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Older people, video games and the European French-language press

A topic model approach on a study about deviance, discipline and self-improvement

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Abstract

Over the past few years, the French mainstream press has paid more and more attention to “silver gamers”, adults over sixty who play video games. This article investigates the discursive and normative paradigms that underlie the unexpected enthusiasm of the French mainstream press for older adults who play video games. We use mixed methods on a corpus of French, Swiss and Belgian articles that mention both older people and video games. First, we produce topics, that is, sets of words related by their meanings and identified with a Bayesian statistical algorithm. Second, we cross the topic model results with a discursive analysis of selected articles. We preface the topic modeling’s conclusions with a discussion of the representations of older people and video games in European French-language mainstream media. Our analysis explores how the press coverage of older people who play video games simultaneously erases moral panic about video games and reinforces the discourse of “successful ageing”.

Introduction

“Our seniors age better when they play the Wii” (*La Dépêche du Midi*, 2013). “Retired people are being introduced to video games by unemployed youth” (*Le Parisien*, 2011). “The new generation of senior gamers” (*Le Point*, 2015)... It seems that the French press

cannot get enough of “silver gamers”, adults over sixty who play video games. Enthusiastic article after enthusiastic article in national and regional newspapers and news magazines cover with awe the installation of Wii consoles in nursing homes and the outpouring of scientific articles researching the health benefits of video games for the elderly. This cheerful coverage departs from the narrative that portrays older adults as uncomfortable with – if not downright hostile to – newer technologies (Caradec, 2001; Sauveur, 2011). It also contrasts with the unfavorable portrayal of digital games that has dominated mainstream media since the 1990s when anxiety about video games was at its peak (Mauco, 2008a).

The discourse on older adults who play video games intertwines various and sometimes contradictory representations: ageing as decline, the injunction to age successfully (in the biopolitical sense of ageing healthily and productively), and the opposing dynamics of moral panic and normalization around video games. Our analysis explores how the European French-language press coverage of older people who play video games simultaneously erases the moral panic about video games and reinforces the discourse about ageing successfully. The case of the discourse on older adults who play video games illustrates the complexity of the competition among moral entrepreneurs to impose injunctions and norms, that is, notions of what is good and acceptable, in a neoliberal context of self-discipline and self-enhancement.

Our research question is twofold. First, we investigate whether and how the representation of video games is changing in the media. More specifically, we ask whether the press coverage of “silver gamers” contributes to the legitimation of video games with a focus on whether a moral panic about digital games persists. Second, we investigate whether and how the representation of older adults is changing in the media. We ask whether the press coverage of “silver gamers” is a part of the discourse of successful ageing and, if that is the case, how video games fit into this discourse.

This work fills several gaps in our knowledge of representations of older adults and representations of video games, two objects whose rapid transformations are under-researched. Moreover, studies on the representation of the “silver gamer” are few and far between with the exception of Sara Mosberg Iversen’s work on older adults and video games in the academic and scientific literature (Iversen, 2014). This study opens the way for a comparison across media and contexts. Furthermore, from a methodological point of view, we show how a specific lexicometry method – namely, Topic Model Analysis – can be used to explore press data.

First, we provide a literature review. Because of the lack of specific work on the media coverage of older people and video games, we review three fields: video games and the media, older people and the media and, finally, academic studies on older people playing video games. Second, we present our corpus and the lexicometry techniques that we have used. Third, we analyse the results of this quantitative analysis and describe the

main topics that arise. Finally, we conduct a text analysis of three chosen articles from the corpus and explore how they match the lexicometry results.

Video games in the mainstream media

The case of France illustrates the lasting influence and the slow shift away from the moral panic in mainstream media about video games. By mainstream media, we mean widely distributed or broadcast press, television and media outlets that cover general news in contrast to specialized outlets such as video game magazines. In the early 1990s, when digital games began to appear in the headlines of mainstream press and television shows, the coverage was, at first, negative. Alarmist takes on the fighting game *Mortal Kombat* (Midway, 1993) and the first-person shooter game *Doom* (id Software, 1993) set the tone for the coming decade (Mauco, 2014; Bogost & Mauco, 2008). When massive multiplayer online games became more visible (with *World of Warcraft* (Blizzard Entertainment, 2005) as an archetypical example), the media coverage of video games added addiction to the list of negative effects attributed to digital games (Mauco, 2008).

