

# Smartphone chronic gaming consumption and positive coping practice

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# Smartphone chronic gaming consumption and positive coping practice

## Abstract:

**Purpose** - Chronic consumption practice has been greatly accelerated by mobile, interactive and smartphone gaming technology devices. This study explores how chronic consumption of smartphone gaming produces positive coping practice.

**Design/methodology/approach** - Underpinned by cognitive framing theory, empirical insights from eleven focus groups (n=62) reveal how smartphone gaming enhances positive coping amongst *gamers and non-gamers*.

**Findings** - The findings reveal how the chronic consumption of games allows technology to act with privileged agency that resolves tensions between individuals and collectives. Consumption narratives of smartphone games, even when play is limited, lead to the identification of three cognitive frames through which positive coping processes operate: (a) the market generated frame, (b) the social being frame, and (c) the citizen frame.

**Research limitations/implications** - This paper adds to previous research by providing an understanding of positive coping practice in the smartphone chronic gaming consumption.

**Originality/value** - In smartphone chronic gaming consumption, cognitive frames enable positive coping by fostering appraisal capacities in which individuals confront, hegemony, culture and alterity-morality concerns.

**Keywords:** Digital Transformation, Smartphone Gaming, Positive Coping, Chronic Consumption, Frames

**Paper type:** Research paper

## Introduction

This research explores how smartphone chronic gaming consumption produces positive coping practice. There is an increasing body of conceptual and empirical work that considers how information technology shapes consumption (Alexander and Sackett, 2013; Ashton, 2011; Chulmo et al., 2015; Watts and Wyner, 2011). This work has drawn attention to the temporal, relating most closely to notions of clock

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3 time (Lin et al, 2015), for example, in the enhancement of waiting times for services.  
4 It has also highlighted the role of the temporary, as a bounded occurrence with a start  
5 and end point (Aggarwal and Vaidyanathan, 2003), for example, Cyber Monday or  
6 Black Friday. However, these time-based consumption activities have been impacted  
7 by transformation of digital technologies and, as a consequence, the speeding up of  
8 social life. Digital transformation is defined as “the realignment of, or new investment  
9 in, technology and business models to more effectively engage digital customers at  
10 every touch point in the customer experience lifecycle” (Forbe, 2014).  
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16 As such, digital transformation has re-set many of the norms associated with  
17 temporal and temporary understandings of consumption practice. For instance, the  
18 storage and distribution of digital content (e.g. music, online videos, live video  
19 streams, e-books etc.) as well as the development of new devices have resulted in  
20 direct and instant access to online consumption activity. Within digital  
21 transformation, consumption is no longer bound or restricted to the traditional ideas of  
22 temporal and temporary consumption cycles found in repeat purchased situations,  
23 such as daily, weekly or monthly. Instead, a myriad of frequent hourly encounters and  
24 indeed irregular temporal encounters (e.g. during the night) are occurring that can be  
25 termed chronic consumption. Whereas some studies support the view that digital  
26 transformation processes have produced positive impacts, creating back office and  
27 frontline efficiencies as well as creating consumption opportunities (Ling and  
28 Campbell, 2011; Van Belleghem, 2015); others point to the stresses arising from a  
29 digital environment where technological demands challenge individuals’ traditional  
30 frames of reference, stability and resources, thereby threatening consumption (Addis,  
31 2005; Chulmo et al., 2015; Hansson, 2015; Rosa, 2003).  
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43 Within the context of digital transformation, the term ‘mobile culture’ reflects  
44 the influence that digital devices and their services have on the temporal acceleration  
45 of day-to-day activities (Gane, 2006; Hjorth and Richardson, 2010; Readhead, 2004).  
46 For example, reports suggest the average UK user interacts with their phone more  
47 than 1,500 times in one week: expending three hours and sixteen minutes a day (Daily  
48 Mail, 2014). While many studies have explored technologies in relation to  
49 technological culture, they have emphasized the negative effects of such  
50 transformation in terms of a loss of privacy, or loss of humanity. Most current views  
51 on digital transformation do not recognise the value of social acceleration –the  
52 speeding up of social life – particularly how this pertains to chronic smartphone  
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3 consumption and to the associated demands of living in a knowledge society (Zwick  
4 and Dholakia, 2006).

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6 Alongside the traditional modes of smartphone communication (e.g. talk,  
7 texting, Internet), smartphones are providing access to novel gaming consumption  
8 behaviours that are fast, easy and fun – for example, the Angry Birds Model- (Van  
9 Belleghem, 2015). Such games represent a particularly popular form of smartphone  
10 content consumed representing approximately 1.82 billion gamers and estimated to  
11 reach a market value of \$102.9 billion by 2017 (Newzoo, 2014). The cultural history  
12 of mobile gaming has a broad reach (Shaw, 2010; Gordon and de Souza e Silva,  
13 2011). Smartphone gaming institutionalization, trends and related institutions are  
14 visible in areas such as: policy regulation (de Kervenoael et al., 2013); education  
15 (McClarty et al., 2012); organizational strategy (Klasnja and Pratt, 2012); e-  
16 government (Burroughs, 2014), and edutainment (Hjorth, 2010). Despite such  
17 insights, it is argued that there is a relative absence of discussions of the people side  
18 of technology, and in particular, the ‘play impulse’ dimension at the root of all culture  
19 (Huizinga, (1955 [1938])). This research therefore starts to inform, in part, our overall  
20 research question of how smartphone gaming may represent a form of coping with the  
21 uncertainty of digital transformation (de Souza da Silva and Hjort, 2009; Juul, 2010;  
22 Richardson, 2011). Viewing smartphone gaming as a form of chronic consumption in  
23 this way raises further important research questions and are examined in more detail  
24 below.

