

The time of sharing

Abstract

Faced with an ever-increasing number of omni-channel customers, many retailers have transformed their physical stores into « phygital stores ». They have invested heavily in digital tools that can be used for self-service by customers or as a sales aid for salespeople. Shop assistants can use them to navigate side-by-side with their customers. But a question must be raised: do customers really want to navigate with their interlocutor on the same screen?

This paper aims to understand the role and the impact of time availability perceptions on consumer's motivations to share a screen in store. Based on quantitative research (499 respondents), this paper shows that time availability perceptions are correlated with motives to engage in this new form of interaction around the screen.

Keywords:

Phygital, Technology, Time, Shop assistant, Availability, Co-browsing, Screen-sharing

Résumé

Confronté à des clients omni-canaux de plus en plus nombreux, les distributeurs ont progressivement transformé leurs magasins physiques en "magasins phygitaux" Ils ont investi dans des dispositifs digitaux qui peuvent être utilisés en libre-service par les clients ou aide à la vente pour les vendeurs. Ces derniers peuvent s'en servir lors des échanges avec leurs clients en leur proposant une co-navigation sur écran. Mais une question se pose : les clients veulent-ils vraiment naviguer avec leur interlocuteur sur le même écran ?

Cet article vise à comprendre le rôle et l'impact du temps disponible sur les motivations des clients à partager un écran avec un vendeur. Sur la base d'une étude quantitative menée auprès de 499 personnes, l'article montre une corrélation entre « les » disponibilités perçues et les différentes motivations qui poussent les clients à s'engager dans une interaction autour d'un écran.

Mots-clés :

Phygital, Technologie, Temps, Vendeur, Disponibilité, Navigation commune, Partage d'écran

Managerial summary

The phygitalization of stores is at the origin of new behaviors. Installing self-service devices in stores is an invitation to the customer to interact with the retailer in complete autonomy. However, digital devices can also be integrated into stores to be used jointly by the shop assistant and the customer. Many shop assistants are now equipped with digital devices to help their customers solve their consumer problems. While shops assistants can now navigate with their customers on the same screen, the question that arises is about the relevance of using these screens for every purchasing situation. Do customers really want to navigate with the shop assistant in the sales area?

While the answer to this question varies from one individual to another, it also depends on the situation in which the customer finds himself when he enters the point of sale and interacts with the shop assistant. A situational variable that is particularly important in explaining the customer's willingness to browse with the shop assistant is studied in this paper. This is the time variable. How can time, and more specifically the amount of time available to the customer, affects his or her willingness to navigate with the shop assistant? The originality of this article lies in the fact that it confronts the customer's available time with the time he thinks the shop assistant has to interact with him around a screen. In other words, the article considers perceived relative availability - that of the customer versus that of the shop assistant.

Concerning its findings, the research highlights the impact of temporal asymmetry between customers and shop assistants on motivations to share a screen. Consumers relative availability perceptions either symmetric or asymmetric in favor of the consumer or the shop assistant affect the expected benefits of such an interaction. For instance, when time is counted and goal oriented, efficient short screen-sharing interactions are expected. However, when time quality is the one that counts, the time to experience together must be invested. Additionally, to take a decision requires usually personal time, time to process the information, time to get one's own perspective to arrive to a final decision. This time can be considered as the time required to complete the cycle of any purchase, a time to relativise before taking actions.

This research about the impact of relative availability on the consumer motivation to engage in a screen sharing interaction have practical implications for brands and retailers. When shop assistants use digital tools to accompany their customers, they must consider time as an important motivational dimension. Furthermore, they must pay real attention to symmetric or asymmetric perception of availability. So, time is relative and multifaceted. Knowing how to decode time significations is therefore crucial. If digital technology can shorten the perceived time to achieve a goal, it can also work as an immersive artefact as well as allow to reflect on different perspectives. When they share a screen, customers and shop assistants also share time together. Shop assistant will have to be trained to identify if customers are looking for "optimisation time", "socialisation time", or "relativisation time" and then, share according to detected motivation.