During the same period, authority figures from various institutions fueled the anxiety about video games. In 1998, during the vote on a law to protect minors, the minister of internal affairs Jean-Pierre Chevènement asserted that digital games begat juvenile delinquency. He lambasted “those little hoodlums who live in a virtual reality” (translated from French). After the release of *Grand Theft Auto* (BMG Interactive, 1998) in which the player is able to shoot police officers, a police union called for the regulation of video games. In 1998 and 1999, the Catholic association *Familles de France* campaigned for zoning restrictions for video game retailers (Mauco, 2014).

This display of anxiety is a common pattern for emerging media. In their early days, popular literature, television and cinema faced criticism from older media and moral authorities similar to those levelled against videogames: they were accused of fostering violent and antisocial behaviour among the most vulnerable groups – in particular, the working class and young people (Ferguson, 2009). They underwent what Kirsten Drotner calls a media panic, a concept modelled after Stanley Cohen’s notion of moral panic (Drotner, 1999; Cohen, 1972; Cohen & Young, 1981). Cohen characterises a moral panic as an episode during which certain interest groups attempt to define a group or an object as a threat to society in order to “mark off boundaries, in their own terms, as to where the respectable mainstream leaves off and the margins – the ‘outsiders’ – begin” (Cohen, 1972, p. 30). Incidentally, Becker’s work on “outsiders” sheds light on the relationship between the groups involved in this normative competition in which “the creation of a new fragment of the moral constitution of society, its code of right and wrong” is at stake (1963, pp. 145-146).

In reaction to the moral panic around video games, other groups have entered the normative competition in an attempt to legitimize video games. The video game industry and the French government have found a common interest in labelling video games a flagship cultural institution (Dauncey, 2012). Members of the cultural field have also taken an interest in video games, which have made their way into museums (Coville, 2013). This shift is arguably visible in the mainstream media's coverage of video games. Although French references are lacking, David Gerber's work reinforces this hypothesis. Since the early aughts, Swiss magazines have increasingly focused on the economic success, potential health benefits and cultural value of video games (Gerber, 2010). Over the past three decades, the representation of digital games has turned around as video games went from noxious to redemptive: the mainstream narrative increasingly focuses on the potentially beneficial effects of video games – in particular, regarding physical and mental health (Carbone and Ruffino, 2012).

Older people in the mainstream media

The media coverage of ageing is just as tumultuous. In France, ageing has been treated as a social issue in the public discourse since the early 19th century, leading to the representation of “the elderly” as an economic burden (Caradec, 2012). However, the emergence of a new discourse about “successful” ageing has provided nuance to the representation of old age as a time of fragility and dependency. The discourse of successful ageing argues that individuals can free themselves from ageing through consumption and lifestyle choices: “Ageing does not result anymore from the passing of time, but from the more or less efficient ‘optimization’ of one’s capital.” (Puijalon & Trincaz, 2014, p. 68, translated from French). This discourse relies on an opposition between the third age and the fourth age, two terms that refer to a dichotomy, but also a hierarchy, between healthy ageing and dependent ageing (Gilleard & Higgs, 2009).

The discourse of successful ageing shapes the prevalent representations of older adults in the French media. The specialised press for seniors often features stories about centenarians, whose longevity is celebrated as the achievement of a commendable individual (Puijalon & Trincaz, 2014). In fact, most of the content of these magazines relates to health in one way or another: even articles about leisure and travel primarily showcase sports and hydrotherapeutic cures (Sauveur, 2011).

This discourse also finds its way into the everyday life of older adults. In an ethnography of several Czech senior centres, J. H. Marhánková finds that both older adults and caretakers rely on that discourse, framing ageing as a project and activity as a moral imperative (Marhánková, 2011, 2014). The discourse of successful ageing has an ambiguous appeal insofar as it is simultaneously liberating and constraining. It offers

perspectives and acknowledges agency but also threatens those who refuse or are unable to comply with its demands with the spectre of the dehumanized fourth age. To that extent, this discourse goes beyond an intuitive desire to live as long and as well as possible. It entails a normative and disciplinary dimension, implemented in institutions but also by older adults.

Video games and older people

The opposition between active ageing and dependent old age crystallizes around the issue of technology – in particular, digital technologies. The essentialist representation of older adults as unskilled with new technologies coexists with a second discourse that portrays seniors as eager to engage with modernity (Caradec, 2001). In this narrative, video games become an acceptable pastime for older adults insofar as it signals their digital literacy as well as their youthfulness of spirit, two qualities associated with successful ageing.