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26 We advance the argument that smartphone gaming is a form of chronic  
27 consumption which produces an agency to resolve tensions between individuals and  
28 collectives. In this respect, the smartphone gaming agency produces positive coping,  
29 moving away from the mitigation of issues towards an aggregation of experiences,  
30 allowing individuals to cognitively frame, hedge risk and pragmatically accept digital  
31 transformative uncertainties. Towards that end, the overall aim of this paper is to  
32 investigate the links between smartphone gaming as a form of chronic consumption  
33 and positive coping practice. Specific objectives are: (1) to identify how individuals  
34 frame, draw on and leverage smartphone gaming as a form of chronic consumption to  
35 cope with social uncertainty caused by digital transformation; (2) to identify forms of  
36 positive coping practice occurring through smartphone gaming, whether individuals  
37 are gamers or non-gamers. The paper proceeds as follows. Theoretical insights are  
38 outlined on the context in which smartphone consumption and coping occur together  
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3 with how frames are leveraged. We then introduce the adopted methodology. In the  
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5 third part, we present the findings before discussing contributions to existing research.  
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## 8 **Theoretical Background**

### 9 *The digital transformation of society and coping processes*

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11 “Any attempt to make sense of the human condition at the start of the new century  
12 must begin with the analysis of the social experience of speed” (Scheuerman, 2004:  
13 1). Acceleration or speed is a constitutive trait of modernity (Mick and Fournier,  
14 1998; Tomlinson, 2007). The speeding up of social life is evident not only in the  
15 social domains such as hi-tempo electronic dance music (Attias et al., 2013), or  
16 descriptions of generation X (Coupland, 1996; Wajcman, 2014), but also in the  
17 commercial domains with the introduction of new products as well as built-in product  
18 obsolescence. Digital transformation has been central to this acceleration. For  
19 example, according to a recent Forrester (2015) report, smartphone owners in OECD  
20 countries renew their devices every year on average. Product replacement acceleration  
21 becomes even more severe when built-in obsolescence limits the life cycle of devices  
22 as confirmed by a recent study (Sacco, 2013). Key characteristics and conditions of  
23 digital transformation include mobility, real time and location aware consumption,  
24 networked and ubiquitous access to various devices and platforms (e.g. smartphone,  
25 tablets, I-Store), constant interactions (e.g. reviews, likes, feedbacks), and the blurring  
26 of public and private spaces as well as work-life balance and multitasking (Cousins  
27 and Robey, 2015).  
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40 Research studies on the consumption of digital technological artefacts have  
41 attempted to provide insights into this digital transformation and to understand how  
42 individuals are located within techno-temporal structures. Research shows how  
43 individuals are connected with ‘others’; making it virtually impossible to be outside  
44 the digital network (Magaudda, 2011). The constant network attachment and  
45 connection to digital technologies has changed the time-based consumption activities.  
46 In turn, moral judgments are made on how smartphones are used, and with specific  
47 forms of chronic consumption patterns emerging that deviate from prescribed (i.e.  
48 what individuals should do) and proscribed (i.e. what is the normative order). One  
49 related characteristic of this phenomenon is the way that smartphone gaming lacks  
50 “real life” stability allowing magical objects and powers to be used within universes  
51 where being the hero or villain are both sought after. Studies show that this may lead  
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3 to new psychological and emotional connections and attachments (separate from  
4 traditional addiction) but also forge (quasi) social relations that allow users 'to cope'  
5 with the uncertainty of digital transformation (Knorr-Cetina, 2001; Schiller, 2007).  
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8 Traditionally, research focusing on technology consumption has been  
9 concerned with issues including antecedents, transaction rates, and act of technology  
10 adoption (Schilling, 2010). Coping in that sense reflects the Information Systems  
11 perspective which is primarily concerned with technology ease of use and  
12 appropriation of features representing coping with machines (Bijker and Law, 1992),  
13 or in comparison to consumption of a more physical kind (e.g. Belk, 2013; Denegri-  
14 Knott and Molesworth, 2012). Here, coping is portrayed in term of positive efficiency  
15 gains, information and access inclusion. Implications pertaining to instituting of  
16 routines and rituals, or the instantiation of identity and consumption *per se* are then  
17 drawn (Kozinets, 2008; Mick and Fournier, 1998).  
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24 From another perspective, Duhachek (2005) interprets coping as an effort to  
25 manage and overcome demands of critical events using a set of procedures that  
26 answer a threat (see also Lazarus, 2000; Lopez et al., 2011). Several studies suggest  
27 that coping is context-dependent (Lazarus and Folkman 1984) and reflects different  
28 levels of complexity, appraisal and maturity. More generally, the work of Lazarus  
29 (2000) identifies two types of appraisal in coping processes. Primary appraisals are  
30 where the individual evaluates and gives personal meaning to events and considers  
31 the significance of 'what is at stake', in terms of harm, threat or challenge. 'Secondary  
32 appraisal' further refines the meaning surrounding the event and addresses the  
33 question, 'What can I do about it?' This is where the individual evaluates the  
34 availability of coping resources to deal with the appraisal of harm, threat or challenge  
35 (Lazarus 2000). Next to the previous view, psychology-based studies have shown the  
36 existence of various forms of mental coping (e.g. reaching out for support, non-  
37 judgmental behaviors and positive reading), physical coping (e.g. deep breathing,  
38 meditation and stretching), emotional coping (e.g. listening to music, group therapy,  
39 retail therapy) and spiritual coping (e.g. praying, volunteering and mindfulness to  
40 others). Positive coping can thus take various forms that involve relationships with  
41 others and often technics or technological devices.  
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54 Smartphone gaming as one form of chronic consumption requires an  
55 understanding of how individuals cope with the uncertainty of accelerating digital  
56 transformation. Essentially, coping in the context of technology has both  
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3 directionality and normative duration but the specifics are blurry (Feijoo et al., 2012;  
4 Shaw, 2010). Accordingly, existing knowledge about the social function of  
5 smartphone games as a form of chronic consumption splits between research stressing  
6 dysfunctionality (e.g. anti-social behavior, dangerous practices, psychological  
7 disorders addiction) and positivity (e.g. effective communications collaboration  
8 strategies – oral textual and manual dexterity, construction of identity collaborative  
9 problem-solving literacy practices and systematic thinking) (Ducheneaut and Moore,  
10 2004; Gee, 2003; Steinkuehler, 2006).

