

AMENDED Exhibit 870

PLAINTIFFS' OMNIBUS OPPOSITION TO DEFENDANTS' MOTIONS FOR SUMMARY JUDGMENT

Case No.: 4:22-md-03047-YGR

MDL No. 3047

In Re: Social Media Adolescent Addiction/Personal Injury Products Liability Litigation

DOCUMENT SLIPSHEET

P-SNAP-0196

Bates Number: SNAP2367565-SNAP2367570

Custodian: ANDREOU_JACOB; SIEGEL_JOSH

Author: [REDACTED]

Filename: 4684288620CC63E3EEBFE20A7BE2ED77CE8B1F4E03E742764E0D2C4B66B76092.EML

Create Date: 5/31/2018 12:50 PM

Last Modified Date: 5/31/2018 12:51 PM

TNAG BEGBATES:

TNAG ENDBATES:

MAAG BEGBATES:

MAAG ENDBATES:

File Path: /4684288620CC63E3EEBFE20A7BE2ED77CE8B1F4E03E742764E0D2C4B66B76092.EML



From: [REDACTED]
Sent: 5/31/2018 12:50:52 PM
To: [REDACTED] Jonathan Jaklitsch [REDACTED]
CC: Josh Siegel [REDACTED]
Subject: Re: 13-17 dau [REDACTED] Jacob Andreou [REDACTED]

+ [REDACTED] and Jonathan for visibility

On Wed, May 30, 2018 at 9:56 AM, [REDACTED] <[REDACTED]> wrote:

If it helps with the analysis we changed the default registration picker to 18 years old in [August 2017](#).

On Wed, May 30, 2018 at 9:47 AM, Josh Siegel [REDACTED] > wrote:

Thanks. To clarify my point / ask: I agree we have a problem, nobody is disputing that. We're obviously declining in DAU, and 13-17 seems more pronounced than other age groups.

The thing I want to know is if 13-17 is *the* problem. When using supplied age we see that we're basically only losing 13-17 year olds and every other cohort is stabilizing.

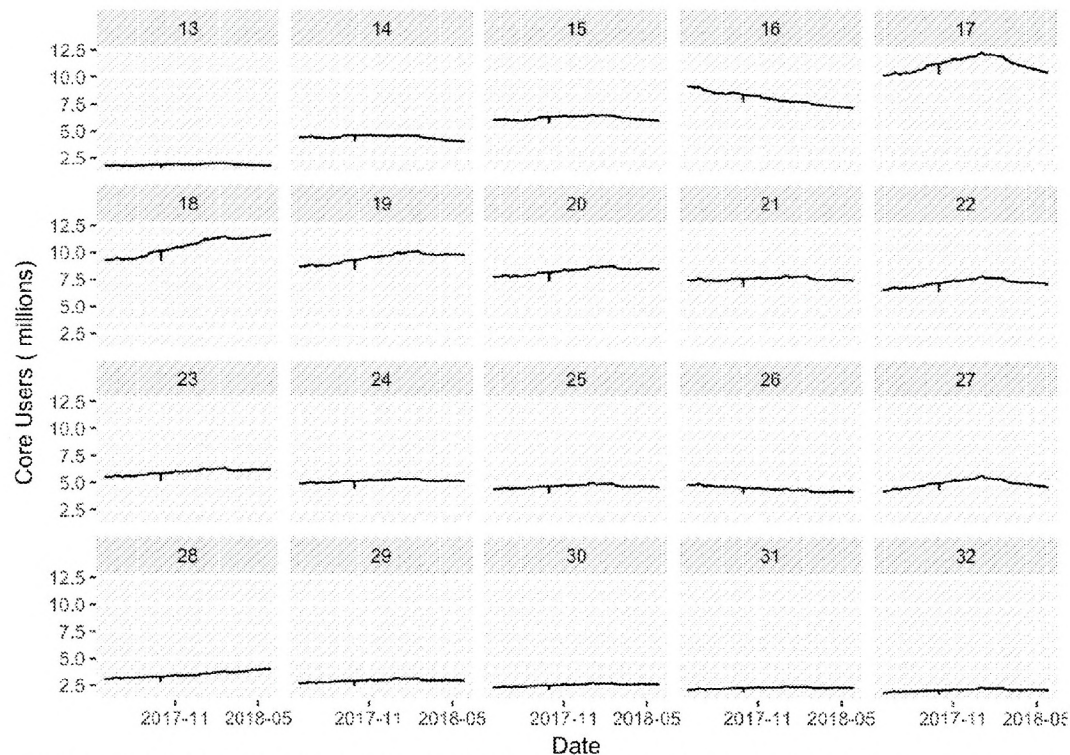
If we're only losing 13-17 year olds, that might mean that we need to just focus on products, features, and improvements in service of that age demo, as they behave very differently (streaks, DTTR, etc.).