However, the notion that video games are an inappropriate activity for older individuals persists. The ethnographic literature on the subject reports that older video games players often face bewildered or disapproving reactions from others (Quandt et al., 2009; de Schutter & Vanden Abeele, 2010). Such reactions are prompted by the symbolic association of play with childhood. In fact, play activities for adults are generally rebranded as “hobbies” and “passions” (Donnat, 2009). Moreover, the representation of play as an unproductive endeavour is at odds with the dominant discourse on ageing. The discourse of successful ageing emphasizes activity, consumerism, and busyness (Gilleard & Higgs, 2009).

However, modern understandings of play have pushed it towards productivity: “Our media-driven consumer culture [...] encourages people to seek ever-greater accomplishments, ever-better abilities, and ever-thrilling experiences. Play becomes something we need to be good at.” (Henricks, 2016, p. 316). From this perspective, playful activities become a disciplinary mechanism, i.e., a mechanism “through which individuals are brought to work on themselves, under certain forms of authority, in relation [to] truth discourses, by means of practices of the self, in the name of their own life or health” (Rabinow & Rose, 2006, p. 197). The medical literature on ageing and video games heavily draws on this approach. The research is chiefly preoccupied with utilitarian and disciplinary questions – namely, how to use video games in order to improve (the lives of) older adults (Iversen, 2014).

Presentation of the corpus

We deal with a corpus made of 333 French-language articles from 61 newspapers (see table 1). They all have been issued in metropolitan France, Belgium or Switzerland

between 2000 and 2016 (see table 2). All the quotes from newspapers in this article were originally in French and have been translated by the authors.

We conduct our study on a multinational French-language sample. Because we are aware of the vast variety in media and discourses between French-language areas, such as Ivory Coast or Quebec, we restrict ourselves to metropolitan France, Belgium and Switzerland. These countries share a geographical area and have comparable sociological, cultural and economic contexts – meaning that intranational variations are arguably at least as sharp as international differences. They also allow us to expand our sample and draw from a larger literature. For example, the only existing study in French about video games in the media was conducted in Switzerland and is cited in French work (Gerber, 2010).

The initial selection has been conducted with the help of Factiva, a software that allows researchers to browse and search through a broad selection of local and national newspapers. Despite its wide scope, Factiva's selection remains arbitrary: for instance, while some major newspapers (*Le Figaro*, *La Montagne*) are included, some of equivalent importance (*L'Humanité*, *La Marne*) are not. In particular, the only French national newspaper that hosts a weekly column about video games – namely *Libération* – is missing. However, since it can arguably be considered as specialized press, we decided not to add it afterwards and kept to the selection from Factiva.

At first, we looked for articles containing the keywords “jeu(x) vidéo” and “personne(s) âgée(s)” This step brought us about 500 articles. Notice that two additional biases may stem from that initial research.

While it is very unlikely that an article would talk about video games without using that very phrase, several different words exist to describe old age. Moreover, these phrases carry different nuances, different ways of seeing the process of aging and the role of older people in society. The choice to use the word “senior” or the word “mamie” [granny] reveals distinct intents with the former belonging more to the entrepreneurial lexicon and the latter sounding more condescending and familiar.

Not all articles containing these two expressions are relevant to our purpose. Some articles are nothing but collections of unrelated short news stories put together in a single unit. For instance, a single article might give information about the food at Laroquebrou's retirement house and mention sales in some video games store in Aurillac. In addition, there are some misleading idiomatic phrases such as “personnes âgées de 20 à 30 ans” [people between 20 and 30 years old], which do not refer to old people.

We handled the second problem by sorting all the articles manually and removing those that were not relevant. In order to address the first problem, we conducted tests with other keywords such as those mentioned above; only a very limited number of new articles were found. Finally, we ended up with a selection of 333 articles that seemed relevant for our study.

Name	Articles	Name	Articles
Ouest France	34	Le Parisien	25
Sud Ouest	21	Le Figaro	16
Le Progrès	15	La Tribune	15
La Voix du Nord	13	Midi libre	11
La Nouv. République du Centre-Ouest	10	La Dépêche du Midi	9
Le Point	9	Le Temps	9
Les Echos	8	24 Heures	7
La Montagne	7	others	124

Table 1. Corpus: distribution of the articles with respect to the newspaper.

2000-2002	2003-2005	2006-2008	2009-2011	2012-2014	Since 2015
6	13	60	84	97	73

Table 2. Corpus: distribution of the articles with respect to time.

Preprocessing

Before conducting any data analysis, we needed to remove all the unnecessary words from each article, especially those that might interfere with the proper functioning of the algorithms.