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16 Coping positively with technological uncertainty (see Lipchitz and Strauss,  
17 1997 for a review of the concept of uncertainty) via smartphone gaming may even  
18 threaten to unravel individual and collective behaviours (Arnould and Thompson,  
19 2005), as gaming chronic consumption represents overt manifestations of individual  
20 coping (Benford et al., 2003). Smartphone games, encompassing virtual and actual,  
21 online and offline, haptic and visual, delay and immediacy, provide individuals with  
22 new skills and knowledge. Facilitated by the freemium model, apps-based social  
23 games have flipped traditional roles, whereby “casual gamers” led an evolution often  
24 leveraging the urban environment and digital media with physical activities and face-  
25 to-face social interaction. Taken together, in the chronic consumption of smartphone  
26 games, positive coping merges the traditional social function of coping with political  
27 collective negotiations opportunities offered by the digital transformation project.  
28 Nonetheless, positive coping manifestations as they appear reflectively and positively  
29 to the individual have not been properly investigated.

### 40 41 *Technological framing applied to chronic smartphone consumption*

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43 The literature on smartphones has used the notion of frame and enframing, whereby  
44 technology is not only physical but conceptual (Berthon et al., 2005; Gal and Berente,  
45 2008; Kidd, 2011). We interpret framing as widely used in research related to  
46 technological frames in organizations, along with the ambiguities and paradoxes that  
47 technologies imply (Barrett et al., 2013; Goffman, 1974; Leonardi, 2011; Mazmanian,  
48 2013; Orlikowski and Gash, 1994; Van Burg et al., 2013). That is to say, culturally  
49 different individuals share a common technology and are empowered to interpret a  
50 turbulent world and take actions, while at the same time, having scope for dissonance  
51 and situational improvisation. Thus, different groups such as smartphone gamers and  
52 non-gamers can share strong similarities despite evidencing clear differences in  
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3 adoption, preferences and strategies for action (Cornelissen and Werner, 2014;  
4 Swidler, 1986). Consumption enables individuals and groups to be reflexive about  
5 social practices and what appears as digital demands emanating from marketers, other  
6 consumers, and other stakeholders. This reflexivity can be a *primed or activated*  
7 *cognitive frame* based on knowledge represented in the frame with limited  
8 adaptability. These practices and demands are constantly examined and reformed in  
9 the light of their perceived effective instantiation (*frame-based meanings* constructed  
10 in context and reflecting new ways of thinking about individuals' environment)  
11 (Benner and Tripsas, 2012; Kaplan, 2008;).

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18 So far in consumer research, framing approaches follow two main avenues:  
19 the formative associative network structure to describe consumers' knowledge of  
20 products (Lawson, 1998), and the purposeful effort from certain actors to influence  
21 others in developing trajectories (Humphreys and Latour, 2013). Work on the  
22 'granularization' of technological frames (separating a frame problem into sub-  
23 components and underlying the role of ambiguity) also reveals framing as a tool that  
24 enables exchange between user groups (Vaccaro et al., 2011). In other words, the  
25 concept(s) of frames may be used to explain why groups of individuals sharing access  
26 to the same toolkit of cultural resources might act differently when interacting with  
27 the same technology. Framing becomes an ongoing interpretative process beyond  
28 detailing consequences and moving from "naming frames to studying framing process  
29 analytically" (Benford, 1997: 423). So, it is in interaction with others that individual  
30 relevance is recognised and collective meaning agreed between various types of users  
31 (Giddens, 1984; Kaplan, 2008).

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42 Taken together, the acceleration or speeding up of social life is both a  
43 performative and reflective dimension of digital transformation. The literature on  
44 coping processes as well as framing offers a theoretically rich way of understanding  
45 smartphone gaming as a form of chronic consumption and the agency for resolving  
46 tensions between individuals and collectives. In summary, then, coping forms are  
47 articulated in the individual's mobilizations of complementary and intertwined  
48 cognitive frames through which they develop expression and appraisal capacities to  
49 cope with digital transformation uncertainties. The methods we used to explore this  
50 further are detailed in the next section of the paper.

