THE TRANSFORMATIVE POTENTIAL OF DIGITAL MEDIA & TECHNOLOGY ON CLASS ACTIONS

by
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In this Note, the author discusses the true potential that digital media and technology hold for class actions beyond effectuating notice to members of a class. Ironically, just as challenges have mounted against the use of the class action device, digital technology has continued to advance in the background to a point where it may be used to break down barriers to class certification now facing would-be class plaintiffs.

However, much of the current discussion across law reviews and blogs as it relates to digital media and class actions pertains to the effect of digital media on notice. Not only are some proposed methods of digital notice flawed, the focus on notice overlooks the numerous other ways digital media and technology can support class actions. The author proposes that advances in digital media and technology may be used to solve recently erected barriers to class actions.

Specifically, mobile location and purchase data—as well as new digital media formats enabling immediate feedback from class members—may be used to supply the additional evidentiary proof now required of would-be class plaintiffs who must establish elements under Rule 23(a) and (b) beyond a mere

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pleading standard and before plaintiffs have had the benefit of full merits discovery. The potential cost savings from new methods of digital payment for claims administration will also be of particular relevance to small claims plaintiffs who must argue that the class device is superior despite resistance from defendants who may suggest that the cost to administer claims alone renders a class action inefficient, and thus, an inferior method of adjudicating claims.

INTRODUCTION

Besides being a cost-efficient medium relative to television, print, radio, or outdoor advertising, a major appeal of modern digital media is its ability to identify and target defined groups of people who share specified attributes. Such attributes include, *inter alia*: personal interests, previous purchases, locations most frequented, demographics, and beliefs.

Beyond the potential this holds for targeting class certification or settlement notice, advanced consumer behavioral targeting—such as mobile location data and consumer purchase data—may increasingly provide plaintiffs a form of circumstantial evidence that may be combined with affidavits to ascertain and establish the requisite number of class members. This will be particularly helpful in consumer class actions where class members are less likely to have kept purchase records, such as routine, or even impulse transactions—e.g., fast food or grocery purchases.

Moreover, new digital "lead ad" formats offer a convenient method of two-way communication through which businesses can get immediate feedback from targeted consumers. As this Note will explain, this feature also has particular relevance to class actions. It allows plaintiff class counsel to efficiently gather information about the injuries suffered by targeted members of a class to verify the cohesiveness of the class. Feedback can then be used to demonstrate that class member injuries stem from common questions of fact or law, shared by a sufficiently numerous group (and class representatives), and that shared questions predominate over individual issues, making a class action the superior method for adjudicating claims.

Related to superiority, modern claims administration methods such as mobile peer-to-peer (P2P) apps and digitized checks will help maximize plaintiff damage awards by mitigating the logistical costs of administering funds to class members. As a result, plaintiffs will be better armed to overcome defendant arguments that individual claims do not justify using the class action device where plaintiffs stand to receive nominal damage awards. This too has particular relevance for consumer class actions where individual damages are likely to be low.

I. CLASS CERTIFICATION REQUIREMENTS

A brief overview of modern class action law is helpful before delving into the specific implications of digital media on class action procedure and certification. In 1966, the Advisory Committee on the Rules of Civil Procedure[1]—the body of legal

[1] Committee members are appointed by the Chief Justice for three-year terms, with the possibility of renewal for one additional three-year term, and members are responsible for the ongoing evaluation of the Federal Rules of Civil Procedure as well as recommendations to the Judicial Conference through a Standing Committee on Rules of Practice and Procedure. Committee membership includes "federal judges, but also practicing lawyers, law professors, state chief justices, and high-level officials from the Department of Justice and federal public defender

professionals charged with the ongoing evaluation of federal rules of practice—made significant changes to the original 1938 Rule 23 to more clearly articulate the kinds of classes that qualified for classwide adjudication in addition to addressing other clarity issues under the original Rule 23.[2] Notably, the Advisory Committee also sought to vindicate the rights of small claims plaintiffs in the 1966 revision to Rule 23.[3] In essence, the modern rule was designed to promote judicial efficiency[4] and remedial justice where plaintiffs would otherwise have no recourse either through government regulation or individual claims.[5]

The fundamental requirements of the current rule are largely unchanged from the 1966 version.[6] First, as a threshold matter, plaintiffs must demonstrate that the class is clearly defined; that there is a representative who is a member of the class; and that the class representative has a live claim.[7] Second, plaintiffs must meet requirements under Rule 23(a) showing that the class is sufficiently numerous to justify use of the class device; that there are common questions of fact or law among the class; that "the claims or defenses of the representative parties are typical" of the class; and that "the representative parties will fairly and adequately protect the interests of the class."[8]

Additionally, a class may only move forward if plaintiffs demonstrate that the

organizations." *Committee Membership Selection,* U.S.COURTS.GOV, http://www.uscourts.gov/rules-policies/about-rulemaking-process/committee-membership-selection.

[2] *See* FED. R. CIV. P. 23 advisory committee's note to 1966 amendment. The original Rule 23 as promulgated in 1938 presented many challenges, including: (1) categorical class definitions that were "obscure and uncertain"; (2) inadequate guidelines for "the proper extent of the judgments in class actions"; and (3) an omission of procedural safeguards to protect the interests of class members. *Id*. at 157.

