

Social puncher

Twitter Purge: True Story

Part 1.

Investigation

by SocialPuncher

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What do we know about the Twitter purge?

According to the current general opinion, the purge started on July 11 from the official announcement, and ended on July 13, when the last major cuts in followers were discovered. In fact, this was only the beginning of a long chain of events associated with the purge, which is still ongoing. During the three months between July 13 and October 13, 2018, a number of phenomena occurred that do not fit into the generally accepted explanation.

Social Puncher monitored Twitter purge in July 2018 and later, and conducted a systemic investigation. We have made many interesting finds, but the recent one is the most important and the most unexpected.

Millions of accounts removed from follower counts in July were returned back proportionally to the same accounts in October and counted again.

If the description and explanation of the purge were complete and reliable, it would be impossible. This means that not everything is known, and the current understanding of it is very different from reality.

This recovery, unlike their removal, was not announced and covered in any way. Why didn't reporters notice this, and Twitter completely ignored these anomalous changes? To understand how this could happen, you need to answer many questions that were not paid attention. You can read the main of these questions on the next page. All of them will be answered in different chapters of this report.

Twitter Purge: True Story

Part 1. Investigation

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Twitter Purge:

unknown facts
and a new
explanation.

1

What accounts were really affected by the purge?

To understand exactly which accounts were proportionally restored in October, you need to know which accounts were purged. And here we meet with the first problem: the correct full list of affected accounts has never been published. There was only one exception that went unnoticed, to which we will return later. Everything you read before was incomplete lists, not even containing half of the accounts that had the greatest losses.

Therefore, the study should start with the correct statistics. Among those affected by the purge were accounts that lost more than Katy Perry or Justin Bieber. One or two million followers for such accounts is no more than 2-5% of their audience, that is essentially a negligible loss. However, thousands of accounts, which lost from 40% to 90%, were completely ignored.

The greatest drop was shown by @Twitter (7.8M), this is absolutely correct. But the next ones were not @katyperry (2.8M) or @justinbieber (2.7M), as widely reported. Four accounts have lost more than 3 million followers. @Oceaanfietser (Ebrahim Hemmatnia) lost 3.9 million followers.

Three more accounts lost about 3.5 million:

@AdelAliBinAli (Adel Ali Bin Ali),
 @Angelluisr (Angel Rivera),
 @dumbassgenius (Rick G. Rosner).



-3.9M



-3.5M

-3.5M



























-3.5M

What do these totally different people have in common? As strange as it seems, but they had millions of common followers, and most of them were affected by the recent purge.

It was fatal for these accounts, their loss averaged 70%. Three of them were on Twitter top 1000 before the purge.

On the next page, you can see a list of 26 accounts that lost more than 2 million followers after the purge. 10 of them were in media reviews in July 2018. Only 38% of the most affected accounts are known, and 62% (16 out of 26) accounts were not covered (except for David Copperfield, who was accidentally mentioned in some lists of affected accounts). But only a full list of affected accounts allow us to understand what really happened during the purge.

The top 26 losers of Twitter Purge who lost over 2 million followers.

		Name / Screenname	Before / After	% Lost	Followers Lost
1		Twitter @Twitter	62,850,000 55,054,000	12,4 %	- 7,796,000
2		Ebrahim Hemmatnia @Oceananfetser	5,505,000 1,133,000	78 %	- 3,922,000
3		عادل علي بن علي AdelAliBinAli	6,195,000 2,696,000	56 %	- 3,499,000
4		Angel Rivera @Angelluisr	4,952,000 1,483,000	70 %	- 3,469,000
5		Rick G. Rosner @dumbassgenius	4,545,000 1,062,000	77 %	- 3,487,000
6		Katy Perry @Katyperry	109,610,000 106,769,000	2,6 %	- 2,841,000
7		DR JAMES CABOT @DRJAMESCABOT	4,017,000 1,220,000	70 %	- 2,797,000
8		Alejandro Vigilante @VigilanteArtist	3,396,000 639,000	81 %	- 2,757,000
9		FILIPPA FELICIA L @FilippaLinroos	3,455,000 713,000	79 %	- 2,742,000
10		Justin Bieber @justinbieber	106,700,000 103,986,000	2,5 %	- 2,714,000
11		DavidKWilliams @DavidKWilliams	3,807,000 1,215,000	68 %	- 3,807,000
12		Ledy Gaga @ladygaga	78,964,000 76,431,000	3,2 %	- 2,533,000
13		Dr Elio Keller @ceracoat	3,377,000 971,000	71 %	- 2,406,000
14		Barack Obama @BarackObama	103,621,000 101,250,000	2,3 %	- 2,371,000
15		BIG MONEY MIKE @BIGMONEYMIKE6	2,977,000 634,000	79 %	- 2,343,000
16		Taylor Swift @taylorswift13	85,566,000 83,231,000	2,7 %	- 2,335,000
17		Patrick Abrar @patrickabrar	3,326,000 1,010,000	70 %	- 2,316,000
18		David Copperfield @D_Copperfield	3,375,000 1,102,000	67 %	- 2,273,000
19		Rihanna @rihanna	89,000,000 86,734,000	2,5 %	- 2,266,000
20		Siyovush Dustov @siyovushdustov	2,660,000 484,000	82 %	- 2,176,000
21		MarQuis Trill @6BillionPeople	4,628,000 2,469,000	47 %	- 2,159,000
22		BRUNO IERULLO @BRUNOIERULLO	3,411,000 1,273,000	63 %	- 2,138,000
23		بَعَثْرَه @80888	2,802,000 671,000	76 %	- 2,131,000
24		Britney Spears @britneyspears	58,260,000 56,154,000	3,6 %	- 2,106,000
25		Ellen DeGeneres @TheEllenShow	78,084,000 76,042,000	2,6 %	- 2,042,000
26		YouTube @YouTube	72,380,000 70,358,000	2,8 %	- 2,022,000

Investigation 2016: the largest Twitter junk botnet

Is there anything else in common with all these 16 accounts, besides the same followers? Yes, most of them were covered in our investigation of the largest international botnet of simple bot-followers in February 2016. In 2015, we purchased 6,500 bots at Fiverr.com for \$5 for the experiment.