## 51 52 53 54 55 56 57 58 **Methodology** 59 60

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3 In this paper we aimed to explore the links between smartphone gaming as a form of  
4 chronic consumption and positive coping practice. An abductive approach was  
5 adopted (Dubois and Gadde, 2002), which borrows from the systematic combining  
6 efforts of the researcher as a constant move “between asking questions, generating  
7 hypothesis and making comparisons” (Dubois and Gadde, 2002). In line with  
8 abductive reasoning, the study combined several types of data including: different  
9 aspects of smartphone gaming consumption (e.g. practices, anecdotes, meanings);  
10 segmentation along smartphone experiences and a contextualizing review of the  
11 mainstream UK press for secondary topical material.  
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18 Focus groups emerged as an appropriate method given the overall study aim  
19 and objectives, as the socio-cultural phenomena and the form of coping could evolve  
20 as the outcome of a collective negotiation that was likely to be reflected in the focus  
21 groups. “Focus groups [. . .] are not simply a means of interviewing several people  
22 [...] but rather are concerned to explore the formation and negotiation of accounts  
23 within a group context, and to see how people define, discuss and contest issues  
24 through social interaction” (Seale, 2004: 194). The cognitive frames and how these  
25 served the coping phenomenon, were facilitated by the moderator’s observation in the  
26 data collection process of a laddering method (i.e. starting by querying the meaning of  
27 the obvious taken-for-granted) and probing for differences among respondents (i.e.  
28 pointing out contradictions) to provide a critique in interpretation (i.e. critical creative  
29 unveiling).  
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38 The study employed a total of eleven digitally recorded focus groups (n=62),  
39 further split into six male and five female groups reflecting the gendering of digital  
40 games (see Table 1) (Caronia, 2005; Rommes, 2002; Shade, 2008). Individual owning  
41 phones but who had never played games were excluded. The age division followed on  
42 from previous research reporting that interest in mobile games is higher in age groups  
43 15–24 (one group female non-adopters 23-28, could not be recruited; only 2  
44 respondents were aged 9 years old) (Flurry, 2011, ISG, 2012; Nokia, 2002). Parental  
45 agreement was obtained before the interviews with minors and a confidentiality  
46 agreement was given to all participants, along with a short description of the study,  
47 following the researchers’ institutional ethical guidelines. We chose not to conduct  
48 discussions between gamers and non-gamers, considering that what mattered was to  
49 investigate forms of coping that primarily required an individual to deal with the  
50 market and not with issues such as the symbolic meanings of games. Themes  
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investigated in the focus groups included: definitions of key terms (smartphone gaming, online social culture, network, value creation, tension among stakeholders – unpacking of actors) and self-defined roles/usages of a smartphone in a respondent's lifestyle; the meaning and purpose of smartphone gaming (non)consumption in relation to engagement with the technological artefact within social environments in both private and public situations; identification of practices that did, or did not, represent prescribed or desired practices by smartphone marketers.

N=62	Male		Female		Duration: Average time 90 minutes Location: London, UK Timing: HTML 5, Ipad2, iPhone 4
	User	Non-user	User	Non-User	
Age 9-15= 22	5	5	6	6	
Age 16-22= 23	6	6	5	6	
Age 23-28= 17	5	6	6	0	

User: individual who plays games regularly and who frequently purchases or downloads new games  
Non-User: individual who owns a smartphone but only consumes pre-loaded, factory-set games (not downloaded free or charged games from third party providers)

Table 1: Participants distribution in the eleven focus groups

Emergent themes in the data (researcher's observations) were compared with the construct of frame as understood from the literature. The importance of what we identified as a given frame was assessed regarding the tangible and intangible resources or reference point (i.e. a given type of stakeholder, or an ideology) it mobilized for the respondents. This process of isolation of cognitive frames followed the common broader process of qualitative data analysis including activities related to categorization, abstraction, comparison, dimensionalization, integration, and iteration (Spiggle, 1994). Finally a consensus was sought among researchers about the existence of three overarching intertwined frames that structured consumers' narratives.

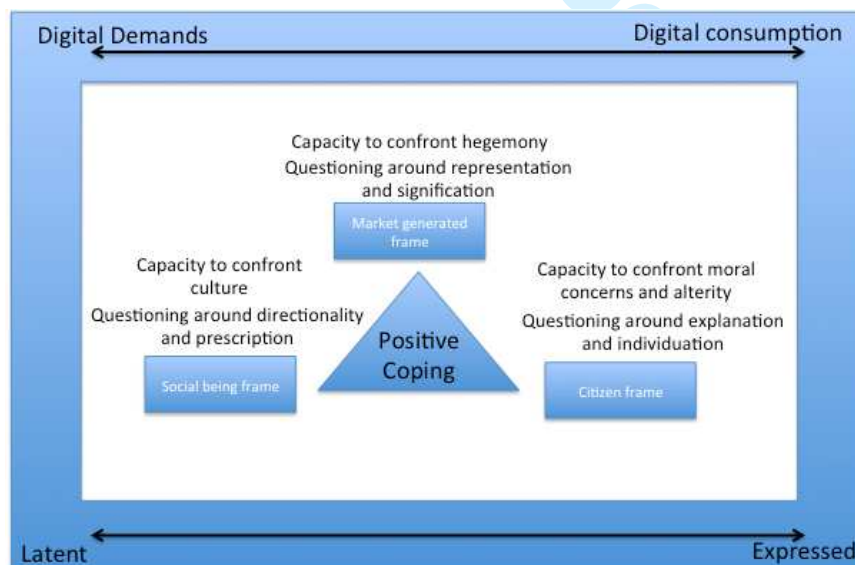
### Findings

The underlying dynamic uncovered from this study was that gamers and non-gamers developed individual reactions to the ongoing flow of expressed vs. latent digital transformation demands of smartphone gaming. This constituted positive coping with associated uncertainties amplified within an accelerated culture. Relationship to smartphone gaming enabled the individual to "secure" in his/her mind, novel forms of understanding and actions regarding the marketplace and about embeddedness as a

consumer within the marketplace, but also as an individual within broader culture and collectives.