Introduction

Today, the ubiquitous adoption of omni-channel behaviour among customers is not any more exceptional. Customers exhibit today a propensity to engage multiple touchpoints throughout their purchasing journey (Melero et al., 2016). Consequently, retailers have responded by redefining their physical outlets as "phygital stores," integrating digital interfaces that customers can independently access or use together with sales representatives (Filser, 2001). This physical and digital realms fusion has prompted retailers to leverage digital screens to augment the selling process; thereby enhancing customer engagement and interaction (Crittenden et al., 2010; Huang in Rafaeli et al., 2017). In some instances, retailers actively encourage shop assistants to engage with clients through an interaction involving the sharing of a digital device (e.g., Nordstrom, Miliboo).

Nevertheless, a pertinent query arises: to what extent do customers prefer a side-by-side co-browsing with shop assistants? Beyond concerns surrounding the potential erosion of perceived autonomy (Roten and Vanheems, 2024a), the temporal dimension emerges as a factor influencing customers' motivation to engage with shop assistants in screen-based interactions. This motivation is contingent upon the perceived availability of time and the anticipated duration of the screen-sharing activity. Time is an exceptionally valuable resource for consumers, as unlike money, it cannot be accumulated or stored. Objective time, or Chronos, is incessantly subjected to numerous demands, causing consumers to experience moments of time pressure due to the myriad demands on their discretionary time (Lallement et Gourmelen, 2018). Time is recognized as having numerous influences on shopping behaviours, affecting everything from store choice (Djelassi et Ferrandi, 2006) and items purchased to overall consumer satisfaction (Kim et Kim, 2008). What influence does this have on the shared use of digital interfaces during a service encounter?

This study seeks to elucidate the dynamics of these emerging interactions and sales processes around digital screens and its relation to to sellers and buyers perceived available time. No research, to our knowledge, has explored the role of time on interactions involving a shared screen. Specifically, it seeks to assess the influence of temporal availability on consumers' motivations to engage in such side-by-side co-browsing activities. The implications of this paper are both theoretical and practical. With the rise of phygitalization, screens either used autonomously or with the assistance of shop assistants are becoming increasingly prevalent in stores, . From a managerial perspective, we examine the benefits of these screens from the customer's viewpoint, particularly in relation to their perception of available time. Theoretically, we delve into the role of a key variable in the omnichannel era —time perception—and its effects on consumer behaviour, considering not only the customer's perception of available time but also that of the shop assistant. The structure of this paper unfolds as follows: Firstly, a comprehensive review of pertinent literature illuminates diverse conceptualizations of time and delineates their implications for service interactions between customers and shop assistants during screen-sharing interactions. Following a review of an initial qualitative study (Roten and Vanheems, 2018), hypotheses are formulated, followed by a presentation of the research methodology. The quantitative findings from a sample of 499 respondents reveal significant correlations between perceptions of temporal availability and distinct motives to engage in such an interaction.

Time: a situational variable that determines consumer motivation to engage in screen sharing interactions with shop assistants

The different conceptions of time

Bergadaà (1989) refers to the "time" as a "frame of human activity", which explains consumer behaviour. As far back as 1974, the temporal perspective as been identified by Belk as a situational variable alongside four others (physical and social environment, role definition and individual's own prior states). As a situational variable, the temporal perspective is assumed "to be specific to a moment or a place" and to have "a systematic and demonstrable effect on behavior" (Belk, 1974). Very early on, studies showed that time pressure impacts for instance store selection criteria (Mattson, 1982) and the frequency to give up on intended purchases (Park et al., 1989).