After examining them we made two conclusions:

1. Most of the bots had some typical features: they had no description and location, only a few or even zero tweets and followers, but a huge number of followings.

2. All of them follow the same set of large accounts from different countries.

That is, they were often blank profiles created only to inflate somebody's follower numbers. Their creators do not even try to make them look like real people. These followers are sold by tens or hundreds of thousands, and it's just impossible to check them manually.

The study found about 1,000 of profiles, which audience mostly consisted of fakes of this botnet. Many of them were from different countries, a large share consisted of Turkish and Arab accounts, but English speaking ones (both US and global), were found too.

Among them were some celebrities, for example, David Copperfield, and completely unknown owners of multi-million accounts.

We focused on highlighting known large, preferably verified accounts for an English speaking audience. After the detailed analysis, we identified 30 accounts with a million or more followers (2 of them are suspended at the moment). All the remaining 28 accounts lost from 60% to 85% of their followers after the purge in July 2018.

On average, one such account lost 1,606,000 followers, or 76% of its audience.

13 accounts lost more than a million followers, 6 accounts lost more than 2 million, and 2 accounts from that list lost more than 3 million.

We can confidently assert that this particular botnet was the main purpose of purge. All statistics allow us to conclude that only incidental effects and secondary victims of the purge were covered. There was no interpretation that it was a botnet (or part of it), and not a set of unrelated accounts with strange behavior.

This happened because Twitter (or some part of its employees) did not reveal its real plan. Undoubtedly, if the real goal of the purge were made public, the assessment of this event by advertisers and shareholders, as well as by reporters, would have been completely different.

Detailed statistics of the investigation of 2016 you can see in the appendix.

The top 50 losers from the Twitter Purge

Social Puncher is not the only one who has compiled an extended list of accounts actually affected by the purge. On July 14, social media analytics company Social Blade published a statistical review "Here are the top 50 losers from the Twitter Purge". It is similar to Social Puncher's findings, accounts from both lists are marked with gray bars in the spreadsheet. But when this review was published, most of the media had already covered this topic and the new correct stats did not attract the attention of reporters.

Media covered only 14 of these top 50 accounts, two more of them were casually mentioned once. That is, the 34 most affected accounts have never been mentioned in the media when covering this purge. It is hardly possible to talk about the correct interpretation of this phenomenon if more than 2/3 of the key data were not taken into account. The fact that most of the affected accounts remained in the shadows was the key cause of further incidents. If the purge would be really transparent, then all subsequent changes in these accounts would not have gone unnoticed, and the anomalies that occurred after that would have been impossible.

The top 50 most affected accounts lost a total of more than 100 million followers, but unique ones were affected many times less: all of these 50 accounts had the same followers removed.

Rank	Username	Total Followers	Lost Followers	% Change
1st	Twitter	55,093,707	-7,760,373	-12.35%
2nd	Oceanfietser	1,150,646	-3,904,103	-77.24%
3rd	AdelAliBinAli	2,685,889	-3,509,553	-56.65%
4th	Angelluisr	1,474,834	-3,477,062	-70.22%
5th	dumbassgenius	1,075,289	-3,472,118	-76.35%
6th	katyperry	106,796,105	-2,818,942	-2.57%
7th	DRJAMESCABOT	1,219,694	-2,797,122	-69.64%
8th	VigilanteArtist	650,720	-2,744,373	-80.83%
9th	justinbieber	104,021,817	-2,697,920	-2.53%
10th	DavidKWilliams	1,225,782	-2,579,814	-67.79%
11th	ladygaga	76,454,950	-2,509,831	-3.18%
12th	BarackObama	101,277,970	-2,355,564	-2.27%
13th	BIGMONEYMIKE6	643,811	-2,333,137	-78.37%
14th	taylorswift13	83,242,071	-2,323,830	-2.72%
15th	patrickabrar	1,015,744	-2,299,917	-69.37%
16th	D_Copperfield	1,102,091	-2,263,084	-67.25%
17th	rihanna	86,761,620	-2,248,807	-2.53%
18th	6BillionPeople	2,471,369	-2,157,607	-46.61%
19th	BRUNOIERULLO	1,272,671	-2,136,600	-62.67%
20th	britneyspears	56,169,538	-2,087,549	-3.58%
21st	TheEllenShow	76,065,633	-2,022,200	-2.59%
22nd	YouTube	70,363,781	-2,005,975	-2.77%
23rd	BurakTorunResmi	1,091,686	-1,910,504	-63.64%
24th	jtimmerlake	64,252,470	-1,805,406	-2.73%
25th	elmorenomichael	1,400,664	-1,768,075	-55.80%
26th	KimKardashian	58,495,516	-1,746,608	-2.90%
27th	drangelocarbone	899,639	-1,736,295	-65.87%
28th	REALDIEGOVALDEZ	713,919	-1,673,586	-70.10%
29th	nicekieran2017	319,890	-1,640,772	-83.68%
30th	bonnovanderputt	533,637	-1,606,962	-75.07%
31st	AlbertoCiurana	1,233,738	-1,605,185	-56.54%
32nd	ERNESTZorro	782,713	-1,601,771	-67.17%
33rd	MixMastaKing	2,890,419	-1,600,917	-35.64%
34th	_SherozKhan	306,891	-1,584,135	-83.77%
35th	PopWrapped	595,398	-1,570,160	-72.51%
36th	economic2112	463,060	-1,536,580	-76.84%
37th	AlaattinCAGIL	1,618,811	-1,531,621	-48.62%
38th	MSaharyan	321,558	-1,518,276	-82.52%
39th	NVPMexico	795,322	-1,504,533	-65.42%
40th	rssaha	333,983	-1,489,893	-81.69%
41st	pauldarbos	394,988	-1,477,832	-78.91%
42nd	SeanMaxwell	575,251	-1,474,642	-71.94%
43rd	tkfjsrks	714,496	-1,442,025	-66.87%
44th	instagram	37,339,908	-1,440,469	-3.71%
45th	Oprah	41,294,277	-1,437,088	-3.36%
46th	paulatooths	507,634	-1,436,929	-73.89%
47th	DrSophy	625,299	-1,434,742	-69.65%
48th	YESBANK	1,847,302	-1,428,287	-43.60%
49th	Tyga	5,482,774	-1,426,989	-20.65%
50th	philstockworld	493,040	-1,366,296	-73.48%

