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Feeding Digital Omnivores:
The Impact of Mobile Media in Digital Entertainment

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1. Media, entertainment and consumer culture

Entertainment has been traditionally a central driver in the evolution of cultural industries. In the early days of media studies, Paul Lazarsfeld –one of the pioneers of functionalist mass communication research- identified entertainment as one of the main functions of the emerging media in the 1930's,[1] and the theorists of the Frankfurt School put it in the very core of their idea of a universal pseudo-culture.[2] Related to spectacle and to new kinds of public, media entertainment simultaneously fascinated and horrified philosophers and sociologists along the 20th century.[3]

Despite being a common place in media and cultural studies, the term does not delimit a clear field of cultural content or media genres. It rather refers to a functional vocation of media content and to an attitude of public towards it. As such, entertainment is defined by the enjoyment or delight of users with (or through) media content. To Vorderer et alt., for example, entertainment is a multidimensional construct that primarily describes the pleasant experiences of users while spending time with the media.[4] In that understanding, the term involves complex psychological (motivational), social (ritual and community) and cultural (meaning codes) assumptions. From a psychological individual perspective, thus, everything in the media and even the use of media itself can be a matter of entertainment: from news to television contests, from zapping across television channels to watching commercials. However, in a more pragmatic sense, when addressing a kind of content as entertainment we tend to presume a specific kind of use which is primarily focused on enjoying, be it through fascination and impact (spectacle), by aesthetic fruition (poetics), by competition, hazard and emotional implication (games) or via recreation (play or ritual). This pragmatic assumption allows differentiating traditional content categories (news, entertainment and advertising) in a loose scheme that, of course, involves hybridization (infotainment, advertainment, serious games, etc.).[5]

Conventional classifications of content and services in the new media usually follow this pragmatic differentiation that, in a sense, resembles category management in general stores (classifying products by scenarios of use, like 'breakfast', 'cleaning', 'DIY', 'entertaining', etc.).[6] Accordingly, in the existing software and mobile application stores, like Apple's App Store or Android's Google Play, one can find a changing variety of genres and types of mobile content under the label of 'entertainment', including typical media entertainment content (like music, games or videos), but also other related to lifestyle, device personalization, etc. That categorization works as a label that seems to say "this is for fun" regardless the kind of content it refers to; and, indeed, one can find the same content (for example, a ringtone editing app or an educative game) in separated categories, like 'entertainment' and 'tools' or 'games' (a subcategory of 'entertainment') and 'education'. The motivational variable seems to play a relevant role in defining what is and what is not entertainment, and consequently, the label 'entertainment' enacts an attitudinal scenario for the user. This is important because one relevant point of entertainment is precisely its role as a driver in consumer culture, since the very principle of consumption is rather similar to the motivational ground of entertainment: satisfaction and pleasure.[7] In a broad sense we could say the difference between consumption and entertainment lies in the medium: what specifically differentiates entertainment is the processing of meaning structures (like narratives, rules for a game o musical coherence) so that entertainment comes to be a form of consuming meanings for delight.

2. Entertaining yourself everywhere

As a part of this enjoyment oriented consumer culture, mobile media are not an exception and entertainment lies at the core of the mobile phone mediatisation process –the transformation of mobile phones into mobile media.[8] The very first mobile content accessed via feature phones in the beginning of 21st century were explicitly entertainment addressed: ringtones, icons, wallpapers, casual games and music entered the mobile phone as a way to personalizing the device, sharing leisure related cultural content and killing time.[9] As soon as the mobile device started to consolidate as a consumer technology, mobile web portals of mobile network operators (MNOs) and other content aggregators started to offer an increasing catalogue of entertainment content, from videos to games, from music hits to movie trailers. Some of them even experimented with innovative business models, offering free content or free SMS and voice access in exchange for users' exposure to targeted advertising (Planet 3 and Blyk, in the United Kingdom, for example).[10] The launch of the iPhone in 2007 strengthened that original link between mobile devices, cultural consumption and entertainment. In fact, the first iPhone was nothing but an iPod (i.e. a clearly entertainment consumption-addressed device) merged into a mobile phone. From then on, the technical evolution of mobile devices and their interfaces has been

tightly attached to performing different forms of entertainment.[11] Touch screens, battery life, processing capacity and increasing broadband availability are some of the milestones in that evolution, and all of them point to improving the quality of the mobile entertaining experience and thus, driving mobile oriented consumption. As a medium for ubiquitous enjoyment of content, private or shared, the possibilities of mobile devices seemed only limited by technical constrains.

