

1 exceptions that do not apply here. *See* 18 U.S.C. § 2710. “The term ‘personally identifiable
 2 information’ [“PII”] includes information that identifies a person as having requested or obtained
 3 specific video materials or services from a video tape service provider.” *Id.* § 2710(a)(3).
 4 “Aggrieved” persons may sue for knowing disclosures of PII in violation of the statute. *Id.*
 5 § 2710(b)-(c). A court may award “actual damages but not less than liquidated damages in an
 6 amount of \$2,500.” *Id.* § 2710(c)(2).

7 In its early summary judgment motion, Hulu argued that it did not violate the VPPA because (I)
 8 it disclosed only anonymous user IDs and never linked the user IDs to identifying data such as a
 9 person’s name or address; (II) it did not disclose the information “knowingly” and thus is not liable;
 10 and (III) Hulu users who are Facebook users consented to the disclosures because Facebook’s terms
 11 of use permitted disclosure. Motion for Summary Judgment, ECF No. 125-4 at 1-2. On April 29,
 12 2014, the court granted Hulu summary judgment as to the disclosures to comScore and denied the
 13 summary judgment as to the Facebook disclosures, holding that there were material issues of fact
 14 about whether there was a disclosure of PII to Facebook and whether Hulu knew what it was
 15 disclosing. *See* ECF No. 194 at 2, 20-26.

16 Given its grant of summary judgment to Hulu on the comScore disclosure, the court denies as
 17 moot Plaintiffs’ motion for certification of a comScore class. Following a hearing on May 8, 2014,
 18 and supplemental briefing, *see* ECF Nos. 202 and 203, the court denies Plaintiffs’ motion for class
 19 certification for the Facebook class primarily on the ground that the class is not ascertainable.

20 STATEMENT

21 I. THE PARTIES, THE PROPOSED CLASSES, AND THE RELIEF REQUESTED

22 Hulu provides on-demand, online access to television shows, movies, and other pre-recorded
 23 video content from networks and studios through its website, www.hulu.com. SAC ¶¶ 1, 17. It
 24 offers a free service that allows users to watch video content on their computers. *See* Yang Decl.,
 25 ECF No. 125-6, ¶ 5. It also offers a paid service called “Hulu Plus” that has more content and
 26 allows viewers to watch Hulu content on other devices such as tablets and smart phones. *Id.* ¶¶ 2, 6.

27 Plaintiffs Joseph Garvey, Sandra Peralta, Paul Torre, Joshua Wymyczak, and Evan Zampella
 28 each are registered Hulu users. *See* SAC ¶¶ 1-6. Sandra Peralta, Evan Zampella, and Paul Torre

1 became paying Hulu Plus subscribers in July 2010, June 2011, and July 2012, respectively. *See id.*
 2 ¶¶ 3-4, 6, 34. The SAC alleges that Hulu wrongfully disclosed Plaintiffs' video viewing selections
 3 and "personally identifiable information" to third parties comScore and Facebook, all in violation of
 4 the VPPA. *See id.* ¶¶ 51-63; Motion for Class Certification, ECF No. 112.

5 In their motion for class certification, Plaintiffs propose the following class definition for the
 6 Facebook Disclosure class:

7 All persons residing in the United States and its territories who, from April 21, 2010 through
 8 June 7, 2012, were registered users of hulu.com (including, but not limited to, paying
 9 subscribers, also known as Hulu Plus subscribers) while being members of Facebook and
 10 requested and/or obtained video materials and/or services on hulu.com during the Class
 Period. Excluded from the class are (i) any person who participated in Facebook connect
 with Hulu; (ii) judges to who this case was assigned and judicial staffs; and (iii) all current or
 former Hulu employees.

11 Motion for Class Certification, ECF No. 112 at 15.

12 At the May 8, 2014 hearing, Plaintiffs limited their disclosure theory to disclosures of identifying
 13 information involving the c_user cookie. As discussed below, that cookie contains the logged-in
 14 Hulu user's Facebook ID, and the disclosure theory in effect limits the class to registered Hulu users
 15 who at least once during the class period watched a video on hulu.com having used the same
 16 computer and web browser to log into Facebook in the previous four weeks using default settings.
 17 *See infra*; Joint Statement of Undisputed Facts ("JSUF") #22, ECF No. 178; Calandrino Decl., ECF
 18 No. 160-5, ¶¶ 66-67.

19 Plaintiffs limit their claim to relief to statutory damages of \$2,500 per plaintiff for one incident
 20 only. *See* RT 5/8/14, ECF No. 210 at 12:14-16.

21 **II. HOW HULU WORKS²**

22 Hulu pays license fees to studios, networks, and other rights holders to obtain the video content
 23 that it offers to its users. *See* Yang Decl, ¶ 10. Hulu allows users to register for a free Hulu account.
 24 *See id.* ¶ 5. A Hulu user does not need to register for a Hulu account to watch videos on hulu.com
 25 using a personal computer. *See id.* ¶ 4. To register for a Hulu account, the user enters a first and last

26
 27 ² The parties cite facts submitted in support of the summary judgment briefs and
 28 summarized in the summary judgment order at ECF No. 194. The order sets forth those facts in the
 next three sections and then adds in additional evidence submitted with the class certification briefs.

1 name, birth date, gender, and an email address. JSUF #1. Users are not required to provide their
2 legal first and last name during registration. JSUF #2. In fact, Plaintiff Joseph Garvey registered for
3 his Hulu account in a name other than his legal name. See JSUF #3. Hulu does not verify the
4 accuracy of the identifying information but stores it in a secure location. Yang Decl. ¶ 6. To
5 register for Hulu Plus, the user must provide the same information as a registered Hulu user,
6 payment information, and a billing address. *Id.* ¶ 7. Hulu assigned each new registered Hulu user a
7 “User ID,” which is a unique numerical identifier of at least seven digits (*e.g.*, 50253776). JSUF #6;
8 see Tom Dep., Carpenter Decl. Ex. 7, ECF No. 157-11 at 37:9-38:12.

9 The videos on hulu.com are displayed on a video player that appears on a webpage. Hulu calls
10 these webpages “watch pages.” See Yang Decl. ¶ 3; JSUF #24. Hulu wrote and deployed the code
11 for its watch pages. Tom Dep., Carpenter Decl. Ex. 7, ECF No. 157-11, at 108:23-109:8, 175:9-16;
12 Wu Dep., Carpenter Decl. Ex. 2, ECF No. 157-6, at 80-84. The code downloaded to registered Hulu
13 users’ browsers when they visited a watch page so that the browser could display the requested web
14 page or video content. Tom Dep., Carpenter Decl. Ex. 7, ECF No. 157-11 at 112:19-113:5. As
15 described in more detail below, the code also allowed information to be transmitted to comScore and
16 Facebook. Until June 7, 2012, the URL (uniform resource locator, meaning, the web address) of
17 Hulu’s watch pages included the name of the video on that page (*e.g.*,
18 <http://www.hulu.com/watch/426520/saturday-night-live-the-californians-thanksgiving>). JSUF #24
19 (the number in the URL, here 426520, is the video ID).

20 On or about March 12, 2009, Hulu began providing each registered user with a profile web page.
21 JSUF #9. The first and last name the user provided during registration appeared on the page and in
22 the page title. JSUF #10. Hulu did not allow registered users to decline to share their first and last
23 names on their public profile pages. Until August 1, 2011, a user’s profile page URL included the
24 user’s unencrypted Hulu User ID. JSUF #12. An example is [http://www.hulu.com/profiles/u/\[User](http://www.hulu.com/profiles/u/[User ID])
25 [ID\]](http://www.hulu.com/profiles/u/[User ID]), where “[User ID]” is the Hulu User ID. *Id.* After August 1, 2011, the Hulu User ID was
26 encrypted. JSUF #13. An example is http://www.hulu.com/profiles/u/wxu2RqZLhrBtVjYKEC_R4.
27 *Id.* Hulu did not provide a separate search function (for example, through a search box) to allow a
28 user to use a Hulu User ID to find the profile page of another user. JSUF #11. On May 30, 2013,

1 Hulu discontinued the user profile pages. JSUF #14.

2 Hulu makes money from advertising revenue and from monthly premiums paid by Hulu Plus
3 members. Yang Decl., ¶ 11. Its main source of income is advertising revenue. *Id.* Advertisers pay
4 Hulu to run commercials at periodic breaks during video playback. *Id.* ¶ 12. Advertisers pay based
5 on how many times an ad is viewed. *Id.* ¶ 13. Hulu thus gathers information (or metrics) about its
6 “audience size.” *Id.* Advertisers require verified metrics, which means that Hulu needs to hire
7 trusted metrics companies. *Id.* comScore is one of those companies. *Id.* ¶ 14.

8 comScore collects metrics on digital media consumption using its Unified Digital Measurement
9 methodology. Carpenter Decl. Ex. 22, ECF No. 155-27 (comScore press release cross-referencing
10 its 2012 SEC Form 10-K and its Q1 2013 SEC Form 10-Q), Ex. 32, ECF No. 155-32 (Addendum to
11 Hulu-comScore contract). As of 2013, comScore captured 1.5 trillion digital interactions each
12 month and had more than 2000 clients. *Id.* Ex. 22; *see Harris v. comScore, Inc.*, 292 F.R.D. 579,
13 581 (N.D. Ill. 2013) (describing comScore’s business).

14 **III. HOW HULU INTERACTS WITH COMSCORE**

15 The comScore disclosures are no longer part of this lawsuit, but the summary judgment order’s
16 fact section on the disclosures provide relevant context for the Facebook disclosures, particularly
17 with regard to how Hulu transmits information to third parties such as Facebook.

18 According to Hulu, comScore gives it “reports containing metrics regarding the size of the
19 audience for programming on hulu.com,” and Hulu uses the reports to obtain programming and sell
20 advertising. Yang Decl., ECF No. 125-6, ¶ 14. The reports never identify a user by name and
21 instead present the data in an “aggregated and generalized basis, without reference even to User
22 IDs.” *Id.* Hulu uses the comScore metrics to show “other content owners . . . that the Hulu audience
23 is a desirable outlet for their programming, and to convince advertisers of the value of reaching
24 Hulu’s audience.” *Id.* Mr. Yang said in his deposition that he did not know why Hulu sent
25 individual comScore user IDs (see below) if comScore provided only aggregate information, and he
26 did not know whether comScore provided other reports with individual-level data. *See Yang Dep.*,
27 ECF No. 125-3 at 102-04, 108-11.

28 comScore uses “beacon” technology to track audience metrics. *Id.* ¶ 15. A “beacon” is triggered

1 by defined events during the playing of a video such as when the video starts, when the
2 advertisement starts, when it ends, and when the video re-starts. *Id.* The beacon, when triggered by
3 an event, directs the user’s browser to send a piece of HTTP programming code to comScore that
4 contains certain defined “parameters” (meaning, pieces of data or information). *Id.* ¶ 16.

5 From March 27, 2010 through November 8, 2012, when a user watched a video on hulu.com,
6 Hulu, which wrote the code to transmit the data, transmitted information to comScore by using a
7 comScore “beacon” on the Hulu watch page. JSUF #4-5. The beacon included four pieces of
8 information: (1) the Hulu user’s unique numerical Hulu User ID; (2) the “GUID,” a long
9 alphanumeric string³ that Hulu used to differentiate between web browsers and that Hulu assigned at
10 random to a browser when it accessed hulu.com; (3) the Hulu “Ad ID,” a unique six-digit number
11 that identifies only the advertisement; and (4) the name of the program and any season or episode
12 number. JSUF #5-8. Hulu suspended sending the Hulu User ID on November 8, 2012. JSUF #4.