<https://socialblade.com/blog/ top-50-losers-twitter-purge/>

Why junk botnet follow Twitter top 100?

It is this set of accounts is not accidental. In addition to their main goal, the mass simulation of millions of followers for their customers, they had a secondary, but also an important goal: not to be banned.

If the botnet is not integrated into the global network and follows only those who paid for it, it looks like a separate and very suspicious community that is very easy to identify and remove. But if a botnet follows dozens or hundreds of popular accounts, its bots are already included in their visible metrics, and its complete deactivation will mean a drop in followers among a wide range of accounts. Blocking such a botnet without good reason is very dangerous since it inevitably entails serious risks for the social network.

If a massive purge occurs, all accounts would lose an audience, including those that did not buy these bots. Following popular global or local accounts, especially selected by the social graph, allows them to simulate personalized human behavior and protects these bots from being suspended.

Twitter knew exactly before the purge what accounts are locked, therefore, it could accurately predict how many followers each user would lose. In fact, if Twitter really wanted to do a transparent purge, it would have to publish a list of 50 losers from the purge itself.

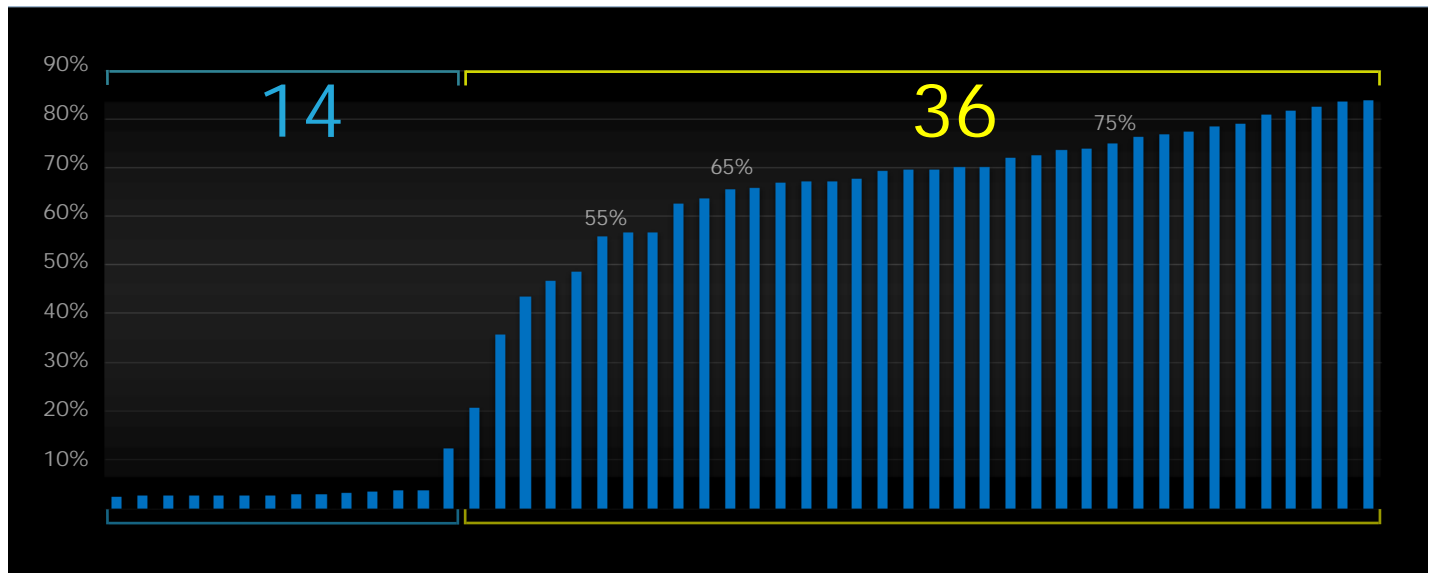
But this was not done, journalists and social media analytics companies had to find and rank the loss of followers from different accounts on their own, although Twitter had the most relevant and complete statistics.

Twitter knew that most followers would lose his own account. This phenomenon is very easy to explain; the best defense against the suspension for such bots is to follow @twitter. So it occurs among the followees of this botnet 3-4 times more often than other accounts.

