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THE EFFECTS OF ORGANIZATIONAL COMMITMENT ON KNOWLEDGE SHARING: THE CASE OF DIGITAL DESIGNERS

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RÉSUMÉ

Cet article étudie la relation entre l'engagement organisationnel des designers digitaux et leur degré de partage des connaissances au sein de leur organisation. Afin de répondre à notre question de recherche, nous avons réalisé une enquête en ligne auprès de 487 concepteurs numériques français sur la période 2020-2021. Sur la base d'un modèle d'équations structurelles et d'une Macro PROCESS, notre analyse montre que l'engagement organisationnel normatif influence positivement le don de connaissances à travers (1) la collecte de connaissances et (2) l'engagement organisationnel affectif. Nous discutons nos résultats ainsi que leurs implications théoriques et managériales.

Mots-clés : partage des connaissances ; engagement organisationnel ; designers numériques ; design UX.

ABSTRACT

This article investigates the relationship between the organizational commitment of digital designers and their levels of knowledge sharing within their organization. We carried out an online survey of 487 French digital designers from 2020-2021. Using Structural Equation Modelling and PROCESS Macro techniques, our analysis finds that normative organizational commitment positively influences knowledge donating through (1) knowledge collecting and (2) affective organizational commitment. We discuss our results as well as their theoretical and managerial implications.

Keywords: *knowledge sharing; organizational commitment; digital designers; UX design.*

INTRODUCTION

In the era of the knowledge economy, digital design (which includes areas like User eXperience [UX] designers or User Interface [UI]) is an increasingly important profession (Engeström, 2006). This profession involves wide-ranging interactions in which the designers are connected to their customers and supported by interventionists within the organization (Engeström, 2006). Digital designers act within complex "activity systems" (Engeström, 2006) as they are required to engage with numerous stakeholders at once (e.g., multiple design teams, subcontractors, internal client units within the corporation, and external end-user customers) throughout the course of various software engineering and web designing projects (Engeström, 2006; Roth, 2017). The objective of digital design is to develop innovative products and processes (Engeström, 2006) by manipulating tools (Hadjimichael & Tsoukas, 2019) while making an iterative set of decisions leading to a successful outcome that enhances users' satisfaction and loyalty (Rodrigo *et al.*, 2022; Roth, 2017). More specifically, digital designers strive to co-configure a work design that offers (1) adaptive "customer-intelligent" products or services via (2) continuous, reciprocal relationships between customers, producers, and product/service combinations over (3) the long term; because (4) the customer is involved, (5) there is a need to have multiple producers collaborating in the networks within or between organizations and engendering (6) mutual learning from the interactions of the involved parties (Engeström, 2006).

As such, digital designers are engaged in continuous interactions. These interactions with the various parties require special reflective intervention methods called "microcosms," which are based on collectively negotiated decision-making, a shared vision, and a simulation of future modes of interaction across boundaries (Carlile, 2004; Engeström, 2006). Thus, a precondition of a successful digital design interaction is dialogue in which all parties can gain real-time feedback on their activity (Engeström, 2020; Rakov & De Ridder, 2022; Tsoukas, 2009). Knowledge tools that encourage dialogue and reflection as well as collaboratively constructed functional rules and infrastructures are thus needed (Baralou & Tsoukas, 2015; Engeström & Ahonen, 2001; Tsoukas, 2009) for digital designers to improve their skills in the interpretation, negotiation, and synthesis of large amounts of information.

These responsibilities assumed by digital designers, as well as the use of virtual tools in the exchanges between the actors, have been found to develop cognitive abilities such as negotiation practices and transformation knowledge, which are developed by reconciling diverging points of views (Carlile, 2004; Korbi & Chouki, 2017; Roth, 2017). In particular, these designers are involved in long-term "activity systems" (organizations) in which the actors are constantly involved in learning, developing, and sharing knowledge (Sannino & Engeström, 2017). This contributes to the appropriation and creation of new knowledge (Baralou & Tsoukas, 2015; Chouki & Persson, 2016; Giraud *et al.*, 2019) that can lead to a successful interactive product (Engeström, 2020; Roth, 2017).

Knowledge management is therefore central for digital designers, who work with a large flow of knowledge that needs to be carefully managed to provide a final product that is as close as possible to the expectations of various stakeholders. In previous studies, Knowledge Sharing (KS) has indeed been identified as a key factor in ensuring organizational competitiveness (Liu & Li, 2018; van den Hooff & van Weenen, 2004) by fostering innovative behaviors (Hussain *et al.*, 2018; Rodrigo *et al.*, 2022) and facilitating the development of new products, services, and processes (Li *et al.*, 2015; Nonaka & Takeuchi, 1995) that considerably improve organizational innovation (Chen & Huang, 2009; Marcandella & Guèye, 2018; Rawung *et al.*, 2015).

As current firms grow in complexity, the process of sharing knowledge may also become more complex as there are many stakeholders or interfaces (internal or external) involved (Carlile, 2004) who have potentially contradictory motives (Engeström, 2006). Thus, and because the literature suggests that organizational commitment may be a main element in buffering these conflicting interests and indeed impacts KS (i.e. Giraud *et al.*, 2019), we aim to investigate in this study the specific effects of organizational commitment on KS.