The promise of bringing entertainment to the "anywhere-anytime" mobile *motto*, drove rapidly MNOs and mobile device manufacturers (MEMs) to the idea of controlling the entrance door to a brand new world of entertainment industries. Some of the great expectations raised about the mobile future in the pre-iPhone years –with mobile-TV holding a prominent place among them- directly relate to the strategies of MNOs and MEMs to turn mobile phones into the key for a device-based access to ubiquitous entertainment.[12] The advent of the smartphone era, however, turned MNOs' dreams into a nightmare where their role was that of the so called 'dumb pipe', and where software developers acquired an increasingly privileged position.[13] The platformisation of the mobile ecosystem[14] not only amalgamated mobile players (basically MEMs, service providers and third party developers) around a new core –OS developers-. It also opened a new era in the distribution and monetization of access to mobile entertainment, with applications (or apps) as the prevalent format and application stores as the dominant distribution channel.

Because of its early role in the consolidation of mobile media –and also due to the expectations of legacy media industries for getting some access to the new business horizon-, mobile entertainment has frequently shown to be in a constant transition. The narratives, interfaces, formats and consumption rituals of mobile entertainment are typically somewhere in the bridge between existing forms of media (like television, music CDs, console video games or Web content) and mobile specific forms (involving, for instance, location and context awareness). They are also important as a driver for Internet and computing related features (like social networking, augmented reality, cloud storage and computing, etc.). Mobile entertainment, thus, constitutes a good example of the available diversity between adapted content and mobile specific (or mobile augmented) content.[15]

The very differentiation of entertainment content in the mobile environment necessarily refers to legacy media genres: standardized formats that enable specific, socially inherited entertainment rituals. Among them, audiovisual narratives (like movies, television series or videos), normative arrangements (like games) and musical aesthetics have a prevalent place. Accordingly, mobile television, mobile video, mobile music and mobile video games are the usual categories when considering mobile entertainment.[16] They are also a good ground to observe cultural, social and economic transformations between existing and new entertainment forms. In the following sections a brief summary of their evolution and characteristics is presented.

3. Mobile television

Mobile television was originally conceived as an adaptation of the cable TV model to the mobile device. That technical approach left virtually untouched television narratives and formats in the adaptation to the small screen, which remained as a problem of signal availability.[17] It also ignored the eventual incompatibility between mobile consumption rituals and television usage[18] and, in a deeper sense, the differences between television and mobile as cultural objects.[19]

Television programs could reach the mobile handset in two main ways: through free to air broadcasting networks that involved installing a chipset in mobile devices in order to be able to receive digital television signal, or via mobile networks, through unicast (individual) or multicast (to a group of users) mobile broadband transmission.[20] MEMs and content producers (like broadcasting companies) pushed the first model, while MNOs clearly supported the latter, in which they kept a significant control over the mobile television value chain. Despite the golden promises of an everywhere-television paradise, mobile television had very soon to face important challenges. Paradoxically, the technical barriers were not amongst the less relevant: the fragmentation of transmission standards (DVB-H in Europe, MediaFlo in the USA, ISDB-T in Japan or STiMi in China) and the high infrastructure investment required for content producers (without a clear return model) contributed to the stagnation of the mobile broadcast model[21]. In the case of the mobile network model, technical difficulties appeared when a significant amount of users converged in time around a live event – like sports or spectacles-, making both unicast and multicast systems collapse.[22] But the technical framework of television content (live time and continuous predefined programming) was not the only burden for mobile television development. It also encountered important economical and normative difficulties: In first place, the two dominant business models in television content (advertising and pay-per-access) did not prove to be viable in the mobile context (with isolated exceptions like Corea and Japan).[23] In second place, the collision of two different normative bodies (regulation about broadcasting and regulation about telecommunications) raised important questions regarding the extension of broadcasting legal protection about copyrights, infancy, cultural diversity, etc. to the mobile sphere.[24] But the most important obstacle for mobile television concerned a low perception of the value/cost balance by users.[25] The result was an early predominance of the mobile network based model of mobile television, with a modest growth of the subscription rate until 2010-2011, reaching a maximum around 5% of total mobile users, and a progressive drop since then.[26] In Spain, for instance, having one of the highest smartphone penetration in EU5 (which means over 20 million smartphones) there was a maximum of 600,000 mobile TV subscriptions in 2011, that dropped to 200,000 in 2012.[27] Beyond that, the social construction of mobile entertainment privileged the capacity to choose and adapt