To evaluate the impact of time on consumer behavior, we need first to specify the different conceptions of time. Firstly, time can be apprehended objectively. Time is then quantitative and linear from a Chronos perspective. Time imposes itself on individuals in an objective manner. This external time is a kind of finite natural resource, by nature measurable and non-storable (Lallement et Gourmelen 2018). But time can also be perceived subjectively. From this Kairos perspective, time is qualitative and refers to a subjective perception of time. Albert Einstein explains it by a colourful quotation "An hour sitting next to a pretty woman seems like a minute. A minute sitting on a hot oven seems like an hour. That's relativity" (Strathern, 2012). Thus, Kairos time is more personal. Subjective time is internal time, which appears as a whole, combining a cognitive component and a motivational component that guides behavior (Bouder-Pailler, 2003; Djelassi and Ferrandi, 2006). Finally, Ayon time can be seen as a cyclical time, a time in which one can look at things and events that happened within a different perspective.

Social relationships, perception of one's own and the other's time

Each individual is confronted with time passing in an objective way. But each individual has his or her own subjective perception of time. Moreover, people also perceive time differently and feel the pressure of time differently according to their socio-demographic characteristics (Wei et al., 2013 ; Codruta Micu et Chowdhury, 2010 ; Branas-Garza et al., 2007 ; Phanuel, 2006) and to the context in which they find themselves (Demoulin, 2011 ; Areni et Grantham, 2009). Consequently, when two or more individuals are interacting, each has its own perception of time and feels the pressure of time in a specific way

These interactions lead individuals to specific socio-relational situations. According to Weber (1976), a social relationship refers "to the behavior of individuals or groups of individuals who regulate their behavior in relation to one another". Through its "meaningful content", the social relationship thus plays a part in directing the behaviour of individuals towards one another. Beyond one's own available time, the perception of "the other's time" constitutes a "significant content" that guides action. The decision to spend time with another person will then depend on our own perception of the other person's availability, coupled with our own perceived availability.

The perception of availability on both sides is an invitation to take time, and influences the nature of the motivation to interact with the other. If both have time, the social interaction motive may be just guided by the simple pleasure of spending s time together. If the potential partner is perceived as less available, the social link motivation will drawback.. Actually, an exchange drove by social motives (John, 2013), generally implies a mutual investment of the partners in terms of time. On the other hand, a perceived asymmetry in the respective availability of the protagonists is likely to hinder social ties motivations.

Screen sharing, available time and motivations for screen sharing

"Sharing a screen" is a specific type of social relationship in which the protagonists position themselves next to each other for the duration of the exchange. The motivations for sharing a screen can be of different kinds, whether in a private (family, friends) or in a commercial context (Roten and Vanheems, , 2021, 2023). Thus, an individual may engage in screen sharing with a relative or a shop assistant for utilitarian, social or individual reasons. If their motivation are utilitarian, task-oriented customers perceive screen-sharing as a means of achieving efficiency and effectiveness goals. If they are looking for socio-hedonic benefits, the screen becomes a "place for sharing". Browsing together is an opportunity to create social links for individuals who are more focused on the activity itself. Finally, if they are seeking to escape from an interaction in which they are in a passive position, screen-sharing enables them to check salespeople's speeches on screen and feel more in control.

Sharing a screen and the resulting side-by-side posture imply that the protagonists can regulate the time of the exchange. As it was demonstrated in other situations (within couples) time availability impacts the decision to shop with another person (Lim and Beatty, 2011). A study about the shopping practices of teenagers with their parents shows also the importance of the temporal dimension in the decision to to share a screen side-by side (Durand-Mégret, 2014). Similarly, the decision to interact around a screen with sales representatives may be impacted by the perception of time availability. More specifically, customers' subjective perception of the staff's availability is assessed in comparison with their own perceived availability, leading either to . a symmetrical or asymmetrical perception of availability (and impacting customers' motivations to engage in co-browsing activities with shop assistants, as suggested by an exploratory qualitative research conducted on this topic (Roten and Vanheems, 2018).