Perhaps the fact that @twitter will lose much more followers than other accounts kept the purge organizers from publishing basic information about it. Although in the future we will see that non-disclosure of information on really affected accounts will allow the botnet to partially overcome the consequences of the purge and restore the activity of most accounts.

It's easy to divide all these accounts into two large groups: those who allegedly bought followers and those that were used to disguise and protect the botnet. The first group consists of Top 100 accounts with 2-4% of these bots, and the second group includes accounts, where these bots are the largest part of the audience (more than 55% was purged in July).

The correct classification of the most affected accounts



This chart shows the percentage loss of the top 50 accounts, ranked in ascending order. 2 segments are clearly distinguished:

14 accounts were used to protect the botnet, their followers lost after the purge 2-4% (the only exception @ Twitter is 12.3%), and

36 accounts that simulated their audience using this botnet (purchased followers), their follower loss after the purge was 55-84% (except 5 accounts, lost 20-49%)

These 14 popular accounts were in Twitter Top 10 in 2010-2013, they still have at least 40M followers. This botnet followed them from the first years, inflated Top 100 before the IPO, protecting its bots and increasing Twitter capitalization at the same time.

If you delete random unrelated accounts, the spread of the affected accounts would look different. But we see an abnormally high number of accounts lost 70-80%, and the lack of accounts between 4% and 55%. We see two extreme behaviors: following large popular accounts, equally distributed throughout the botnet, or concentrated following (most often) completely unknown accounts with 2-5 million followers, which is completely inconsistent with their real popularity.

If the statistical analysis theoretically proves the artificial origin and behavior of this audience, then the testimony of the participants in the transactions prove the sale of these bots. The next two pages are devoted to one of the largest buyers and one of the largest sellers of these bots.

Joe Mande and 1,000,000 of his fake followers

The following story is the simplest and most obvious proof that this particular botnet was the real target of the purge. In this case, an open buyer of fake followers from this botnet lost almost half of his audience after the purge. He never concealed that he bought these bots; even more, he tried to make of this experiment something like a show.

5 years ago, in 2013, the stand-up comedian and writer Joe Mande set out to reach a million followers by buying bots after reading an article that Justin Bieber could have had up to half of the fake followers. He tried to buy bots in different places, but eventually found a marketplace where he started wholesale purchases. According to his interview, this site is very similar to the fiverr.com: "... through that website I found a bunch of vendors from various countries all over the world who are willing to sell me a certain number of Twitter followers for like \$5 a piece."

By early March 2014, Joe Mande reached the goal of 1 million followers. He would have done it faster, but in the fall of 2013, before the Twitter IPO, he lost several hundred thousand followers, and his further progress towards the goal slowed for a while.

How many fake followers did Joe Mande buy? According to his interview with Yahoo News, "it started with the fact that I had been stuck at 80,400 [followers] for months." Let's assume that all of them were only real people.

Immediately before the purge, Joe Mande had 1,005,000 followers. That is, more than 925,000 of them were openly purchased 5 years ago. In fact, reaching a million followers, much more fake followers were bought, but some of them were removed during previous purges.

Joe Mande told many times about this experiment in various interviews, but until July 2018, buying a million bots did not have any effect on his account. After the purge, Joe Mande lost 420,000 followers, and now his count is only 585,000.

If Twitter really deleted all the bots from his followers, it should have been no more than 85,000. Eventually, after the purge, Joe Mande had at least 500,000 more fake followers.

16 October 2017 Joe Mande left Twitter, making the last tweet, explaining the reasons for his decision. Despite the ambiguous ending of this story, this experiment was of great importance for this research. The same bots were found in other accounts covered during the 2016 investigation. For example, 48% of his 1,000,000 followers were common with Angel Rivera, and 35% of them also followed David Copperfield.

The purge for some reason did not affect the entire botnet. Millions of purchased bots were removed from the follower counts, but there are still millions that continue to distort the important visible metrics.

The largest account that sells fake followers affected by the purge

If Twitter really would like to stop the activity of this botnet and punish those involved in it, another account that was found during the investigation in 2016 should have been suspended a long time ago. Unlike other accounts of this investigation, it definitely did not buy bots. It sells them. @itzbjj promotes its services mainly for teenagers using automated targeted likes (more than 400K by the beginning of October).

Immediately before the purge, it had almost 1,500,000 followers, after it fell to 360,000, but in the second half of September, it was growing to 450,000. Social Plug (formerly Ben Jurgenson) has been engaged in selling different social media packages for more than 4 years. In 2015, the account had almost 5 million followers and a description: #1 Social Media Provider! TwitterFollowers, Instagram Followers, Facebook Likes, YouTube Views, YouTube Subscribers. Retweets and Favorites!

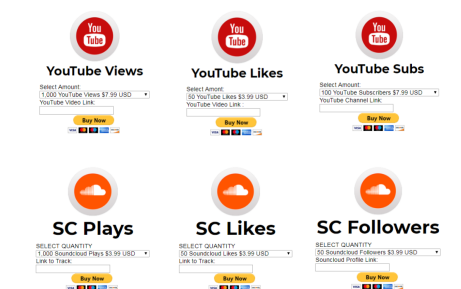
At various times, it promoted 5 its own online stores selling fake social engagement (there are only 3 different services, two of them are just clones). HitSocialMarketing.com is different from the other two couples, it allows you to register and repeatedly buy fake social audience and web traffic through your account in this system. According to this site, Social Media Pros Providing Social Media Services Since 2012. Affiliate of www.SocialMediaPros.org and www.UpMyPlays.com. Currently the most promoted are Sound Cloud Plays and Likes, since they are in the highest demand for its customers.