content to the situation of the user, raising a deep functional conflict with the essence of television entertainment (limited choice, time constrain) that turned mobile media consumption into more flexible forms of audiovisual narratives.[28]

5. Mobile video

The enhancement of mobile broadband access, the flexibility and adaptability of video formats, the consolidation of mobile platforms with app stores as their main distribution channel and the development of new more video friendly mobile devices (like high quality touch screen smartphones and tablets) are amongst the causes for the turn from the mobile television entertainment paradigm to the mobile video paradigm.[29] Though it can include traditional television content (like TV series) together with other entertainment contents (like music video clips, movie trailers or user generated videos), mobile video differs from mobile television in some relevant aspects: it is not continuous and it is not attached to a pre-defined programming. On demand access and social network integration make of mobile video an adaptation form of Web video, IP TV and social TV formats.[30]

In the case of mobile video, dominant players in conflict are content producers (from legacy media companies to users that create and share their own videos) and mobile platforms (that control distribution channels and content discovery systems, like recommendation and ranking networks). According to the implication of each one of these players, four main ways for accessing mobile video can be considered: social media content aggregators that merge user generated video with legacy media branded channels, like Youtube; content aggregators specialized on given formats, themes or sectors, like Hulu or Netflix; branded mobile portals or apps developed by relevant broadcasting companies and content producers in order to channel their IP video offer in the mobile environment, like BBC iPlayer, HBO Go or Clan TV; and mobile content stores, like iTunes, Google Play or Amazon Instant Video, that play the role of mobile video aggregation intermediaries including television formats (mainly TV series and documentaries), music formats (video clips and live concerts) and cinema formats (movies).

Despite the difficulties that mobile video has to face are similar to those of mobile television (mainly regarding business models and normative frame), it presents some distinctive advantages. The first one is a better compatibility between mobile social aspects and digital video consumption routines, including short duration, compulsive discontinuous usage and on demand availability. The natural integration of mobile video into mobile social network practices (which means sharing, commenting, recommending, mash up, etc.) is another advantage over traditional mobile television.[31] Mobile video use can also integrate multi-platform coordinated content

consumption; like in the case of second screen apps (see section 7 below), taking advantage of different forms of enjoying content and its narrative universe.

The diffusion of tablet devices is contributing to change usage patterns and user attitudes in favor of mobile entertainment (especially fostering mobile video and mobile video game): tablets address longer sessions, easier access to content and better entertainment experiences, which result in a better user attitude towards payment.[32] In the United States, for example, the annual growth of mobile video apps usage is over 82% in 2012, followed by other mobile content categories like music (72%) or social networks (54%).[33] The growing relevance of the mobile environment in consuming digital video is emphasized by the increasing use of apps as the prevalent access to this kind of content –with a frequency of 55% against the 41% of Web access in the United States in 2012-.[34]

Despite the business model definition is still a pending question also in the case of mobile video, the increasing integration in the app store based models introduces new opportunities to diversify income sources beyond advertising and pay-per-access, like renting formulas, freemium models or in-app-purchase models.[35]

5. Mobile music

Mobile music is perhaps the very first entertainment content integrated into the mobile ecosystem.[36] Coming from the popularization of ringtones as a way to personalize mobile phones, music entered mobile devices in the early days of 2G feature phones.[37] The relatively small weight of mobile music files and the possibility of easily downloading them from content portals or sideloading them from personal computers facilitated an early convergence between mobile devices and portable music devices. Even Sony Walkman, the nomadic music brand that gave name to a cultural ritual that marked late 1980's urban culture, developed a mobile version in their European MEM coalition with Ericsson: the Walkman mobile phone series. The inherent social dimension of sharing and listening to music has also contributed to the 'mobilitization' of digital music.[38]