Coping forms were articulated in the individual's mobilizations of three complementary and intertwined cognitive frames through which they could develop expression and appraisal capacities to confront and improvise with hegemony, culture, and moral concerns / alterity. These three objects of confrontations are organized in what we have respectively called the "market-generated", the "social being" and the "citizen" frames. Digital chronic consumption "activated" frames in individual minds. Each respondent tended indirectly to make frames robust by encountering their limitations, which in turn allowed collective redefinition of frames. They engaged in questioning when inherent paradoxes or contradictions arose from the exclusive reliance on a given frame. Through frames, individuals strengthened their socio-cultural understanding and meanings of smartphone gaming as a form of chronic consumption. The relative fluidity by which each individual manoeuvred across the culture through frames suggests that coping implies positive outcomes for the individual sense of self. This positive valence is related to the fact that individuals appreciated those interactions with various kinds of stakeholders and related cultural resources that actually "mattered" to them. Figure 1 below summarizes the main findings around these key points.

Figure 1: Positive coping with digital technology



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3 *The market generated frame: revealing the hegemonic power of marketplace*  
4 *resources and their downside*  
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8 Respondents whether they were smartphone gamers or non-gamers, revealed a frame  
9 associated with the subject position of being a consumer that relied on brands,  
10 producers and market generated materials to evaluate trustworthy relationships. One  
11 respondent illustrated the relevance in individuals' minds of being a consumer in  
12 order to deal with this.  
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18 *[one respondent to another] Few games are dominating the official*  
19 *market (Itune, android equivalent). We all have at least one version of*  
20 *them. I am tracking tricks to move between level and access*  
21 *accessories earlier and only share with friends that deserve it. (Male,*  
22 *gamer, 16-22)*  
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28 These standpoints impacted upon how smartphone gaming was chronically-  
29 consumed across time and enabled to track the value creation process. This 'market  
30 generated' frame, implied that the respondents positioned themselves as consumers  
31 facing value propositions emanating from firms. The responses revealed that they  
32 appeared to confront the hegemony of the latter, while also questioning their  
33 relationships with a diffused set of marketplace entities beyond the most popular  
34 smartphone games' brands. With freemium games, the respondents' interactions  
35 revealed that the issue of consumption started well before the classic and static  
36 purchase of branded products. It should be acknowledged that this chronic  
37 consumption was also fostered by over half of non-gamers who defined games within  
38 a broader category (e.g. selfies, download of other applications) when articulating the  
39 meanings of mobile technology consumption in their lived experiences. As such, the  
40 signification of brands and of commoditized artifacts (i.e. what these really represent)  
41 was expressed.  
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53 *There are many other things you can do besides gaming. Lots of apps*  
54 *for everything and tonnes of new ones each day [...]. Some are good*  
55 *some are terrible, some I cannot understand. Games have a lot of*  
56 *competition with applications that are also entertaining and fun.*  
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3 *These are more adapted to my lifestyle may be more grown up too.*  
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5 *(Female, non-gamer, 16-22)*  
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8 Thus, the smartphone games market allowed respondents to engage in primary  
9 forms of coping by understanding that digital chronic consumption is not just a matter  
10 of brands, images, signs and meanings, but also represent technology origin, social  
11 speed, ethical and political foci. Under the market-generated frame, gamers appeared  
12 to be critical towards technology because its commodification was viewed as  
13 problematic. A dominant view emerging from the data indicated that cognition  
14 triggered a readiness to be critical about what they could really do with mobile  
15 technology consumption in a way that assuaged their needs whilst questioning the  
16 meaning of the market generated frame. Non-gamers extended digital transformation  
17 meaning so that their knowledge structure fitted with social acceleration (emerging  
18 fads on new media, new brands etc.). For instance, one of the respondents, a non-  
19 gamer, revealed how the dynamic of value acknowledgment and destruction was  
20 framed by a reliance on marketplace positions, and showed that the market generated  
21 frame allowed him to give credit to firms' brands and technological device  
22 configurations in order to initiate symbolic self-projects.  
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35 *[one respondent to another] This is my phone, state of art, totally*  
36 *cool. It is factory pre-set. But with this phone you are not the same as*  
37 *somebody else. I have play station and Wii if I want to play games.*  
38 *Mobile games are boring, I already completed the one on it, 50 levels*  
39 *took a couple of hours. They are too expensive for what they do,*  
40 *graphics are small and not worth it. Better get a good one on*  
41 *PS3...may be new games will be more suited for that phone soon*  
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46 *(Male, non-mobile-gamer, 9-15)*  
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49 The analysis of the data also indicated that the market-generated frame was  
50 sustained by the re-integration of firms' information (marketing) in view of future  
51 technology chronic consumption. For any given individual the consumption processes  
52 of various digital devices and games appeared to be overlapping, thus, underlying the  
53 necessity but at the same time very often the current lack in practice of games'  
54 definition and interoperability across platforms. This coping form therefore provides  
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3 macro-viewpoints of the brandscape following the development of capacities to  
4 confront other stakeholders over time.  
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8 *The social being frame: expressing one's need for embeddedness*  
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11 In this frame the respondents elaborated further on their association to the wider  
12 environment surrounding smartphone games and related technologies (such as  
13 headphones, or phone covers, fashion, expression, imaginary magical artefacts)  
14 consumption. With what we have termed the social being frame, individuals were  
15 better equipped to express and appraise their need for embeddedness regarding their  
16 presence next to others while chronically consuming.  
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21 *It is really easy on a smartphone to have cool stuff. It says you are up*  
22 *to date. It also allows me to show off a bit with my gaming friends and*  
23 *with the effects produced when I am on the Tube! (laughs) (Male,*  
24 *gamer, 16-22)*  
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30 *Or*