[3] Amchem Prods., Inc. v. Windsor, 521 U.S. 591, 617 (1997) (noting that "the Advisory Committee had dominantly in mind vindication of 'the rights of groups of people who individually would be without effective strength to bring their opponents into court at all'").

[4] Califano v. Yamasaki, 442 U.S. 682, 701 (1979) (noting "the class-action device saves the resources of both the courts and the parties by permitting an issue potentially affecting [many parties] to be litigated in an economical fashion under Rule 23.").

[5] Deposit Guar. Nat'l Bank, Jackson, Miss. v. Roper, 445 U.S. 326, 339 (1980) ("The aggregation of individual claims in the context of a classwide suit is an evolutionary response to the existence of injuries unremedied by the regulatory action of government. Where it is not economically feasible to obtain relief within the traditional framework of a multiplicity of small individual suits for damages, aggrieved persons may be without any effective redress unless they may employ the class-action device.").

[6] Robert H. Klonoff, *Class Actions in the Year 2026: A Prognosis*, 65 EMORY L. J. 1569, 1572 (2016).

[7] ROBERT H. KLONOFF, CLASS ACTIONS AND OTHER MULTIPARTY LITIGATION IN A NUTSHELL 30 (5th ed. 2017).

[8] FED. R. CIV. P. 23(a).

class qualifies under one of the four subdivisions of Rule 23(b).[9] Rule 23(b)(1)(A) is concerned with consistency and applies when multiple individual actions would "establish incompatible standards of conduct for the party opposing the class."[10] Rule 23(b)(1)(B) applies when numerous separate actions would "substantially impair or impede" the interests of individual class members.[11] Rule 23(b)(1)(B) classes are sometimes referred to as "limited fund" classes, because there is a risk of one or a few plaintiffs exhausting defendant funds available for damages to the detriment of other would-be plaintiffs.[12] Rule 23(b)(2) applies where a class seeks declaratory or injunctive relief.[13] Rule 23(b)(3) applies when "questions of law or fact common to class members predominate" over individual questions, and where plaintiffs can show that "a class action is superior to other available methods for fairly and efficiently adjudicating the controversy."[14]

Class members with relatively small individual claims who seek monetary relief are now largely limited to class certification under Rule 23(b)(3) because decisions by the Court have limited Rule 23(b)(1)(A) and (b)(2) classes to injunctive or declaratory relief and severely restricted access to monetary relief under Rule 23(b)(1)(B).[15] It is not surprising, then, that most class actions today are brought as (b)(3) claims.[16] This presents some challenges due to relatively recent developments in class action law that have made it much harder for plaintiffs to certify (b)(3) classes. In the words of Justice Kagan: "To a hammer, everything looks like a nail. And to a Court bent on diminishing the usefulness of Rule 23, everything looks like a class action, ready to be dismantled."[17] For one thing, plaintiffs in some jurisdic-

[9] *See* KLONOFF, *supra* note 7, at 31.

[10] FED. R. CIV. P. 23(b)(1)(A).

[11] FED. R. CIV. P. 23(b)(1)(B).

[12] *See* Ortiz v. Fibreboard Corp., 527 U.S. 815, 849 (1999).

[13] FED. R. CIV. P. 23(b)(2).

[14] FED. R. CIV. P. 23(b)(3).

[15] After *Greenman*, Rule 23(b)(1)(A) is generally limited to cases seeking injunctive and declaratory relief. *See In re* Dennis Greenman Sec. Litig., 829 F.2d 1539, 1545 (11th Cir. 1987). Otherwise, Rule 23(b)(1)(A) actions would nullify (b)(3), forcing class members to be subject to classwide judgment without any of the protections under (b)(3). Monetary damages are difficult to obtain under Rule 23(b)(1)(B)—a.k.a. "limited fund classes"—as a result of the Court's three-part test in *Ortiz* which requires proof of: (1) a fund sufficiently limited; (2) inclusiveness of the proposed class; and (3) equitable treatment of class members. *See Ortiz*, 527 U.S. at 853–56. And the Court made clear in *Dukes* that Rule 23(b)(2) actions are for injunctive or declaratory relief only. *See* Wal-Mart Stores, Inc. v. Dukes, 564 U.S. 338, 360 (2011) (holding that it is impermissible to seek damages for a (b)(2) class where "monetary relief is not incidental to the injunctive or declaratory relief" sought).

[16] *See* Klonoff, *supra* note 6, at 1619 n.304 (noting "[m]ost class actions are brought under 23(b)(3)").