In fact, with the consolidation of the Internet and digital media in late 1990's, music has become a prominent example of a 'mediumless' content: a kind of content that maintains its nature and increases its value as it becomes available (and shareable) through a growing number of different devices. As in other kinds of digital content, this has caused a singular paradox, simultaneously increasing the social demand of that kind of content and making more difficult to monetize its distribution.[39] The problem of piracy and illegal distribution is one of the most known sides of this contradiction. The result is a fragmented landscape, with fragmented audiences, fragmented formats, an increasing diversification of access platforms, different business models and an increasingly complex network of players.[40]

Nevertheless, music remains as one of the top three most popular entertainment formats (with video and video games), both in digital industries and in the mobile environment.[41] According to 2011 Nielsen report on digital music, from all the popular forms of accessing music in the digital landscape, 21% of users declared to have streamed music on their mobile phones in the last three months, 23% watched music videos and 20% used music apps.[42] The popularity of mobile apps addressed to streaming, managing, sharing and even playing with music keeps as well within top positions.[43]

Mobile music involves any form of music entertainment accessed, managed and shared via mobile devices. It includes different spheres of use:

- Mobile music as a part of interaction or personalization mobile routines (like ringtones and ringback tones),
- as a listening oriented entertainment (via download services like iTunes or Google Play, through artists or album applications access and via streaming services similar to IP radio, like Rdo, Pandora, Rhapsody or Spotify),
- mobile music as a content management oriented use (like in the case of Shazam or Planetary and music related social networks like TuneWiki),
- as a tool to perform, create or modify music (with apps like Garage Band, Figure, etc.).

It also comprises hybrid formats like music video clips and music mobile video games. Despite this variety and fragmentation, speaking of mobile music as entertainment content usually refers to downloading or streaming music for personal or shared listening: in 2010 these two categories constituted 49% of global mobile music revenue,[44] starting a shift from a full track download model to unlimited music streaming subscription models (like in the case of Spotify or Buongiorno).

Mobile music can be mainly accessed through specialized music aggregators (like Spotify), mobile content intermediaries (like iTunes), as an integrated service to some MEMs' and MNOs' offer (like Nokia Music), or via branded apps published by music record companies or artists. Coherently with the dominant distribution structures, mobile music business models remain within the constraints of the access-or-ownership dilemma, with an increasing presence of access-oriented models based on subscription fees or micro-payments for music streaming.[45]

The growing number of mobile apps involves also a diversification of functions and uses of music entertainment. Music mobile apps may offer additional functionalities, like managing, personalizing and sharing playlists or channeling fan interactions around a given artists' app (integrating, for example, Twitter or Facebook fan groups). Attractive visual playing interfaces are also a trend in music management apps that

emphasize the entertainment nature of listening and watching. Planetary, for example, transforms music playlists into realistic moving planetary systems.

The flexibility of apps as a monetizing channel for mobile music is being currently tested in some interesting innovation experiences. One example of this is Bjork's mobile version of the album Biophilia, a free app that offers an innovative visual experience similar to that of Planetary, in which stars and planets represent songs that users can buy individually via micro-payments. Another relevant example is N, by Jorge Drexler. N is a free app including three songs that allow user to interact with them changing lyrics, instruments and singers involving direct interaction, GPS location and time of the day. The user can thus create his or her own versions of the songs, exploring a wide number of possible combinations and the songs adapt to the daily routines of the user. The app combines as well different income models: freemium for accessing music and lyrics (merging free full access to one song with premium access the rest) and in-app purchase for services attached to user versions of the song (for instance, to be able to save or share with others your version of the song).

6. Mobile video games

Mobile video games are the content king of mobile entertainment just as video game industry has become after 2010 the leading entertainment industry, ahead of movies and television.[46] If previously considered mobile entertainment forms (mobile television, video or music) are examples of difficulties in adapting formats from existing to emerging mobile media, video games are a good example of the opposite. Obviously this has to do with the fact that video game is a native digital entertainment industry and this means a substantial advantage in adapting narratives, consumption routines and market structure to the mobile environment.

