



# MARU

**KARLAPLAN**

November 20, 2017

## **Abstract**

We examine the relation between a youtube video's monetisation status and their algorithm promotion. We used youtube's official "DATA API v3" to get the top 25 related videos for 100k videos. This is equivalent to the related videos that you see on the right side when watching a video. We then scraped the related videos for information relating to monetisation status, views, etc. The corpus containing information of the scraped videos were then analysed in detail. According to our analysis Youtube is systematically suppressing content that have limited monetisation or have been completely demonetised. This will in turn lead to censorship of political ideologies, HTBQ+, mental health awareness, suicide awareness and prevention, etc.

# Contents

## **1. Introduction**

Page 3

## **2. The Youtube community's evidence and opinions**

Page 3-6

## **3. Identifying demonetised videos by their specific demonetised category**

Page 7-9

## **4. The methodology used to scrape and analyse the evidence**

Page 9

## **5. Analysis of the scraped evidence**

Page 9-13

## **6. Conclusions**

Page 13

## 1. Introduction

In this report, we address a recent youtube algorithm change suspected to have been implemented on the 30th of august. The algorithm change was discovered in early September by internal testing within the group Karlaplan. On the 19th of October Bullet Barry published the first video claiming a relation between algorithm promotion and demonetisation, called “The Demonetization Test”.

After that video was publicised more and more youtube creators tweeted out that they had noticed a clear relation between demonetisation and algorithm promotion. Many of them showcased small screenshots comparing a demonetised video’s performance compared to a non demonetised videos performance. To our knowledge no study or publication has yet publicly proved that youtube is censoring videos based on their monetisation status by significant evidence. Our research is motivated by exposing the very negative implications that this type of censorship has lead to. This prompted us to go public with a report that proved this algorithm change without compromising any Karlaplan assets. Based on our prior testing we have a qualified hypothesis that if Youtube is actively limiting promotion for demonetised videos, then a clear relation between monetisation status and promotion will be present for related videos. Referring to the videos that are recommended in relation to a video and displayed to the right of any youtube video.

## 2. The Youtube community’s evidence and opinions

While the evidence different creator’s published is far from qualifying as proper evidence, the quantity of the creators coming out is a clear indication that a systematic censorship is in fact in place instead of it being a limited placebo case. Despite the evidence being very limited and case specific the statistics provided especially in numbers clearly hints at a relation between demonetisation and algorithm promotion. The significant difference is also a huge factor to consider when it comes to making any conclusions based on the evidence.



7:29 PM - 26 Nov 2017

FIGURE I. A graph showcasing the daily amount of views. Uploaded to twitter by @adam22 with the caption “This is what happens when youtube demonetizes a video. your views go to shit. so fucking frustrating.” published 26/11-2017

While the graph and caption lack any proper indication of exactly when the video was demonetised it does suggest that the video was demonetised at the start of the descending trend before the viewership flatlined. The evidence provided is very flawed by it’s inability to properly state the exact date of the demonetisation.

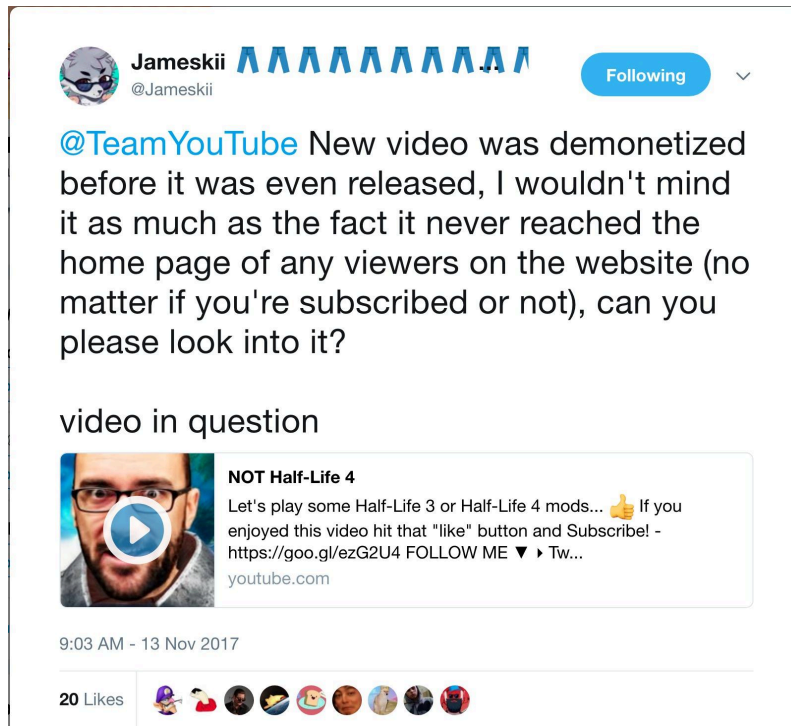


FIGURE II. A tweet made by @Jameskii with the caption “New video was demonetized before it was even released, I wouldn’t mind it as much as the fact it never reached the homepage of any viewers of the website (no matter if you’re subscribed or not), can you please look into it?”