[17] Am. Exp. Co. v. Italian Colors Rest., 570 U.S. 228, 252 (2013).

tions must show at the certification stage that the class is not only objectively defined, but that class members can be readily identified.[18] This serves two purposes: (1) setting clear parameters for the class of individuals that will be bound by the judgement; and (2) establishing who must receive notice of the class action so that they may be offered an opportunity to "opt-out" in case they want to pursue their own claims separately. With regard to the latter purpose, Rule 23(c)(2) requires the court to direct that all (b)(3) class members receive "the best notice that is practicable under the circumstances, *including individual notice to all members who can be identified through reasonable effort*."[19] Additionally, the Court has imposed heightened evidentiary burdens on plaintiffs to prove Rule 23(a) and (b) requirements even when doing so involves getting to the merits of the case, before plaintiffs have had the benefit of full discovery.[20]

II. ISSUES CONCERNING NEW PROPOSED METHODS OF DIGITAL NOTICE

The key, then, for the continued success of class action plaintiffs will be to find ways to meet these heightened standards during the certification phase while keeping costs down. Conveniently, as the class action landscape has evolved over the last 20 years to increase the burden on class plaintiffs, so too has digital technology that could be the very mechanism to lessen this burden. In recent years, the legal community has similarly noted the appeal of digital media, specifically as it relates to class action litigation. Much of the discussion among legal scholars across law reviews and legal blogs focuses on the impact of digital media on fulfilling notice requirements for members of a class.[21] There are two problems with this focus: (1) the

[18] *See infra* Part III.A.

[19] FED. R. CIV. P. 23(c)(2)(B) (emphasis added).

[20] *See* Amgen Inc. v. Conn. Ret. Plans & Tr. Funds, 568 U.S. 455, 466 (2013) (qualified the evidentiary burden noting "[m]erits questions may be considered to the extent—but only to the extent—that they are relevant to determining whether the Rule 23 prerequisites for class certification are satisfied"). Although *Amgen* seemed to provide class plaintiffs with more leeway during the certification phase, the Court immediately reiterated its position that Rule 23 "does not set forth a mere pleading standard" in a subsequent case. *See* Comcast Corp. v. Behrend, 569 U.S. 27, 33 (2013) (quoting *Dukes*, 564 U.S. at 350). Writing for the majority, Justice Scalia noted that parties must "'prove that there are *in fact* sufficiently numerous parties, common questions of law or fact,' typicality of claims or defenses, and adequacy of representation, as required by Rule 23(a) . . . [and] evidentiary proof [of] at least one of the provisions of Rule 23(b)." *Id.* (quoting *Dukes*, 564 U.S. at 350).

[21] *See, e.g.*, Alexander W. Aiken, *Class Action Notice in the Digital Age*, 165 U. PA. L. REV. 967, 984–85 (2017); Elizabeth M.C. Scheibel, *#Rule23 #ClassAction #Notice: Using Social Media, Text Messaging, and Other New Communications Technology for Class Action Notice and Returning to Rule 23(C)(2)(B)'s Best Notice Practicable Standard*, 42 MITCHELL HAMLINE L. REV. 1331, 1362 (2016); Steven Weisbrot, *Is Digital the New Print in Class Action Notification Programs?*, 25 CLASS

analyses are flawed because some digital methods proposed are not reasonably calculated to reach class members; and (2) the predominant focus on notice overlooks the numerous other ways that digital technology can impact class actions.

This is not to belittle the importance of digital media's application to class notice. To the contrary, if digital media proves to be both effective and efficient at effectuating notice, this could persuade the Advisory Committee to require court ordered notice of certification for all class types (although not necessarily individual notice). This is so because the cost to provide notice would be less likely to outweigh the potential benefit of informing all class members of an upcoming class action—even in classes where damages are largely (or completely) barred. Thus, even (b)(1) and (b)(2) class members might be guaranteed notice of certification and an opportunity to participate in the proceedings or to appeal a class certification order.

Furthermore, the cost savings gained using digital targeted notice are significant in light of the fact that courts must order individualized notice of class certification to all class members who can be reasonably identified for a (b)(3) class, and plaintiffs seeking to maintain a class action are responsible for covering the cost of providing such notice.[22] This is even more significant considering the Court's position that notice must be delivered to all identifiable plaintiffs *regardless of the cost*. In *Eisen v. Carlisle and Jacqueline*, the Court required first class mail to effectuate notice to all 2.25 million ascertainable members of a (b)(3) class.[23] The Court's reasoning in *Eisen* largely had to do with protecting the procedural due process rights of class members who might not be afforded the opportunity to opt-out of a binding judgment. Quoting *Mullane*, the Court stressed that "notice must be 'reasonably calculated, under all the circumstances, to apprise interested parties of the pendency of the action and afford them an opportunity to present their objections.'"[24] It did not matter that there were over 2 million ascertainable class members in *Eisen*.[25] Rather, the Court explicitly stated that "[t]here is nothing in Rule 23 to suggest that the

ACTIONS & DERIVATIVE SUITS 7, 11 (2015); Steven Weisbrot, *A New Approach for Class Action Media Notice Programs*, ANGEION GROUP, http://www.angeiongroup.com/news-a-new-approach-for-class-action-media-notice-programs; Natalie Finkelman Bennett, et al., *Class Action Notice Requirements: Leveraging Traditional and Emerging Media to Reach Class Members*, STRAFFORD (2016), http://media.straffordpub.com/products/class-action-notice-requirements-leveraging-traditional-and-emerging-media-to-reach-class-members-2016-04-05/presentation.pdf.

[22] Oppenheimer Fund, Inc. v. Sanders, 437 U.S. 340, 358 (1978) (holding "the representative plaintiff should bear this expense because it is he who seeks to maintain the suit as a class action").

