

Audience Dynamics of Online Catch Up TV

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ABSTRACT

This paper studies the demand for TV contents on online catch up platforms, in order to assess how catch up TV offers transform TV consumption. We build upon empirical data on French TV consumption in June 2011: a daily monitoring of online audience on web catch up platforms, and live audience ratings of traditional broadcast TV. We provide three main results: 1) online consumption is more concentrated than off-line audience, contradicting the hypothesis of a long tail effect of catch up TV; 2) the temporality of replay TV consumption on the web is very close to the live broadcasting of the programs, thus softening rather than breaking the synchrony of traditional TV; 3) detailed data on online consumption of news reveals two patterns of consumption (“alternative TV ritual” vs. “à la carte”).

Categories and Subject Descriptors

J.4 [Computer Applications]: Social and behavioral sciences

General Terms

Human Factors, Measurement.

Keywords

Catch up TV, Online Audience, Long Tail, Temporal dynamics.

1. INTRODUCTION

In recent years, most of the French television networks have developed “catch up” services, on which viewers can watch TV programs on-demand after they have been aired. For many media sociologists, the opportunity for viewers to watch “the program they want, when they want” deeply transforms the experience of television. This evolution should lead to “the end of television” understood as the simultaneous consumption of a same content, and to the disappearance of a collective practice that fueled the sense of community in society [2]. Nevertheless, the opportunity for viewers to watch any program at any time does not imply that they randomly scatter their attention among all the available contents. First, research works on content consumption on the web bring out a phenomenon of strong concentration of collective attention on a few items [1], within a short time-span [3]. Secondly, many social forces (e.g. live events, marketing or imitation) may lead viewers to watch the same TV programs. Therefore, whether on-demand TV leads to the end of television as a collective practice or not is an empirical question, which we address in this paper. Our analysis focuses on two questions: how is viewer’s attention distributed among contents, compared to traditional TV? How is catch up content consumption distributed over time, and what is the lifespan of an on-demand TV program?

2. DATASET

We built an exhaustive dataset of catch up videos published on the Web in June 2011 by the 18 French DTT (Digital Terrestrial Television) TV channels. With *ad hoc* crawlers, we performed a daily scan of the specific (tf1.fr, m6replay.fr, arte.tv...) and generic (wat.tv, dailymotion.fr) streaming platforms. Thus, we gathered day-to-day information on the offer (e.g. the available videos each day) and the daily cumulative view count of each video. The collected dataset represents 11.682 videos published in June 2011; we monitored the audience of these videos until October 2011 (5 months). We completed this dataset with live TV audience ratings over the last week of June, from the French audience operator Médiamétrie. We matched the online audience of TV programs from the seven main French channels (TF1, F2, F3, Canal+, F5, M6, Arte) with the live ratings at the relevant level (program or subset of program), in order to compare the views counts and the average number of live viewers. This dataset is composed of 957 matching entries between live and online audience data.

We performed three post-processing operations. First, when the information was not available from the Web sites, we calculated the publication date as the eve of the first observation. Secondly, for the 20% of videos available online indefinitely, we observed that they don’t gather significant audience after 100 days online; therefore, we considered the audience after 100 days as the “final audience” of the concerned videos. Finally, we set up a meta-categorization of the programs. Mixing the different taxonomies of each channel, we classified all videos into 9 categories of content: news, sport, kids, reality TV, infotainment, game shows, entertainment, fiction and web-only.

3. RESULTS

3.1 Shortening the tail

Our data shows that a catch up TV video cumulates in average 2.871 views, but this audience is not equally distributed: 30% of the videos cumulate less than 100 views, while 20% have more than 1.500. When comparing online and live ratings, we observed that catch up consumption is more concentrated on top videos (see Figure 1).

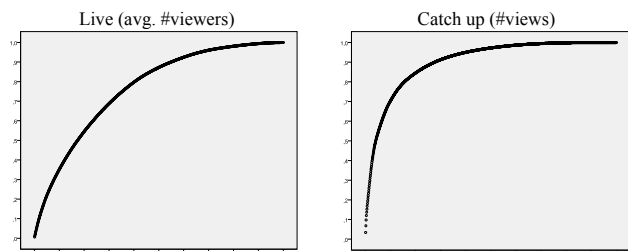


Figure 1. Cumulative audience (n=957, ordered by rank).

Live and catch up audience ratings appear to be globally correlated (Pearson=.399). Nevertheless, an in-detailed crossing of the two ratings for each video, with 8-tiles splitting of the two variables, reveals three different situations (see Figure 2).