As a first and quite conventional step, we partially lemmatized the vocabulary. This means that we reduced to a single form all the words that were different from a grammatical point of view but equivalent as far as the meaning was concerned. For instance, we removed plurals, gender or conjugation. This step was performed manually since we wanted to avoid creating unwanted homonyms. For instance, the word “marché” might either refer to a marketplace or be the past form of “marcher” [to walk], so we did not automatically identify “marché” and “marcher”.

A second step was to glue together phrases as a single unit when that phrase was more meaningful than its separate items. A typical example in English is “New York”; here, we have frequently seen “jeu vidéo” [video game], “union européenne” [European Union] or “maison de retraite” [retirement home].

It might also be interesting to search for homonyms and mark them in the text as different words, but this is a tiresome and possibly misleading task, which is not often done in similar studies. Thus, we decided to abandon this possibility.

These first steps are common in most lexicometry studies. The last one is more specific to topic models: we decided to remove part of the vocabulary – not only purely grammatical words (articles, prepositions, auxiliaries) but also description verbs and common journalistic vocabulary (“to say”, “to ask”, “to seem”). The hypothesis behind this is that these words are not equally distributed since journalists may have different styles. Thus, the algorithm is at risk of detecting variations that are not meaningful for our

purpose. We are not trying to identify authors but to understand topics. This last step halved the total number of words in the corpus.

LDA Topic Model

The topic generation model through Latent Dirichlet Allocation (LDA) was introduced for the first time in 2003 by Blei, Ng and Jordan (2003). It is based on a Bayesian probabilistic model, which stems from the following theoretical hypothesis.

Topics exist before any article is written, topics standing for semantic fields, i.e., sets of words that are connected by their meaning. Then, the journalist produces an article by picking words at random among a small subset of topics.

Let us make this less theoretical by giving an example. A journalist wants to write an article on the Vietnam War. She uses the following topics: warfare, de-colonization and Asia. She ignores all the other words such as South America, space race and ranching. In the first topic, she will pick up certain words such as “army”, “guerrilla” and “napalm” (discarding “spears” or “drakkars”); in the second, “imperialism” and “struggle”, etc. With all these words, she writes an article.

This is, of course, a strong hypothesis. First, it only considers articles as mere bags of words, ignoring sentences. Second, it assumes randomness at every stage of the process, but journalists, in reality, have some idea about what they want to write. Finally, it is uniform over time although some topics may be more attractive at different moments. Those three assumptions are necessary for the sake of the mathematical model’s simplicity, which otherwise would be intractable. However, the extensive use of topic model in the past decade shows that this model is quite efficient to identify lexical fields in a corpus of any size.

Let us now give a more mathematical definition of the model.

Let k be topics – namely, $T_1, T_2 \dots T_k$. For every article a :

- 1) Pick at random a weighted distribution $\theta(a) = (\theta_1, \theta_2, \dots, \theta_k)$. θ_i stands for the contribution of topic i to article a .
- 2) For every possible word w_p , pick at random a topic T_i , with respect to the distribution θ_i , which means $\forall i \forall w_p \Pr(w_p \in T_i) = \theta_i$.
- 3) Now pick the actual word w itself at random among T_i . If the article is complete, go back to step 1 – otherwise, to step 2.

Notice that the way we pick words among the topic is not fixed. In this article, we use a uniform distribution, but it is possible to associate words with different probabilities, for example.

In practice, this means that the articles are observations that derive from hidden variables – namely, the topics. Thus, we expect to find the topics through reversing the generation process. This is equivalent to the computation of $\Pr(T, \theta/w) = \Pr(T, \theta)/\Pr(w)$.

Unfortunately, there is a computational difficulty: computing the sample space and then computing $\Pr(w)$ is not tractable. Therefore, the analysis needs to approximate this quantity. Many algorithms have been introduced in the literature to handle this; here, we simply use the original one from Blei et al. – namely, the mean field variational method (2003).

Results

The algorithm asks as an input the number n of topics we want. Since we had no idea at the beginning, we made several attempts. The most interesting results were obtained for $n = 8$. Beyond that number, non-significant distinctions arose; below 8, we lost information since several important topics were merged together while junk did not disappear.

The following tables display the different topics that the algorithm computed. Note that the algorithm was non-deterministic; thus, the exact bags of words may vary, but the signification remains mostly unchanged with iterations.