31 *[one participant to another] We exchange games quite often, I buy*  
32 *one you buy one and via Bluetooth, it is free. We compete against*  
33 *each other and I think it is fair to say that I get to stamp a bit of me*  
34 *and my ideas on the group through sharing the sort of more*  
35 *thoughtful games I prefer' (Male, gamer, 9-15)*  
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41 An identity was evident through which needs appeared to be fulfilled and  
42 value was consumed. This invited the respondents to add “qualities” and personalize  
43 the use of technologies they encountered. We argue that this cognitive work  
44 predominantly illustrates an individual ability to confront culture. It is of major  
45 importance since it informs the multifaceted nature of social interactions and the  
46 potential negotiation of norms (what digital transformation prescribe) among  
47 individuals. This subtle and dynamic form of coping with technology occurred within  
48 a network that could be both insecure and unknown (generally free) or official and  
49 generally paid for. It led to respondents questioning what technology as a whole  
50 prescribes or how it could be used in a way that could sustain social relations  
51 negatively or positively with those virtually rather than physically present. The social-  
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3 being frame encourages previous theories of technology consumption to include  
4 'others' that paradoxically also shape consumption from "the outside". This cognitive  
5 work goes in tandem with the phenomenon of contournement and amplification of  
6 technologies, as illustrated in the following quote.  
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11 *Most games are only for one player. I like games where you need a*  
12 *team like on PS3 but on mobile it is not yet that advanced and many*  
13 *people do not know or want to play multi-players games. Good multi-*  
14 *player games are hard to find. It will be nice to be able to share with*  
15 *whoever is with you rapidly without all that login. Are photo effects a*  
16 *game because I do that a lot with friends? (Female, gamer, 16-22)*  
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23 Under this frame, respondents also took different stances and subject positions  
24 in a kind of 'play' mode; allowing them to develop affective disposition and  
25 sensibilities towards their gaming chronic consumption practices. When this frame  
26 was salient, respondents' often used humor to reflect on themselves and their digital  
27 possessions consumption.  
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33 *In mobile games it is ok to get killed or stop in the middle. You can*  
34 *even play back the crash and share it with your friends. You often*  
35 *have to lose in any case as you have to move quickly to another*  
36 *activity or you get bored knowing what is coming. (Female, gamer, 9-*  
37 *15)*  
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43 This enactment took different forms of sensing towards the close environment  
44 in the course of their experiences; a dominant view emerging from the respondents  
45 reported they had been relaxed, stressed, irritated, avoiding or seeking social contact.  
46 As one of the respondents revealed, consumers can take part in different experiences;  
47 demonstrating how conventional marketing discourse has shifted by focusing on the  
48 importance of the collective.  
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54 *I have Bluetooth, so I get a lot from my stepson. I am happy as it is*  
55 *free and he can show me. He has tested them for me and knows my*  
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3 *tastes. Peer to peer is the best system for games. (Female, gamer, 23-*  
4 *28)*  
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8 *The citizen frame: scrutinizing the general interest*  
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11 Being driven by goals, shaped by marketplace influences and the collective gaze,  
12 respondents' view of individuality was challenged; leading them in turn to renegotiate  
13 the discursive consumption architectures and forms of coping offered by digital  
14 technology. This frame provides initial evidence that smartphone gaming as a form of  
15 chronic consumption facilitated preferences such as cultural tastes and ways to  
16 connect with others that were expressed and re-negotiated.  
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23 *I am not a huge fan of video games in general. I do have a few that*  
24 *came with the phone. Playing does not make you individual anymore.*  
25 *You are individual if you do not have games. I am protecting myself*  
26 *against wasting time. I think people with game are just trying to*  
27 *attract attention. (Male, non-gamer, 23-28)*  
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33 Questioning of technological value appeared to be primarily made possible  
34 through more or less radical problematization, in which suitable usages of digital  
35 games were reflected upon. These linked to what we have termed the citizen frame,  
36 with judgmental views on smartphone games around a cognitive frame that allowed  
37 the respondents to take into account the possibility of others' views in order to stay  
38 attuned with perceived higher-order technological necessities.  
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44 *It is all about what the others are doing with their phone and games.*  
45 *New trends are created every day. You see that with video clips. New*  
46 *groups are created with their own demands and needs. The type of*  
47 *game and where they come from is getting larger. (Male, gamer, 16-*  
48 *22)*  
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54 The citizen frame was especially salient when the respondents revealed  
55 common groupings through which gaming technologies were collectively used  
56 highlighting acceptable ways to play games in public spaces: essentially, 'all is  
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3 permitted'. Smartphone gaming had legitimate priority, including permanent visibility  
4 and authorization to multitask. Under the citizen frame, the respondents understood  
5 their role when consuming technology, but also were able to go beyond marketers'  
6 strategies to assume that a general interest and a more authentic sense of individuality  
7 could be reached.  
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13 *I have a Blackberry, this is a serious phone, got it for work, I do not*  
14 *expect many to carry games and I don't think the business types who*  
15 *use these phones would approve of gaming on them in the middle of a*  
16 *serious Board meeting for example (laughs). (Female, non-gamer, 16-*  
17 *22).*  
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23 So, through smartphone gaming as a form of chronic consumption, the  
24 fulfillment of individual goals by respondents did not necessarily require to recognize  
25 fully the technical possibilities of specific devices. However, this also raises issues of  
26 potential identification and recognition errors, and creates potential tensions with  
27 respect to social etiquette wherein every smartphone owner is equivalent to any other.  
28 This was discussed in the focus groups around game encounters that required, as part  
29 of the play, making identification in real life (IRL) a relevant concern. Indeed, the  
30 type of device and its specific followers via the mediation of approved meeting points  
31 were viewed as a means to segregate or engage with passersby. In doing so, gamers  
32 and non-gamers came to clarify their positive coping trajectories for a general interest.  
33 They developed different interactional styles (place, time, game connection with  
34 public settings etc). This attempt to reach unification was situated within the  
35 respondents' minds and called for a citizen frame that comprehended and integrated  
36 altruistic concerns for others.  
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46 Taken together, the three frames can be described as a pair of glasses that  
47 individuals use to interpret the turbulent world of digital transformation and take  
48 action (see Figure 1). The findings suggest that this interpretation and enabled actions  
49 are not just corrective; they rather enable positive coping practices. Frames structure  
50 narratives, and by doing so they enable individuals to "secure" and undertake novel  
51 forms of understanding and actions regarding their embeddedness as a consumer  
52 within the marketplace, but also regarding their individuality within broader culture  
53 and collectives. The frames reveal that games on Smartphones have become  
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3 crystallized as a set of social and material relations providing scope for dissonance  
4 and situational improvisation. Frames ‘work for’ and are ‘worked on’ by a host of  
5 individuals, ideologies, philosophies, principles and other social and material  
6 elements becoming an ongoing interpretative process that provides a basis to  
7 understand how individuals are located within techno structures and how they cope.  
8 Whether individuals see playing games on Smartphones as enabling and empowering  
9 or as disruptive, deskilling and controlling, their reliance on cognitive frames within  
10 their narratives shows that their interactions with Smartphones enables them to act  
11 within an ambiguous and rapidly evolving technological ecosystem.