For successful KS to happen, a strong bond with the organization may need to exist as both the collection and donation of knowledge do matter (Dysvik *et al.*, 2015; Luo *et al.*, 2021). According to van den Hoof and van Weenen (2004), Knowledge Donating (KD - communicating knowledge to others) and Knowledge

Collecting (KC - actively consulting others for their intellectual capital) are distinct and yet complementary dimensions of KS and thus to be examined in this article. While the benefits associated with KS seem to be well established, there are few studies of digital designers in this context. Consequently, there is a need to explore how KS processes take place within this strategic population.

As previously mentioned, digital designers are called upon to manage complex relationships involving ongoing discussions with various stakeholders in which there are feelings of diffuse obligation (Dysvik *et al.*, 2015) and an immediate "pay-off" is not always guaranteed (Blau, 1964; Cropanzano & Mitchell, 2005; Dysvik *et al.*, 2015). Therefore, the socio-emotional aspects of KS discussions should be viewed through the lens of reciprocity. As such, the cost of donating intellectual capital would be compensated by the benefits of collecting it, thus building trust into KS. It therefore seems possible that KD and KC are positively related and occur simultaneously, but not necessarily automatically or spontaneously (Dysvik *et al.*, 2015; van den Hooff & van Weenen, 2004). While KD is inherent to job requirements and could be considered as behavior inherent to the role, the collection process is more likely to be considered as an extra effort that would need to be rewarded (Dysvik *et al.*, 2015). As of today, the mechanisms for how and under which conditions KD and KC are related remain unknown as there are few empirical studies investigating the association between these processes.

In addition, the association between KD and KC seems to depend on the degree to which employees experience a social exchange relationship with the various organizational parties (Dysvik *et al.*, 2015). It could then become an organizational priority to identify the prominent factors that may facilitate the sharing of meaningful knowledge among designers. Previous scholars have found social context to facilitate KS (Kim, 2012). As a major component of this social context, Organizational Commitment (OC) is likely to be a key factor in fostering KS among digital designers within an organization. Employee commitment to the organization, or employee attachment to an organization and the desire to remain within it (Allen & Meyer, 1991), has therefore been a main target of Human Resource Management (HRM) (Cohen, 2007). Digital designers' commitment to the organization still remains an overlooked area of research that thus deserves further investigation, especially since the potential departure of such a strategic human resource could entail knowledge and performance losses. We therefore attempt to fill this gap in the literature by investigating the impact of OC on the KS of digital designers.

Accordingly, this article tackles the aforementioned literature gaps by identifying which specific dimensions of OC could particularly impact KS (donating and collecting) among digital designers. We first review the literature about the KS and OC of digital designers. We then present the methodology of our empirical study to test our hypotheses. Results are finally presented and discussed.

1. LITERATURE REVIEW AND FORMULATION OF HYPOTHESES

1.1. Knowledge Sharing of digital designers

Reaching a competitive edge enhances organizational sustainable profitability (Liu & Li, 2018), and this long-lasting competitive advantage notably stems from a company's ability to regularly generate new knowledge (Han *et al.*, 2016; Liu & Li, 2018; van den Hooff & van Weenen, 2004). Since knowledge is multidisciplinary in nature, it has captured the attention of researchers from diverse disciplines (Szulanski, 1996). KS appears to be a key factor in ensuring organizational competitiveness (Liu & Li, 2018) because it encourages employees to make use of organizational resources, fosters their innovative ability (Hussain *et al.*, 2018), and facilitates the development of new products, services and processes (Li *et al.*, 2015; Nonaka & Takeuchi, 1995).

Digital designers seem to bear most of the responsibility for the proposition of new concepts and products by negotiating between various organizational members and customers (Carlile, 2004; Engeström, 2020; Roth, 2017). This approach to working seems to require strong ties among many actors who are involved in different departments or "activity systems" (Engeström, 2006). Advanced interaction skills may therefore constitute a key mechanism for the transfer and acquisition of knowledge (Hadjimichael & Tsoukas, 2019; Pyrko *et al.*, 2017; Tsoukas, 2011). If they can identify the contradictions

among the multiple stakeholders (Carlile, 2004; Sannino & Engeström, 2017), digital designers are more likely to overcome those contradictions and become an ultimate source of learning (Hadjimichael & Tsoukas, 2019) by translating these conflicting motives into better design for the users (Engeström *et al.*, 2015; Sannino & Engeström, 2017). Carlile (2004) finds that conflicts of interest yield negative consequences in terms of knowledge transfer as it can negatively impact designers' willingness to create if any actor compares the cost of learning what is new with the cost of transforming current knowledge and its shortcomings. Subsequently, KS is likely to be an important issue for digital designers who are in a position to make judgments about the quality needs of a product or service by anchoring these contradictory ideas and transforming them into a marketable design that integrates the expectations of each party.