Topic 1	Topic 2
marketing	enfant [child]
territoire [territory]	jeune [young]
économique [economic]	personnes âgées [older people]
développement [development]	centre [center]
service	jeu vidéo [video game]
démarche [process]	place
territorial	heure [hour]
exemple [example]	maison [home/house]
étape [step]	salle [room]
offre [offer]	association
analyse [analysis]	projet [project]
action [share/action]	octobre [october]
projet [project]	atelier [workshop]
stratégie [strategy]	espace [space/place/area]
acteur [actor]	semaine [week]
tableau [picture]	fête [party]
	jeu [game]
	samedi [saturday]
	rue [street]
	quartier [area/neighborhood]

Table 3. Topic modelling results: topics 1 and 2.

Topic 1

The first topic is connected to the economic and strategic analysis of a product – usually, a game or a console. Almost all the words belong to an entrepreneurial vocabulary – primarily, marketing. In fact, this topic is the least significant of all (see table 7, below). Indeed, in none of the 333 articles do a majority of the words belong to this topic.

Topic 2

The second topic is much more distinctive. It deals with volunteer work, the social and socially-responsible economy, and also with intergenerational connections. It mentions actors, exhibitions and spaces. This vocabulary is typically used by local press articles that insist on cross-generation activities. Here, video games may be either the cross-generation activity itself or a reward for the well-behaving youth who has spent time with the elders.

Here is an example of an article in which 82 pct. of the words belong to the second topic:

La 'Maison des Associations' has set up a video game workshop which is open to anyone. It aims at having grown-ups and older people take up video games with the help of family- and user-friendly games. Another objective is to educate and guide children and teenagers towards games that are different from what they are used to... (*La Voix du Nord*, 2011)

We can also see a frequent association between this topic and topic 6 below. The articles mixing words from topics 2 and 6 talk about cross-generation relationships and emphasize cultural legitimacy. An example of such an article is “Retired people are being introduced to video games by unemployed youth”: 36 Pct. of the words belong to topic 2 and 21 Pct. to topic 6. (*Le Parisien*, 2011)

Topic 3	Topic 4
autre [other]	million
âge [age]	entreprise [business]
temps [time]	euro
travail [work]	Internet
personne [people]	marché [market]
vie [life]	société [company]
certain [sure / old (with 'âge')]	année [year]
bien [good]	France
personnes âgées [older people]	produit [product]
capacité [ability]	chiffre [figure / turnover (with 'affaire')]
cerveau [brain]	vente [sale]
mieux [better]	service
étude [study]	affaire [opportunity / turnover (with 'chiffre')]
	système [system]
	milliard [billion]
	numérique [digital]

Table 4. Topic modelling results: topics 3 and 4.

Topic 3

The third topic belongs to medical and paramedical vocabulary that primarily deals with two issues: the process of ageing (of the brain or the body) and self-improvement. Health and wellness columns feature almost exclusively words from topic 3. Other articles combine topic 3 with topic 8 – typically, when there is an attempt to promote cognitive training games, the Nintendo Wii console, or video games as a way to fight the degeneration associated with old age.

A typical, pure third topic article (72 pct.) is “Keep your brain young. A task at every age in life”:

Digital tools are more accessible, user-adapted, and fun. Since many people who are more familiar with computers are reaching 60, the potential of these tools is rising. Nowadays, some places not only use video games to entertain the older people they take care of but also to stimulate their brain activity. (*Sciences Magazine*, 2010)

As a 3+8 hybrid, we quote “Video games improve alertness for senior people” (respectively, 47 pct. and 41 pct.)

California scientists have tried something slightly different on a population of older patients between 60 and 85. They have designed a specific game, named Neuroracer, which has the user do two different things at the same time. With the help of a pad, the user is meant to drive a car on a winding road while having to react to unrelated visual signals. (*Le Figaro*, 2013)

Topic 4

The fourth topic, like the first one, is related to the economy although with a more global approach. The words are borrowed from sales vocabulary and also from the innovation lexicon. It deals with market analysis, product descriptions and business evaluations.

Many articles that meet this topic with a 60 to 70 pct. frequency are barely relevant to our purpose in the sense that they only connect old people and video games through the statement that these are both booming economic fields. Some of them are still interesting – for example, “High-Tech sector: The young and promising French” (61 pct.):

‘Artificial intelligence will bring a technological revolution that can compare with the coming of electricity or the Internet’. These are not the words of just any trend-watcher but Bruno Bonnell, CEO of Robopolis. [...] The former head of Infogrames-Atari is sure that, in the near future, the robot will be in the service of the ill, the old and the disabled. (*L’Entreprise*, 2010)

Topic 5	Topic 6
fonctionnement [working]	robot
prix [price]	public [audience]
départ [start]	exposition [exhibition]
risque [risk]	monde [here: people, audience]
idée [idea]	musée [museum]
investissement [investment]	beaucoup [a lot]
moyen [means/average]	aujourd'hui [today]
originalité [originality]	livre [book]
potentiel [potential]	musique [music]
rendement [outcome]	lire [read]
www	directeur [head/guiding (with 'principe')]
com	

Table 5. Topic modelling results: topics 5 and 6.