Links between customers' temporal perspective and motivations to share a screen: results from a preliminary qualitative research

A previous exploratory qualitative study was conducted to examine the relationships between customers' temporal perspective and their motivations to share a screen with shop assistants (Roten and Vanheems, 2018). The main findings of this qualitative research, which facilitated the formulation of hypotheses, are summarized here.

If shop assistants are globally perceived as less available (*"Today shop assistants are not available, not available. And it is true that it is quite common", M., 60*), the results show that the convergence of their perceived availability with the customer one's own availability seems to foster or hinder the motives to share screens - *"In stores I go very fast, I do not waste my time because I think it's a waste of time (...) They (the shop assistants) do not want to waste also their time, especially since there are a lot of customers there, especially on Saturdays (...) so they will not stay an hour with me (on the screen)" (L.,57)*. This symmetric or asymmetric levels of availability are associated to the utilitarian motivations to share a screen in an efficient way- *"And then I was in a hurry (...) and that's right to the point, right to the goal absolutely" (S., 59)* – It is associated to the Chronos linear and quantitative concept of time - *"You want to share quickly for... that's it... you do it quickly as a gesture ..." (D., 55)*. On the other hand, social motives to share a screen appeared increased when the level of availability is perceived as symmetric. - *"I guess if I support a salesman for half an hour, he must be very friendly" (P., 55); we had to deal with a shop assistant who was very nice, that took his time, who had*

explained everything to me, (...) so he had really taken his time ... to do his job well" (S., 27). This result stresses that social motives are grounded in the possibility of taking time to experience together the shared activity - "The idea to share is... that we have time, to take the time to, to, to look at things quietly" (T., 48). The time is perceived there as qualitative and subjective in the sense of Kairos. Finally, an asymmetric availability seems to reduce the individual motive to use the screen-sharing process – "Well I would not stay long in this kind of thing, no" (to watch the screen passively with the seller)" (C., 60). It especially applies whereas the customer wishes to move to one cycle of passive control position - "if it's just him, look for him, have him search the info and extract it to give it, he does not really share with us either the screen or the manipulation (T., 48) - to a more active one to get the time to put information in perspective in the sense of Ayon- "the different timing that everyone has in the analysis of the content of the screen" (P., 55).

Following this qualitative study confronted with theoretical foundations, the hypotheses are enunciated as follows:

H1: The consumer's perception of asymmetric availability impacts negatively the utilitarian motives to share a screen with a shop assistant.

H2: The consumer's perception of asymmetric availability impacts negatively the social motives to share a screen with a shop assistant.

H3: The consumer's perception of asymmetric availability impacts negatively the individual motives to share a screen with a shop assistant.

Method and results

Methodology

Given the challenges associated with describing and comprehending various interactional behaviors around screens, visual projective techniques were integrated into the design of this study. A hybrid method, combining projective-declarative/verbal-visual elements inspired by the Multi-Motives-Grid scheme (Sokolowski et al., 2000), was selected. The aim was to enhance respondents' acceptance and understanding of the survey by blending visual and verbal inputs in a playful and seamless manner, employing techniques such as cartoon drawings and bubble sentence completion (see Appendix 1). This methodological approach, termed 'semi-projective' by motivational psychology scholars (Schmalt, 1999; Sokolowski et al., 2000), reconciles projective design with quantified structured data to mitigate potential social desirability biases. Holbrook and Hirschman (1982) describe this approach as "structured projective techniques that employ quantifiable questionnaire items applicable to samples large enough to permit statistical hypothesis testing" (p.136). They argue that such techniques delve into deeper, implicit, inhibited, and subconscious dimensions, which lie "just below the threshold of consciousness" (p.136), providing insights beyond explicit responses. For data collection, the "Prolific" crowdsourcing research-oriented platform affiliated with the University of Oxford was utilized (Peer et al., 2017). A two-stage procedure consisting of a pretest and a main test was conducted, yielding 95 and 499 valid responses, respectively. Additionally, to mitigate inattention bias resulting from the "lack of control over the environment" (Palan and Schitter, 2018, p.2), attention-check questions (Peer et al., 2017) were interspersed throughout the questionnaire to assess respondents' ability to engage in simultaneous multitasking and potential attention limitations (Chandler et al., 2014). Due to

constraints on paper length, the operationalization process of the constructs' scales will be presented during the communication.