This account is an integral part of global ecosystem of digital audience simulation. There is no chance that 1.5 million real people follow him. At most, it can be followed by a few hundred of its regular customers.

Social Plug/ Ben Jurgenson



MegaSocialBoost.com/SocialMediaPros.org



UpMyPlays.com/BoostMyBeats.com

What should the purge look like if Twitter really followed its rules?

Removed followers do not look like a variety of unrelated random accounts that were locked over the years. These are millions of impersonal accounts that do not have a description, followers, and tweets, but simultaneously follow someone without any reason for it. If these were real people, they could be characterized as asocial polyglots, not needing friends and talks, but knowing a unique set of languages (usually Turkish, Arabic and English), and obsessed with a manic desire to follow.

But it is a huge army of primitive bots, which can be bought on thousands of marketplaces all over the Internet.

According to Twitter rules, all these accounts should have been suspended, as well as their sellers and buyers. And this should have happened much earlier, at least two, or even five years ago.

But for some reason, Twitter did not take strong action against this botnet, limited to a periodic partial blocking of a small number of accounts, which in the end had no effect on its activities. Even this time, when in fact cheaply purchased followers was the main target of the purge, a significant part of this botnet still was not affected.

But it was only the first step in a series of inconsistent Twitter actions against this botnet.



Twitter Help Center.
Safety and Security

About fake engagements on Twitter

Can I purchase or sell account interactions (i.e. Twitter followers, Retweets or likes) on Twitter?

No. Twitter strictly prohibits the purchasing and selling of account interactions on our platform. When you purchase followers, Retweets and likes, you are often purchasing bot (fake) or hacked accounts. Any account caught participating in this behavior will be in violation of the Twitter Rules and may be suspended.

- If your account is found to have purchased followers, Retweets and likes, your account may be suspended.
- If your account is promoting the selling of followers, Retweets and likes, your account may be suspended.
- If your account is set up with the sole purpose of selling followers, Retweets and likes, your account may be suspended.

<https://help.twitter.com/en/safety-and-security/fake-twitter-followers-and-interactions>

Resurrection of the “locked accounts”:

how removed
followers began
to follow again.

2

What actually happened in the following days after the purge?

As we said earlier, the purge was completed on July 13, but the most important things happened after that. As soon as reporters switched to other topics, the locked accounts began to recover. Here are the 5 facts you should know about it.

[spoilers]

1

Already in 3 days after the purge millions of locked accounts removed from follower counts, became active again. And their first action was to delete all their previous deactivated followings and... start to follow the same accounts again.

2

Hundreds of accounts with mostly fake followers have completely returned their audience within 1-2 weeks. In all cases, without exception, the recovery was due to synchronous reactivation of the audience removed during the purge.

3

That is, this growth of followers was made using "locked accounts" which should no longer be counted as followers. Then the reasonable question arises, were they actually locked or not?

4

Among those who were actually affected by the purge, at least 11 accounts returned a million or more followers. The two largest recovered accounts have added to their audience 3.5 and 4 million respectively.

5

The first one is a businessman from Qatar Adel Ali Ben Ali, and the other one is a fashion entrepreneur Angel Rivera. Both of them were in top 5 of our list of the most affected accounts, and after this recovery they returned to the Twitter Top 1000.

How technically was the purge done and why was the recovery possible?

In order to explain everything that happened next, you need to know what exactly happened to the accounts during the purge. First of all, you need to figure out what the strange wording "remove from follower counts" means.

Immediately after the purge, these accounts did not disappear, they were accessible to all users and were no different from other accounts. Despite the fact that they were excluded from the follower counts, their lists of followees remained unchanged. They really were no longer counted as followers, but looking at this account, you could not understand it.

The fact is that the following list of the certain account and the links of who follows whom are two different objects in the database. Here is a simplified explanation of this feature of the Twitter architecture.

When you follow someone, two things happen. First, your new followee appears on your following list. Second, a unique link is created in the database: "Account1 followed Account2". It is important to understand that these are two different actions, although they usually occur synchronously.

If you remove someone from your follower list, then the corresponding link is automatically removed. But there is no feedback between them, if only these links are deleted, this will not be reflected in the following lists. You cannot directly remove this link, but Twitter can.

This was exactly what was done during the purge: they remained intact, but all their connections with followees were deleted.

And again, we were not the only ones who discovered this phenomenon. The article "What is the Real Agenda Behind the Great "Twitter Purge"?" was published on July 15 on the blog Off-guardian.org reviewed 1580 followers who were removed from their twitter account with the following conclusion: *"... the important point is that they are all still there and all still following other people."*

We recommend that you read the entire article, the authors ask important questions, for example: *"Why did Twitter claim to only be targeting "locked accounts" when a simple stats check proves this to be a lie?"*

Unfortunately, this discovery was made only in a single review and was not continued. But the deep study of this issue could lead to a great conclusion.

The main events of the first recovery cycle

Within a few days, the botnet owners analyzed what had happened, and began to take some action. Logging into these accounts was definitely possible, as hundreds of thousands of them didn't stop tweeting just before and after the purge. Then they made the most important discovery that only all former followers were removed, but there was no ban on new followings, and there were no restrictions on the accounts Twitter announced as locked.

It was impossible to follow those accounts that are still in the following list, but their links were deactivated. Then a simple decision was made: they deleted all the followees and started to follow them again. It worked, and new followings of the same accounts were counted. The next week after the purge, the synchronous recovery of hundreds of accounts began.

But botnet owners have been careful. The big advantage for them was that most of the purged accounts were not covered and no one (except Social Puncher) did not monitor their statistics. They began to gradually restore those accounts whose owners were unhappy with the purge and wanted to return their followers. Who exactly was restored? Analysis of the 50 largest accounts allows us to make three main conclusions.