Topic 5

The fifth topic deals with the characteristics of a product or an investment. It contains some artefacts (fragments of web addresses) that reveal the presence of many URLs in the articles – they might be advertisements or references to company websites. However, this topic is quite marginal in the corpus as a matter of quantity and with respect to the relevance of the articles in which it appears.

Topic 6

The sixth topic, at its core, belongs to the vocabulary of “classical” culture with books, museums and such. Its importance in the corpus illustrates the efforts to legitimize video games. In addition, it includes some technological words such as “robot”.

Articles dominated by topic 6 are pretty diverse, including pieces about cosplay (*Le Quotidien*, 2015, 58 Pct.) and a study on temporary exhibition (*Le nouvel économiste*, 2015, 55 Pct.). Still, they loosely connect video games and older people. This is a hint at the fact that the enterprise of legitimation through culture does not seem to be very interested in older people while, symmetrically, the legitimation of video games for older people does not consider culture as the main theme (which would be health).

However, topic 6 remains pretty common as a junior partner for other topics – mostly, 2 and 8.

Topic 7	Topic 8
jeune [young]	jeu [game]
bien [good]	jeu vidéo [video game]
coup [blow/opportunity]	console
France	Wii
français [french]	personnes âgées [older people]
homme [man]	écran [screen]
dernier [last]	Nintendo
femme [woman]	jouer [to play]
cours [here: stream]	senior
reste [remains]	santé [health]
Etats-Unis [USA]	nouvelle [new]
mal [bad, ill-]	patient
passe [happen (with 'se')]	ludique [playful]
cadeau [gift]	mouvement [move]
violence	virtuel [virtual]
	permet [to enable/to allow]
	capteur [sensor]
	technologie [technology]
	maison [house/home]

Table 6. Topic modelling results: topics 7 and 8.

Topic 7

At first sight, the seventh topic is not easy to understand insofar as the vocabulary seems disparate. A closer look at the corpus reveals that it is mostly present in articles on petty crimes. Older people appear as victims while video games are either the motivation for the aggression or the reason for the perpetrator to have lost any moral sense. Hence, moral panic – otherwise quite absent from this sample – is reintroduced. See, for example, “an analysis of violence in the canton of Vaud” (43 pct.):

Parents are usually unaware of the devastating powers of such sophisticated tools in the hands of teenagers. This reminds us of the video games that the American Army use to un-inhibit soldiers, Henriette Haas suggests. Mothers and fathers, the school and the media, video games and the Internet, alcohol and drug consumption have been the main topics of discussion and were often blamed [for their bad influence]. (*Le Temps*, 2008)

Topic 8

The eighth topic is probably the most expected. Its vocabulary is centred on the therapeutic possibilities and specific benefits of video games for older people, often mentioning the Nintendo Wii. It is represented in many articles – often, as the main topic – but never above 52 pct. – indeed, it is usually associated with topics 2 or 3.

Here are a few examples of titles in which topic 8 represents a 30-40 pct. majority: “The senior console” (*Stratégies*, 2007), “The Wii, an elixir of life in the retirement home: Pierre, 91,

from Les Pins, Narbonne, ‘does not suffer from Parkinson’s anymore when he plays’” (*Midi Libre*, 2008), and “The elderly say Wii” [=“Oui”, Yes] to video games (*Ouest France*, 2010).

Statistics

The topics do not follow a uniform distribution in time or within the texts. The few elementary statistics below allow us to appreciate their relative importance.

Topic number	1	2	3	4	5	6	7	8
% of total	5.09	24.35	16.44	11.75	6.83	12.51	9.92	12.93
Standard deviation	0.33	4.77	1.8	1.8	0.72	1.09	1.33	1.68
Number of articles where the topic is pre-dominant	4	124	47	42	20	31	29	51

Table 7. Statistics on topic distribution.

The second topic (about social economy) is both the most frequent and the one with the highest standard deviation. Thus, it is the majority topic in more than one-third of the articles. On the opposite, the first topic (about marketing) is the weakest and the most equally distributed – hence, the least significant.