The tweet by @Jameskii suggests that Youtube didn’t promote his demonetised video to any of his viewer’s homepage, neither subscribed or not subscribed. Clearly suggesting that youtube is actively not promoting his video due to his video being demonetised.



FIGURE III. A tweet made by @ProSyndicate with the caption “Weired thing I’ve experienced with @Youtube.. But when a video gets demonetised.. it gets a FRACTION of the views. Does anyone else experience this?”

The high profile youtuber ProSyndicate with over 10 million subscribers, share his experience of demonetised videos performing much worse in comparison to fully monetised videos.



**Max** ✓  
@maxmoefoe

Following



Replying to [@ProSyndicate](#) [@YouTube](#)

Once its yellow, it is removed from any form of recommended or trending. It strips it of its momentum and is also harder to find by other means.

FIGURE IV. A reply to @ProSyndicate's tweet shown in Figure III. The youtuber maxmoefoe with a total subscriber count of 4.6 million for his 3 channels, seems determined that youtube will pull all promotion if a video is demonetised.

Clearly Pro Syndicate is not alone in his opinion that Youtube is actively censoring demonetised videos.



**Kwebbelkop** ✓  
@Kwebbelkop

Follow



Replying to [@IJJERiiCHOII](#) [@tubefilter](#)

Demonitization means less promo on youtube's end (confirmed). Happy wheels for me was my most popular series for example, but I had to drop it because everything got demonitised and therefor didn't get views. Probably the same for many other games and other channels.

9:23 PM - 17 Nov 2017

FIGURE V. The youtuber Kwebbelkop with over 7.5 million subscriber is certain that youtube promote demonetised videos to a lesser extent. As seen in his tweet on his account @Kwebbelkop, 17/11-2017.

This is just one of many tweets Kwebbelkop have made on the topic. All with a clear opinion of demonetised videos being unfairly censored by the algorithm.

### 3. Identifying demonetised videos by their specific demonetised category

In order to give advertisers more control over advertising placement Youtube have implemented a system that labels videos with a specific category of demonetisation. This system is referenced in Google's Adwords reference for managing ads <https://goo.gl/GcPbc9>. Google Adwords is the only publicly disclosed method for advertisers to advertise on youtube.

When youtube demonetise a video they don't notify the channel what type of content category the video was demonetised for. What we have found is that hidden in the source code of Youtube videos is a function called "Excluded\_ads". As the name clearly states this function is responsible for keeping track of which types of categories Youtube won't place advertising for. In short if your video have an excluded\_ads variable that labels it as controversial, then Youtube will not place any ads from advertisers that don't want their ads placed on controversial videos.

The Excluded\_ads list is only present if a video is monetised. If a video is not monetised, is completely demonetised or if the user has youtube red enabled then this function won't be visible. The Excluded\_ads function is structured as a dictionary featuring a main category id with a corresponding list of sub values. An example using the main category id "102" and it's regular sub values is represented in the following manner.

```
102=1_1,1_3,2_1,2_3;
```

The sub value list is seen as a way to categorize different levels of severity. 17\_1, etc is never present without lower values if a main category have lower values like 1\_1, etc. This behaviour is a clear indication that the higher the numbers get the stronger the labeling is. Strong Language can thereby be seen as having varying levels of severity labeled with different sub values.

We have done testing using the programs in the A folder of our zip file with the open sourced programs that we used for the report. What we found was that no variables with 102, 104, 105, 109 had a monetisation % over 40%. 115 also showed a significant difference but a with a higher overall monetisation % than 40%.

Based on the fact that all videos tested with the main category id's 102, 104, 105 and 109 had a monetisation % less than 40%, we have come to the conclusion that all of the variables are directly corresponding to the sensitive content filter categories mentioned in Google's adwords reference for managing ads <https://goo.gl/GcPbc9>. Our personal guess and our confidence of our labeling is the following.