Results

Two dummy variables were created indicating the asymmetry of availability either in favor of the shop assistant or of the customer relatively to a symmetric availability as a default option. To test the hypotheses that the utilitarian, social and individual motivation to share a screen is a function of the availability asymmetry level, a hierarchical multiple regression analysis was performed. The shopping orientation variable was introduced in the first block as its direct motivational impact has been confirmed both in the literature and in the analysis of the data (Cervellon et al., 2015; Mimoun et al., 2022; Roten and Vanheems, 2019b). Indeed, our qualitative analysis highlighted three dimensions of shopping orientation, in line with McClelland's (1985) motivational psychology theory, which asserts that every human behavior can be understood through "three big needs" described as "achievement, affiliation, and power." Then, the two asymmetric availability variables in the second block to check a possible mediation effect. Yet, the asymmetric availability impacts were tested separately with each motive to share a screen.

The impact of the asymmetric availability on the utilitarian motive to share a screen

The regression, which includes the general shopping orientation score, displays no significant F change while entering the asymmetric availability variables as well as their interaction terms in block two and three. Moreover, their regression coefficients loom up also as not statistically significant. So, Hypothesis H1 on the consumer's perception of asymmetric availability negative impact on the utilitarian motives to share a screen is rejected.

The impact of the asymmetric availability on the social motive to share a screen

The regression with the social motive to share a screen as the dependent variables indicates a significant R square change also in model two in which the availability variables were added (a total R² of .142 when $F(3,496) = 27.438, p < .001$). The asymmetric availability variables emanate as having a significant impact on the social motive to share a screen. Besides the social shopping orientation variable ($\beta = .347, t = 8.292, p < .001$), the asymmetric availability in favor of the shop assistant ($\beta = -.106, t = -2.301, p = .022$) and the asymmetric availability in favor of the customer ($\beta = -.115, t = -2.473, p = .014$); exhibit a negative significant impact on the social motive to share a screen comparatively to a symmetric availability level. So, Hypothesis H2 on the consumer's perception of asymmetric availability negative impact on the social motives to share a screen is validated.

The impact of the asymmetric availability on the individual motive to share a screen

Similarly, while testing the impact of the asymmetric availabilities variables on the individual motive to share a screen, the second model exhibited a significant R square change (a total R² of .179 when $F(3,496) = 36.081, p < .001$). Besides the significant impact of the individual shopping orientation ($\beta = .411, t = 10.081, p < .001$), the asymmetric availability in favor of the shop assistant ($\beta = -.110, t = -2.608, p = .082$) indicates a negative significant impact on the individual motive to share a screen, comparatively to a symmetric availability level. On the other hand, the asymmetric availability in favor of the customer emanates as not significant but still with a negative coefficient ($\beta = -.073, t = -1.615, p = .107$). So, hypothesis H3 on the negative impact of the consumer's perception of asymmetric availability on the individual motives to share a screen is validated only when the time asymmetry is in favor of the shop assistant. All these results are summarized in table 1 below.