If we're losing users across the board at similar rates, that means that we need to fix the viral loops that we closed with Cheetah, improve retention, new user experience, and make all the other improvements that we know to be impactful to users of all ages.

On Wed, May 30, 2018 at 9:38 AM, [REDACTED] > wrote:

Following up on this.

Here's a plot of the count of users in the "core" state (L6+) by age without bucketing. Again, I'm using age from dau_user_country as it has been for the past several months.

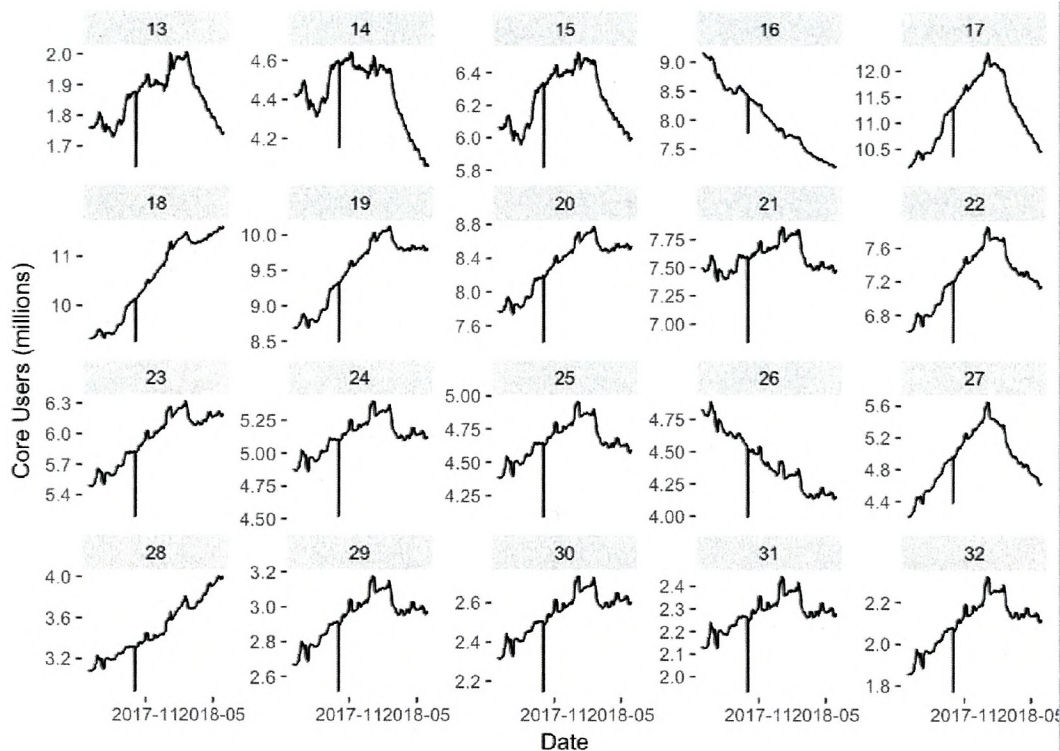


You can see that the 17 year old cohort is the largest, at least partly as a result of our reg flow design. The 17 year panel kinks to flat in January just as you'd expect, and then starts declining rapidly with Cheetah. But that 17 year old line actually includes users of many different ages, so it's a bit difficult to interpret. We want to look at the other lines, but that's made difficult because they are all on the same scale. So I'll replot. Below each panel is on its own scale, so you can see the variation in each series much more clearly. There are a few things going on here:

- * 17 and 27 year olds look similar (down precipitously), as do 18 and 28 year olds (up post-Cheetah). I believe this is the known effect from the reg flow, though why 27 and 28 year olds are impacted isn't clear.
- * 16 and 26 year olds have been dropping out of core status since last summer. Unclear whether this is yet another unexplained anomaly in this age data, or is caused by reg flow.