C-ID	Sensitive content categories (Google Adwords)	Confidence
102	Profanity and rough language (very wide)	100%
104	Sexually suggestive content (sexual references)	100%
105	Tragedy and conflict	60%
109	Sensational and shocking	80%
115	Sensitive social issues (controversial, guns, etc)	100%

We strongly believe that this is an accurate representation for what the main category ID's are corresponding to. We strongly believe that this is not limited to the Google Adword's sensitive filter categories. We believe that many other different categories exist. We're certain that most of the categories represented have a direct relation to Youtube's advertiser friendly guidelines <https://goo.gl/BfVt9i>. Many categories like incendiary and demeaning, violence, etc are not represented in the Google Adwords categories. So many of the other categories like, 10, 25, 80, excluding the standard 46, etc variables are most likely corresponding to certain other categories. The 2 variable is almost certainly some sort of indication that the request is made by a robot and not a human, as it is never seemingly never present for a manual check in a browser but always present for requests made by a program. Thereby acting as some sort of protection against viewbotting.

One problem with this method is that excluded\_ads system is not 100% reliable. For certain videos the values might be inconsistent. We credit this to different servers having different indexes of the ad-status. So if a video has been recently been cleared for monetisation certain servers may not have updated the variables correctly. For certain videos we believe that they

won't ever update it correctly for all servers as well. This does create the question whether a recently demonetised video will still be impacted by the demonetised censorship that we have collected evidence of. Because if an individual server have a video with the wrong index, then one would assume that their call for promoting that video would be made with that outdated index. While this won't be the case for all servers, it would still impact a large portion of the audience.

#### 4. The methodology used to scrape and analyse the evidence

We have done scraping using the scraper provided in the B folder of our zip file with the open sourced programs that we used for the report. The Pre-scraped corpus that we used for our analysis is also included in the B folder. The scraping utilise youtube's official "Youtube Data Api V3" to get related videos requests. The related video requests are made by search.list with the relatedToVideoId parameter enabled. Other parameters like safeSearch is set to none instead of the default moderate configuration. A total of 6 accounts were used over a 5 day period. All of the accounts used are over the age of 25 with no other restrictions enabled. The videos were taken from 264 channels with a maximum cap at 300 videos per channel.

The scrape of the related video include the following properties:

Views, VideoId, Video\_upload\_date, Video\_monetised, Excluded\_ads, isFamilyFriendly, channelId, main\_vid\_id, main\_vid\_monetised, main\_vid\_excluded\_ads, main\_vid\_channel, main\_vid\_family\_friendly, main\_vid\_upload\_date, main\_vid\_views, MainQ, SubQ

The relation between the different variables and the excluded\_ads variables will be essential in order to analyse how the algorithm behaves regarding demonetised videos.

#### 5. Analysis of the scraped evidence

A total of 1.2 million videos were scraped for 57k related to videoId requests. Due to very the large scale of the scrape the results of the analysis will be an accurate representation of how the algorithm behaves. Any biases will be addressed and the methods used to minimise and exclude

them will be documented. All of the sources for the information is included in the B folder.