Scholars have characterized KS as the dissemination of ideas, information, expertise, and suggestions among employees to solve problems, develop novel ideas, or implement new policies or procedures (Wang & Noe, 2010). It is therefore a social process in which employees are willing to share their valuable knowledge with one another (Mu *et al.*, 2008). As this information and knowledge are usually non-substitutable, inimitable, rare and valuable, the process involves opportunities for both individuals and organizations (Pinho, 2016).

According to Hadjimichael and Tsoukas (2019), tacit knowledge is a key resource that digital designers use to facilitate organizational innovation (Hartmann *et al.*, 2004), prevent competitors from duplication (García-Morales *et al.*, 2008), and enable significant organizational performance (Hadjimichael & Tsoukas, 2019). In the same vein, Sannino and Engeström (2017) state that digital designers must be endowed with actionable and impactful knowledge that can be turned into transformative action. KS seems to be at stake when it comes to tacit knowledge (Hadjimichael & Tsoukas, 2019), which is particularly delicate to express, formalize, and therefore share (Nonaka *et al.*, 2000), especially in that this appears to be time-consuming (Hadjimichael & Tsoukas, 2019). Nonaka *et al.* (2000) argue that individuals tend to share "common knowledge" that is frequently used or not related to personal interests, rather than sharing "key knowledge". Thus, an important challenge with digital designers involves tacit knowledge as each individual handles it differently (Hadjimichael & Tsoukas, 2019).

According to Van Den Hooff and Van Weenen (2004), KS consists of (1) KD, which refers to communicating one's personal intellectual capital to others and (2) KC, which refers to persuading colleagues to share their intellectual capital. In the current paper, we simultaneously investigate both kinds of KS since digital designers as well as the various stakeholders are to equitably benefit from the shared knowledge: the cost of donating is to be compensated by the benefit of collecting knowledge. Given the importance of KS processes for the betterment of organizations, investigating the conditions under which KC is related to KD remains of utmost interest as this relationship has been overlooked by scholars.

Van den Hooff and Ridder (2004) posit KD and KC to be active processes that are visible to the various organizational members. The authors find KC to positively impact KD since the more information the individuals collect, the more they seem to donate it (van den Hooff & van Weenen, 2004).

In contrast, Dysvik *et al.* (2015) investigate the relationship between KC and KD from the management perspective (employee KS with their manager). In this specific configuration, they find a positive relationship between KC and KD in the opposite causal direction from the one described above. The authors suggest that when employees communicate their knowledge to their direct manager (KD), they are more likely to be recognized for their efforts and intellectual capacities. In turn, the direct manager feels indebted to consult these employees in order to learn from what they know (KC).

Based on the reciprocity norm (Gouldner, 1960) and as far as digital designers are concerned, we choose to expect a positive relationship from KC to KD. To create novel ideas, digital designers are required to first collect knowledge that may then be transformed and transmitted in the form of actionable and impactful knowledge (Sannino & Engeström, 2017). Thus, we hypothesize that the more useful information digital designers collect (KC) within the organization, the more likely they are to donate novel knowledge to other organizational members (KD).

H1: Knowledge Collecting positively influences Knowledge Donating.

1.2. Organizational Commitment

OC remains one of the most studied topics for Organizational Behavior and HRM researchers. Committed employees indeed seem to adopt more positive behaviors (i.e. Giraud *et al*., 2019; Pangil & Nasurdin, 2019). For instance, OC has been shown to prevent turnover (Scales and Brown, 2020) and enhance performance at work (Hendri, 2019). In this article, we approach OC as an antecedent of KS, another positive behavior at work that is likely to facilitate the transmission of knowledge between actors.

Doan *et al.* (2020) note that OC expresses the individual's wish to maintain a bond with their organization. Allen and Meyer (1991) indeed define commitment as an employee's attachment to their organization and their desire to remain within it. These authors have characterized OC as a psychological state (a desire, need, or obligation) that affects employee willingness to remain in the organization.

The literature generally distinguishes three different kinds of organizational commitment. *Affective Commitment* (AC) is related to employees' emotional attachment to their organization, creating a desire to maintain the employment relationship (Allen & Meyer, 1991; Cohen, 2007; van den Hooff & van Weenen, 2004). This dimension of organizational commitment usually depends on personal characteristics, job characteristics, work experiences, and structural characteristics (van den Hooff & van Weenen, 2004). *Continuance Commitment* (CC) is related to the costs associated with the potential departure from the organization, creating a perceived necessity to continue employment (Allen & Meyer, 1991; van den Hooff & van Weenen, 2004). *Normative Commitment* (NC) is related to the feeling of obligation towards the organization, suggesting that one ought to continue one's employment (Allen & Meyer, 1991; Cohen, 2007; van den Hooff & van Weenen, 2004). This component may be influenced by individual experiences both prior to (familial/cultural socialization) and following (organizational socialization) their entry into the organization (Cohen, 2007; van den Hooff & van Weenen, 2004). NC is likely to develop for individuals who perceive that their organization expects loyalty (van den Hooff & van Weenen, 2004).

