habits, before, during or after visiting a store. Finally they were queried about their “*joint shopping experience*” while facing the same screen in the private or/and in the commercial sphere.

The objective was first to identify general values of screen-sharing wherever and with whomever it occurs, and then to feature their unique characteristics while surfing at a same screen in a store with a shop assistant.

### 1. Presentation and Method

#### 2. Part One - Open Interview - Non-directive and narrative (Store purchase experience)

#### 3. Part Two - Semi-structured

Theme A: Preliminary information search before purchase / consumption

Theme B: The seller in store

Theme C: The use of a digital device in store (From narrative to projective)

Theme D: Stories of shopping screen sharing with friends and family members. (From narrative to projective)

Theme E: Stories of shopping screen sharing with shop assistants at the point of sale (From narrative to projective)

#### 4. Remarks, conclusion and thanks

The interviews has been recorded and fully transcribed. A content analysis has been carried out according to the methodological recommendations of Evrard et al., (2009). A pre-analysis consisting in selecting the corpus to be analyzed (interviews) and its meticulous reading has been performed following the instructions of Bardin, (1977). Then an encoding step was carried by choosing and defining the presence of sequence of phrases having "a complete meaning in themselves" as "units of meaning" (Unrung, 1974) A categorization, organization phase and classification process of the corpus was performed when a set of significant units of record (the codes); were grouping by analogy of meaning and sorting based on the criteria of the entire encoded material. Finally, a process of reorganization of classifications and interpretation by inferential process led us to an open model.