13 comScore’s possession of the Hulu User ID allowed it to connect all information that was tied to
14 that Hulu User ID. *See* Calandrino Decl., ECF No. 160-5, ¶¶ 30, 33-34, 47. Because the Hulu User
15 ID was in the URL of users’ profile page, comScore had the “key” to locating users’ associated
16 profiles, which revealed the names the users provided when they signed up for Hulu. *Id.* ¶¶ 35-37.
17 The user profile pages were all in a standard format: [http://www.hulu.com/profiles/u/\[User ID\]](http://www.hulu.com/profiles/u/[User ID]). As
18 discussed above, the watch page contained the video title. The argument is that comScore could
19 easily access the profile page and see the user’s first and last names (or at least the names that the
20 users gave when registering) and connect that to the user’s viewing information. For Hulu Plus
21 members, presumably the name would correspond to their billing and payment information (and thus
22 likely reflected the users’ true names).

23 The code Hulu wrote and included in each watch page caused a unique numeric or alphanumeric
24 “comScore UID” for each registered user to be communicated from the registered user’s browser to
25 comScore. *See* Wills Decl., ECF No. 160-6, ¶¶ 36-37; JSUF #15, 17. The comScore UID is stored
26 in a comScore cookie and identifies the specific copy of the web browser. JSUF #15-17. The

27
28 ³ An example of a “GUID” is 767DE299767B4E577B787B40B5123C30. JSUF #7.

1 comScore cookie enabled comScore to link the identified user and video choice information to other
2 information it gained about the same user when the user visited websites where comScore collects
3 data. Calandrino Decl., ECF No. 160-5, ¶¶ 48-56; Wills Decl. ECF No. 160-6, ¶ 36.

4 For context, a cookie is a file on a user’s computer. Wu Decl., ECF No. 125-7, ¶ 13. Cookies
5 contain information that identifies the domain name of the webserver that wrote the cookie (*e.g.*,
6 hulu.com, comScore.com, or facebook.com). *Id.* ¶ 18. Cookies have information about the user’s
7 interaction with a website. *Id.* Examples include how the website should be displayed, how many
8 times a user has visited the website, what pages he visited, and authentication information. *Id.* ¶ 13.

9 Each web browser on a computer (*e.g.*, Internet Explorer or Chrome) stores the cookies that are
10 created during a user’s use of the browser in a folder on the user’s computer that is unique to that
11 browser. *Id.* ¶ 14. When a user types a website address into the browser, the browser sends (a) a
12 request to load the page to the webserver for that website address and (b) any cookies that are
13 associated with the website (such as the cookies on the user’s computer for “hulu.com” or
14 “comScore.com”). *Id.* ¶ 15. The remote website server returns the requested page and can update
15 the cookies or write new ones. *Id.* The only servers that can access a particular cookie are those
16 associated with the domain that wrote the cookie. *Id.* ¶¶ 18, 21. That means that Hulu can read only
17 hulu.com cookies, and it cannot read comScore.com cookies or facebook.com cookies.

18 That being said, according to Plaintiffs, Hulu hosts its vendors’ JavaScript code on Hulu’s
19 domain so that when Hulu’s web pages execute the vendor code, a vendor such as comScore obtains
20 information through cookies that are set by hulu.com. *See* Carpenter Decl. Ex. 10, ECF No. 158-2 at
21 HULU_GAR231508 (vendors need to set cookies on hulu.com for tracking; example given was
22 google analytics); *id.* Ex 11, ECF No. 158-3 at HULU_GAR093686 (email from Hulu to Google;
23 hulu user goes to hulu.com to watch a video; user’s browser calls invite_media (presumably where
24 content is); cookies from there will be passed on to Google; Google can set cookies on the user).
25 More specifically as to comScore, Hulu’s documents have examples of code that sets comScore
26 identifiers, including its UID and UIDR cookies. *See id.* Exs. 11-15, ECF Nos. 158-3 to 158-7.

27 **IV. HOW HULU INTERACTS WITH FACEBOOK**

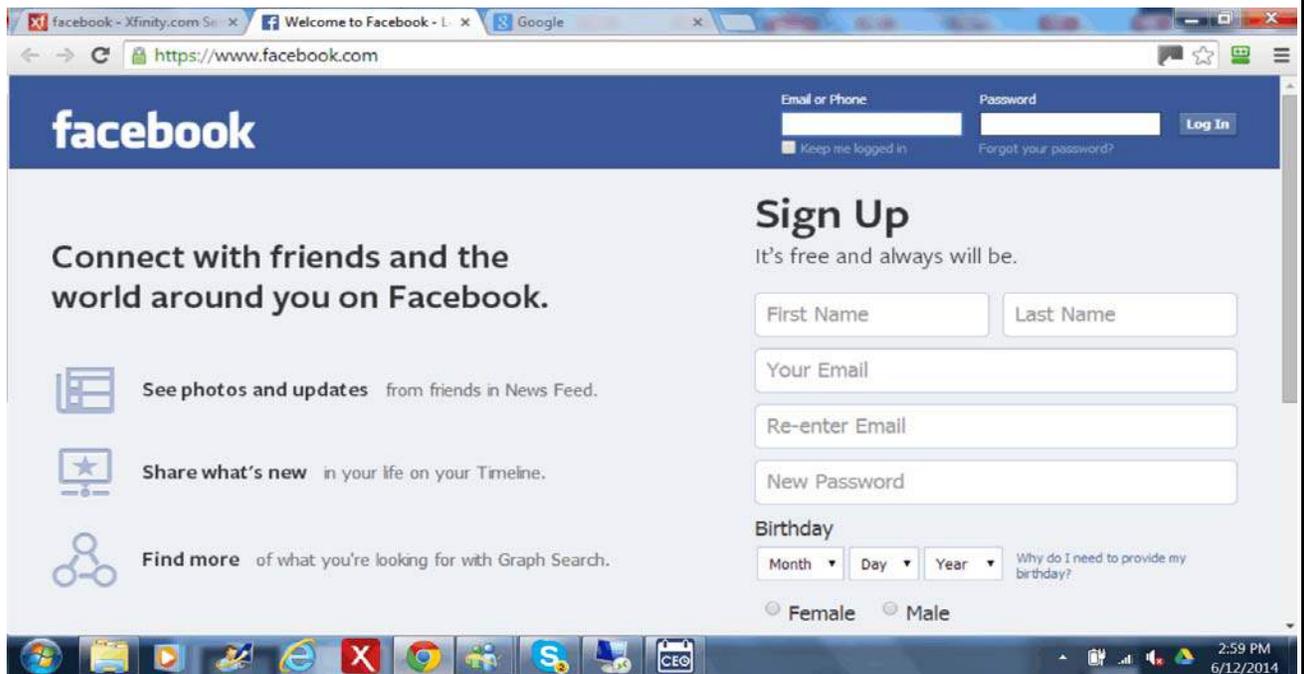
28 Facebook collects information and processes content “shared by its users,” and it provides that

1 information to marketers when it sells them its products (identified as “Facebook Ads,” “Facebook
2 Ad System,” and “Ad Analytics and Facebook Insights”). *See* Carpenter Decl. Ex. 8, ECF No. 157-
3 12 (Facebook 2012 SEC Form 10-K). Facebook shares its members’ information with marketers so
4 that marketers can target their ad campaigns. *See id.* Marketers can “specify the types of users they
5 want to reach based on information that users choose to share.” *Id.* Advertisement revenue is how
6 Facebook makes money. *See id.*

7 Certain information was transmitted from hulu.com to Facebook via the Facebook “Like” button
8 through June 7, 2012 (when Hulu stopped including the video title in the watch page URL). JSUF
9 #18. During this time period, Hulu included a Facebook Like button on each hulu.com watch page.
10 JSUF #18-19. Hulu wrote code for its watch pages that included code for where the “Like” button
11 should be located on the page and where (from facebook.com) to obtain the code that loads and
12 operates the button. JSUF #20. When the user’s browser executed this code, the browser sent the
13 request to Facebook to load the Like button. JSUF #21. The request included a “referer URL” value
14 (the URL of the page from which the request issued) in the request headers and the query string.
15 JSUF #21. That is how Facebook knows where to send code for the Like button so that it can be
16 downloaded and used. Wu Decl., ECF No. 125-7, ¶¶ 16, 20. Until June 7, 2012, the URL for each
17 watch page included the title of the video displayed on that watch page. *See* JSUF #18. The IP
18 address of the Hulu registered user’s computer also was sent to Facebook (although there are
19 scenarios when the IP address might not be that of the users but instead of a proxy or intermediary).
20 *See* Tom Depo., Carpenter Decl. Ex. 7, ECF No. 157-11 at 190:23-192:12.

21 Facebook also received the following cookies associated with the facebook.com domain: (1) a
22 “datr” cookie, which identifies the browser; (2) a “lu” cookie, which “can contain the Facebook user
23 ID [e.g., 286xxxx1] of the previous Facebook user to log in to Facebook via the browser and has a
24 lifetime of ‘two years;’” and (3) if the user had logged into Facebook using default settings within
25 the previous four weeks, a “c_user” cookie, which contains the logged-in user’s Facebook user ID.
26 JSUF #22; Calandrino Decl., ECF No. 160-5, ¶ 71. Hulu did not send Facebook the Hulu User ID or
27 the Hulu user’s name when the user’s browser executed the code to load the Like button. JSUF #23.
28

1 This screen shot shows the default setting for logging into Facebook.



14 When the “remember me” box is checked, Facebook sets the c_user cookie. *See* 5/8/2014
 15 Hearing Transcript, ECF No. 210 at 8-29. The importance of this is that Plaintiffs’ disclosure theory
 16 is based on transmission of the c_user cookie back to Facebook. *Id.* This potentially would happen
 17 for Hulu users who watched a video on hulu.com having used the same computer and web browser
 18 to log into Facebook in the previous four weeks using default settings. *See* JSUF #22; Calandrino
 19 Decl. ¶¶ 66-67. As discussed below, according to Hulu’s expert Peter Weitzman, the c_user cookie
 20 would be cleared if the “keep me logged in” box were not checked, if the user manually cleared
 21 cookies after the Facebook session and before the Hulu session, or if the user deleted or blocked
 22 cookies. *See infra.*

23 No evidence has been introduced that Facebook took any actions with the cookies described
 24 above. JSUF #25. That being said, Plaintiffs’ expert opines that Hulu’s disclosure to Facebook of
 25 cookie identifiers set by Facebook’s domain enabled Facebook to link information identifying the
 26 user with the user’s video choices. *See* Calandrino Decl., ECF No. 160-5, ¶¶ 57-81. In common
 27 web browsers, visiting a website out of Facebook’s control will not result in the communication of
 28 information to Facebook absent a decision (directly or indirectly) by the party controlling the

1 website to send information. *Id.* ¶ 57. It is straightforward to develop a web page that “yields no
2 communication with Facebook.” *Id.* When a Hulu watch page loaded with the Facebook Like
3 button, the page prompted the user’s web browser to transmit the watch page URL and Facebook
4 cookies to Facebook-controlled servers. *Id.* ¶ 58. This happened with the initial Hulu-prompted
5 request from the user’s browser to Facebook before the receipt of any information from Facebook.
6 *Id.* ¶ 59. Because the URL of the watch page specified the title of the video during the period from
7 April 21, 2010 to June 7, 2012, the disclosure to Facebook included the title of the video being
8 viewed. *Id.* ¶ 61. The c_user cookie would give the name of the currently-logged in Facebook user.
9 *Id.* ¶ 66. The lu cookie might too. *Id.* ¶ 71. A user is logged out of Facebook by default after
10 closing the browser, but Facebook also provides users with an option to remain logged in after
11 closing the browser. *Id.* ¶¶ 72-73. The lu cookie clears after a user selects Facebook’s log-out
12 option. *Id.* ¶ 74.