The big point for me is that the drops in 13-15 and 17 are all more severe and sustained post-Cheetah. I do think we have a problem with younger users falling away from the service.

I also think that the size of the 17 year old cohort is not so large as to make me believe that it's dominated by people of other ages that just chose the default birth year. I'd guess that it's ~80% actual 17 year olds.



Let me know if this makes sense, or if you think my analysis is off.

-J

On Wed, May 30, 2018 at 8:31 AM, [REDACTED] wrote:

I'm trying to figure out what this means for plots like the one below. The age in this plot is driven by the age column in `dau_user_country`, which I think is the supplied age impacted by our reg flow defaults. What that means is that the 13-17 bucket is really comprised of a blend of 13-17 year olds and users from other buckets, in the appropriate amounts, inflected by the user's propensity to enter a real age. Depending on how long the reg flow has been like this, there might also be a tenure effect in the 13-17 bucket. Still, the drop in all panels lines up with the global Cheetah rollout, so it's not driven by the change of the year. And the 13-17 panel continues to decline, while all the others level off, which makes me think the 13-17 bucket really is different from the others.

In short: I still think it's likely that we have a real problem with 13-17 year olds post-Cheetah. Do I misunderstand the nature of this data anomaly? I'd hate for us to take our eye off the ball w.r.t to this cohort.

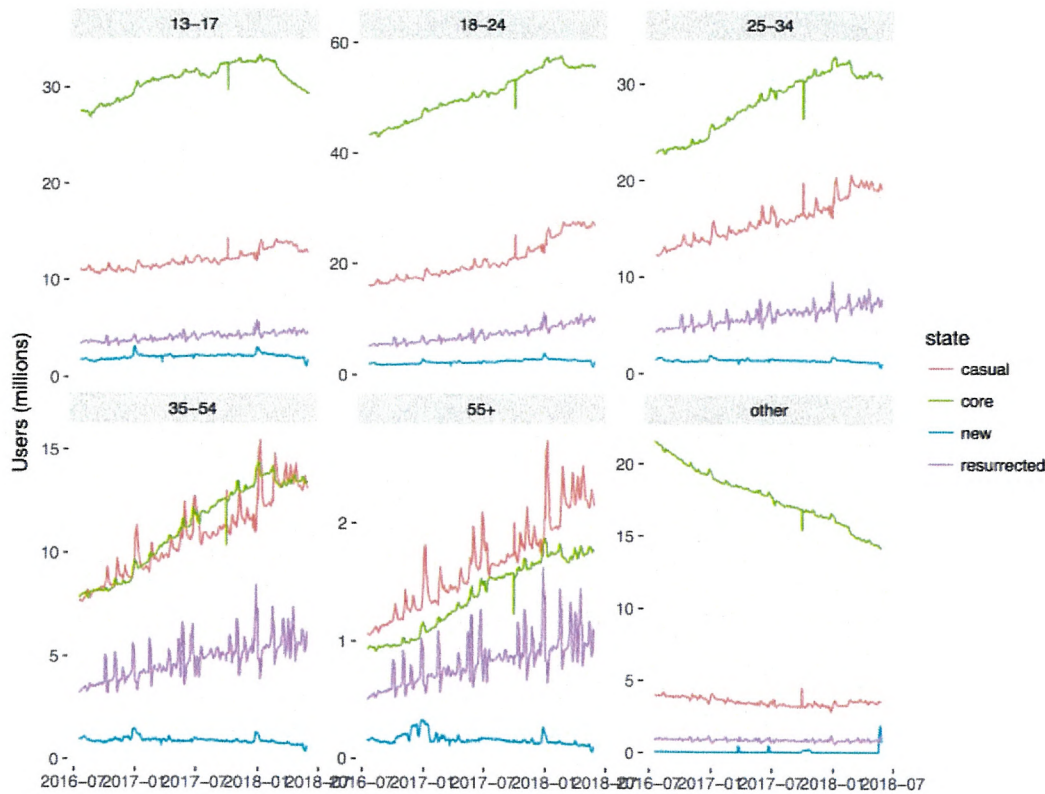


Figure 5.4: The number of users in each state, by age group.