In the days of feature phones, mobile games were built-in simple gaming functions offered as a device attached bonus feature. The popular Snake, for instance, was included for the first time in the Nokia 6610 in 1997. The age of mobile video games, however, started when MNOs and MEMs deployed devices in which users could install games from their content portals.[47] Together with personalization contents (like ringtones, wallpapers or icon sets) and music, videogames were a relevant part of the very first steps of mobile entertainment content. Until 2007 mobile video games were basically casual games: simple, fast-play, graphically unsophisticated games, mainly addressed to killing time and providing ephemeral entertainment.[48] Their functions and possibilities were constrained by the computing and display limitations of the devices. At that stage, games were accessed from MNO portals (on-deck games) or from content aggregators (off-deck games), and income models were usually attached to MNOs' privileged position in the mobile ecosystem (premium SMS or monthly billing).

The enhancement of the computing capacities of mobile devices allowed developing more complex and graphically sophisticated games, attracting the attention of video game industries. Entertainment giants like Disney created mobile entertainment divisions, where mobile games played a key role (Disney Mobile was launched in December 2003 as a portal to distribute Disney branded mobile content). This same year, the commercialization of Nokia's nGage (a merge of mobile phone and portable game console) subscribed the relevance gaming was to have for the emerging medium. But it was the launch of the iPhone in 2007 and the rapid consolidation of smartphone standards after it what revolutionized the development of mobile video game as a relevant form of entertainment. Integrating the new device capacities (high quality touch screen, camera, GPS and accelerometer) to the mobile ubiquitous connection to networks meant a whole new horizon for mobile game innovation: implementing location based games, using movements and gestures as game controls, developing mobile online multi-player games, etc. It meant also the functional integration of mobile games into the app format, and the parallel consolidation of application stores as the dominant distribution channel for that kind of mobile entertainment. As a result of that, reputed video game companies started to look at the mobile device as something more than a product promotion platform. An increasing number of game companies (from digital players like Blizzard or EA to mobile specialists, like Game Loft or Glu) started to publish mobile versions of their well known console and PC game franchises. From 2008 on, as mobile entertainment becomes a mainstream, these mobile versions turn from adaptations (reduced versions of the console game) to autonomous extensions of the narrative world of game franchises. Not much later, with mobile gaming hits like Angry Birds or Temple Run, the influence reversed, and digital game companies found themselves publishing Web, console and PC versions of popular mobile games.

The launch of the iPad in 2010 and the subsequent diffusion of tablets definitely push the adoption of mobile devices as a game platform, enriching the gaming experience and opening a horizon of innovation with the (integrating built-in sensors and cross-device connection). What once started as a sort of complementary platform for a consolidated content industry became in less than four years its main source of influence and innovation.[49] In 2011, in a survey in the UK, 44% of users declared that the mobile device was the most frequently used platform for gaming, compared to a 21% pointing at consoles and 30% to PCs.[50] In late 2012, only in Apple's iOS App Store, there were 803,137 active apps, including 134,789 active games, and around 125 new mobile games being published every day.[51] Mobile games constitute the 80% of the apps global revenue.[52]

Some specific characteristics make mobile games attractive to digital industries. First of all, in business terms, their privileged position in the three key variables to measure viability: reach (number of downloads), engagement (time spent using the

app) and monetization.[53] Mobile games have traditionally been a good environment for integrating and innovating business and income models: subscription, pay-per-access, freemium, in-app purchase (where user can buy, for instance, extra lifes or other game items), and advertising (beyond in-game advertising, mobile advergaming and mobile branded games have become a common promotion strategy, like in the case of Angry Birds Rio to promote 20th Century Fox's film Rio in 2011). From the perspective of game developers and publishers, the mobile ecosystem involves a more complex environment (with additional players, like MEMs, MNOs and OS developers, and with a growing number of technical specifications to deal with, from screen size to graphic engines or coding standards).[54] But it also offers more agile production and distribution processes, with mobile application platforms fostering a wide, easy access to third party developers.[55] From a technology adoption perspective, mobile video games offer a high integration capacity both in technical terms and regarding usage rituals. An example of the first is the use of mobile game apps as game controls or complementary narratives for console games. A case of the latter is the merge of mobile social networks and mobile games, powered by GPS and other mobile built-in sensors: since 2010, a growing number of mobile game addressed social networks (like Open Feint) allow users to share scores, hints, videos and comments about their favorite games.