13 **V. SUMMARY OF ADDITIONAL EXPERT TESTIMONY**

14 **A. Plaintiffs’ Expert Gary Wills**

15 Craig Wills, Ph.D., an expert in web privacy, analyzed “‘session captures’ – recordings of actual
16 data transmissions between a browser and Web pages on Hulu’s Web site.” Wills Decl. ¶ 26. Dr.
17 Wills reviewed session captures he created that preceded the relevant period and that took place after
18 April 2013. *Id.* ¶ 27. He also reviewed session captures between March 2011 and April 2013 that
19 Plaintiffs’ counsel provided “with the representation that they were captures of User-Hulu sessions
20 conducted and recorded at the direction of [P]laintiffs’ counsel.” *Id.* ¶ 28. His review revealed that
21 the following data were sent to Facebook from July 2011 to the present when Hulu users viewed
22 video content on Hulu’s website:

- 23 a. A facebook “datr” cookie value, which is set whether or not a user is logged into
24 Facebook, that uniquely corresponds to a particular Facebook User and can be used to
25 uniquely track User activity on Hulu as well as other Web sites and associate it with a User’s
26 Facebook profile information.”
- 27 b. The URL of the web page, which until June 7, 2012, identified the name of the video
28 displayed on the web page.
- 27 c. The numeric Video identifier of any video viewed by the User; and
- 28 d. The Video Series name for episodic videos such as television shows.

1 *Id.* ¶ 42. This transmission occurred as part of the loading of the Like button (also described above).
2 *Id.* ¶ 43a. Hulu inserted instructions in its watch pages so that whenever a Hulu user watched a
3 video, the instructions caused the user’s browser to retrieve Facebook JavaScript code that gathered
4 information about the web page and the user and sent it to the Facebook server. *Id.* At the same
5 time, the title (in 2011) and identifier of the video being watched were sent via the HTTP referer
6 header to a Facebook server. *Id.* ¶ 43b. The request also caused the Facebook datr cookies and
7 many other cookies (described in the summary judgment motion as including the lu and c_user
8 cookies) to be transmitted to Facebook. *Id.* ¶ 43c. This happened without the user clicking on the
9 Facebook Like button. *Id.* ¶ 45. In his July 2013 tests and analyses, Dr. Wills confirmed that these
10 findings “apply to any User who is also a Facebook subscriber, regardless of whether the User is
11 actively signed onto Facebook while watching video content on Hulu. *Id.* ¶ 46.

12 Dr. Wills concluded that “whenever a User selected a video for possible viewing or viewed a
13 video on Hulu’s Web site during the Relevant Period, the title of video selected or viewed was sent
14 to comScore and Facebook, along with various identifiers uniquely associated with the User.” *Id.*
15 ¶ 32. “The exception to these conclusions would be for Users who implemented software, such as
16 Adblock Plus, that may prevent the operation of some of the data transmissions triggered by Hulu’s
17 JavaScript code described in this section.” *Id.* ¶ 35.

18 **B. Plaintiffs’ Expert Joseph Calandrino, Ph.D.**

19 Dr. Calandrino is a computer scientist with Elysium Digital, LLC, “which provides consulting
20 and expert witness services in connection with litigation having technology-related aspects.” *See*
21 Calandrino Decl., ECF No. 160-5 ¶ 1. Plaintiffs submitted his declaration in the summary judgment
22 proceedings and cited it in their reply here (without objection by Hulu). Dr. Calandrino considered
23 two declarations Hulu filed in support of its summary judgment motion, documents related to the
24 operations of facebook.com, including detailed reports published by the Irish Data Protection
25 Commissioner, a journal article on privacy, and Plaintiffs’ class certification brief. *Id.* ¶ 3.

26 As discussed above, when a Hulu watch page with the Facebook Like button loaded, it
27 prompted the user’s web browser to transmit the web page URL and Facebook cookies to Facebook.
28 *Id.* ¶ 58. Dr. Calandrino’s remaining conclusions about the Hulu’s disclosures to Facebook are

1 predicated on the assumption “that a user does not manually delete cookies or enable any browser
2 settings that otherwise cause automatic deletion of cookies prior to their expiration dates.” *Id.* ¶ 63.
3 Those disclosures generally are set forth above but are reiterated here because of the predicate
4 assumption that the user did not delete cookies. Visiting a page with an embedded Facebook Like
5 button while logged in to Facebook caused the user’s web browser to transmit three cookies:
6 “c_user,” “lu,” and “datr.” *Id.* ¶ 64.

7 The “c_user” cookie contains the Facebook profile ID of the previously logged in Facebook
8 user. *Id.* ¶ 66. This means that when a user was logged into Facebook and visited a Hulu watch
9 page during the period that includes December 21, 2011 to May 2, 2012, Hulu prompted the user’s
10 browser to transmit to Facebook data specifying the user’s Facebook ID and the title of the video
11 viewed, meaning, it transmitted “details that uniquely identified a Facebook user along with details
12 of the user’s Hulu viewing activity.” *Id.* ¶¶ 67-69.

13 The “lu” cookie has multiple uses, but it can contain the Facebook profile ID of the previous
14 Facebook user to log in to Facebook in that browser and it has a lifetime of two years. *Id.* ¶ 71. A
15 user is logged out of Facebook by default after closing the browser, but Facebook also provides
16 users with the option to remain logged in after clearing the browser. *Id.* ¶¶ 72-73. The lu cookie
17 clears after a user selects Facebook’s log-out option. *Id.* ¶ 74.⁴ If a user logs out of Facebook by
18 closing a web browser rather than explicitly logging out, then “transmission of the lu cookie
19 prompted by visiting a Hulu watch page would enable Facebook to identify a unique Facebook user
20 account and associate the account and other details of it (such as provided name) with Hulu viewing
21 activity.” *Id.* ¶ 76.

22 The datr cookie identifies the web browser used to connect to Facebook and lasts for two years.
23 *Id.* ¶ 77. “Details in a datr cookie distinguish an individual to the extent that use of a given browser
24 distinguishes that individual.” *Id.* ¶ 78. “To the extent that use of a particular browser distinguished
25 an individual during a period that includes December 21, 2011 to May 2, 2012, the Hulu-prompted
26

27
28 ⁴ As discussed above and in the section summarizing Hulu’s expert, the c_user cookie clears
in the same way.

1 transmission of the datr cookie and referer URL data to facebook would distinguish the individual
2 and enable Facebook to aggregate that individual’s viewing activity on Hulu.” *Id.* ¶ 79.

3 **C. Hulu’s Expert Peter Weitzman**

4 Mr. Weitzman is a manager of the Data Analytics group at Stroz Friedberg, “a firm specializing
5 in critical areas of digital risk management.” Weitzman Decl. ¶ 1, ECF No. 145 at 2. Mr. Weitzman
6 summarizes Hulu’s interactions with Facebook as follows:

7 Watching videos on hulu.com has separately caused the browser to send various unstructured
8 and structured data elements to Facebook via the Facebook ‘Like’ button. Facebook received
9 the URL of the page where the Facebook ‘Like’ button was to be uploaded, which before
10 June 7, 2012, included the video title embedded within it. Hulu does not send Facebook the
11 Hulu User ID or a user’s name or other identifying information. There are and were many
12 mechanisms available to Hulu users to prevent the Facebook ‘Like’ button from being
13 downloaded from Facebook, and thereby prevent these transmissions from occurring, and
14 also to block any cookies that Facebook may have set on users’ browsers from being
15 accessed by Facebook. Such mechanisms were freely available throughout the class periods,
16 and would not prevent a user from watching content on hulu.com

17 Weitzman Decl. ¶ 9.

18 When a person using the Internet browses to a website, the web page may include (a) integration
19 with other websites via social features that allow the sharing of a website via a social network
20 (which in this case would be the Facebook Like button), (b) advertisements, (c) embedded content
21 such as videoclips hosted by third parties, and (d) tracking technologies used by third-party analytics
22 providers such as comScore. *Id.* ¶ 11. Cookies can be viewed, removed, or blocked by a user of a
23 web browser. *Id.* ¶ 12. Whenever a computer user’s web browser requests any part of a web page,
24 the cookies associated with the domain for that web server are sent to the web server with the
25 request for the web page. *See id.* GUIDs (or globally unique identifiers) identify a specific copy of
26 a web browser (as described above) to the website that set the GUID value for the browser, and they
27 are important to identify a browser engaging in a series of transactions on a website (such as adding
28 a number of items to an online shopping cart and then buying them). *Id.* ¶¶ 13-20.

To identify the types of data elements that a user’s browser might transmit to Facebook, Mr.
Weitzman reviewed network captures provided by Dr. Wills and network captures he generated or
directed to be generated by his colleagues. *See id.* ¶ 21. He also reviewed Hulu’s source code and
changes to the code during the class period. *Id.* He identified and tested various approaches that a

1 user might take to prevent transmissions to Facebook. *Id.* ¶ 22. Mr. Weitzman focused on tools that
 2 were available during all or part of the class periods and that are easy to install and configure. *Id.*
 3 ¶ 22. Mr. Weitzman created a “Microsoft Windows 7 virtual machine,” which is a software-based
 4 computer that runs on a host computer’s hardware that allowed him and his colleagues to “browse
 5 various Internet pages while capturing network traffic.” *Id.* Then he could review the captured
 6 network traffic data to see exactly which data elements were transmitted by the browser and “deduce
 7 which ones were blocked.” *Id.*

8 Due to “the complexity of interactions between the Facebook and Hulu websites,” Mr. Weitzman
 9 “did not review all traffic sent between the user’s browser and Facebook when a user views a Hulu
 10 page” and instead “focused on what happens when the Facebook ‘Like’ button is installed on a
 11 hulu.com webpage, before any user has clicked on the button.” *Id.* ¶ 38. The Like button is
 12 generated on the Hulu watch pages as an “iframe,” which acts as a small Facebook webpage
 13 embedded on hulu.com that is separate and apart from the parent web page hulu.com. *Id.* ¶ 39.
 14 “Hulu’s sole involvement with respect to the Facebook ‘Like’ button is instructing the user’s
 15 browser to request the Facebook ‘Like’ button from Facebook servers, and setting the parameters that
 16 tell Facebook how the ‘Like’ button should be configured.” “When the browser requests the
 17 Facebook ‘Like’ button from Facebook servers, it sends the following data elements:

- 18 1. href parameter – The URL of the page of the [watch] page on which the ‘Like’ button will
 19 be placed . . . [T]his URL may contain additional embedded information . . . Before June 7,
 20 2012, such information may have included the title of the video being watched. . . . The
 21 referrer URL also included the numerical ID of the video being watched on a watch page, or
 22 the series title on a Hulu Web page for a television series. . . .
- 23 2. the Facebook datr cookie . . . [which] is only set when the user visits facebook.com . . .
 24 [and] identifies a specific instance of a web browser that has accessed facebook.com
 25 [paragraph contains additional information about how a datr cookie is and is not used]
- 26 3. the Facebook profile ID – a Facebook numerical ID associated with the Facebook user . . .
 27 [which] is sent to Facebook web servers via the ‘lu’ cookie when the browser makes the GET
 28 request for the Facebook ‘Like’ button. . . . If the user logs out of Facebook, the ‘lu’ cookie
 value is set to ‘0’

26 *Id.* ¶ 39 (also explains that “[i]f the Facebook user is no longer logged in, but was only logged out
 27 passively, such as by a timeout, then the lu cookie will still contain their Facebook numerical ID.
 28 The value will change if (1) they actively log out by selecting “Log Out” (then the lu value will be

1 reset to “0”) or (2) if another user logs into the facebook.com on the same browser.”).⁵

2 Browsers allow users to block and clear cookies (including by setting privacy settings to clear
3 cookies automatically) and to install plugin browser enhancements to configure the browser in many
4 ways, including blocking traffic to a specific web domain. *Id.* ¶ 40. During the class period of April
5 21, 2010 to June 7, 2012, Hulu users “could take simple steps to block data transmissions from their
6 browsers to third parties, such as comScore and Facebook, when visiting hulu.com. Doing so would
7 not have interfered with the user’s ability to select and watch videos on hulu.com.” *Id.* ¶ 41.