[23] Eisen v. Carlisle & Jacqueline, 417 U.S. 156, 173–74 (1974) (holding that "[i]ndividual notice must be sent to all class members whose names and addresses may be ascertained through reasonable effort" and that where "2,250,000 class members are easily ascertainable . . . there is nothing to show that individual notice cannot be mailed to each").

[24] *Id.* at 174 (quoting Mullane v. Cent. Hanover Bank & Tr. Co., 339 U.S. 306, 314 (1950)).

[25] *Id.* at 173.

notice requirements can be tailored to fit the pocketbooks of particular plaintiffs."[26]

The issue with the Court's reasoning in *Eisen* is that it seems to be at odds with the "best notice practicable" standard under Rule 23(c), a rule that could be interpreted to accommodate a cost-benefit analysis.[27] Nevertheless, new forms of digital notice could render this contradiction largely irrelevant. Given that the vast majority of class actions are now brought as (b)(3) opt out classes,[28] it is no wonder that there is a certain enthusiasm among the legal community about the prospect of harnessing the precision of digital media to efficiently deliver "the best notice that is practicable under the circumstances."[29]

Even the Advisory Committee has warmed to the idea of leveraging digital media to effectuate notice. Rule 23(c)(2)(B) was revised at the end of 2018 to incorporate amended language proposed by the Rules Advisory Committee and approved by the Judicial Conference's Standing Committee on Rules of Practice and Procedure.[30] The amended Rule 23(c)(2)(B) language provides in relevant part: "notice may be by United States mail, *electronic means*, *or other appropriate means*."[31] This effectively alters the traditional rule from *Eisen v. Carlisle and Jacqueline* that has largely been interpreted to require first-class mail for all identifiable class members. Email could take the place of first-class mail, and other digital formats may replace secondary means of notice like print, radio, and television resulting in significant cost savings for class plaintiffs.

For example, the average cost per thousand impressions ("CPM") on a television spot can be up to $34.00, whereas digital media can be purchased at a third of that cost.[32] This is especially attractive to small claims plaintiff classes, such as consumer claims, who have an even greater interest in conserving budget on pre-trial procedures to maximize returns from smaller damage awards. Additionally, the targeting capabilities of banner ads and social media that allow parties to home in on

[26] *Id.* at 176.

[27] FED. R. CIV. P. 23(c)(2)(B).

[28] *See* Klonoff, *supra* note 6, at 1619 n.304.

[29] FED. R. CIV. P. 23(c)(2)(B).

[30] *See Committee Membership Selection, supra* note 1; Stuart Rossman and Jhordanne Williamson-Rhoden, *As of December 1, New Rules Alter Class Action Notices, Settlements, and Objections*, NCLC.ORG (Dec. 10, 2018), https://library.nclc.org/december-1-new-rules-alter-class-action-notices-settlements-and-objections (discussing the amendment to Rule 23(c)(2)(B) permitting electronic class notice).

[31] Memorandum from Hon. John D. Bates, Chair, Advisory Comm. on Civil Rules, to Hon. Jeffrey S. Sutton, Chair, Comm. on Rules of Practice and Procedure (May 12, 2016), https://www.uscourts.gov/sites/default/files/2016-05-12-civil_rules_report_to_the_standing_committee_0.pdf.

[32] *See Major Media CPM Comparison*, OAAA.ORG (2016), https://oaaa.org/Portals/0/Public%20PDFs/Major%20CPM%20Comparison%20Combined%20Charts_2015.pdf.

highly defined groups would seem to address the due process requirement that notice be "reasonably calculated, under all the circumstances, to apprise interested parties of the pendency of the action. . . ."[33]

The problem is that some digital methods currently proposed as supplemental or constructive forms of notice intended to reach unknown class members—banner ads, posting to a defendant's social media accounts, and some forms of audience targeting—are not in fact reasonably calculated to hit their mark.

A. The Ineffectual Nature of Banner Ads

Courts are beginning to allow banner advertisements as a way to reach unknown class members.[34] The problem is banner ads are the bane of most digital media users' online existence. The average rate at which people actually click on a banner in the United States is 0.09 percent.[35] This is just slightly higher than your odds of being struck by lightning in your lifetime—about 0.03 percent.[36] This is problematic, because someone would need to actually click on the banner ad to get to a landing page where there is enough space to cover the level of detail dictated by Rule 23's notice requirements.[37] It would be impractical to describe the action, and to define the class, claims, and rights of class members in the limited real-estate

[33] Mullane v. Cent. Hanover Bank & Tr. Co., 339 U.S. 306, 314 (1950).