-J

On Tue, May 29, 2018 at 11:26 PM, Josh Siegel [REDACTED] wrote:

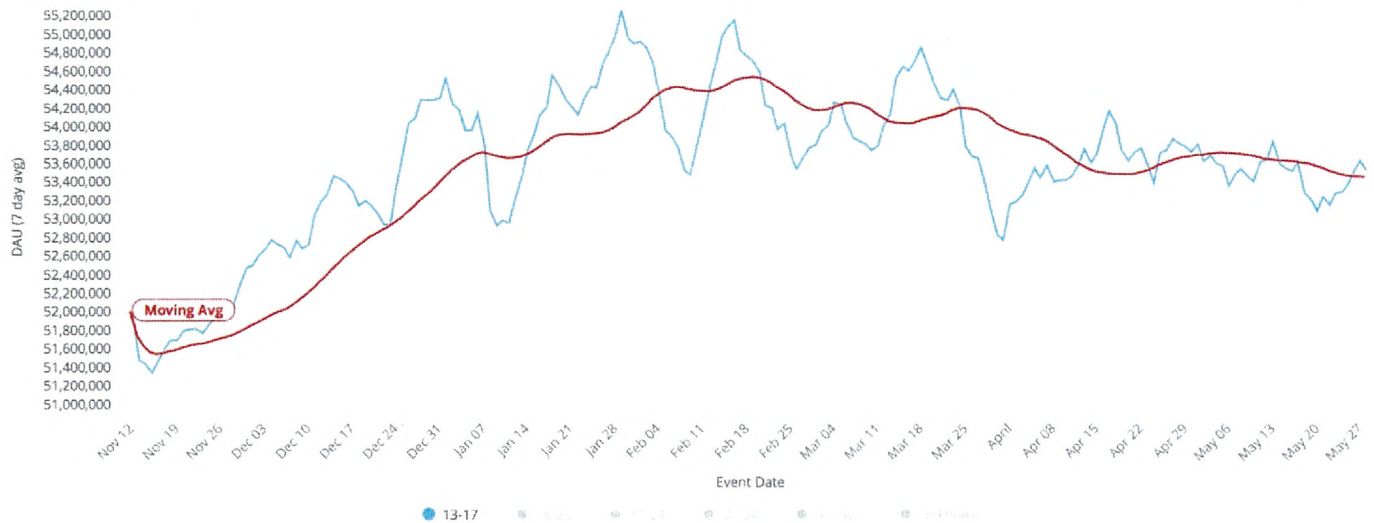
Thanks so much [REDACTED] a. Having the default birthday as "on this day in 2000" sounds like a major culprit explaining some of what we're seeing. Can't believe I missed that :)

Losing 0.8M DAU is a lot better than the -4M loss we see when using supplied for 13-17 in Q2. This affects our near term strategy too.

Good to keep digging, and moving to a consistent way of measuring age and demographics across the company.

On Tue, May 29, 2018 at 11:09 PM, [REDACTED] wrote:

We synced inferred age table, and the drop in 13-17 is softer than the supplied age using your (report_dau_user_device_country) dashboard:



One of the main reason for 13-17 bleeding:

I believe part of the problem is that default year in the registration flow is year 2000 and that's why top birthday year for us is 2000 by far. All those users which didn't change the year have been turning 18 starting this Jan. So, starting Jan you will see drop in the 13-17 bucket and move to 18-20 bucket because of this registration issue when you look at supplied age. The legacy inferred pipeline is not that sensitive to date of birth and absorbs this effect much much slower, which is a good thing in this case. I don't think this 13-17 bleeding is a real problem due to this design problem, and these users are not changing bucket this fast.



When's your birthday?

BIRTHDAY

Continue

March	27	1998
April	28	1999
May	29	2000
June	30	2001
July	31	2002

Next step: we've been working on a new inferred age pipeline for last 2 months which it's very complex, heavy ML and addresses many of these issues. We will rollout that into production later this week and that should give us much better indication of real 13-17 bleeding, for now supplied age change from 17 to 18 will look extreme because of this registration problem.