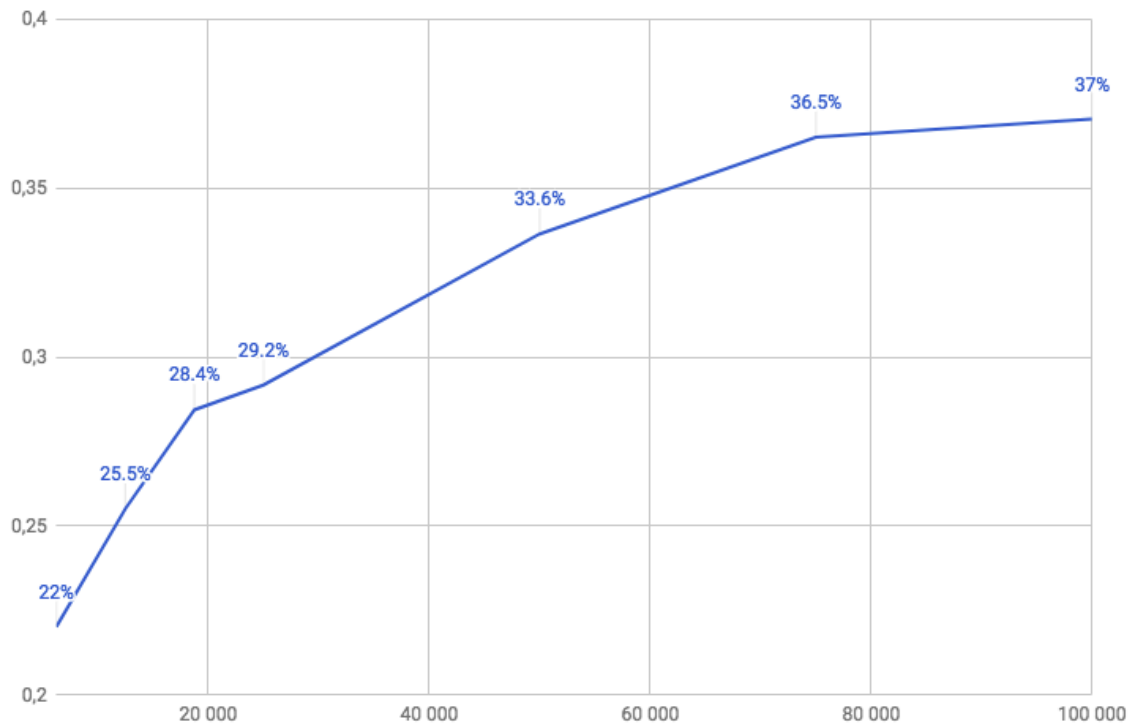


Figure VI. The graph showcase how the percentage of 102, 104, 109 for related videos between the specific intervals develops as the viewership gets higher.

The graph shows the percentage of videos with 102, 104 or 109 for the specific intervals set. This graph ultimately shows a clear trend without any deviation that videos with 102, 104 or 109 are recommended a lot less at lower viewership than at higher viewership. Due to the high amount of videos represented and the clear trend without any deviation clearly suggest that some sort of algorithm devaluation is in place for videos with 102, 104 and 109. Since the graph showcase the all videos scraped there is a slight bias to either the side of demonetised or monetised videos. The reason for this being that the videos that the related requests were made from are not identical to it's counterpart by views, amount, etc. In order to minimise this bias we have the following graph that only count related videos of demonetised videos.

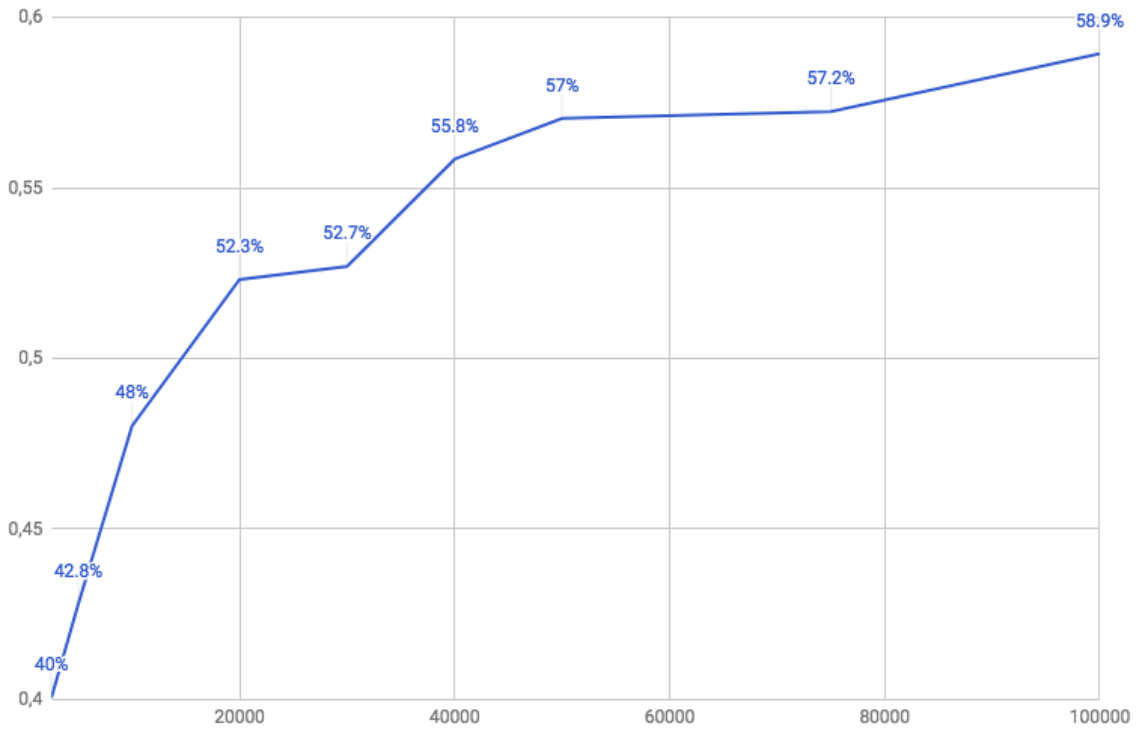
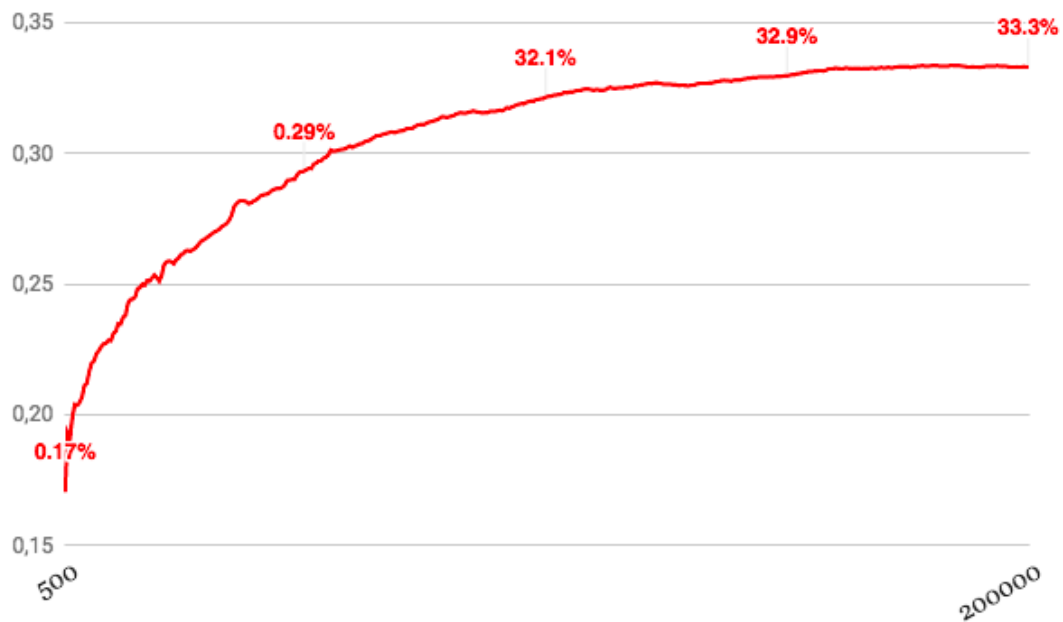