Allen and Meyer (1991) suggest that AC, CC, and NC should be considered as three independent components rather than three types of commitment. Indeed, employees might experience these psychological states differently, and their overall individual commitment may reflect each of these separable psychological states (Allen & Meyer, 1991; Mercurio, 2015).

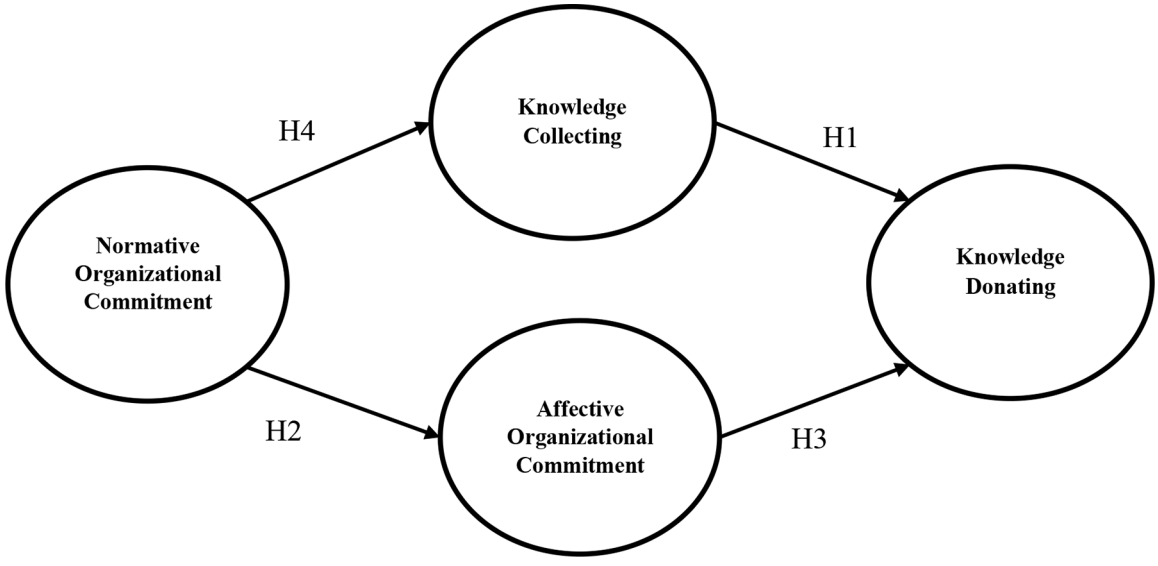
Nevertheless, empirical results should be carefully interpreted when using Allen and Meyer's (1991) scale as there seems to be some ambiguity with the measurement scale, notably regarding the CC and NC dimensions (Cohen, 2007). Hence, Cohen (2007) proposes the conceptualization of organizational commitment according to only two dimensions: affective and normative. According to Cohen, CC remains an unclear dimension as its evolution over the employees' experiences makes their commitment unstable and thus difficult to assess. Moreover, according to several scholars (Ko *et al.,* 1997; Cohen, 2007), CC corresponds more to a behavior than to an attitude as this dimension translates to the awareness of the costs associated with leaving the organization. For this reason, Meyer *et al.* (2012) invite caution with CC; we therefore did not include this variable in our hypotheses.

Another issue related to Meyer and Allen's (1991) model might concern the lack of discriminability between AC and NC (Bergman, 2006; Cohen, 2007; Ko *et al*., 1997). Several scholars have found a high correlation between AC and NC (Herscovitch & Meyer, 2002). Bergman (2006) is indeed intrigued by the fact that AC and NC are highly correlated despite their theoretical distinction.

Moreover, the validity of the NC measurement scale may remain unclear, contrary to AC, as NC might fail to explain the attitudinal outcomes of individuals when affective commitment is controlled (Bergman, 2006; Masud *et al*., 2018). It has actually been argued that NC may have a dual nature: one related to the sense of obligation to stay with the organization and the other one related to a sense of moral duty (Gellatly *et al*., 2006; Masud *et al*., 2018; Meyer & Parfyonova, 2010). For instance, Meyer and Herscovitch (2001) find that, when all three forms of commitment are high, NC and CC affect the internal feeling of attachment, which in turn reduces the impact of AC on the positive behaviors of employees.

Cohen (2007) therefore suggests that NC should be considered as a commitment propensity rather than a component of commitment. According to him, NC and AC differ in their timing and their determinants. More precisely, NC is a general propensity affected by personal characteristics

Figure 1: Conceptual model.