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18 The three frames, market generated (as capacity to confront hegemony),  
19 social being (as capacity to confront culture) and citizen (as capacity to confront  
20 moral concerns and alterity) articulate the nature of coping from individual to  
21 collective interpretations. The gaming process is presented as conflicted and often  
22 misinterpreted by certain actors, but this triggers a need to shift between the frames.  
23 Through appraisal capacities developed by individuals employing the three frames,  
24 the findings show that positive coping processes emerge. The enhancement of frames  
25 and of positive coping processes is enabled through connection between the frames  
26 and through the different confrontations and questioning each frame represents. The  
27 findings especially shows how, by relying on the same set of frames as gamers, non-  
28 gamers do matter and shape – indirectly but positively – Smartphone gamers’  
29 behaviours to achieve broader social goals. Moreover, the findings explore in a more  
30 explicit fashion where the consumption boundaries of Smartphone gamers and non-  
31 gamers converge, disappear, or are redefined outside of a firms’ control. While most  
32 previous research has disregarded the importance of external socio-cultural conditions  
33 in coping mechanisms, the findings suggest that cultural reframing of technological  
34 artefacts is motivated by representations of social interactions and by the negotiation  
35 of the ascribed rules or assumptions of use promoted by Smartphone manufacturers  
36 and retailers. Beneath the three frames, the findings also bring evidence on second-  
37 order and more subtle forms of cultural re-framing –such as rejection, postponement,  
38 and opposition.

## 54 Discussion

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56 In this paper we have sought to explore how smartphone gaming as a form of chronic  
57 consumption mitigated digital transformation uncertainty in an accelerated culture.  
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3 We extend in doing so previous research by demonstrating that positive coping is  
4 evident in the respondents' consumption narratives. Even though existing knowledge  
5 indicates that technologies serve continuous learning, knowledge development and  
6 often positive outcomes that serve individuals' sense of self (Addis, 2005; Kozinets,  
7 2015), it does not focus on how coping operates in the realm of (convergent) chronic  
8 consumption of mobile technologies (Petruzzellis, 2010). By focusing on how  
9 smartphone game consumption' narratives produce novel positive coping processes,  
10 this study builds and provides new insights regarding digital transformation together  
11 with emerging positive coping forms. Leveraging the three frames (market generated,  
12 social being and citizen frames), the study findings identify congruent chronic  
13 consumption behaviours related to digital transformation and digital services  
14 including gaming by both smartphone gamers and non-gamers. This consumption  
15 multiplicity is found to facilitate continuous learning and knowledge development,  
16 increasing the artefact's complexity over time, but also allowing emerging coping  
17 forms operationalized via three main frames. Furthermore, the majority of  
18 respondents were expecting the 'others' (smartphone gamers or non-gamers  
19 depending on starting point) to engage in the on-going learning process. Describing  
20 their playing activities (for gamers) or merely referring to game-like activities on  
21 smartphones was enabling and empowering, refining the meaning of technology  
22 transformation.