[34] *See* Pappas v. Naked Juice Co of Glendora, Inc., No. LA CV11-08276 JAK(PLAx), 2014 WL 12382279, at *5 (C.D. Cal. Jan. 2, 2014) (noting court-authorized notice for a class settlement included online banner and pop-up advertisements); Aiken, *supra* note 21, at 970 n.12 (citing *In re* Briscoe, 448 F.3d 201, 207 (3rd Cir. 2006)) (affirming the trial court's decision to allow a notice plan including "'banner advertisements on the Internet directing class members to the official settlement website,' where the proposed class included 'all persons in the United States, including their representatives and dependents, who had ingested [a particular diet drug]'"). *See also* Jason Ross, *Electronic Class Notice May Be the Best Notice Practicable,* ARNOLD & PORTER LLP (Apr. 13, 2016), https://www.arnoldporter.com/~/media/files/perspectives/publications/2016/04/electronic-class-notice-may-be-the-best-notice-practicable.pdf (citing Flynn v. Sony Elecs., Inc., No. 09-CV-2109-BAS (MDD), 2015 WL 128039, at *1 (S.D. Cal. Jan. 7, 2015)) (noting the court in *Flynn* approved a notice plan of geographically and demographically targeted online banner ads).

[35] *The Digital Advertising Stats You Need for 2018*, APPNEXUS, 2018, at 26, https://www.appnexus.com/sites/default/files/whitepapers/guide-2018stats_2.pdf.

[36] *Flash Facts About Lightning*, NAT'L GEOGRAPHIC (June 24, 2005), https://news.nationalgeographic.com/news/2004/06/0623_040623_lightningfacts.html.

[37] FED. R. CIV. P. 23(c)(2)(B) provides that "notice must clearly and concisely state in plain, easily understood language: (i) the nature of the action; (ii) the definition of the class certified; (iii) the class claims, issues, or defenses; (iv) that a class member may enter an appearance through an attorney if the member so desires; (v) that the court will exclude from the class any member who requests exclusion; (vi) the time and manner for requesting exclusion; and (vii) the binding effect of a class judgment on members under Rule 23(c)(3)."

provided by banner advertisements, which are traditionally limited to 15–30 seconds of animation.[38] And this is even assuming someone *sees* the ad in the first place. U.S. adults are increasingly turning to "ad blockers" to avoid banner advertisements on the websites they visit. eMarketer, a leading source of digital media news, projects 30 percent of U.S. adults now use ad blocking software.[39] This can be even higher—up to 40 percent—depending on whether someone is using their laptop versus a mobile or tablet device.[40]

Even if someone has not installed an ad blocker, it is still more likely than not that a real person will not see banner ads. The vast majority of adults are conditioned to tune out banner ads on a webpage. In fact, the issue is so prevalent that the advertising industry has coined a term for this—banner blindness.[41] Aside from the difficulty of getting the attention of online users, just over half of banner ads on the internet are not actually seen because the ads appear outside the viewable area of the browser window or because of so-called "bots."[42] Bots are computer software programs used by unscrupulous websites to mimic human interaction. Websites that make use of bots will report impressions and clicks on banner ads as if a real person interacted with those ads. This allows the website to fraudulently charge the advertiser for impressions that were not actually seen by a real person, leaving most advertisers none the wiser.[43] In 2016, it was estimated that businesses lost $12.5 billion due to bot ad fraud, and it is estimated this increased to $16.4 billion in 2017.[44]

B. Posting to Social Media Without Paying to Boost Posts Is Unlikely to Effectuate Notice

There is a misconception that social media offers a free means to get the word out. For example, in a recent law review article, *Class Action Notice in the Digital Age*, Alexander Aiken takes an optimistic view about the potential to reach "a large number of people" by posting notice of class action certification to a defendant's

[38] Meghan Shaulis, *Creating Engaging and Clickable Banner Ads,* WENDT AGENCY (Mar. 21, 2017), https://thewendtagency.com/creating-engaging-clickable-banner-ads/.

[39] *30% of All Internet Users Will Ad Block by 2018*, BUS. INSIDER (Mar. 23, 2017), http://www.businessinsider.com/30-of-all-internet-users-will-ad-block-by-2018-2017-3.

[40] Greg Sterling, *Survey Shows US Ad-Blocking Usage is 40 Percent on Laptops, 15 Percent on Mobile*, MARKETING LAND (May 31, 2017), https://marketingland.com/survey-shows-us-ad-blocking-usage-40-percent-laptops-15-percent-mobile-216324.

[41] *Study: 86% of Consumers Suffer from Banner Blindness*, ADOTAS (Mar. 19, 2013), http://www.adotas.com/2013/03/study-86-of-consumers-suffer-from-banner-blindness/.

[42] Alex Kantrowitz, *56% Of Digital Ads Served Are Never Seen, Says Google*, ADAGE (Dec. 3, 2014), http://adage.com/article/digital/56-digital-ads-served-google/296062/.

[43] *Id.*

[44] Lucy Handley, *Businesses Could Lose $16.4 Billion to Online Advertising Fraud in 2017: Report*, CNBC (Apr. 13, 2017), https://www.cnbc.com/2017/03/15/businesses-could-lose-164-billion-to-online-advert-fraud-in-2017.html.

Facebook or Twitter accounts.[45] As Aiken points out, some courts already allow this form of notice.[46] The idea is that anyone following a particular social media account will see posts by that account. Were this true, defendants to a class action could post to their social media pages informing putative class members of class certification. Unfortunately, this is not the case. Most social networks prioritize posts from close connections—posts from your friends, family, or pages you interact with most often—or content you are more likely to engage with based on prior browsing behavior. [47] Thus, even if someone "likes" a business's page, it is still unlikely they would see a post from that business unless they regularly engage with their posts.