such as personal values and beliefs, prior experience, and job characteristics (Cohen, 2007). NC is considered as a situational variable related to organizational exchange processes (Cohen, 2007). In parallel, AC may be affected by the quality of social exchanges in an organization, such as perceptions of organizational justice, organizational support, and transformational leadership (Cohen, 2007). Bergman (2006) also states that AC is developed through the fit between workplace and individual characteristics, and especially through work experience (Bergman, 2006; Mercurio, 2015). Cohen (2007) explains that NC and AC are closely related in that NC functions as a form of pre-entry commitment, which is an important determinant of AC. The author suggests viewing NC as a propensity to pre-entry commitment, rather than post-entry commitment, because NC provides information on the individual differences in propensity to become morally committed to the organization, rather than information about actual commitment inside the organization. From that perspective, each individual should be sensitive to NC before entering an organization, since their NC level impacts their AC. As such, NC is considered as a prerequisite for OC and may be viewed as an antecedent of AC (Cohen, 2007). Similarly, Bergman (2006) argues that NC is developed prior to organizational entry via familial and cultural socialization processes. This means that individuals are socially prepared to be sensitive to loyalty and reciprocity norms *before* organizational entry. Meyer and Parfyonova (2010) confirm this assumption and find NC to influence these behaviors beyond the early employment period and contribute, beyond AC, to employees' abilities to understand and predict other employees' behavior. However, Bergman (2006) suggests that the relationship between NC and AC is not unidirectional. According to this author, AC could precede NC because AC may be inherent to a positive work experience, pushing employees to reciprocate with the organization by increasing the feeling of obligation that leads to the development of NC. Bergman (2006) concludes that, over time, NC is likely to influence AC non-recursively. Along these lines, we formulate the following hypothesis:

H2: Normative Organizational Commitment positively influences Affective Organizational Commitment.

1.3. The effects of Affective and Normative Organizational Commitments on Knowledge Sharing

In previous studies, OC has been identified as a facilitator of KS (Curtis & Taylor, 2018; Giraud *et al.*, 2019; Li *et al.*, 2017; Meyer & Allen, 1997; Nguyen *et al.*, 2020; van den Hooff & van Weenen, 2004). Several components of OC indeed seem to influence KS (i.e. Giraud *et al.*, 2019; Nguyen *et al.*, 2020; van den Hooff & van Weenen, 2004). Individuals who are more committed to their organization also tend to demonstrate more trust in both their managers and their coworkers, thus positively impacting KS

Table 2: Measurement scales and the summarized factor analysis.

Variable	Number of items	Confirmed validity	Reliability	Measurement scale retained for the analysis
Knowledge sharing (van den Hooff & van Weenen, 2004)				
Knowledge donating	5	Yes	Cronbach's α = 0.85	Yes
Knowledge collecting	5	Yes	Cronbach's α = 0.89	Yes
Organizational commitment (Allen & Meyer, 1996)				
Affective	5	Yes	Cronbach's α = 0.77	Yes
Continuance	6	Yes	Cronbach's α = 0.75	Yes
Normative	5	Yes	Cronbach's α = 0.79	Yes

(van den Hooff & de Ridder, 2004; van den Hooff & van Weenen, 2004). At the same time, the more committed employees are to their activity, the better KS seems to be (Giraud *et al.*, 2019; Tsoukas, 2009).

Researchers have pointed out that knowledge may be distributed according to the quality of the social context (Hadjimichael & Tsoukas, 2019). More precisely, the ability to share and the level at which knowledge is shared may depend on the intensity of the direct contacts within the organization (Hadjimichael & Tsoukas, 2019; Hansen, 1999). For instance, Sannino and Engeström (2017) suggest that sharing impactful and actionable knowledge requires strong initiative and commitment from digital designers (Sannino & Engeström, 2017).

However, CC has also been found to be unrelated or negatively related to desirable work behaviors. Pangil and Nasurdin (2019) reach this conclusion, finding CC to have an insignificant impact on KS behaviors. The literature thus invites us once again to focus on the affective and normative dimensions of OC.

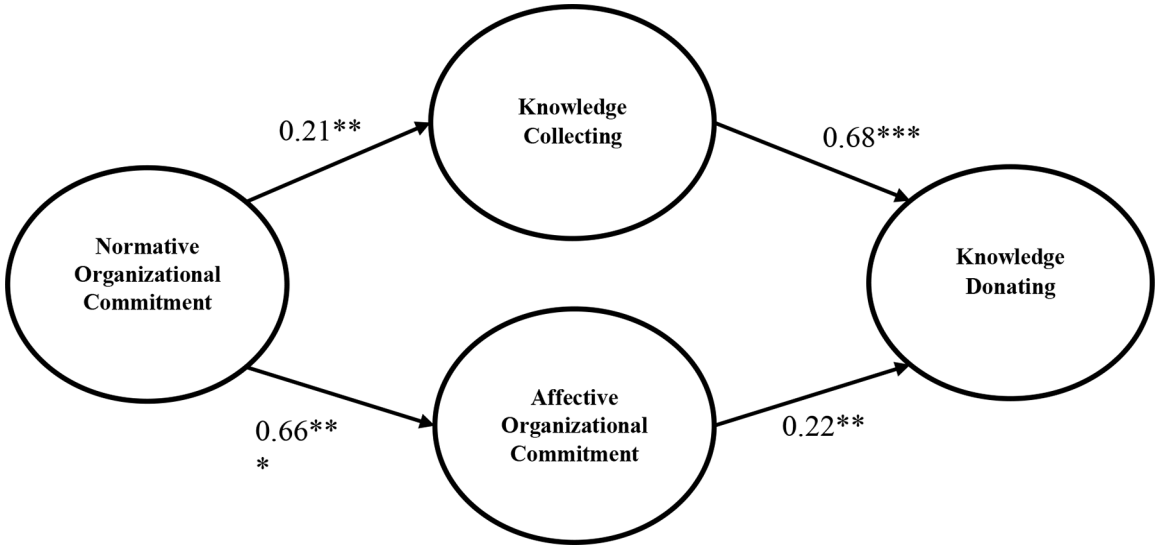
First, AC has been found to benefit organizations (Mercurio, 2015; Meyer *et al.*, 2002). For instance, Mercurio (2015) considers AC to be key as it is an enduring, indispensable, and central feature of OC. The author explains that while previous conceptualizations of OC were tentative with equally weighted components (affective, normative, and continuance), the affective construct of commitment remains central and constant through a wide diversity of theorizations and multidimensional conceptualizations (Mercurio, 2015). It has also been found that AC is strongly associated with desired work behaviors (Meyer & Herscovitch, 2001). AC has thus been frequently studied as a central driver of positive behaviors (Chordiya *et al.*, 2017; Mercurio, 2015).