Consequently, innovation in video game industries is now mainly produced in –or is directly related to- the mobile sphere. The innovative contribution of mobile games in this respect concentrates in three interrelated trends: Mobile serious games (i.e. games addressed to additional purposes beyond the mere entertainment, like edugaming, training games or social consciousness games), game experience enrichment (combining, for instance, augmented reality, location and context information, as in Google's experiment with the game Ingress) and transmedia storytelling (i.e. inserting mobile games into cross-platform multi-format narrative worlds, like Star Wars, Walking Dead or Assasin's Creed).

In the last decade mobile devices have consolidated as a mainstream gaming channel that even outshines consoles.[56] However, in an increasingly crowded environment like app stores, with hundreds of thousands of games competing for users' interest, the challenge concerns discoverability and monetization rather than adoption or format innovation; especially in the case of independent developers.[57] Before succeeding with the global hit Angry Birds, the Finnish company Rovio had published 51 mobile games. None of them was able to reach users' interest or become profitable.

7. Mobile entertainment and digital media

The impact of mobile entertainment in the consolidation of mobile platforms has also consequences beyond the mobile sphere. Mobile platforms –the two most influential conformed around Apple's iOS and Google's Android- are not an isolated phenomenon. They are part of a complex network of economic and social players, technological innovations, changes in content narratives and social transformations that outline the horizon of a clash between legacy media environment and digital content ecosystem. The tensions between Internet companies and legacy media are transforming not only entertainment industries, but also entertainment consumption.

Digital entertainment content lies at the core of the expansion strategy of the big software industry players, especially the so called Internet 'fantastic four' (Apple, Google, Amazon and Facebook). The struggle to settle and control distribution channels takes place across the four screens that outline the landscape of digital entertainment: smartphones, tablets, television and consoles.[58] Google and Apple explicitly foster application stores, cloud storage and synchronization services as the natural environment to channel a wide multi-screen offer of entertainment products and related services. As a result of that, application stores tend to merge with digital content stores (the case of Google Play) and expand to other screens, like connected TV sets (Samsung Smart TV, for example) or game consoles (Play Station, Wii and Xbox).

The counterpart from the side of users is the increasing relevance of multi-screen consumption. Recent studies point to smartphones and tablets playing a key role in coordinated multi-screen use,[59] merging entertainment content into social interactions –messaging or twitting friends about a given TV series episode while watching, for instance- and other forms of entertainment. At a first glance, that trend raises questions about the redefinition of legacy media entertainment content and its associated business models (mainly advertising). For example, during early 2013 Super Bowl event the use of mobile social networks peaked during certain moments of the match:

> "As the world's top brands paid up to $4 million to air 30 second television spots, consumers were more distracted than ever, accessing mobile apps and social media in droves. Twitter reported 24.1 million Super Bowl-related tweets, the most popular of which focused on Beyoncé, Destiny's Child, the Superdome power outage and key game moments. Facebook reported similar increases in conversations around these topics" [60]

But it is also possible to create added value from multi-screen experience. Second screen apps are explicitly addressed to that. They are mobile applications with complementary synchronous functions to the use of entertainment content in other screens (usually television). Disney Mobile counts within its application catalogue with an increasing set of second screen apps for Disney movies and series, which provide extra content, additional info, quiz games, puzzles and graphic content to follow up along the movie. Television channels and popular television series have also started to publish 'television companion' apps that synchronically provide information, social

network access and bonus content. BBC Autumnwatch TV Companion or Walking Dead Companion App are examples of this. Some second screen apps adopts a game-like format, like The Walking Dead - Walkers Kill Count, where users compete in guessing the zombies each character of the series kills in an episode. Second screen apps develop also the idea of using mobile devices as controls for console games, adding complementary functions like the WiiU pad does for Nintendo's Wii: Sony, for instance, has announced the release of a Play Station App for iOS and Android (available obviously in the PS Vita environment) that would provide in-game maps, social networking tools and a navigation interface for the PlayStation Store. In a similar way, Microsoft presented in 2012 Smartglass, a second screen technology for using smartphones and tablets with Xbox content.