Most of them were Arab (54%) and Turkish accounts (37%). One-third of them had exactly a million followers (with minor variations). Many of them reached these numbers a long time ago, 2-5 years ago, and after that their audience did not increase.

The first accounts to be restored were allegedly associated with botnet owners or intermediaries. Large verified accounts were restored after two weeks when it became clear that Twitter did not deactivate recovered followers. The most recent account of Angel Rivera was restored in early August.

After these events more than a month nothing happened. But in mid-September, the first strange change occurred. Millions of "locked accounts" hid their new follower numbers. If you look at such an account, you would think that it does not follow anyone. But if you open a direct link to the following list, you would see all the new followees there.

Moreover, this data was hidden not only for the web or mobile users but also for API requests, that are used by partners and developers. Social media analytics companies couldn't monitor changes in the number of followees in the accounts. But these changes occurred within a couple of weeks.

11 accounts that received more than 1 million followers after recovery

	Name / Screenname	Before / After	% Lost	Recovered / Now
1	عادل علي بن علي @AdelAliBinAli	6,195,000 2,696,000	- 56 %	+3,928,000 6,624,000
2	Angel Rivera @Angelluisr	4,952,000 1,462,000	- 70 %	+3,524,000 4,986,000
3	بَغْتَرَه @80888	2,802,000 671,000	- 76 %	+2,290,000 2,961,000
4	Raj Kundra @therajkundra	2,083,000 821,000	- 61 %	++2,045,000 2,866,000
5	Mehmet Burak TORUN @BurakTorunResmi	3,000,000 1,093,000	- 64 %	+1,903,000 2,996,000
6	M1 ! hijacker ! @3tlll	2,139,000 451,000	- 79 %	+1,602,000 2,053,000
7	Alaattin Çağıl @AlaattinCAGIL	3,151,000 1,616,000	- 49 %	+1,530,000 3,146,000
8	KuRaLsiz_ @KuRaLsiz_	2,093,000 933,000	- 55 %	+1,160,000 2,093,000
9	Zafer Şahin @_zafersahin	1,272,000 700,000	- 45 %	+1,121,000 1,821,000
10	Definitive lowan @Definitive33	1,423,000 302,000	- 79 %	+1,120,000 1,422,000
11	M1مشاعر @48a_	1,198,000 91,000	- 92 %	+1,109,000 1,200,000

Another 20 such accounts you can see in the appendix

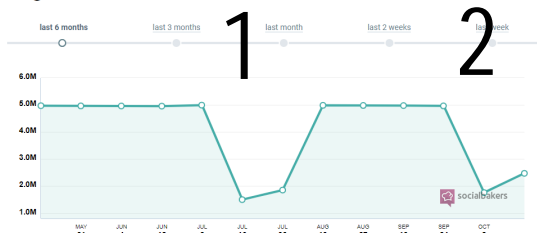
An unexpected
turn:

how Twitter
responded to the
botnet recovery.

3

The second purge. Dates and numbers

Angel Rivera Twitter Followers



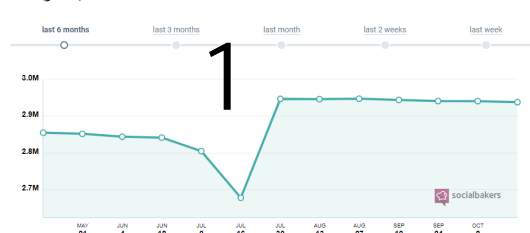
@adelalibenali

عادل علي بن علي Twitter Followers



@angelluisr

بغتره - Twitter Followers



@80888

On October 5 and 6, Twitter re-purged the once-purged accounts. The two main beneficiaries of botnet recovery, Angel Rivera and Adel Ali Ben Ali, lost almost all recovered followers. One would think that Twitter decided to correct its mistake and now finally banned this botnet, or rather the part that was the purpose of the first purge.

But this did not happen. The third largest restored account @80088, was not affected by new purge and still has the same 3 million followers, most of whom follow no one, according to their statistics. More than 25% of the large restored accounts and a significant portion of the small accounts remained intact.

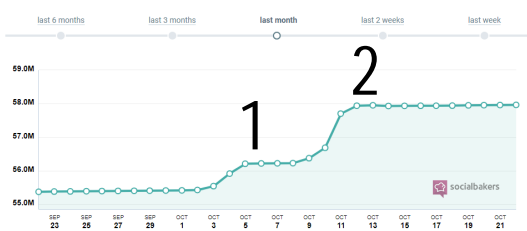
But two days earlier, the process began, which overshadowed the second purge. This was the second recovery.

Since July 11, the multimillion group of so-called "locked accounts" has been purged and recovered twice.

Follower stats for the recent month provided by SocialBakers

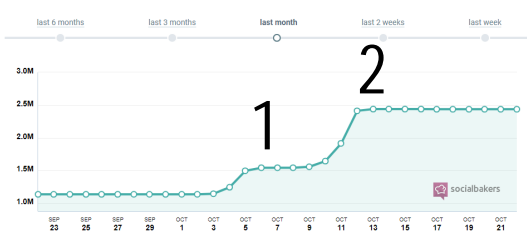
The second recovery. Dates and numbers

Twitter Twitter Followers



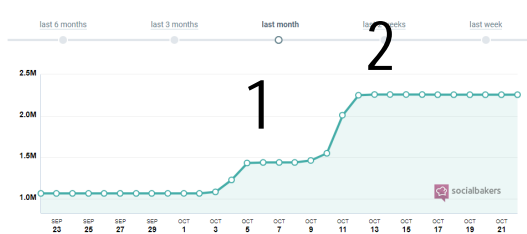
@twitter

Ebrahim Hemmatnia Twitter Followers



@Oceaanfietser

Rick G. Rosner Twitter Followers



@dumbassgenius

Follower stats for the recent month provided by SocialBakers

The second recovery
could not be done
by anyone other than
Twitter employees.