For instance, previous studies have found AC to prevent turnover intention (Mehmood *et al.*, 2016; Meyer & Herscovitch, 2001; Mowday *et al.*, 1982) and to be positively associated with job satisfaction (Chordiya *et al.*, 2017). Others have found AC to be closely related to KS as both concepts depend on the quality of the existing relationships (Bergman, 2006; Dysvik *et al.*, 2015; Juan *et al.*, 2018). For instance, scholars have shed light on AC being a main determinant of KS and found AC to specifically influence knowledge donating (van den Hooff & de Ridder, 2004; van den Hooff & van Weenen, 2004). Findings by Meyer *et al.* (2002) have shown AC, followed by NC, to have the strongest positive effect on behaviors such as KS.

The relationship between AC and KS could be explained in that the concept of sharing is deeply anchored in the norm of reciprocity (Gouldner, 1960; Juan *et al.*, 2018), which suggests that KS (donating and collecting) is induced by the expectation that others will reciprocate an act when asked (Aslam *et al.*, 2013). In addition, once employees start trusting the integrity of their HRM systems, they may feel more motivated (Chuang *et al.*, 2016) and in turn, more disposed to engage in KS (Hadjimichael & Tsoukas, 2019; Juan *et al.*, 2018) as they have no fear of being exploited by other members (Aslam *et al.*, 2013).

The effect of AC could also be approached in light of Social Identity Theory. If individuals' judgments of their organization are related to their level of organizational identity, this causes positive behaviors (Pagliaro *et al.*, 2018) such as KS. From this perspective, when individuals put trust in their organization, they become part of the organizational social network (Juan

Figure 2: Identified model with standardized coefficients (* = p < 0.001).**



et al., 2018). This perception may enhance their organizational identification and lead to them become more committed, with a high sense of belonging (Cohen, 2007; Juan *et al.*, 2018; Pagliaro *et al.*, 2018). This perception may also positively affect their intention to share knowledge. On the contrary, if employees feel that their sense of identity is threatened (Kamoche *et al.*, 2014), they might be less motivated to share knowledge. Similarly, Hansen (1999) finds weak ties with other organizational members to impede the transfer of complex knowledge.

As digital designers are in constant interaction with different stakeholders, they are required to build strong bonds with these actors. This intense social exchange within an organization may render AC even more central (Bergman, 2006; Cohen, 2007), which is ultimately likely to increase KS. We can thus expect AC to be a key factor leading to higher KS among digital designers, especially as this population is susceptible to strong emotions about their profession, work, and organization (Chouki *et al.*, 2020). These potentially strong feelings can lead digital designers to become more affectively committed and therefore show a stronger intention to share knowledge (Giraud *et al.*, 2019; Tsoukas, 2009). In this sense, Chouki *et al.* (2020) have shown that digital designers are increasingly opting for informal ways of sharing knowledge within their organization. To succeed, designers also seem compelled to gather knowledge from the actors with whom they collaborate and then to share their objectives (Chouki *et al.*, 2020), which likely suggests that NC positively influences both KC and KD.

Based on the aforementioned arguments, we propose the following two hypotheses:

H3: Affective Organizational Commitment positively influences Knowledge Donating.

H4: Normative Organizational Commitment positively influences Knowledge Collecting.

The Figure 1 above synthesizes the four proposed hypotheses to be tested.

2. METHODOLOGY

In order to test our hypotheses, we surveyed 487 respondents working in the field of digital design (UX and UI). Data collection was carried out over 2020-2021. Table 1 below summarizes the characteristics of our sample.

Table 1: Studied sample (standard deviation or proportion in parenthesis).