8 For example, Hulu users could take standard web-privacy measures to limit the active lifespan of
9 cookies including (1) using their browsers in “incognito” mode, where no existing cookies from any
10 websites can be accessed, and all cookies set during browsing sessions are deleted when the browser
11 is closed (leading to the resetting of the datr cookie), and (2) deleting cookies either manually or by
12 browser configuration, which has the same effect as browsing incognito. *Id.* ¶ 43.

13 Other tools available to Hulu users to block communications include three that Mr. Weitzman
14 tested: Ghostery, AdBlock, and Adblock Plus. *Id.* ¶ 42. Mr. Weitzman tested these plugins (to the
15 extent they were available) in five major web browsers to determine the effect on communications
16 between the browser, comScore, and Facebook. His results are summarized in the following chart:

	Ghostery v5.0.0 & v3.1.0 (IE)	AdBlock	AdblockPlus
Internet Explorer v10.0.9200.16521	Blocked all comScore beacons and Facebook like buttons. Requires 32-bit IE and Administrator privileges. Not available for IE11. Some interactions with the pages caused the browser to freeze.	Not mentioned.	Available during class period apparently only for Firefox and Chrome.
Mozilla Firefox v25.0	Blocked all comScore beacons and Facebook like buttons.	Not mentioned.	Blocked all comScore beacons and Facebook like buttons.

27 ⁵ Similarly, logging out of Facebook clears the c_user cookie. *See* Gov’t of Ir., Data
28 Protection Commissioner, Facebook Ireland Ltd: Report of Re-Audit (21 Sept. 2012), ECF No. 146
at 86; Hulu Supplemental Filing, ECF No. 202 at 2 (citing record).

1 2 3	Google Chrome v31.0.1650.57	Blocked all comScore beacons and Facebook like buttons.	Blocked all comScore beacons and Facebook like buttons.	Blocked all comScore beacons and Facebook Like buttons.
4 5	Apple Safari v534.57.2 (Windows)	Did not block comScore beacons and Facebook like buttons.	Did not block comScore beacons and Facebook like buttons.	Not available.
6 7 8 9 10	Opera v18.0.1284.49	Blocked all comScore beacons and Facebook like buttons.	Blocked all comScore beacons and Facebook like buttons with extra options enabled. Did not block comScore beacons and Facebook like buttons with default installation.	Blocked all comScore beacons and Facebook Like buttons with extra options enabled. Did not block comScore beacons and Facebook like buttons with default installation.

11 See Weitzman Decl. Ex. B.

12 At his deposition, Mr. Weitzman admitted that he tested only versions of the browsers and
13 plugins that were current at the time of testing, not what was available during the class period.

14 Q. So do you have any personal knowledge as to whether any of these plugins blocked
15 Facebook or comScore for any prior versions of these browsers?

16 Mr. Svirsky: Objection.

17 A. So, as I said, we did not test the configurations to cover the entirety of the class period or
18 to cover the class period. We determined when the plugins became available and we tested
19 current versions, because that was feasible to do so. So we didn't test the various plugins and
the various browsers as they might have been during the class period, so no, I don't have any
direct knowledge of that.

20 Weitzman Dep. 77:3-17, Tersigni Decl. Ex. 6.

21 **D. Hulu's Expert Hal Poret**

22 Mr. Poret, Senior Vice President of ORC International, designed and conducted a consumer
23 survey about Hulu users and how they interact with their Hulu accounts. See ECF No. 144. Mr.
24 Poret holds B.S. and M.A. degrees in mathematics from Union College and S.U.N.Y. Albany,
25 respectively, and a J.D. from Harvard Law School that he received in 1998. ECF No. 144-1 at 2.
26 He worked at Foley Hoag & Elliot in Boston from 1998 to 2003, and has worked at ORC since
27 2004. *Id.* He has "personally designed, supervised, and implemented approximately 600 surveys
28 regarding the behaviors and opinions of consumers . . .[,] designed numerous studies that have been

1 admitted as evidence in legal proceedings[,] and . . . been accepted as an expert in survey research
2 on numerous occasions by U.S. District Court” and other tribunals. *Id.*

3 Mr. Poret conducted an online survey of “U.S. consumers age 18 and older who had a registered
4 account at hulu.com during the class period of April 2010 to November 2012 and viewed content at
5 hulu.com using a computer during that time.” ECF No. 144 at 6. There were 700 respondents,
6 which provided a margin of error for key statistics in the range of +/- 3.7% or less. *Id.*

7 The double-blind survey first asked respondents a series of screening questions to determine
8 whether they met the appropriate criteria to qualify for the survey. *Id.* at 6-9, 64. The remaining
9 survey “was comprised of several sections, each targeting one of the following topics regarding the
10 practices of potential class members:

- 11 • Habits regarding how respondents have interacted with their Hulu accounts.
- 12 • Habits regarding how respondents have interacted with Facebook.
- 13 • Habits regarding respondents’ computer behavior.
- 14 • Habits regarding respondents’ Internet behavior.
- 15 • Browsers and operating systems used by respondents.
- 16 • Respondents’ concerns and actions regarding privacy protection online.”

17 *Id.* at 9-10. Some of the relevant lines of inquiry were as follows: (1) whether anyone else had
18 access to the respondents’ Hulu accounts during the class period; (2) whether those users also would
19 have accessed Facebook from the same browser; (3) whether respondents used their real names to
20 register for Hulu and/or Facebook; (4) how frequently respondents signed out of Facebook; (5)
21 whether and how often they ever had cleared Facebook cookies; and (6) whether they cleared or
22 blocked cookies or used ad-blocking software. *Id.* at 10-61. The Poret report includes tables
23 documenting the survey responses for each question. *Id.*

24 The Poret report concludes “that there is significant variation among Hulu account holders from
25 April 2010 to November 2012, in terms of their interaction with their Hulu account(s), as well as
26 additional factors, such as:”

- 27 • How many Hulu account holders allowed others to access their Hulu account.
- 28 • How many Hulu account holders knew others were viewing content on their Hulu

1 account and how often.

- 2 • How many Hulu account holders admittedly did not use their real name to register for
Hulu, and how many could not remember.
- 3 • How often Hulu account holders used Hulu while also logged into Facebook.
- 4 • How many Hulu account holders cleared Facebook cookies.
- 5 • How many Hulu account holders posted on Facebook about content watched on Hulu,
6 and how often.
- 7 • Browsers used by Hulu account holders to access Hulu during [the] class period.
- 8 • Privacy actions taken by Hulu account holders (*e.g.*, clearing cookies, using ad-blocking
9 software).

10 *Id.* at 5. For example, over 50% use ad-blocking software, and over 60% use private browser
11 settings that would block cookies. *Id.* at 47.

12 **VI. ADDITIONAL INFORMATION ABOUT HULU’S BLOCKING THE BLOCKERS**

13 A comScore witness testified that from 2007 to the present, she could not recall a single instance
14 where the data comScore received from Hulu was not paired with the comScore cookie, meaning,
15 the cookies always came through. *See* Johnson Dep., Tersigni Decl. Ex. 3, ECF No. 169 at 80-81
16 (not sure about the Safari browser). Also, Hulu was able to defeat cookie-blocking technologies.
17 *See* Tersigni Decl. Ex. 7, HULU_GAR203628 at 22 (“In our experience ad blockers are not yet an
18 issue within video streams given that ads are much harder to block there. Our medium-term focus
19 on the issue will be to ensure that our reporting and logic functions continue to work correctly in
20 those cases where an ad is blocked.”); Ex. 8 (Hulu applied fixes when new ad-blocking software
21 affected its video technology); Ex. 9, HULU_GAR196877 (Hulu communication to vendor that
22 “[w]e are able to drop cookies in the player without an issue” and “[t]his has been done with pretty
23 much all our vendors”).

24 **VII. ADDITIONAL INFORMATION ABOUT NAMED PLAINTIFFS’ BROWSER USE**

25 The named plaintiffs Joseph Garvey, Evan Zampella, Paul Torre, and Josh Wymyczak submitted
26 declarations about their browser use. *See* ECF Nos. 113-13 to 113-16. All are Facebook users who
27 have used Facebook on the same computer that they used when watching videos on hulu.com, none
28 linked their Hulu and Facebook accounts, and they do not use ad-blocking software on devices

1 where they watched videos on Hulu and do not clear cookies regularly or have not cleared cookies in
2 some time. *See* Garvey Decl. ¶¶ 6-7; Zampella Decl. ¶¶ 6-7; Torre Decl. ¶¶ 6-7; Wymyczak Decl.
3 ¶¶ 6-7.

4 In his deposition, Mr. Torre said that he used a program that can block cookies and that he had
5 manually cleared cookies. Torre Dep., Robison Decl. Ex. A, ECF No. 150-4 at 64. Plaintiffs
6 admitted to posting on Facebook about videos they watched on Hulu. *See* Garvey Dep., Robison
7 Decl. Ex. C at 89:12-17; Torre Dep., Robison Decl. Ex. A at 181:7-12, 183:19-24; Wymyczak
8 Dep., Robison Decl. Ex. D at 95:3-19.

9 ANALYSIS

10 I. EVIDENTIARY ISSUES

11 Plaintiffs argue that the Poret report and survey are irrelevant and unreliable under *Daubert v.*
12 *Merrell Dow Pharms., Inc.*, 509 U.S. 579, 592-93 (1993). Reply, ECF No. 168 at 14, n.12.

13 A qualified expert may testify in the form of an opinion or otherwise if (A) the expert's
14 scientific, technical, or other specialized knowledge will help the trier of fact understand the
15 evidence or to determine a fact in issue, (B) the testimony is based on sufficient facts or data, (C) the
16 testimony is the product of reliable principles and methods, and (D) the expert has reliably applied
17 the principles and methods to the facts of the case. *See* Fed. R. Evid. 702. Under *Daubert*, the court
18 acts as a "gatekeeper" to ensure that an expert's opinion rests on a reliable foundation and is
19 relevant. 509 U.S. at 592; *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 145, 147-49 (1999).
20 "*Daubert* does not require a court to admit or exclude evidence based on its persuasiveness; rather it
21 requires a court to admit or exclude evidence based on its scientific reliability and relevance." *Ellis*
22 *v. Costco Wholesale Corp.*, 657 F.3d 970 (9th Cir. 2011) (applying *Daubert* standard to motion for
23 class certification); *see also Wal-Mart Stores, Inc. v. Dukes*, 131 S. Ct. 2541, 2553-54 (2011)
24 (implying that district court must ensure that any expert testimony complies with *Daubert* standard
25 at class certification stage).