It is very important how this recovery was technically done. It began on October 3, ended on October 12, and consisted of two phases: 3-5 and 9-12 October. Both stages had spikes on Thursdays and ended on Friday. During the weekend there was a slight correction. The first stage can be considered as a trial. The second stage was twice the first.























The recovery affected all accounts that have lost followers after the July purge, including the top 100. Most of the accounts returned 29%-34% of removed followers.

The average recovery
percentage was **31.6%**

There has been another important change. Millions of locked accounts have the number of their followings made visible. And in most cases, it coincides with the numbers at the beginning of July. Almost a third of all accounts affected by the first purge fully restored their followees. It was not a new following, it was exactly the recovery of the connections that were removed in July.

It is not difficult to guess that the one who lost the most has restored most. @twitter recovered 30% of deleted followers, almost 2.4 million. Only in one day, on Thursday, October 11, @tweeter recovered 1 million. In total, 4 accounts returned more than 1 million lost followers.

Top 25 beneficiaries of the October recovery

		Name / Screenname	%	Recovered
1		Twitter @Twitter	30,3 %	2,365,000
2		Ebrahim Hemmatnia @Oceaanfietser	33,2 %	1,304,000
3		عادل علي بن علي AdelAliBinAli	33,2 %	1,163,000
4		Angel Rivera @Angelluisr	26,2 %	916,000
5		Rick G. Rosner @dumbassgenius	34,2 %	1,194,000
6		Katy Perry @Katyperry	33,2 %	943,000
7		DR JAMES CABOT @DRJAMESCABOT	34,2 %	957,000
8		Alejandro Vigilante @VigilanteArtist	30,9 %	853,000
9		FILIPPA FELICIA L @FilippaLinroos	31,0 %	850,000
10		Justin Bieber @justinbieber	29,3 %	794,000
11		DavidKWilliams @DavidKWilliams	26,2 %	678,000
12		Ledy Gaga @ladygaga	31,0 %	786,000
13		Dr Elio Keller @ceracoat	29,6 %	712,000
14		Barack Obama @BarackObama	33,2 %	787,000
15		BIG MONEY MIKE @BIGMONEYMIKE6	31,7 %	742,000
16		Taylor Swift @taylorswift13	29,6 %	691,000
17		Patrick Abrar @patrickabrar	45,6 %	1,055,000
18		David Copperfield @D_Copperfield	29,0 %	660,000
19		Rihanna @rihanna	33,2 %	753,000
20		Siyovush Dustov @siyovushdustov	31,9 %	695,000
21		MarQuis Trill @6BillionPeople	29,6 %	639,000
22		BRUNO IERULLO @BRUNOIERULLO	29,6 %	632,000
23		بَعْرَه @80888	---	recovered earlier
24		Britney Spears @britneyspears	29,6 %	623,000
25		Ellen DeGeneres @TheEllenShow	26,2 %	534,000
26		YouTube @YouTube	34,2 %	692,000

Summary 1.

The main facts of the purge

1

The main victims of the purge were not widely covered Top-100 or Top-500 accounts, but a group of several thousand accounts that lost from 40% to 90% (or even more) their audience.

2

Most of so-called “locked accounts” are primitive bots, created only to simulate a static audience (followers). It wasn't real people, there were fake accounts managed by an automated system.

3

All these bots, despite belonging to different botnets, often acted in a similar way. They were sold through the same vendors and marketplaces. It is the lowest segment of the international shadow digital market.

4

Twitter has previously repeatedly deleted a few small parts of this botnet. The first major purge took place a few months before the IPO. Twitter for at least 5 years found the initial signs of this illegal activity.

5

The drop in the number of followers of the global top 100 (as well as local and thematic top 100) was also associated with the purge of this botnet. Following large accounts is a reliable way to protect against the danger of being suspended, because removing such a botnet leads to a drop in the number of followers popular accounts, whose audience it artificially increased.

6

As a result of the purge, not all accounts belonging to this group of botnets were removed from the followers. The purge affected not the whole botnet, but only its part.

Summary 2.

The first and the second recoveries

7

We did not find any signs that the accounts were actually locked. Their mass activity returned after only a few days, and in different manifestations continues to this day. These are ordinary accounts that immediately after the purge could not be distinguished from the non-locked ones. Only in September, all these accounts had a distinctive feature, they had a following number hidden, but the following list was available through a direct link.

8

After the purge, it took only three days to find a response from the botnet owners. When they found out that that only old connections were removed, but all new followings are counted, they began to act in this way. All these accounts synchronously reset the old connections and started to follow again. Their first followees were strange accounts with an inexplicably high audience and anonymous/unknown owners.

9

The response of Twitter took about a month and passed in three stages. In mid-September, the following numbers of this bots were hidden. Then there was a partial purge when the restored followers of the most famous and large accounts were deleted. After that, about a third of the so-called "locked accounts" were completely restored.

10

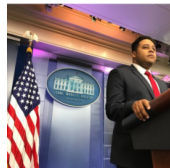
Junk botnet consists of three big parts at the moment. The first one was not affected by the purge and acts as before. The second part, after self-recovery, was partially purged again. The third part was fully restored in October and looks the same as three months before. But despite all the differences, they are united by one thing: all of them are still counted as followers.