Sample	487
Age (years)	31.7 (7.7)
Women	52%
Occupation	UI/UX designers (47.6%)
	UX designers (28.7%)
	Others (23.7%)
Executive position	59.5%

Status	Employees (55.2%)
	Agency employees (23.4%)
	Freelance (20.5%)

Measurement scales

Table 1 synthesizes the psychometric features of the measurement scales after each scale was subjected to a Principal Components Analysis (PCA) and reliability tests (Cronbach's α) on IBM SPSS 26. The following reverse-coded items were removed in order to give the measurement scales stronger psychometric values: AC5R, AC6R, AC8R, CC1R, CC4R, and NC1R. Loading them in the program indeed negatively affected the validity of the various measured dimensions. In addition, the Cronbach's alphas for all were above 0.70. The final psychometric values of our measurement scales thus allowed for the statistical testing of our model.

3. RESULTS

We used Structural Equation Modeling (SEM) techniques on IBM SPSS 26 (with the AMOS extension) by opting for maximum likelihood as the estimation procedure to identify our model. As Figure 2 shows below, all the tested relationships are statistically significant. The results were interpreted using the criteria recommended by Hu and Bentler (1999). In addition to the $\chi 2$ test, which must return the smallest possible value, several adjustment indices were used. Those are the Root Mean Square Error of approximation (RMSEA), whose expected value must range from 0.05 to 0.08, as well as the Comparative Fit Index (CFI), the Incremental Fit Index (IFI), and the Tucker Lewis Index (TLI), which must be greater than 0.90 in order for them to be considered satisfying (Roussel *et al.*, 2002). These indexes are considered to be the most statistically robust in verifying model fit qualities (Hu & Bentler, 1999) and are summed up in Table 3. All the indexes reached satisfactory thresholds.

Table 3: Fit indices of the tested model.

Fit indices	χ2/ddl	RMSEA	CFI	IFI	TLI
Results	3.61	0.073	0.919	0.920	0.901

According to Hayes' methodology (2018), we used the PROCESS Macro procedure for SPSS (Version 3.5.3) to validate the two parallel mediations included in our model (Normative Organizational Commitment → Knowledge Collecting → Knowledge Donating and Normative Organizational Commitment → Affective Organizational Commitment → Knowledge Donating).

Figure 2 shows that normative organizational commitment positively impacts KD through KC, thus supporting Hypotheses 1 and 4. Furthermore, our results suggest that NC positively impacts KD through AC, thus validating H2 and H3. We can observe that the standardized impact coefficients are particularly strong between KC and KD ($\beta = 0.68$) as well as between NC and AC ($\beta = 0.66$). All the identified relationships that appear in Figure 2 reach a solid significance level at $p < 0.001$.

4. DISCUSSION AND IMPLICATIONS

The purpose of this article is to identify which dimensions of OC might influence the KS (collecting and donating) of digital designers.

First, our study contributes to the KS literature by investigating the very relationship between KC and KD. Our results confirm that KC influences KD such that the more information digital designers collect, the more they are disposed to donate it to others (**H1 confirmed**) (van den Hooff & de Ridder, 2004; van den Hooff & van Weenen, 2004). This could be explained by the nature of the digital design occupation, which requires gathering knowledge before generating novel ideas (Sannino & Engeström, 2017). The main role of a digital designer (especially UX) indeed begins with the collection of information from users in order to study their needs (Chouki *et al.*, 2020). These new ideas are then transformed into and transmitted in the form of actionable and impactful knowledge that ensures innovation (Sannino & Engeström, 2017). Our research thus confirms how digital design knowledge is processed to optimize websites and other digital applications. In contrast with the findings of Dysvik *et al.* (2015), we observe in our data that digital designers seem to voluntarily share their knowledge once it has been collected. Our results imply that, within the digital designer community (UX or UI), there seems to be a strong intention to share tacit knowledge throughout the organization (Hadjimichael & Tsoukas, 2019).

Second, our findings shed light on the positive relationship between NC and AC (**H2 confirmed**).

Our findings highlight the important role of NC in enhancing the emotional attachment found among digital designers. This result is consistent with the work of Cohen (2007), which considers NC a commitment propensity rather than a component of commitment. These results could even mean that digital designers tend to be sensitive to loyalty and reciprocity norms before they enter the organization (Bergman, 2006). This finding could also stem from the composition of our sample, which comprises young digital designers (average age = 31.7) for whom NC may constitute an important condition for emotional attachment to the organization. Our result is also consistent with the finding of Meyer and Parfyonova's (2010) study that NC impacts employee behaviors beyond the early employment period and enhances their AC, which in turn helps them to understand and predict the behavior of other employees. Thus, it is essential that NC be enhanced among young digital designers through the implementation of appropriate HR polices. In order to capitalize on their knowledge, it also seems essential to enhance the NC of millennial designers who might demonstrate lower organizational commitment (Lyons & Kuron, 2014).

Third, and consistent with previous findings (van den Hooff & de Ridder, 2004; van den Hooff & van Weenen, 2004), the results of our study show AC and NC to be positively related to both KD and KC respectively (**H3 and H4 confirmed**). Since our data reaffirm that AC and NC are strongly tied (Bergman, 2006), we discuss them together in the following paragraphs.

Although AC has been shown to be the most substantial form of commitment (Chordiya *et al*., 2017; Mercurio, 2015), our data suggests that NC may play a more major role as an antecedent of the AC of digital designers. High levels of NC thus seem to make designers more willing to share and receive knowledge, a key success factor for their projects (Chouki *et al*., 2020).