26 Plaintiffs' first objection is that the survey's conclusions about consumer behavior do not
27 demonstrate that these behaviors prevented Hulu's disclosure of PII. Thus, the survey results are not
28 relevant. Reply, ECF No. 168 at 14, n.12. This argument is predicated on Plaintiffs' argument that

1 regardless of what Hulu’s experts concluded about consumer habits or user ad-blocking capabilities,
2 they were not aware that Hulu’s technology circumvents ad-blocking. *See id.* at 14-15, n.12. This
3 goes to weight, not relevance, given that Hulu argues that clearing cookies or using blocking
4 technologies is relevant to whether a VPPA violation occurred and thus is relevant to typicality and
5 predominance. *See Opp’n*, ECF No. 150-3 at 16, 21-23.

6 The second objection is that Mr. Poret lacked familiarity with the survey topics, especially
7 consumers’ usage of technologies to prevent web tracking. *See Reply*, ECF No. 168 at 14, n.12. For
8 example, Plaintiffs allege that Mr. Poret was not familiar with whether “do not track” tools were
9 available during the survey, when ad-blocking software was introduced into the U.S. marketplace,
10 whether browsers could be set to automatically delete cookies as of November 2012, whether
11 browsers offered a tool to automatically clear or delete cookies as of April 2010, and whether it is
12 possible to clear Facebook cookies from the browser without clearing the other cookies. *Id.* This
13 relevance argument is more about Mr. Poret’s explanation not being sufficient and does not establish
14 that it is not relevant.

15 The third objection is that Mr. Poret failed to adequately validate the survey results. *Id.* For
16 example, the Poret report states that 65.3% of survey respondents used ad-blocking software, but
17 Plaintiffs cite another report stating that as of May 2012, fewer than 10% of U.S. internet users
18 employed ad-blocking tools. *Id.* (citing *Ad-Blocking, Measured*, ClarityRay, May 2012, at 4,
19 Tersigni Decl. Ex. 18, ECF No. 169-18). This is about the sufficiency of the report, not about its
20 relevance or the reliability of the methodology or results. It is standard territory for expert
21 disagreement, and Plaintiffs could – as they do – challenge the weight that the court ought to accord
22 to it. They could have put in other expert testimony, but they did not.

23 The Poret report discusses its methodology, which included a sampling plan, double-blind
24 interviewing, third-party data collection and processing, and validation and quality control
25 questions. *See ECF No. 144* at 62-66. On this record and at this stage of the case, the court finds
26 Mr. Poret qualified to render his opinions, and the Poret report relevant and sufficiently reliable.

27 **II. THE VIDEO PRIVACY PROTECTION ACT AND DISCLOSURES OF USER IDS**

28 The VPPA is titled “Wrongful disclosure of video tape rental or sales records.” 18 U.S.C.

1 § 2710. It “protect[s] certain personal information of an individual who rents [or otherwise obtains]
2 video materials from disclosure.” *See Dikes v. Borough of Runnemede*, 936 F. Supp. 235, 238
3 (D.N.J. 1996) (quoting S. Rep. 100-599, 2d Sess. at 16 (1988)). The protected information is
4 “information which identifies a person as having requested or obtained specific video materials.” 18
5 U.S.C. § 2710(a)(3).

6 “Aggrieved” persons may sue for knowing disclosures of information in violation of the statute.
7 *See* 18 U.S.C. § 2710(b)-(c). Under the statute, a “court may award – (A) actual damages but not
8 less than liquidated damages in an amount of \$2,500; (B) punitive damages; (C) reasonable
9 attorneys’ fees and other litigation costs reasonably incurred; and (D) such other preliminary and
10 equitable relief as the court determines to be appropriate.” 18 U.S.C. § 2710(c)(2).

11 Plaintiffs seek to represent a class of “aggrieved persons.” As consumers of Hulu’s video
12 content, they allege that Hulu transmitted their identifying information and the videos they watched
13 to comScore and Facebook. The court granted summary judgment to Hulu as to the comScore
14 transmissions. *See* ECF No. 194. The remaining issue is whether the information transmitted to
15 Facebook is “information which identifies a person as having requested or obtained specific video
16 materials.” 18 U.S.C. § 2710(a)(3). If it is, then the transmission violates the VPPA. *See id.* &
17 2710(b). As to the Facebook disclosures, the court held that there are material issues of fact about
18 whether the disclosure of the video name was tied to an identified Facebook user such that it was a
19 prohibited disclosure under the VPPA. *See* ECF No. 194 at 2. Also, the court could not rule as a
20 matter of law whether Hulu knowingly disclosed information or whether Hulu users consented to the
21 disclosures. *See id.*

22 **II. CLASS CERTIFICATION**

23 Plaintiffs here seek to certify a class for damages under Rule 23(b)(3).

24 A threshold requirement is that Plaintiffs must establish a definable class. *See* Rule
25 23(c)(1)(B) (“[a]n order that certifies a class action must define the class and the class claims, issues,
26 or defenses”); *Mazur v. Ebay Inc.*, 257 F.R.D. 563, 567 (N.D. Cal. 2009). A party seeking class
27 certification then must show the following prerequisites of Rule 23(a): numerosity, commonality,
28 typicality, and adequacy of representation. A court may certify a class under Rule 23(b)(3) if the

1 court finds that questions of law or fact common to class members predominate over any questions
 2 affecting only individual members and a class action is superior to other available methods for fairly
 3 and efficiently adjudicating the controversy. *See* Fed. R. Civ. P. 23(b)(3).

4 “Certification is proper only if the trial court is satisfied, after a rigorous analysis, that the
 5 prerequisites of Rule 23(a) have been satisfied.” *Dukes*, 131 S. Ct. at 2551 (internal quotation marks
 6 and citation omitted). The “rigorous analysis” often will “entail some overlap with the merits of the
 7 plaintiff’s underlying claim.” *Id.* at 2551. More specifically:

8 [A] party seeking to maintain a class action ‘must affirmatively demonstrate his compliance’
 9 with Rule 23. The Rule does not set forth a mere pleading standard. Rather, a party must not
 10 only be prepared to prove that there are *in fact* sufficiently numerous parties, common questions
 11 of law or fact, typicality of claims or defenses, and adequacy of representation, as required by
 12 Rule 23(a). The party must also satisfy through evidentiary proof at least one of the provisions
 13 of Rule 23(b). . . . [I]t may be necessary for the court to probe behind the pleadings before
 14 coming to rest on the certification question, and . . . certification is proper only if the trial court is
 15 satisfied, after a rigorous analysis, that the prerequisites of Rule 23(a) have been satisfied. Such
 16 an analysis will frequently entail overlap with the merits of the plaintiff’s underlying claim. That
 17 is so because the class determination generally involves considerations that are enmeshed in the
 18 factual and legal issues comprising the plaintiff’s cause of action. The same analytical principles
 19 govern Rule 23(b).

20 *Comcast*, 133 S. Ct. at 1432 (quotation marks and citations omitted). Still, “Rule 23 grants no
 21 license to engage in free-ranging merits inquiries at the certification stage. Merits questions may be
 22 considered to the extent – but only to the extent – that they are relevant for determining whether the
 23 Rule 23 prerequisites for class certification are satisfied.” *Amgen Inc. v. Conn. Ret. Plans & Trust*
 24 *Funds*, 133 S. Ct. 1184, 1194-95 (2013). If a court concludes that the moving party has met its
 25 burden of proof, then the court has broad discretion to certify the class. *Zinser v. Accuflix Res. Inst.,*
 26 *Inc.*, 253 F.3d 1180, 1186, *amended by* 273 F.3d 1266 (9th Cir. 2001).

27 **A. Ascertainable and Definite Class**

28 A class should be sufficiently definite and “clearly ascertainable” by reference to objective
 criteria “so that it is administratively feasible [for a court] to determine whether a particular person
 is a class member” and thus “bound by the judgment.” *Shepard v. Lowe’s HIW, Inc.*, No. C 12-3893
 JSW, 2013 WL 4488802 (N.D. Cal. Aug. 19, 2013) (collecting cases); *Deitz v. Comcast Corp.*, No.
 C 06-06352 WHA, 2007 WL 2015440, at *8 (N.D. Cal. July 11, 2007) (proposed class of cable
 subscribers who owned cable-ready televisions or related equipment not ascertainable where the

1 defendant did not maintain records to identify those customers, rendering it “impossible to determine
2 without significant inquiry which subscribers owned such devices”); *see also* Newberg on Class
3 Actions § 3:3 (5th Ed. 2013) (“Administrative feasibility means that identifying class members is a
4 manageable process that does not require much, if any, individual factual inquiry.”); Annotated
5 Manual for Complex Litigation (Fourth) § 21.222 (2013) (“Because individual class members must
6 receive the best notice practicable and have an opportunity to opt out, and because individual
7 damage claims are likely, Rule 23(b)(3) class actions require a class definition that will permit
8 identification of individual class members”). Still, “the class need not be so ascertainable that every
9 potential member can be identified at the commencement of the action.” *Ortiz v. CVS Caremark*
10 *Corp.*, No. C-12-05859 EDL, 2013 WL 6236743 (N.D. Cal. Dec. 2, 2013) (quotation omitted).

11 The first issue is whether the class can be defined or identified at all. The summary judgment
12 order narrowed the class harm to the transmission of Facebook ID cookies with the Hulu/Facebook
13 user’s Hulu watch page and video title when the Facebook Like button loaded. Thus, the class is
14 comprised of users of both Facebook and Hulu during the class period. Both services require
15 provision of an email address when a user registers. Presumably email addresses submitted to
16 Facebook and Hulu could be cross-referenced, which would result in the identification of a group
17 that used both services. But Plaintiffs did not propose cross-referencing Hulu and Facebook records
18 or address any burden of doing so.

19 Assuming that cross-referencing is possible, then it would provide a feasible way to notify and
20 communicate with the potential class members. *See Brewer v. Salyer*, No. 1:06cv1324 AWI DLB,,
21 2010 WL 1558413, at *1 (E.D. Cal. April 19, 2010) (approving over-inclusive class as the best
22 practicable notice under the circumstances). This does not end the ascertainability inquiry, however,
23 because class members are those who actually had their PII transmitted to Facebook. That inquiry
24 turns on whether the `c_user` cookie was sent to Facebook, which depends on a number of variables
25 (including whether the user remained logged into Facebook, cleared cookies, or used ad-blocking
26 software).

27 The order addresses these issues below in the analysis of Rule 23(b)(3) predominance
28 requirement by considering whether the issues can be resolved by refining the class definition or

1 designating subclasses. *See Messner v. Northshore Univ. HealthSystem*, 669 F.3d 802, 825 (7th Cir.
2 2012) (class definition is “more of an art than a science,” and definitional flaws “can and often
3 should be resolved by refining the class definition rather than by flatly denying class certification on
4 that basis”). The court concludes there that possibly subclasses could be defined (even though there
5 are issues with that approach). For example, a possible class definition is registered Hulu users who
6 at least once during the class period watched a video on hulu.com having used the same computer
7 and web browser to log into Facebook in the previous four weeks using default settings. *See supra*
8 Statement (discussing class definition); JSUF #22; Calandrino Decl. ¶¶ 66-67. Subclasses might be
9 users who use the “keep me logged in” box checked (or do not log out at all). Possibly subclasses
10 could account for whether the user manually clears cookies, sets browser settings to clear cookies, or
11 uses software to clear cookies. *See infra*.

12 This approach might define the class, but the question is, how does one ascertain who is in the
13 class or subclasses. The only way is self-reporting, an issue addressed at the May 8, 2014 hearing
14 and in the parties’ supplemental briefing. *See* ECF Nos. 202, 203, 208, 210.