We also notice that the third topic (about health), while second in size, is less often the main topic in a given article than the eighth (about Wii). Indeed, many articles deal at some point with health issues even if they are not their core purpose, while the benefits of the Wii or economic issues tend to be discussed mostly in specialized articles.

Textual Analysis

We now conduct a detailed qualitative text analysis on three selected texts, one for each of the three most significant topics (see Table 7). The first one is about civil society (topic 2), the second one about health (topic 3) and the third one about the specific effects of Nintendo’s Wii (topic 8). For each of these topics, we have chosen a text that was both long enough for a meaningful analysis and with a high percentage of words belonging to the said topic.

The article “Retired people are being introduced to video games by unemployed youth” in which the second topic is dominant weaves together the themes of intergenerational relationships and civil society (*Le Parisien*, 2011). The article, published in a French newspaper that covers the region of Paris, describes an initiative from the employment agency of the *département* of Seine-et-Marne, a distant and sparsely-populated suburb of Paris. It explains that the employment office has sent sixteen unemployed people under 25 to several retirement homes in order to teach the residents how to play the Wii bowling game. The journalist frames the initiative as an

intergenerational exchange between young adults and older adults in which the former brings modernity and the latter bring experience and wisdom: “I like to listen to older people telling me about their lives, and I teach them modernity; we complete each other”, one of the participants is quoted saying.

In fact, both the older adults and the unemployed youth who participate in the programme are cast in an essentialized, monolithic identity of being either young, unemployed and digitally literate or old, wise and grateful for young people’s attention. The articles frame the initiative as, first and foremost, a way out of unemployment for the young adults, who discover caregiver professions and may choose to pursue a career as a live-in nurse or activities assistant in a retirement home. In fact, the article is chiefly about them and their quest for a job, while older adults learning how to play video games is merely the backdrop of the story. Tellingly, only one of the five quotes in the article is from one of the retirement home’s residents.

Video games are presented in a positive but narrow way: they are portrayed as a gateway to employment and good exercise for the physical and mental health of older adults but not as an enjoyable or playful activity. The only sentence that brings up the point of view of the older participants focuses on physical exercise and intergenerational connections. “Over the ten training sessions with four young people per retirement home, seniors enjoyed the freshness of youth, stretching their arms and legs while focusing on the pins on the screen.” Video games here are presented as reinforcing intergenerational dialogue, giving a purpose to lost young people and put an end to the isolation of older adults in retirement homes.

The article “Keep your brain young. A task for every age in a life” in which the third topic is dominant illustrates how the themes of health, play and ageing are connected in the media coverage of older adults and video games (*Sciences Magazine*, 2010). In the context of a popular science magazine, diverse and sometimes conflicting understandings of ageing coexist. The article frames ageing as a tension among inevitable biological decline, the endless possibilities of science, and inter-individual variations: the piece argues that, “even if all intellectual abilities are affected by the natural ageing process, they are not all affected to the same degree”, adding that, “more than chronological age, it is the quality of social integration and the adaptive capacities of individuals that appear to be decisive.” Here ‘decisive’ refers to the necessity of escaping ageing, which is depicted as a gruesome process of decay. The piece includes a vivid and quantified image of a brain shrinking with age: “Between 65 and 88, one observes a mean cortical atrophy of 5.3 cm³ per year and a dilatation of cerebral ventricles. The resulting weight loss of the brain is estimated at 300 grams on average, i.e., 15% to 25% of the total.” A pessimistic, medicalized vocabulary pervades the article in which ageing is described with words such as “regressive alterations” (“altérations régressives”), “intellectual decline” (“déclin intellectuel”), “degradations” (“dégradations”), “deficiencies” (“déficits”), “degenerescences” (“dégénérescences”) and “diminution”.

Still, as the title suggests, the core argument of the article is that ageing can be mitigated through work, the word “travail”, which means here both employment and efforts. The first third of the article describes ageing as a problem and a threat – especially, in relation to economic productivity, which is framed as a duty. The rest of the piece argues that continued employment of older adults, on one hand, and information and communication technologies (ICTs), on the other, could help individuals resist ageing. Such themes are typical of the discourse of successful ageing; and, in fact, the phrase “vieillesse réussie” (“successful ageing”) appears three times in the article.

The last thousand words of the article discuss ICTs and their role in the “successful ageing” project. The piece focuses on video games, listing their potential benefits for older adults’ cognitive health, the fact that they make physical activity more available, and the intergenerational relationships they foster. According to the article, “the main asset of digital software may be its strong distractive potential.” Interestingly, the word used here is not “distrayant”, entertaining, but “distractif”, distractive: it is not about play and fun but about optimizing and facilitating health maintenance. In fact, the article neither names nor describes any specific game.