As long as entertainment users become efficient digital omnivores (Google & Ypsos, 2012) entertainment content formats and platforms are getting more and more interrelated, providing different forms of coordination along diverse usage scenarios. One consequence of that is the growing importance of transmedia storytelling. According to Scolari,[61] transmedia storytelling "is a particular narrative structure that expands through both different languages (verbal, iconic, etc.) and media (cinema, comics, television, video games, etc.). It is not just an adaptation from one media to another". Coined by Henry Jenkins,[62] the term refers to narrative worlds unfolded throughout different narratives and media. Transmedia stories usually consolidate in popular narrative brands or entertainment franchises, like Star Wars, Lost, Pokemon or The Matrix. They obviously exist long before digital or mobile media, but digital environment creates specific conditions for their proliferation. In a sense, transmedia stories are a natural result of digital media convergence and their integration into social network processes. Furthermore, as long as mobile media become more relevant in the digital entertainment landscape, their involvement in the spread of transmedia franchises increases. Already mentioned second screen apps are just a step before transmedia storytelling, and multi-screening is an obvious scenario for performing transmedia stories. The personal and socially centered nature of the mobile medium shows to be also useful in integrating user social networks and user generated content into transmedia stories: conversations, comments and even stories created by users constitute a lively part of digital entertainment franchises. Angry Birds can be named here as the first transmedia brand entirely born in the mobile environment. In the trail of the mobile game hit, the franchise has released comics, cross-media versions (like Angry Birds Rio and Angry Birds Star Wars), toy figures and television cartoons, accompanied with an extensive catalogue of Angry Birds related user generated content, including some home-made fake trailers for a –still- inexistent Angry Birds movie.

8. Towards the broad picture: Changing cultural consumption logics

Beyond all that, from a systemic point of view, the growing importance of mobile entertainment relate to an in-depth transformation in content industries. Mobile media lay behind a process of re-definition of the very nature of entertainment content itself. The integration of apps and traditional media involves merging conventional content consumption (passive watching, listening or reading) with Internet and digital media interactive capacities,[63] fostering thus an evolution from a watching-oriented logic of entertainment to a doing-oriented conception. Users increasingly expect not only to access content, but to do things with content (commenting, linking, forwarding, recommending, transforming…).[64] The proverbial attachment of mobile media to personal identity and everyday life situations is undoubtedly a milestone in that direction. In a sense, from the very moment content gets into social relations dynamics, content consumption is no longer the end of the cultural process. Digital entertainment is increasingly becoming a part of a new object for cultural consumption: technology mediated social relations.[65]

From the point of view of mobile platform players, such doing-oriented logic involves new possibilities for monetizing cultural consumption processes. Mobile media are personal ubiquitous media. In the digital context –where everything done by the user leaves behind a trace of data- mobile media bring forth the possibility of building personal data profiles including consumption and browsing behavior, identity related data and social networks information. While it is true that this was already possible in the pre-mobile digital context (tracking tools like cookies are inseparable from the development of the social Web), it is only the mobile device that ensures an individual ubiquitous source of data.[66] With mobile media, personal data profiles leave the private home or the office and get out to the streets. The relevance of mobile devices as behavioral data providing tools has been often underlined in the context of the big data Internet and data-driven societies.[67]

The economics of personal information[68] has much to do with the explosion of digital and mobile entertainment in the last decade. It is the relevance of mobile entertainment as a powerful source of personal behavioral information about users that explains the unnatural convergence of companies with different business models (like Apple, Google or Amazon) over the strategic centrality of digital entertainment content. Cross-platform integrated mobile entertainment (or, what amounts the same, doing-oriented content) is becoming a main access door to data about user context, preferences, behavior and affective networks. Personal information data mining allows, for example, Google to optimize in-search advertising, and Amazon to efficiently channel its entertainment content offer.[69]

The increasing relevance of data about user profiles and about what users do with content raises important changes in the business model of cultural and media industry.[70] Data mining about user profiles and behaviour enacts a new source of value for digital content beyond monetizing audiences' attention through advertising. Both

legacy media and users should be aware of that change in the value chain of digital entertainment in which mobile media are deeply involved. The first, because it raises new revenue sources in a context were business model definition is still in progress. The latter, because it raises important challenges concerning privacy and transparency.

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