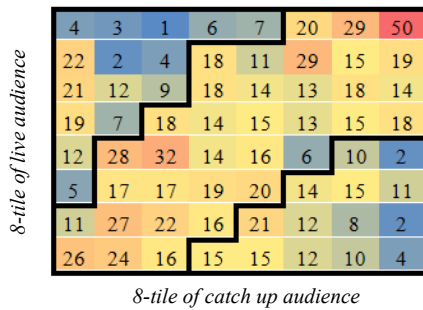


Figure 2. Crossing live and catch up audience

First, a wide diagonal zone (69%) where success online and offline are correlated; secondly, a north-west zone of “online fails” (16%), where good live ratings didn’t convert into catch up success; finally a south-east zone of “benefit catch up effect” (15%) where contents faced middle or low audience when they were broadcasted live, and took benefit of online diffusion. Crossing these three effects with channels and content categories shows that *fictions* and *kids* programs benefit the most of the catch up effect, as well as the culture-dedicated channel, Arte, whereas *games* and *weather news* don’t. These elements tend to show that catch up TV reinforces the “superstar effect”, which benefits to already successful programs, but also to those with low temporal-related value and interest.

3.2 Temporal synchronization

In order to assess the level of synchronicity of on-demand TV consumption, we measure, for each video, the part of the final audience made during its first days online. In this analysis, we focus on the 40% of videos of our corpus available online more than 7 days (see Table 1).

Table 1. Lifespan of videos available for more than 7 days

Genre	% of final audience after...		
	3 days	5 days	7 days
Entertainment	37%	50%	58%
Fiction	41%	54%	65%
Infotainment	51%	58%	63%
Kids	24%	38%	38%
Games shows	70%	78%	84%
News	71%	76%	79%
Sport	56%	67%	74%
Reality TV	44%	68%	78%
Total	58%	65%	69%

Most of the videos meet their audience during their first days online: 58% after three days, 65% after five days. This synchronization of online audience is variable according to the nature of the programs: *news*, *game shows*, *reality TV* and *sports* programs are highly synchronized with live broadcasting. Conversely, *kids* (cartoons) and *entertainment* programs have a longer lifespan.

3.3 Two ways of watching the news

To investigate further these patterns of consumption, we concentrate on the case of news programs. We focus on the news

programs provided by TF1, the first French TV network, between Sept. 2010 and Feb 2011. The channel offers two ways to consume news on demand: full 30 minutes-long programs (1.331 videos, 28.5 millions views), and short videos of the different stories (21.211 videos, 41.6 millions views). The consumption of these two kinds of videos follows very different patterns (see Figure 3).

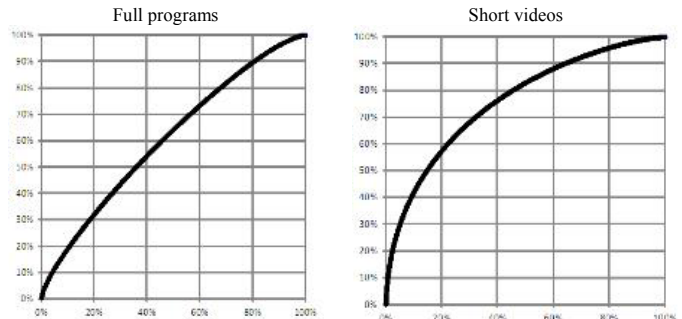


Figure 3. Cumulative audience of news videos (order by rank)

The audience of complete news programs is very steady and homogeneous: every day, videos of the full news programs get roughly the same audience. Conversely, the consumption of short videos is much more concentrated: 20% of the videos account for 60% of the audience. The examination of the most successful short videos suggests that viewers favor stories dealing with entertainment and practical information, and neglect those dealing with international and national politics. When looking at the temporal patterns, we observe that the audience of the full programs is very concentrated in time: 70% of the views occur during the first day, 86% during the first two days. We may consider this pattern of consumption as an extension of the TV ritual: the same amount of viewers watch the program every day, soon after it has been aired. The temporal pattern of the audience of short videos is more diverse: though most of the views occurs in the first days, some videos are consumed over a longer time span, especially stories centered on places or people.

4. DISCUSSION

Our data shows that the consumption of on-demand TV programs is concentrated and synchronized, thus weakening the hypothesis of the “end of television” as discussed in [2]. The live diffusion of the programs continues to set the viewer’s agenda, allowing a sense of community among viewers, reinforced by voting and commenting features of web platforms. Our future works should first investigate to what extent these results are specific to the French broadcasting supply and can be extended to other countries. We should also examine how the increasing use of social media may contribute to the burstiness of the audiences.

5. REFERENCES

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