15 In *Harris v. comScore*, the court certified a class for transmission of personal information in
16 violation of the Stored Communications Act, the Electronic Communications Privacy Act, and the
17 Computer Fraud and Abuse Act. *See* 292 F.R.D. at 587-88. Putative class members downloaded
18 comScore’s OSSProxy program as part of bundled free software. *Id.* In allowing reporting by
19 affidavit, the *Harris* court observed that at least some portion of the class was known by email
20 address. *Id.* It recognized that it can be improper to allow class membership to be established only
21 by assertion of the class members without any corroboration by the defendant’s records, but
22 nonetheless allowed submission of affidavits because the “bulk” of the class membership would be
23 determined by comScore’s own records, and the burden of an affidavit process was minimal. *Id.* at
24 587-88 (collecting cases, including cases where courts allow “portions of a class” to be established
25 by affidavit or claim form when burdens are minimal) (citations omitted). The court also said that if
26 the portion of the class asserting membership by affidavit only was excessively large, it could
27 consider whether to limit the class to members with downloads of OSSProxy that could be
28 ascertained from comScore’s records. *Id.* at 588.

1 This case is different than *comScore*: cross-referencing email records here would identify a large
2 pool of users with only a subset of the pool suffering any injury. Plaintiffs have offered no way to
3 identify individual class members other than broad notice and a self-reporting affidavit.

4 Proof by affidavit does not necessarily defeat ascertainability. The reason is that if consumers
5 always had to prove purchases, then that would defeat many consumer class actions. *See McCrary*
6 *v. The Elations Co., LLC*, No. EDCV 13-00242 JGB, 2014 WL 1779243, at *7 (E.D. Cal. Jan. 13,
7 2014) (certifying a class of purchasers of a dietary drink marketed to have joint health benefits)
8 (citing *Ries v. Arizona Beverages USA LLC*, 287 F.R.D. 523, 525 (N.D. Cal. 2012), where the court
9 certified a class that was required to self-identify whether they purchased the iced tea during the
10 class period). That being said, and as the *Harris* court noted, reliance on affidavits can be
11 problematic. 292 F.R.D. at 587-88.

12 One factor to consider in whether to allow affidavits is ease of documentation and burden. *See*
13 *id.* An administrator here could handle claims notices and affidavits electronically, by simple form,
14 and probably without substantial burden, which militates in favor of the affidavit process. *See id.*
15 (citing Newberg on Class Actions § 10.12 (4th ed. 2012)).

16 Other factors are the size of the claims or the difficulty of verifying them: “[a] simple statement
17 or affidavit may be sufficient where the claims are small or are not amenable to ready verification.”
18 *Id.* (quoting Newberg on Class Actions § 10.12 (4th ed. 2012)). In cases where the dollar amounts
19 are small, and class members do not have proof of purchase of a defective product, courts (including
20 those in this district) allow proof by affidavit. *See, e.g., McCrary*, 2014 WL 1779243, at *7 (joint
21 supplements); *Lanovaz v. Twinings North America, Inc.*, No. C 12-02646, 2014 WL 1652338, at *3
22 (N.D. Cal. April 24, 2014) (misbranded teas) (collecting cases); *Forcellati v. Hyland’s, Inc.*, No. CV
23 12-1983-GHK, 2014 WL 1410264, at *5 (C.D. Cal. April 9, 2014) (cold and flu products); *Boundas*
24 *v. Abercrombie & Fitch Stores, Inc.*, 280 F.R.D. 408, 417-18 (N.D. Ill. 2012).

25 By contrast, when dollar amounts are higher, some form of verification is appropriate beyond
26 just an affidavit. *See Saltzman v. Pella Corp.*, 257 F.R.D. 471, 476 (N.D. Ill. 2012) (class action for
27 products defect in windows with wood rot; consumers without sales records could self-identify and
28 provide verification in the form of photographs); *Red v. Kraft Foods, Inc.*, No. Cv10-1028-GW,

1 2012 WL 8019257 (C.D. Cal. April 12, 2012). And in any event, objective criteria (such as
2 corroboration by reference to a defendant’s records or provision of some proof of purchase) are
3 important to establishing class membership as opposed to relying only on potential members’ say-so
4 and subjective memories that may be imperfect. *See Harris*, 292 F.R.D. at 587; *accord Xavier v.*
5 *Philip Morris USA Inc.*, 787 F. Supp. 2d 1075, 1089 (N.D. Cal. 2011) (requiring objective criteria to
6 identify a class). In *Xavier*, for example, the district court denied class certification to a class of
7 smokers who smoked Marlboro cigarettes for at least 20 “pack-years” (one pack a day for 20 years
8 or the equivalent) on the ground that the putative class members’ subjective estimates of their long-
9 term smoking habits were not reliable. *See* 787 F. Supp. 2d at 1089-90.

10 Here, the claims apparently are not amenable to ready verification. And at \$2,500 per class
11 member, they are not small. As Hulu points out, this amount creates incentives for claimants. In
12 addition, on this record, the court cannot tell how potential class members reliably could establish by
13 affidavit the answers to the potential questions: do you log into Facebook and Hulu from the same
14 browser; do you log out of Facebook; do you set browser settings to clear cookies; and do you use
15 software to block cookies? The affidavit seems prone to the same subjective memory problems
16 identified in *Xavier*. *See* 787 F. Supp. 2d at 1090 (attesting to the number of cigarettes smoked over
17 decades is categorically different than swearing that “I have been to Paris”). The possibility of
18 substantial pecuniary gain affects this analysis too. *Accord id.* That incentive and the vagaries of
19 subjective recollection makes this case different than the small-ticket consumer protection class
20 actions that this district certifies routinely.

21 Whether these issues could be resolved by narrowing the class definition, by defining subclasses,
22 by reference to objective criteria, by a damages analysis that addresses pecuniary incentives, or
23 otherwise, the undersigned cannot tell. But on this record, Plaintiffs have not defined an
24 ascertainable class.

25 Because the court denies class certification on this ground without prejudice, the order addresses
26 the remaining Rule 23 requirements.

27 **B. Rule 23(a)’s Requirements**

28 Plaintiffs must show the following prerequisites of Rule 23(a): numerosity, commonality,

1 typicality, and adequacy of representation.

2 **1. Numerosity**

3 Rule 23(a)(1) requires that, for a class to be certified, it must be “so numerous that joinder of all
4 members is impracticable.” Hulu does not challenge certification based on the numerosity element.
5 *See* Opp’n, ECF No. 150-3 at 15, n.4 (“Hulu does not dispute numerosity, although . . . their class
6 definitions are overbroad”). Plaintiffs have satisfied this element.

7 **2. Commonality**

8 Under Rule 23(a)(2), a class cannot be certified unless Plaintiffs establish that “there are
9 questions of law or fact common to the class.” Rule 23(a)(2) does not require Plaintiffs to show that
10 each class member’s claim is based on identical factual and legal issues: “The existence of shared
11 legal issues with divergent factual predicates is sufficient” to meet the requirements of Rule
12 23(a)(2).” *Parra v. Bashas’, Inc.*, 536 F.3d 975, 978 (9th Cir. 2008) (quoting *Hanlon v. Chrysler*
13 *Corp.*, 150 F.3d 1011, 1019 (9th Cir. 1998)). Under Rule 23(a)(2), “even a single common question
14 will do.” *Dukes*, 131 S. Ct. at 2556 (quotation omitted). “Commonality requires the plaintiff to
15 demonstrate that class members have suffered the same injury. This does not mean merely that they
16 have all suffered a violation of the same provision of law.” *Id.* at 2551. The common question
17 “must be of such a nature that it is capable of classwide resolution – which means that determination
18 of its truth or falsity will resolve an issue that is central to the validity of each one of the claims in
19 one stroke.” *Id.* “What matters to class certification . . . is not the raising of common ‘questions’ –
20 even in droves – but rather the capacity of a classwide proceeding to generate common answers apt
21 to drive resolution of the litigation. Dissimilarities within the proposed class are what have the
22 potential to impede the generation of common answers.” *Id.* (quotation omitted).

23 Plaintiffs argue that the common factual and legal questions are as follows:

- 24 1. Whether the Facebook c_user cookie provided to Facebook for each class member
25 “identifies a person” to Facebook under the VPPA;
- 26 2. Whether the URLs provided to Facebook identify “specific video materials or services”
under the VPPA;
- 27 3. Whether Hulu obtained Class Members’ “informed, written consent” under the VPPA to
28 disclose their personally identifiable information to Facebook, at the time Hulu made
such disclosure;

- 1 4. Whether, as a result of Hulu's conduct the Class is entitled to equitable relief and/or other
2 relief, and if so the nature of such relief; and
3 5. Whether, as a result of Hulu's conduct the Class is entitled to damages, including
4 statutory and/or punitive damages.

4 **Defenses Raised By Hulu**

- 5 1. Whether Hulu's disclosures were incident to Hulu's debt collection activities, order
6 fulfillment, request processing, or transfer of ownership;
7 2. Whether Hulu's disclosures were in Hulu's ordinary course of business.

8 Motion, ECF No. 112 at 14; *see* Summary Judgment Order, ECF No. 194 at 11-12 (holding that
9 transmissions were not in Hulu's ordinary course of business, which is defined in 18 U.S.C.
10 § 2710(a)(2) as "only debt collection activities, order fulfillment, request processing, and the transfer
11 of ownership").

12 As discussed in the summary judgment order, the theory of the VPPA disclosure to Facebook is
13 that to load the Like button, Hulu sent Facebook the title of the watched video and the Facebook ID
14 cookies, which are the datr cookie (identifying the browser), the lu cookie (identifying the previous
15 Facebook user to log into Facebook) (with a lifetime of three years), and the c_user cookie
16 (identifying any user logged into Facebook using the default setting in the last four weeks). *See*
17 Summary Judgment Order, ECF No. 194 at 19-20.⁶ By resolving the issues about whether
18 transmission of the Facebook cookies (now limited to the c_user cookie) identified a consumer and
19 whether the URLs conveyed video titles, the court can resolve issues central to the viability of the
20 class members' common statutory claim that Hulu violated the VPPA by disclosing their PII to
21 Facebook. Plaintiffs' common questions of law and fact satisfy Rule 23(a)(2). *See In re Netflix*
22 *Privacy Litig.*, No. 5:11-CV-00379 EJD, 2012 WL 2598819, at *3 (N.D. Cal. July 5, 2012) (in the
23 context of its final approval of a class action settlement, the district court found that Netflix's
24 uniform policy of retaining and disclosing PII and viewing histories of subscribers established
25

26 ⁶ Plaintiffs' motion for class certification relied only on the datr cookie, asserting that it was
27 "an identifier unique for each Facebook user." *See* Motion for Class Certification, ECF No. 112 at
28 13. That analysis changed by the summary judgment motion, where everyone acknowledged that
the datr cookie alone was not a unique identifier on its own.

1 common statutory claims under the VPPA; the resulting common factual and legal claims met Rule
2 23(a)'s commonality requirement).

3 Hulu nonetheless argues that the claims are not common because each member's claim turns on
4 individual evidence, such as whether he or she used ad-blocking software, watched a video while
5 logged into Facebook, or cleared browser cookies before accessing Hulu. *See* Opp'n, ECF No. 150-
6 3 at 17. These assertions do not change the determination that Plaintiffs have established common
7 issues of law and fact. These also are not potentially disparate questions underlying each putative
8 class member's claim that prevent Plaintiffs from establishing the commonality requirement. *Cf.*
9 *Dukes*, 131 S. Ct. at 2548, 2554-56 (potentially disparate questions about each class member's
10 discrimination claim – given no evidence about a general policy of discrimination or the exercise of
11 discretion by the company's managers in a common way resulting in a common injury – meant that
12 plaintiffs did not satisfy the commonality requirement). The alleged common injury of disclosure of
13 PII to Facebook by transmission of Facebook ID cookies and the name of the watched video is
14 different than the individualized discrimination claims that the Supreme Court identified in *Dukes*.