Figure VII. The graph showcase how the percentage of 102, 104, 109 for related videos of videos with 102, 104 or 109 between the specific intervals develops as the viewership gets higher. Thereby excluding a potentially significant bias.

As previously mentioned this graph only show the related videos to demonetised videos. Thereby any bias towards videos with lower viewership being monetised and thus causing the pattern is excluded from this graph. This pattern is a clear indication that youtube has some sort algorithm function that devalues demonetised videos.



The graph showcase the cumulative percentage of suggested videos that have 102. The range is from 500 to 200 000 with a total of 440 786 videos represented by 400 different points in the graph.

Using the cumulative percentage in this manner has it's flaws. When the views gets higher any difference will be less noticeable in the graph. It is despite it's flaws a method commonly used to spot a trend while having a smaller corpus. Since our research has total of 1.2m videos scraped for analysis, the graph shown previously in figure X is a better representation than this graph. With the biases addressed, it still provides a trend that simply would not exist to this extent if youtube is not actively censoring videos by suppressing their promotion.

To explain why the patterns showcased is so significant it is important to realise that there should not be any pattern at all. The only way such a clear pattern would occur without any deviation is if youtube is actively censoring videos based on labels tied to demonetisation. The fact that more demonetised videos are related at lower viewership is contrary to the logical assumption that more videos at the lower viewership would be demonetised since less of them have the option to appeal their videos. What the demonetised % pattern suggest is a sandbagging function that has a much bigger impact on videos with lower viewership. Due to the limitations of Youtube's data api there is seemingly no way to get an

estimation of any constant percentage of suppression. It is very likely that constant % suppression or similar is also at play. The only way to properly tell that is for a complete algorithm rework with comparisons between different scraped dates. Our personal guess within Karlaplan is an overall 30-40% suppression. We won't provide any evidence or motivate this guess, as it is simply a guess.

## 6. Conclusion

Youtube seemingly has a system in place that systematically censor videos with the `excluded_ads` labels 102, 104, 105, 106, 109, 115. The `excluded_ads` variables undoubtedly have a relation to the categories listed in Google Adword's reference <https://goo.gl/GcPbc9>. Other variables seem to be related to the current user device and other might be related to other demonetisation categories not listed in the Google Adwords reference.

All the data is linked in the description of my main video. Youtube have also removed "Excluded\_ads". They have not denied any of the claims made in this report only removed the variable.

Main video link:

<https://www.youtube.com/watch?v=n3H8D2LrLHc>