The only way businesses guarantee their posts will be seen is by paying to place posts at the top of the newsfeed. This is particularly true of the largest social network out there: Facebook. As of the end of 2017, Facebook boasted 2.13 billion monthly active users, 184 million of whom were reported in North America.[48] This makes Facebook an especially attractive platform for someone wanting to reach as many potential class members as possible. However, like other social networks, Facebook uses an algorithm to determine what its users would most like to see in their newsfeed, and Facebook recently announced it would begin further prioritizing posts from friends and family over posts from businesses or publishers.[49] This is not a new development either. Facebook has deprioritized posts from businesses since 2012.[50]

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[45] *See* Aiken, *supra* note 21, at 1012 (discussing "the millions of followers that companies enjoy on social media," and noting that "posted notice has the potential to reach a large number of people" for companies like Target with substantial followings).

[46] *Id.* (citing to Kelly v. Phiten USA, Inc., 277 F.R.D. 564, 569–70 (S.D. Iowa 2011)) (finding that "Plaintiff provided sufficient notice, which was reasonably calculated, under the circumstances, to apprise Settlement Class Members of the pendency of the Phiten Actions" where notice was posted to Phiten's Facebook page); *see also* Mark v. Gawker Media LLC, No. 13-CV-4347(AJN), 2016 WL 1271064, at *7 (S.D.N.Y. Mar. 29, 2016) (noting the "[c]ourt approved widespread notice to potential collective members through stand-alone websites and social media").

[47] Nicolas Koumchatzky & Anton Andryeyev, *Using Deep Learning at Scale in Twitter's Timelines*, TWITTER ENGINEERING BLOG (May 9, 2017), https://blog.twitter.com/engineering/en_us/topics/insights/2017/using-deep-learning-at-scale-in-twitters-timelines.html; Adam Mosseri, *Bringing People Closer Together*, FACEBOOK NEWSROOM (Jan. 11, 2018), https://newsroom.fb.com/news/2018/01/news-feed-fyi-bringing-people-closer-together/; Colin Oliver, *The Four Pillars of the LinkedIn Newsfeed Algorithm*, LINKEDIN (Oct. 20, 2017), https://www.linkedin.com/pulse/four-pillars-linkedin-newsfeed-algorithm-colin-oliver/.

[48] Josh Constine, *Facebook Survives Q4 Despite Slowest Daily User Growth Ever*, TECHCRUNCH (Jan. 31, 2018), https://techcrunch.com/2018/01/31/facebook-q4-2017-earnings.

[49] Seb Joseph, *'Organic Reach on Facebook is Dead': Advertisers Expect Price Hikes after Facebook's Feed Purge*, DIGIDAY (Jan. 15, 2018), https://digiday.com/marketing/organic-reach-facebook-dead-advertisers-will-spend-reach-facebooks-feed-purge/.

[50] Marshall Manson, *Ground Zero: Life After Organic Reach on Facebook*, O'DWYER'S (Apr. 4, 2014), https://www.odwyerpr.com/story/public/2197/2014-04-04/ground-zero-life-after-organic-reach-facebook.html.

Even as of early 2014, an analysis of more than 100 brand pages revealed that those businesses could only reach six percent of followers through "organic"—i.e., unpaid—Facebook posts.[51]

This is not to say courts should not approve the use of social media channels to supplement traditional methods of notice. Rather, future guidelines issued to federal courts containing approval criteria for class action notice plans[52] should just specify that any social media tactics proposed should be targeted *using paid media* to guarantee reach of the putative class, because free reach on social media channels is unreliable. This is still a good deal for class counsel eager to minimize costs because the cost to reach people on social channels through paid posts is still relatively low compared to other forms of supplemental notice. For reference, the average cost per thousand impressions (CPM) on a Facebook post was about $12.45 in Q4 2017.[53] This cost goes down to $5.92 on Twitter and $8.39 on LinkedIn.[54] These are still less than half the cost of newspaper ads or primetime television spots, which have CPMs ranging from $25 to $35.[55]

Additionally, social media platforms offer robust targeting options that allow plaintiffs to narrowly tailor the reach of class notice to minimize the risk of wasted impressions among people outside the defined class. On Facebook alone, class representatives can target by *inter alia*: age, gender, workplace, location, people who have visited a particular website or downloaded a corporate defendant's mobile app, existing customers, or people who share attributes of current customers of a brand.[56]

C. Messaging Users Directly on Social Platforms Without Permission Fails to Deliver Notice

Some legal scholars have advocated using digital communication channels like Facebook Messenger to supplement other direct forms of individual notice.[57] How-

[51] *Id.*

[52] Such guidelines could be included in future materials issued by the Federal Judicial Center—the judicial body responsible for advising federal judges on issues and trends affecting case management. *See* FEDERAL JUDICIAL CENTER, JUDGES' CLASS ACTION NOTICE AND CLAIMS PROCESS CHECKLIST AND PLAIN LANGUAGE GUIDE (2010), https://www.fjc.gov/sites/default/files/2012/NotCheck.pdf.

[53] JD Prater, *Facebook Ads CPM, CPC, & CTR Benchmarks for Q4 2017*, ADSTAGE (2017), https://blog.adstage.io/2018/02/13/facebook-ads-benchmarks-q4-2017/.