15 To the extent that these fact issues affect the similar but more demanding analysis under Rule
16 23(b)(3)'s predominance requirement, the order discusses them below. In the context of the
17 commonality analysis, at best, they are differences in proof that might be amenable to addressing by
18 subclasses. They do not affect the conclusion that Plaintiffs allege the same claim of wrongful
19 disclosure by Hulu to Facebook of their PII and watched videos.

20 **3. Typicality**

21 Rule 23(a)(3) requires, as a prerequisite to class certification, that “the claims or defenses of the
22 class representatives [must be] typical of the claims or defenses of the class.” “[R]epresentative
23 claims are typical if they are reasonably co-extensive with those of absent class members; they need
24 not be substantially identical.” *Hanlon v. Chrysler Corp.*, 150 F.3d 1011, 1020 (9th Cir. 1998)
25 (internal quotation marks and citation omitted). “Typicality refers to the nature of the claim or
26 defense of the class representative, and not to the specific facts from which it arose or the relief
27 sought.” *Ellis v. Costco Wholesale Corp.*, 657 F.3d 970, 984 (9th Cir. 2011). “The test of typicality
28 is whether other members have the same or similar injury, whether the action is based on conduct

1 which is not unique to the named plaintiffs, and whether other class members have been injured by
2 the same course of conduct.” *Hanon v. Dataproducts Corp.*, 976 F.2d 497, 508 (9th Cir. 1992)
3 (citation and internal quotation marks omitted). “The purpose of the typicality requirement is to
4 assure that the interest of the named representative aligns with the interests of the class. . . . [C]lass
5 certification is inappropriate when a putative class representative is subject to unique defenses which
6 threaten to become the focus of the litigation.” *Id.*

7 The claims are typical. Plaintiffs’ claims involve the same statutory violation and the same
8 injury: disclosure of their PII (in the form of the Facebook ID cookies) and the name of the video.

9 Hulu again points to differences in each member’s claim, such as whether he or she used ad-
10 blocking software, watched a video while logged into Facebook, integrated Hulu and Facebook
11 accounts, made posts on Facebook about videos viewed, or cleared browser cookies before
12 accessing Hulu. *See* Opp’n, ECF No. 150-3 at 16 (citing Hulu’s consumer survey that 50% of Hulu
13 users use ad-blocking technology and 60% use browser settings that block cookies). They also point
14 to Joseph Garvey’s use of a pseudonym to register as a Hulu user. *Id.*

15 These differences do not change the conclusion.

16 First, Plaintiffs exclude participants in Facebook Connect (the service that connects Hulu and
17 Facebook users and allows sharing of views across the two platforms) on the ground that including
18 them would present sufficiently different questions of law and fact to preclude a cohesive class. *See*
19 Motion, ECF No. 112 at 15, n.8. This disposes of any concern regarding integration of Hulu and
20 Facebook accounts.

21 Second, a plaintiff’s independent posting on Facebook is not a defense. Consent to a disclosure
22 under the VPPA in effect during the class period required the “informed, written consent of the
23 consumer given at the time the disclosure is sought.” 18 U.S.C. § 2710(b)(2)(B). What is at issue
24 here is Hulu’s alleged independent transmission to Facebook – without any consent by the
25 Hulu/Facebook user – of the Facebook ID and the video title as part of the process of loading the
26 code for the Like button. Being logged into Facebook similarly is not obviously consent under
27 VPPA. As discussed in the summary judgment order, there is no evidence in the record that
28 Facebook’s data policies affect this analysis or are the informed, written consent required by the

1 VPPA. *See* ECF No. 194 at 26.

2 Third, Joseph Garvey’s use of a pseudonym does not alter the issues here: his being identified to
3 Facebook. As discussed in the summary judgment order, there are material issues of fact about
4 whether the transmission of the Facebook cookies with the video title was an electronic transmission
5 of the Hulu user’s actual identity on Facebook and the video that the Facebook user was watching.
6 *See* ECF No. 194 at 20-22. The Facebook ID personally identifies a Facebook user. *See id.*
7 (material issue of fact exists about whether the transmission to Facebook was sufficient to identify
8 individual consumers); *see also In Re: Zynga Privacy Litig.*, No. 11-18044, 2014 WL 1814029, at *9
9 (9th Cir. May 8, 2014) (discussing how a Facebook ID is personally identifiable information under
10 18 U.S.C. § 2702(c) of the Electronic Communications Privacy Act). Joseph Garvey’s use of a
11 pseudonym on Hulu does not affect the inquiry about whether Hulu knowingly sent his Facebook ID
12 to Facebook together with the titles of his watched videos.

13 Finally, to the extent that fact issues about ad blockers or clearing browser cookies affect the
14 analysis under Rule 23(b)(3), the court discusses them below in the section on the predominance
15 requirement. As to the defenses, they are not the kinds of defenses that typically defeat class
16 certification by the need for substantial cross-examination on negative facts. Moreover, they are not
17 the kinds of defenses that pose “a danger that absent class members will suffer if their representative
18 is preoccupied with defenses unique to it.” *Hanon*, 976 F.3d at 508.

19 **4. Adequacy of Representation**

20 Rule 23(a)(4) requires that, before a court may certify a class, it must find that “the
21 representative parties will fairly and adequately protect the interests of the class.” The requirement
22 applies to the class representative and class counsel and requires resolution of two questions: “(1) do
23 the named plaintiffs and their counsel have any conflicts of interest with other class members, and
24 (2) will the named plaintiffs and their counsel prosecute the action vigorously on behalf of the
25 class?” *Hanlon*, 150 F.3d at 1020. Rule 23(g)(4) also specifies that class counsel “must fairly and
26 adequately represent the interests of the class.” Under Rule 23(g)(1)(A), the court must consider the
27 following criteria in appointing class counsel: (i) counsel’s work “in identifying or investigating
28 potential claims in the action”; (ii) “counsel’s experience in handling class actions, other complex

1 litigation, and the types of claims asserted in the action”; (iii) “counsel’s knowledge of the
2 applicable law”; and (iv) “the resources that counsel will commit to representing the class.” Rule
3 23(g)(1)(B) permits the court to “consider any other matter pertinent to counsel’s ability to fairly and
4 adequately represent the interests of the class.”

5 Defendants do not dispute the adequacy of Plaintiffs’ counsel. Plaintiffs retained counsel with
6 significant experience in prosecuting large consumer class actions. *See Parisi Decl.*, ECF No. 113,
7 Exs. 10-12. Counsel have worked vigorously to identify and investigate the claims in this case, and,
8 as this litigation has revealed, they understand the applicable law and have represented their clients
9 effectively. *See In re Netflix Privacy Litigation*, 2012 WL 2598819, at *3.

10 As to the adequacy of the named Plaintiffs, the requirement is meant to evaluate whether “the
11 named plaintiff’s claim and the class claims are so interrelated that the interests of the class members
12 will be fairly and adequately protected in their absence.” *Gen. Tel. of Sw. v. Falcon*, 457 U.S. 147,
13 158, n.13 (1982). Plaintiffs’ counsel asserted, and Hulu does not dispute, that Plaintiffs have worked
14 actively with counsel to prepare and “vigorously” prosecute the case. *See Fed. R. Civ. P. 23(a)(4)*;
15 *Parisi Decl.*; ECF No. 114, Exs. 10-12; *Torre Decl.* ¶ 9; *Wymyczak Decl.* ¶ 9; *Garvey Decl.* ¶ 9;
16 *Zampella Decl.* ¶ 9; *see Opp’n*, ECF No. 150-3 at 15, n.4. Given their common claims and shared
17 interests with the class, the named Plaintiffs adequately represent the class’s interests under Rule
18 23(a)(4). *Accord In re Netflix Privacy Litigation*, 2012 WL 2598819, at *3 (reaching the same
19 conclusion in a VPPA case based on similar facts).

20 Hulu’s only argument against this result is that Plaintiffs are not adequate representatives under
21 Rule 23(b)(3). *Opp’n*, ECF No. 150-3 at 15, n. 4. The order addresses Rule 23(b) in the next
22 section.

23 **C. Rule 23(b)(3) Requirements**

24 Under Rule 23(b)(3), a class action is maintainable if “the court finds that questions of law or
25 fact common to class members predominate over any questions affecting only individual members,
26 and that a class action is superior to other available methods for fairly and efficiently adjudicating
27 the controversy.” Rule 23(b)(3) thus requires two inquiries: (1) do the common questions of law or
28 fact “predominate” over questions over questions affecting only individual class members, and (2) is

1 class treatment “superior” to alternative methods for adjudicating the controversy?

2 ***1. Predominance of Common Questions***

3 The Rule 23(b)(3) predominance inquiry involves weighing and evaluating the common and
4 individual issues in the case. *See Dukes*, 131 S. Ct. at 2556. It involves consideration of the same
5 principles that guide the Rule 23(a) commonality analysis, but it “is even more demanding than Rule
6 23(a). *See Comcast Corp. v. Behrend*, 133 S. Ct. 1426, 1432 (2013). The Rule 23(a)(2) inquiry is
7 only whether the plaintiff shows the existence of a common issue of law or fact. *See Dukes*, 131 S.
8 Ct. at 2556. The predominance inquiry looks at those common questions, “focuses on the
9 relationship between the common and individual issues,” *Hanlon*, 150 F.3d at 1022, and requires the
10 court to weigh the common issues against the individual issues. *See Dukes*, 131 S. Ct. at 2556.
11 Class certification under Rule 23(b)(3) is proper when common questions represent a significant
12 portion of the case and can be resolved for all members of the class in a single adjudication.
13 *Hanlon*, 150 F.3d at 1022.

14 “Considering whether ‘questions of law or fact common to class members predominate’ begins,
15 of course, with the elements of the underlying cause of action.” *Erica P. John Fund, Inc. v.*
16 *Halliburton Co.*, 131 S. Ct. 2179, 2181 (2011). “In determining whether common questions
17 predominate, the Court identifies the substantive issues related to plaintiff’s claims (both the causes
18 of action and affirmative defenses); then considers the proof necessary to establish each element of
19 the claim or defense; and considers how these issues would be tried.” *Gaudin v. Saxon Mortgage*
20 *Servs., Inc.*, No. 11-CV-01663-JST, 2013 WL 4029043 (N.D. Cal. Aug. 5, 2013) (citing Cal. Prac.
21 Guide Fed. Civ. Pro. Before Trial Ch. 10-C § 10:412). The predominance analysis is a pragmatic
22 one: it is not a numerical analysis and instead is a qualitative assessment of overriding issues in the
23 case, despite the existence of individual questions. *See Newberg on Class Actions*, § 4.51; *Butler v.*
24 *Sears, Roebuck & Co.*, 727 F.3d 796, 801 (7th Cir. 2013) (finding a single, central issue of liability
25 in a class action involving defects in washing machines; the two central defects were mold and the
26 control unit; those differences could be addressed by subclassing; differences in damages can be
27 addressed in individual hearings, in settlement negotiations, or by creation of subclasses), *cert.*
28 *denied*, 134 S. Ct. 1277 (2014).