Table 1: Regression statistics of the temporal variables on the motives to share a screen

<u>Screen-sharing motivations</u>	<u>Utilitarian</u> B/Beta	<u>Social</u> B/Beta	<u>Individual</u> B/Beta
Constant	2.758 (.223)	2.557 (.151)	2.302 (.146)
Shopping Orientation	.200/.157*** (.057)	.347/.347*** (.042)	.386/.411*** (.038)
Asymmetric availability in favor of the shop assistant		-.127/-.106* (.055)	-.200/-.110* (.082)
Asymmetric availability in favor of the customer		-.190/-.115* (.077)	
R2	.025	.142	.179
Adjusted R2	.023	.137	.174

Notes: *** p< 0.01 ** p<0.05* p<0.1, ***, **, * indicates significance at the 99%, 95%, and 90% level, respectively - Standard errors are reported in parentheses- N=499

Discussion and implications

In accordance with the literature, the customer general ‘hurry’ level negatively affects the social motive to share a screen with a shop assistant independently of the perceived availability of this later. This result is in tune with the qualitative findings, stating that the distinct motives to share a screen are influenced by temporal evaluations (Roten and Vanheems, 2018a). It also meets Lim and Beatty (2011)’s results about the impact of spouse's symmetric temporal availability positively associated with likelihood of joint shopping, though without specifying on which specific motives is based this likelihood.

The impact of perceived relative availability on the customers’ sought goals is an interesting topic that have both theoretical and managerial implications when putting it in a screen-sharing service context. Asymmetric availability both in favor of the customer or the shop assistant surfaced as having a significant negative impact on the social motive to share a screen. Nonetheless, its negative effect is more intensive when the customer perceives the shop assistant as less available than the opposite. In fact, perception of time and availability must converge to be able to enter in qualitative “Kairos” time and leave behind “Chronos” efficient-oriented time. As a result, retailers need to train their staffs to identify social motivated customers that are first at all interested in the activity and then propose qualitative time that could last through the experience memories (Flacandji and Krey, 2020). To avoid any misperception of mutual availabilities, shop assistants could propose scheduling a time that is mutually compatible and in which they could spend time and also enjoy the shared activity. Another interesting finding concerns the individual motive to share a screen representing how human beings need “Ayon” time to get new perspectives and move back and forth from more passive individual control phase to more active one in which they feel more autonomy (authors, 2024). So, the individual motives related to individual control is negatively impacted when the availability asymmetry is not in the favor of the customer. This result highlights that consumers need also enough individual time focusing on themselves, putting in perspective shopping habits and previous experiences before being able to move to another cycle and transform old shopping patterns. Transformation is happening through time of contemplation, relativization and inspiration to act by oneself. Finally, the non-significant impact of asymmetric availability on the utilitarian motive to share a screen, notwithstanding its negative coefficients underlines the effectiveness-efficiency trade-offs of “technology empowered frontline interactions” (Marinova et al., 2017), when efficiency can be measured as an inversed function of the time invested in the shopping task for optimizing effectiveness. Shop assistants should therefore be

able to differentiate customers that are efficiency or effectiveness-oriented and adapt their availability during the sharing process.

Conclusion

While the availability of shop assistants remains a primary concern for customers in service studies (e.g., Cooper and Summer, 1990; Sharma and Stafford, 2000), scholars have almost not considered the impact of time perception and relative availability in infused technology interactions (Röding et al., 2023). Time may be perceived differently according to the situation, either definite and measured quantitatively (Chronos time), indefinite and subjective (Kairos time) or cyclical and perspective oriented (Ayon time). Accordingly, consumer goals and behaviours are changing during screen sharing service interactions- from an objective of efficiency, optimising the time - to one of experiencing, spending time and even losing the sense of time. Consumers' perceptions of their available time, whether symmetrically or asymmetrically in favour of the consumer or seller, influence the expected benefits of screen-sharing interactions. Respectively, they wish to be efficient and brief when time is limited and goal-oriented, to enhance shared experiences and invest quality time when the socio hedonic aspects matter or require personal time to actively control and process information and build their own perspective through a new time cycle of exploration. The main limitation of this paper remains the level of analysis that is monocular, focusing solely on the consumer rather than considering the dyad from an interdependence perspective. As it may potentially diminish the internal validity of the study, we recommend for future research an experimental multiple interaction design, adopting a "component perspective" (Malloy and Kenny, 1986)

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Appendix 1: Pictures of PSI practice