Appendix:

the additional stats
of the purge and
recovery.

Top 6 accounts from the investigation 2016 after the purge

1



Angel Rivera
@Angelluisr

4,952,000
1,462,000



70%

2



Rick G. Rosner
@dumbassgenius

4,459,000
1,062,000



76%

3



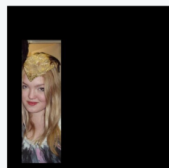
DR JAMES CABOT
@DRJAMESCABOT

4,017,000
1,220,000



70%

4



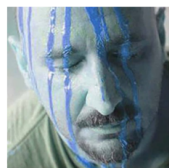
FILIPPA FELICIA L
@FilippaLinroos

3,455,000
713,000



79%

5



Alejandro Vigilante
@VigilanteArtist

3,396,000
639,000



81%

6



David Copperfield
@D_Copperfield

3,375,000
1,102,000



67%

The other 22 accounts from the investigation 2016 after the purge

	Name / Screenname	Before / After	% Lost	Followers lost
1	BIG MONEY MIKE @BIGMONEYMIKE6	2,977,000 634,000	- 79 %	- 2,343,000
2	Siyovush Dustov @siyovushdustov	2,660,000 484,000	- 82 %	- 2,176,000
3	Sheroz @_SherozKhan	1,994,000 300,000	- 85 %	- 1,694,000
4	Kieran Upadrasta @nicekieran2017	1,961,000 315,000	- 84 %	- 1,646,000
5	Pop Wrapped ✓ @PopWrapped	2,173,000 602,000	- 72 %	- 1,571,000
6	Rabi Saha @rssaha	1,883,000 328,000	- 83 %	- 1,555,000
7	PaulaTooths @paulatooths	1,945,000 510,000	- 74 %	- 1,435,000
8	Christine Ha @ChacastHa	1,669,000 247,000	- 85 %	- 1,422,000
9	ΤΡΕΥΙΟΡΕΣ @treviores	1,798,000 574,000	- 68 %	- 1,224,000
10	Robert Kresson @RobertKresson	1,455,000 262,000	- 82 %	- 1,193,000
11	Ron Rafael Shimshilashvili ✓ @RonRafaelS	1,435,000 276,000	- 81 %	- 1,159,000
12	Richard Thomas @richardthomas81	1,616,000 468,000	- 71 %	- 1,148,000
13	Social Plug @ltzBJJ	1,454,000 360,000	- 75 %	- 1,094,000
14	Morris Chestnut ✓ @Morris_Chestnut	1,515,000 436,000	- 71 %	- 1,079,000
15	Peacks @popillos	1,251,000 215,000	- 83 %	- 1,036,000
16	Uncle Louie G ✓ @UncleLouie	1,361,000 379,000	- 72 %	- 982,000
17	Erickssón Ferreira @FerriiOfficial	1,230,000 311,000	- 75 %	- 919,000
18	Stephanie Adams ✓ @stephanieadams	1,316,000 447,000	- 66 %	- 869,000
19	E-man's Angels @EMANSANGELS	994,000 174,000	- 82 %	- 820,000
20	Rap Bible @RAPBIBLE	973,000 199,000	- 80 %	- 774,000
21	Reizo Shibamoto @reizonation	983,000 219,000	- 78 %	- 764,000
22	Derik Fein @derikfein	976,000 377,000	- 61 %	- 599,000

The stats of 20 largest accounts after the first recovery

	Name / Screenname	Before / After	% Lost	Recovered / Now
1	Emre Almas emrealmas_	1,383,000 480,000	- 65 %	+935,000 1,415,000
2	Murat Avci MURATAVCIONLINE	1,150,000 221,000	- 81 %	+928,000 1,149,000
3	Hubert Temba HubertTemba	530,000 62,000	- 88 %	+895,000 957,000
4	Victor Mochere VictorMochere	897,000 88,000	- 90 %	+808,000 896,000
5	Odun Adam odunadam	1,097,000 326,000	- 70 %	+770,000 1,096,000
6	ملك 1king_	1,327,000 567,000	- 57 %	+761,000 1,328,000
7	صقر 38 SQR38	1,191,000 466,000	- 61 %	+760,000 1,226,000
8	عديل الروووح soory2020	1,017,000 251,000	- 75 %	+747,000 998,000
9	سعد السميري CIV_11	1,121,000 627,000	- 44 %	+746,000 1,373,000
10	Beyefendi Beyefendi	1,024,000 279,000	- 73 %	+745,000 1,024,000
11	Talha Yilmaz TalhaYilmaz	1,348,000 639,000	- 53 %	+719,000 1,358,000
12	A_M احساس عاشق A88_88_88A	1,023,000 310,000	- 70 %	+700,000 1,010,000
13	وليم شكسبير Wam_Shakespear	1,016,000 355,000	- 65 %	+660,000 1,015,000
14	أنا إنسان 75fM1	1,065,000 446,000	- 58 %	+652,000 1,098,000
15	مشعل الفدغوش alfadguc	965,000 560,000	- 42 %	+649,000 1,209,000
16	Arzu BidinleSen_	1,139,000 535,000	- 53 %	+602,000 1,137,000
17	Kenan Yilmaz Knnnyilmaz61	1,157,000 571,000	- 51 %	+585,000 1,156,000
18	1M زيتونه 1mRijj	1,017,000 496,000	- 51 %	+521,000 1,017,000
19	فك، ره. idea_spread	1,017,000 496,000	- 51 %	+521,000 1,017,000
20	1M خجل العتيب _5jll_	1,107,000 615,000	- 44 %	+492,000 1,107,000