[54] JD Prater, *Twitter Ad Costs for 2017 [New Report]*, ADSTAGE (2017), https://blog.adstage.io/2018/02/15/twitter-ads-cost-2017/; JD Prater, *How Much Do LinkedIn Ads Cost? [New Report]*, ADSTAGE (2017), https://blog.adstage.io/2017/09/19/linkedin-cpc-increase-2017/.

[55] OAAA.ORG, *supra* note 32, at 2.

[56] *Find Your Audience,* FACEBOOK BUS., https://www.facebook.com/business/products/ads/ad-targeting.

[57] *See, e.g.*, Aiken, *supra* note 21, at 1011 (advocating for notice firms to send Facebook

ever, messaging users directly on social platforms who have not opted in for communication is a non-starter. Social media platforms like Facebook protect their users from spam by placing messages from unknown contacts in a "Message Requests" section of Facebook's app.[58] Some messages Facebook thinks are spam are filtered out of Message Requests entirely before they are seen. And if Facebook's algorithm does not identify a connection between a particular Facebook member and the sender, the message is automatically transferred to a "Filtered Requests" folder.[59] This should be particularly relevant to class representatives who have not likely had prior contact with would-be class members and whose messages are therefore more likely to end up in "Filtered Requests." Even worse, the Filtered Requests folder is buried within Facebook's messenger app and notoriously difficult to discover.[60] In other words, the Filtered Requests folder is no man's land for a class notice firm seeking to effectuate notice on behalf of a plaintiff class.

Twitter is actually slightly more accommodating, but not by much. On Twitter, third parties can direct message people who are not following them. However, Twitter users must opt-in within their Twitter account settings in order to receive direct messages from third-party Twitter accounts they do not follow.[61]

It is also unlikely that social networks would bend the rules to accommodate communication between an unconnected business with other users for purposes of class action notice. Tech companies have historically refused to bend user privacy rules to work with the courts.[62] Although most instances of resistance have dealt

messages containing notice to discoverable class members on Facebook); Martin Woodward, *Class Notice Version 2.0: Revising Rule 23 for the Internet Age*, AMER. BAR ASSOC. (Feb. 29, 2016), https://www.americanbar.org/groups/litigation/committees/class-actions/articles/2016/winter2016-0216-class-notice-revising-rule-23-for-the-internet-age/ (noting that if the new proposed Rule 23(c)(2)(B) is adopted, "the best individual notice practicable under the circumstances can and should be sent via email, social media accounts, or text or *instant messaging* (or a combination of some or all of these methods)") (emphasis added).

[58] *How Do I Check My Message Requests in Messenger?*, FACEBOOK HELP CTR., https://www.facebook.com/help/messenger-app/984163458313035?helpref=faq_content.

[59] Samuel Gibbs, *Facebook Has Another Hidden Inbox You Probably Didn't Realise Was There*, GUARDIAN (Apr. 8, 2016), https://www.theguardian.com/technology/2016/apr/08/facebook-hidden-inbox-filtered-messages.

[60] *Id.* Tony Merevick, *There's Another Hidden Facebook Messages Inbox*, THRILLIST (Apr. 7, 2016), https://www.thrillist.com/news/nation/facebook-messengers-hidden-filtered-requests-folder.

[61] *About Direct Messages*, TWITTER HELP CTR., https://help.twitter.com/en/using-twitter/direct-messages.

[62] *See, e.g.*, Ann E. Marimow, *Facebook Says It Shouldn't Have to Stay Mum When Government Seeks User Data*, WASH. POST (Jul. 15, 2017), https://www.washingtonpost.com/local/public-safety/facebook-says-it-shouldnt-have-to-stay-mum-when-government-seeks-user-data/2017/07/15/759f2cd6-67dd-11e7-9928-22d00a47778f_story.html?utm_term=.cb7bbe43c241 (discussing Facebook's opposition to a gag order that would prevent it from

with requests by the government for user data, social networks would likely respond with similar disfavor if asked to bypass rules designed to protect user privacy that bar direct messages from unknown contacts.

This is not to say that direct messaging on social networks is a complete dead-end for class notice firms, or class counsel for that matter. In fact, adoption of social messaging apps has grown rapidly over the last few years. In 2015, the big four messaging apps—WhatsApp, Facebook Messenger, WeChat, and Viber—had already surpassed monthly active users for the big four social networks—Facebook, Twitter, LinkedIn, and Instagram.[63] The two-way communication afforded by messaging apps could be extremely valuable not only for delivering notice, but also for discerning the cohesiveness of a class.

The answer then is not to abandon direct messaging, but to get putative class members to connect with a class page in the first place. This is best done through a simple two-step process. First, a class notice firm would invest in promoted posts targeting potential members of a class with a call to action to follow the class action's dedicated social media account for more information on the action and ongoing updates. Once potential class members have opted-in to follow the page, they can be messaged freely thereafter.