High AC among digital designers seems to translate into solid emotional attachment to their organization (Allen & Meyer, 1990) and thus potential additional efforts to share relevant knowledge (in order to create suitable and novel designs that meet various users' expectations). Indeed, the second sequence of our model suggests that digital designers who feel a strong emotional attachment towards their organization have a higher tendency for KD. Our results confirm that affectively committed designers may feel more trust in the organization as well as a higher motivation for KD, notably its advanced forms (Hadjimichael & Tsoukas, 2019; Juan *et al*., 2018), as they might feel less concern about being exploited by other members (Aslam *et al*., 2013).

Our data also demonstrate that when digital designers are high in both AC and NC, they are more inclined to share knowledge within their organization. Even though this combination did not belong to our original hypotheses, this emerging result reinforces the idea throughout the paper that a positive relationship between AC and NC reflects a moral duty mindset (Meyer & Parfyonova, 2010) that may be found among UX designers who are strongly engaged in KS processes. More precisely, digital designers experience the collection and donation of intellectual capital as a chosen obligation that may incite them to deeply invest themselves, especially because of the complex context in which they are involved (Sannino & Engeström, 2017).

To conclude, our research shows that digital designers demonstrate significant levels of both AC as well as NC. While our results demonstrate that the NC of digital designers impacts their AC, we more generally confirm that digital designers seem to be highly emotional about their relationships within their organization, while feeling strongly obligated to share their knowledge (formally and informally) (Chouki *et al*., 2020). This result echoes the work of Chouki *et al.* (2022) suggesting that the success of KS mainly depends on the quality of the relationships and communication between the various stakeholders, which might be an antecedent of digital designers' NC.

At the management level, we recommend that managers support digital designers' commitment and their role in KS. We encourage managers to regularly listen to this professional community so as to mitigate potential frustrations at work. We draw attention to the importance of a favorable work environment and its role in the sharing of tacit knowledge, which can prove useful for a differentiation strategy in a competitive digital market. Nowadays, organizations are required to demonstrate high competitiveness and ensure sustainable performance via the creation of a work environment that supports both sharing and creativity, notably through serendipity (Busch, in press). Our study calls for the managers of digital designers to foster organizational performance that inspires trust and confidence among employees, who in turn would tend to better share their knowledge. In the current highly uncertain

economic context, such initiatives would enable organizations to stay competitive in their markets.

In conclusion, our research unravels the process through which KS can be optimized through NC and AC, which is also relevant in preventing turnover and fostering other positive behaviors like OCBs (Gellatly *et al*., 2006). HR managers are therefore encouraged to be attentive to the motivation and the integration of digital designers who, when successful, are likely to generate a plethora of positive behaviors, notably in terms of KS.

LIMITATIONS AND FUTURE DIRECTIONS

Despite its interesting theoretical and managerial contributions, our research contains several limitations that deserve to be examined as they may become avenues for future research. First, the study focused solely on digital designers in similar occupations. It could be possible to extend this research to include other major digital actors like developers or product owners in order to find complementary results relative to connected KS. Similar studies in other countries might also prove useful. Secondly, the cross-sectional data used in this study may be exposed to common method bias. Further longitudinal studies are thus advised. Thirdly and as discussed in the literature review, the Three-Component Model (TCM) remains a subject of scholarly debate. Similar studies with alternative measurement scales of commitment or related concepts (like *workplace commitment*) may also contribute relevant elements to the existing literature (van Rossenberg *et al*., 2022), notably when studying digital designers.

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APPENDICES

Appendix 1: Correlation matrix (* = p<0.05, ** = p<0.01).

		Age	AC	CC	NC	K donating	K collecting
Age	Pearson Correlation	1	0.102*	0.032	0.023	0.028	-0.033
	Sig. (bilateral)		0.025	0.475	0.611	0.537	0.466
	N	487	487	487	487	487	487
AC	Pearson Correlation	0.102*	1	0.266**	0.502**	0.287**	0.175**
	Sig. (bilateral)	0.025		0.000	0.000	0.000	0.000
	N	487	487	487	487	487	487
CC	Pearson Correlation	0.032	0.266**	1	0.423**	0.027	-0.025
	Sig. (bilateral)	0.475	0.000		0.000	0.558	0.587
	N	487	487	487	487	487	487
NC	Pearson Correlation	0.023	0.502**	0.423**	1	0.233**	0.199**
	Sig. (bilateral)	0.611	0.000	0.000		0.000	0.000
	N	487	487	487	487	487	487
K donating	Pearson Correlation	0.028	0.287**	0.027	0.233**	1	0.704**
	Sig. (bilateral)	0.537	0.000	0.558	0.000		0.000
	N	487	487	487	487	487	487
K collecting	Pearson Correlation	-0.033	0.175**	-0.025	0.199**	0.704**	1
	Sig. (bilateral)	0.466	0.000	0.587	0.000	0.000	
	N	487	487	487	487	487	487