1 As discussed in the section on commonality, Plaintiffs allege a common claim and the same
2 injury: disclosure of their PII by the transmission of the Facebook ID cookies and their watched
3 videos in violation of the VPPA, 18 U.S.C. § 2710. Hulu argues that there can be no predominance
4 of that common claim over individual issues because each plaintiff must prove that his or her
5 identity was “reversed engineered” from the data sent to Facebook. *See* Opp’n, ECF No. 150-3 at
6 17. But as narrowed in the summary judgment order, the theory of disclosure to Facebook is not a
7 reverse engineering theory and instead is a theory of direct disclosure to Facebook of its users’
8 actual identities on Facebook and their watched videos. *See* ECF No. 194 at 19-21. Indeed, the
9 court agreed with Hulu (and granted summary judgment to Hulu on the comScore disclosure) that
10 disclosure of anonymous information was not the linking of a specific, identified person to his video
11 watching habits that would violate the VPPA. *See id.* at 18-19. By contrast, Hulu’s transmission of
12 the Facebook ID cookies and the title of the watched video possibly is information that identified the
13 Hulu user’s actual identity on Facebook. *See id.* at 19-21. There is a material issue of fact about
14 whether this was sufficient to identify consumers and thus violate the VPPA. *See id.* at 21-23.
15 Moreover, there are material issues of fact about whether Hulu knew it was disclosing PII in
16 violation of the VPPA. *See id.* at 22-23. If it knew, then (depending on the facts) there might be a
17 VPPA violation. *See id.* If it did not, then there would not be a VPPA violation.

18 Hulu also argues that issues that defeat predominance are whether class members (1) registered
19 with a pseudonym, (2) watched videos while logged into Facebook, (3) disclosed their choices to
20 Facebook voluntarily, (4) allowed others to use their Hulu account, and (5) installed ad-blocking
21 software, cleared browser cookies before watching videos, or set browsers to block third-party
22 cookies.

23 First, as to registering with a pseudonym, this does not defeat predominance (just as it did not
24 defeat typicality). The use of a pseudonym on Hulu does not affect the inquiry about whether Hulu
25 knowingly sent a Hulu user’s Facebook ID to Facebook together with the titles of his watched
26 videos.

27 Second, as to Hulu users’ watching videos while logged into Facebook, Hulu’s argument is that
28 this is consent to disclosure. *See* Opposition, ECF No. 150-3 at 23. But the issue is Hulu’s alleged

1 unauthorized disclosure. Absent the informed, written consent required by the VPPA “given at the
2 time the disclosure is sought,” a disclosure of PII violates the VPPA. *See* 18 U.S.C. § 2710(a)(b)(2)
3 (2012) (later amended in 2013 to broaden the consent provisions). It is one thing to acknowledge
4 the placement or use of cookies. It is another to interpret a data policy as the informed, written
5 consent that the VPPA required during the class period. As the summary judgment order concluded,
6 there is no evidence in the record that Facebook’s data policies affect this analysis or are informed,
7 written consent under the VPPA. *See* ECF No. 194 at 26.

8 Third, and similarly, as discussed above, the record does not allow the court to conclude that a
9 plaintiff’s independent posting on Facebook is an informed, written consent under the VPPA.
10 Moreover, the claims here are about Hulu’s alleged unauthorized disclosure of PII during the
11 loading of the Like button when a Hulu user launched the watch page. A user’s independent actions
12 do not alter the analysis of whether Hulu knowingly disclosed PII.

13 Fourth, allowing someone else to use one’s Hulu account does not mean that a Hulu user cannot
14 complain about Hulu’s disclosure of the user’s PII. Limiting the injury to one disclosure avoids
15 proof issues that might exist with multiple disclosures and tying a disclosure to a particular user.

16 Fifth, the main issue with predominance is cookie clearing or blocking. As described above, the
17 remaining theory of disclosure is the transmission of the c_user cookie, which includes the Facebook
18 ID. That cookie was transmitted only when a Hulu user watched a video on hulu.com having used
19 the same computer and web browser to log into Facebook in the previous four weeks using default
20 settings. *See* JSUF #22; Calandrino Decl. ¶¶ 66-67. Also, according to Hulu’s expert Peter
21 Weitzman, the c_user cookie is cleared if the Facebook “keep me logged in” box is not checked, if
22 the user manually cleared cookies after the Facebook session and before the Hulu session, or if the
23 user used cookie-blocking or ad-blocking software that prevented disclosures. *See supra* Statement.

24 Plaintiffs point out that Mr. Weitzman tested only current versions of blockers and ad-blocking
25 tools, not those in effect during the class period. *See* Weitzman Dep., Tersigni Decl. Ex. 6, ECF No.
26 170 at 77:3-17. It may be that this does not matter, but the record is silent on this point.

27 Plaintiffs also argue that Mr. Weitzman relied only on incomplete versions of their session
28 captures regarding the loading of the Like button and the disclosure of the user’s Facebook ID in the

1 non-cookie portion of Hulu’s request to Hulu to load the Like button. *See* Plaintiff’s Reply, ECF
2 No. 168 at 13. In support of this argument, the brief cites the Wills Decl., ECF No. 160, ¶ 47. One
3 cannot tell from the Wills Declaration whether the disclosure of the Facebook ID is in a cookie or
4 non-cookie portion of Hulu’s request to load the Like button. But Plaintiffs’ expert Joseph
5 Calandrino’s declaration refers to a transmission of the Facebook ID of the currently-logged-in
6 Facebook user via the c_user cookie or the lu cookie. Calandrino Decl., ECF No. 160-5, ¶¶ 66, 71.
7 The record does not contain any dispute that (1) the relevant disclosure is the transmission of the
8 c_user cookie, and (2) if the c_user cookie is cleared, then it cannot be transmitted to Facebook
9 when the Like button loads.

10 Hulu also employed technology to block attempts to block ad blockers, and Plaintiffs’ inference
11 is that there is no evidence that ad blockers were effective. Plaintiffs’ Reply, ECF No. 168 at 10.
12 Plaintiffs point to comScore’s testimony that its cookies always came through. Johnson Dep.,
13 Tersigni Decl. Ex. 3, ECF No. 169, at 80-91.

14 Finally, Plaintiffs dispute the reliability of Mr. Weitzman’s survey result that 65.3% of
15 respondents used ad-blocking software and cite a different study that as of May 2012, the percentage
16 of Internet users in the U.S. using ad-blocking software was under ten percent. *Id.* at 14 n.12 (citing
17 Tersigni Decl. Ex. 18, *Ad-Blocking, Measured*, ClarityRay, May 2012, at 4).

18 In the end, the substantial issues about remaining logged into Facebook and clearing and
19 blocking cookies mean that the court cannot conclude on this record that the common issues
20 predominate over the individual ones. Perhaps subclasses could address the use (or lack of use) of
21 ad-blockers or browser technologies, or whether users stayed logged into Facebook. Plaintiffs have
22 not proposed that subclassing. Given that even the court’s best guess at subclassing would not
23 address the issues about ascertainability and identify the class members, the court finds on this
24 record that common issues do not predominate.

25 **2. Rule 23(b)(3) Superiority**

26 Rule 23(b)(3) requires a court to assess whether class treatment is “superior to other available
27 methods for the fair and efficient adjudication of the controversy.” Factors to consider in assessing
28 superiority include the following: (A) the class members’ interests in individually controlling the

1 prosecution or defense of separate actions; (B) the extent and nature of any litigation concerning the
2 controversy already begun by or against class members; (C) the desirability or undesirability of
3 concentrating the litigation of the claims in the particular forum; and (D) the likely difficulties in
4 managing a class action. Fed. R. Civ. P. 23(b)(3). Aggregation in a class action can be efficient
5 when many individuals have small damages because absent a class suit, it is unlikely that any of the
6 claimants will be accorded relief. *See Amchem Prods., Inc. v. Windsor*, 521 U.S. 591, 619 (1997).

7 Here, the factors supporting the superiority of a class action are the small individual statutory
8 damages and the putative class's common theory of liability. Either Hulu transmitted PII by its
9 policy and practice regarding the loading of the Like button, or it did not. But based on the court's
10 holding that a class is not ascertainable on this record, class treatment is not superior.

11 **III. HULU'S DUE PROCESS ARGUMENT**

12 Hulu argues that certifying the class would result in statutory damages of \$2,500 per class
13 member, without any evidence that a class member was injured, for a total damages award of
14 billions of dollars. Opposition, ECF No. 150-3 at 29. That award is wildly disproportionate to any
15 adverse effects class members suffered, and it shocks the conscience. *Id.* (citing *Kline v. Coldwell*
16 *Banker & Co.*, 508 F.2d 226, 234-35 (9th Cir. 1974)). *Kline* is a case where the Ninth Circuit
17 upheld the district court's refusal to certify a case involving \$750 million in statutory treble
18 damages, noting that each claim involved only minimal damages.

19 It can be a legitimate concern that the potential for a devastatingly large damages award, out of
20 proportion to the actual harm suffered by members of the plaintiff class, may raise due process
21 issues. *Parker v. Time Warner Entertainment Co.*, 331 F.3d 13, 22 (2nd Cir. 2003) (addressing
22 claims for transmission of personally-identifiable subscriber information in violation of the Cable
23 Consumer Protection Act and state consumer protection laws). The aggregation of statutory
24 damages claims potentially distorts the purpose of both statutory damages and class actions, and if it
25 does, it creates a potentially enormous aggregate recovery for plaintiffs that in turn may induce an
26 unfair settlement. *Id.* In a sufficiently serious case, a defendant might invoke the Due Process
27 clause to reduce the statutory award. *Id.* The Second Circuit has held that a defendant might invoke
28 the Due Process clause, "not to prevent certification, but to nullify that effect and reduce the

1 aggregate damage award.” *Id.*

2 Another approach to the calamitous damages problem is to certify a class, allow it to proceed,
3 and then invoke the Due Process clause to cap damages within a reasonable realm if Plaintiffs
4 prevail. Newburg on Class Actions, § 4.83. In a putative class action against a potential creditor for
5 accessing consumers’ credit history without permission, the Seventh Circuit has held that such
6 “constitutional limits are best applied after a class has been certified.” *Murray v. GMAC Mortg.*
7 *Corp.*, 434 F.3d 948, 954 (7th Cir. 2006). “Then a judge may evaluate the defendant’s overall
8 conduct and control its total exposure. Reducing recovery by forcing everyone to litigate
9 independently – so that constitutional bounds are not tested, because the statute cannot be enforced
10 by more than a handful of victims – has little to recommend it.” *Id.*; accord *Bateman v. American*
11 *Multi-Cinema, Inc.*, 623 F.3d 708 (9th Cir. 2001) (in a class action against a movie theater chain for
12 violations of the Fair and Accurate Credit Transactions Act, court acknowledged possibility of due
13 process concerns by noting that “reserv[ing] judgment as to whether a district court may reduce
14 damages award as unconstitutionally excessive” but held that “it is not appropriate to evaluate the
15 excessiveness of the award [at the class certification stage] Because we do not know what
16 amount of damages [plaintiffs] will seek nor how many plaintiffs will ultimately claim the benefit of
17 any damages awarded should plaintiffs prevail, any evaluation of AMC’s potential liability at this
18 stage is unduly speculative.”).

19 Given its denial of class certification on this record, the court does not reach this issue. That
20 being said, likely it is one best addressed after a class is certified.

21 CONCLUSION

22 The court denies Plaintiffs’ motion for class certification without prejudice and denies Plaintiffs’
23 motion for appointment of the class representatives and class counsel as moot.

24 This disposes of ECF No. 111.

25 **IT IS SO ORDERED.**

26 Dated: June 16, 2014



27 LAUREL BEELER
United States Magistrate Judge

28