The article “Wii, the youth elixir. Pierre, 91, resident of the Pins in Narbonne, ‘does not suffer from Parkinson’s anymore when he plays’” celebrates the therapeutic benefits of video games for older adults and prominently features the eighth topic (*Midi Libre*, 2008). The article, published in a local newspaper in 2008, covers a very specific instance of older adults playing video games: retirement home residents over eighty who bowl on Nintendo’s Wii. This article is representative of a genre that was surprisingly numerous in the sample, as there are 51 of these short articles (under a thousand words) about Wii workshops in retirement homes in local newspapers. They provide a narrow representation of the “silver gamer” that focuses on health management.

The article describes the installation of several Nintendo Wii consoles in three retirement homes in the region of Narbonne over the span of a year. Video games in general and Wii consoles in particular are presented as miraculous devices capable of curing ageing. Pierre himself is never given a voice, but a caregiver describes with awe how video games have succeeded where medicine has failed: “When he arrived, he could not stay focused for more than five minutes. Today, he shoots in rapid-fire bursts on virtual targets and gets a hundred percent hit rate. He realizes he can hold a tool, do things. After giving up all artistic activity, he now thinks about taking up painting again.” Interestingly, the common tropes about video games and their dangers are reversed in ninety-one-year-old Pierre’s case. Proficiency at playing First Person Shooters is the sign of a recovering mind and body. Violent video games lead to artistic activities. And, last but not least, health professionals are endorsing digital games.

Nonetheless, the article relies on the conventional representation of older adults as uncomfortable with technology, forgetful, easily confused and clumsy. The shortcomings of the residents are systematically highlighted, and all of the residents’ quotes start with

a mention of how unskilled they are at playing digital games. As is often the case with the media coverage of older adults, health is the central topic of the article. However, the piece concludes on a more general note that echoes the celebratory discourse about digital games with a list of the Wii's qualities: the console is acclaimed for its "ability to value each individual, to strengthen the connection [of older adults] with their children and great-grandchildren, and to make the third and fourth ages move, react, think, play." Play finally makes an appearance but remains in last position, far after "move".

Conclusion

Stigmatizing representations of older adults and video games coexist and compete with celebratory representations. Two results from the topic model stand out: the ubiquity of a discourse of successful ageing and the slow erasure of moral panic about video games. The topic model shows that four themes emerge at the intersection of discourses on digital games and older adults: health, economy, sociality, and culture.

The discourse of successful ageing is pervasive in the press coverage of older adults and video games. The sample includes various representations of ageing from the high-tech senior involved in her community to the sick elderly person who is fading away in an isolated nursing home. The theme of health is prevalent, appearing in topic 3 with words related to the optimization of ageing and topic 8 with words related to the health benefits of specific kinds of video games.

Alongside the discourse of successful ageing, the articles promote a legitimizing discourse on digital games. They mostly advertise their economic success: topics 1, 4 and 5 feature words associated with investment and market analysis. Other themes associated with the same legitimizing discourse emerge – most notably, in topic 2 with words related to the volunteer sector and intergenerational dialogue and topic 6 with words related to exhibitions and culture alongside words related to technology and innovation.

With one exception, the articles do not mention addiction or violence in relation to digital games. Topic 7 contains words associated with petty crimes and delinquency, suggesting that the discursive elements of moral panic persist in the press coverage of video games. However, a close reading of the articles featuring topic 7 reveals an important nuance: journalists only associate video games with delinquency in pieces that mention teenagers or young adults. By contrast, older adults seem to defuse the concerns over the dangerousness of video games.

Overall, European French-language press articles that mention older adults and video games focus on the posited positive effects of video games with an emphasis on cognitive health but also social integration, digital literacy, and the economic potential of the video game industry. The topic model results highlight the convergence of two distinct moral enterprises, one preoccupied with the legitimation of video games and one preoccupied with the productivity of older adults. French, Belgian and Swiss press articles on video

games and older adults describe digital games not in terms of play or enjoyment but as resources and tools for ageing better – to achieve better health, to get closer to one's family and especially grandchildren, to become more connected, more active, more involved with one's community. Such a utilitarian perspective helps legitimate video games, which become useful rather than dangerous in the hands of older adults. From a discursive perspective, older adults seem to be the ones offering a new youth to video games.

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