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Smartphone games are presented as privileged actors that facilitated emergent norms among the study respondents. We argue that this reveals in turn that cultural trends operate within the uncertainty of digital transformation by including a balancing viewpoint to smartphone gaming that has been termed disruptive, de-skilling, polluting the social environment and potentially controlling (Kozinets, 2008). One particular area of theoretical insight in our findings is the role of un-organised, peripheral, non-strategic, non-institutionalised actors as catalysts in the (re)framing of digital transformation, underlining the interdependencies of knowledgeable agents in shaping its societal impact. We explicitly identify where the consumption boundaries of smartphone gamers and non-gamers converge or are redefined outside the control of the marketers' of smartphone games (de Kervenoael et al., 2015). The role of non-institutionalized 'others' is essential, not least because such actors sit on the boundaries of two fields and thus experience tension/ clash of institutionalized expectations. Most of the studies on digital transformation consumption are often

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3 portrayed as “either marginal or as only one element in the wider social-accelerative  
4 process” (Hassan, 2010: 361), while others present digital technologies as  
5 representing “a new social morphology ... [with a] logic [that] substantially modifies  
6 the operation and outcomes in processes of production, experience, power and  
7 culture” (Castells, 1996: 469). Significant from the findings of this study is the  
8 necessity to further problematize how technology-related consumption not only  
9 produces iterative and market-led feature redesigns, through user-generated content,  
10 or value co-creating practices, but how the social interaction in, through and behind  
11 gaming activity also produces more nuanced changes of smartphone games’ initial  
12 intents or designs.  
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20 Through the cognitive framing of convergent technologies, in this study  
21 smartphone gaming as a form of chronic consumption is shown to facilitate positive  
22 coping with digital transformation uncertainties. Prioritising consumption reframing  
23 practices over marketers’ prescriptions posits consumer power not as negative or  
24 confrontational, but as a (co)creative force, structuring fields of interaction and  
25 exchange of free agents (Denegri-Knott et al., 2006). Research on coping is  
26 multidisciplinary and as a socio-technical phenomenon it takes evolving forms, yet a  
27 noticeable shortcoming in the literature is the lack of consideration of the effects on  
28 coping of the rise of post-social relations within chronic consumption (Knorr Cetina,  
29 2001) and overall digital technology transformation (Zwick and Dholakia, 2006). On  
30 the one hand, consumer culture researchers have shown the importance of  
31 consumption dynamics for individual coping strategies in various contexts (Pavia and  
32 Mason, 2004; Sujun et al., 1999), but they have remained quiet in their empirical  
33 consideration about technology’s potential to serve the coping agenda. This study  
34 attempts to bridge this gap by acknowledging the implications of the technologization  
35 of society in terms of coping. We isolate the role that convergent mobile gaming  
36 technology chronic consumption plays in coping. Referring to the context of  
37 smartphone gaming, the findings show how chronic-gaming enables individuals to  
38 cope positively with uncertainties that persistently problematize the link between  
39 individuals and the collective (Berthon, 2005).  
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### 55 **Conclusion**

56 Coping mechanisms are built in narratives that articulate the three frames and that  
57 allow individuals to develop capacities to face hegemony, culture, and alterity-moral  
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3 concerns. A given frame enables to engage in the questioning of the inherent  
4 paradoxes or contradictions that arise from the reliance on other frames. Each frame  
5 draws the attention of individuals on questions of representation and signification  
6 (market generated frame), directionality and prescription (social being frame) and/or  
7 explanation and individualization (citizen frame) activating positive coping  
8 mechanisms.

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13 Our research calls for re-organisation of relationships and collaboration  
14 between technologists and digital consumers but does not fully reject current  
15 marketing approaches (Green et al, 2001). As such, it is important to re-visit the  
16 classical assumptions within the gaming industry underlying a lack of socio-cultural  
17 understanding of gaming that can be considered as a manifestation of chronic  
18 consumption on Smartphone and other mobile devices. For example, most game  
19 retailers may too often base their strategy on past data, which means that they may not  
20 understand fully the lack of console-based (PS3, Nintendo) gaming heritage evident  
21 for most mobile game users. In a similar area, most marketing and communication  
22 related to smartphone games seem to be mainly directed at long standing smartphone  
23 gamers. In essence, we question whether there is not a shortcoming that classify  
24 individuals who play Farmville and Angry Birds as "gamers" in the same sense as  
25 those who play Starcraft and Call of Duty. Ultimately, regarding games per se, mini-  
26 games built for touchscreen devices are now dominating the app market and they are  
27 often based on freemium models. Is the socio-cultural understanding and practices of  
28 chronic mobile game sufficiently attentive to the behavioural aspects generated by the  
29 presence of free and charged services?  
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41 Drawing on the above game examples, our three frames foster the creation of  
42 new strategic chronic consumption forms congruent with consumers at whatever stage  
43 of the consumption cycle they are at; creating both greater scope for existing digital  
44 technologies and more inclusive societal understanding of future technological  
45 artefacts and services (Matthing et al., 2004). As found in the press review (articles  
46 published about the issue in the generic English press) of this study, selection and  
47 execution of gaming opportunities are indicated as key issues. From an industry  
48 perspective, the exponential growth in GPS-based games provides evidence of rapid  
49 adaptation of the market to digital transformation opportunities. Consider, for  
50 example, 'Tourality' and 'Waymarking' as games where a number of locations are  
51 chosen for each game in order to build a community map of cool places (Hjorth,  
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2010). A different example relates to wearable digital technology or the internet of things that records personal information (e.g. blood pressure, sugar level) and allows owners to monitor themselves and to control daily activities remotely. A non-commercial example includes Cancer Research UK which has launched free smartphone games in which players help scientists to find patterns in genetic data from cancer patients (Play to Cure: Genes in Space). As a result, the challenge for marketing around digital technology chronic consumption is how to build capabilities that can relate to individual consumers without infringing on the community: i.e. the stimulation of consumer embeddedness within digital transformation.

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