D. Machine Learning: A Cautionary Note on "Lookalike" Modeling to I.D. Class Members

Because class certification occurs before plaintiffs have the benefit of full discovery, there is a need for plaintiffs to be able to efficiently identify all members of a class. Although class plaintiffs may have a preliminary list of class members, such as a customer list supplied by a defendant, these lists are not likely exhaustive and may not satisfy numerosity requirements for the particular geography specified in the class definition. For this reason, advances in digital algorithms capable of identifying patterns in a data set (like an email list) could become increasingly valuable as a means for identifying other class members based on a known list.

This type of digital technology is often referred to as "machine learning," be-

notifying users when law enforcement asks to search an individual's political communications); *see also* Robert Barnes, *Supreme Court to Consider Major Digital Privacy Case on Microsoft Email Storage*, WASH. POST (Oct. 16, 2017), https://www.washingtonpost.com/politics/courts_law/supreme-court-to-consider-major-digital-privacy-case-on-microsoft-email-storage/2017/10/16/b1e74936-b278-11e7-be94-fabb0f1e9ffb_story.html?noredirect=on; April Glaser & Kurt Wagner, *Twitter Reminds Everyone It Won't Cooperate with Government or Police Surveillance*, RECODE (Nov. 22, 2016), https://www.recode.net/2016/11/22/13719876/twitter-surveillance-policy-dataminr-fbi.

[63] *Messaging Apps Are Now Bigger than Social Networks*, BUS. INSIDER (Sept. 20, 2016), http://www.businessinsider.com/the-messaging-app-report-2015-11.

cause it is a field of computer science "that gives computers the ability to learn without being explicitly programmed."[64] In essence, machine learning allows computers to comb through dense datasets to identify patterns and make recommendations. An everyday example of this technology can be found on most online shopping sites. Amazon, for example, analyzes items previously viewed or purchased to recommend additional items an Amazon shopper might be interested in buying.[65]

In his article, *Class Action Notice in the Digital Age*, Alexander Aiken also discusses how machine learning may be used to identify unknown class members.[66] Essentially, the idea is that a class action notice firm could upload a list of known class member email addresses to a media platform like Google, Facebook, or Twitter. Machine learning capabilities built into these platforms would match email addresses to individual user profiles. In doing so, each media platform could then identify a list of attributes that known class members are more likely to exhibit (e.g.: age, gender, income, interests, and profession).[67] With these attributes collected, the media platform could then identify *other* user profiles that exhibit those same attributes. This all happens within the span of minutes. Class representatives or notice firms could then target posts providing notice to a broader audience of people who *look like* the known list class members and encourage unknown class members to come forward. The key is that the class action is of a kind where the defendant has a starting list of customer emails.

This particular application of machine learning where consumer databases are used to identify other consumers with similar characteristics is typically referred to as "lookalike targeting."[68] And at first blush, it might seem like a useful tool for identifying unknown class members. But not all lookalike targeting is created alike, and where parties have limited budgets to supplement traditional forms of notice, accuracy is key. Parties employing lookalike targeting should ask how lookalike audiences are identified. Specifically, one should ask: are matches between known and unknown user profiles based on "Internet cookie" data or "people-based" data such as user registration data?

Internet cookies have long been used by online websites to track online browsing behavior, target advertising, and record user preferences to improve browsing

[64] Jean Francois Puget, *What Is Machine Learning?*, IBM DEVELOPER WORKS (May 18, 2016), https://www.ibm.com/developerworks/community/blogs/jfp/entry/What_Is_Machine_Learning?lang=en.

[65] Michael Martinez, *Amazon: Everything you Wanted to Know About its Algorithm and Innovation,* INTERNET COMPUTING, (Sept. 17, 2017), https://publications.computer.org/ internet-computing/2017/09/27/amazon-all-the-research-you-need-about-its-algorithm-and-innovation/.

[66] Aiken, *supra* note 21, at 1003–05.

[67] *See Find Your Audience*, *supra* note 56 (an example of the types of attributes media platforms can identify).

[68] *Lookalike Targeting,* TABOOLA HELP CENTER, https://help.taboola.com/hc/en-us/articles/360008105253-Lookalike-Targeting.

experiences.[69] There are, however, some significant challenges associated with using cookies to target users online. First, most mobile devices don't allow cookies, which is a problem because as of 2016, more people access the internet from mobile and tablet devices than from desktop devices.[70] Additionally, Safari, the leading mobile web browser, doesn't accept cookies.[71]

Even outside the mobile context, there are other issues. Most importantly, Microsoft reported that 66 percent of adults delete cookies.[72] Under the old model, media platforms would ingest a list of customer emails and attempt to develop a lookalike audience based on cookie data, but these lookalike audiences had the potential to leave out a sizeable portion of a given population due the blind spots associated with cookie data.

Due to the limitations of cookies, businesses are more often turning to what is now commonly referred to as "people-based" data to match consumer datasets with verified user registration data (e.g., site registration data tied to a login). People-based data is so named because registration data, unlike cookies, recognizes real individuals, not profiles or theoretical segments.[73] People-based data is more accurate because it relies on site registration data that serves as a persistent identifier (ID) that works across all connected devices.[74] As the name suggests, persistent IDs also have greater staying power. Businesses can look back at user behavior for a longer time using persistent IDs, and thus, identify more people who share a certain set of attributes.

The challenge with people-based targeting is that only a handful of media companies—Google and Facebook among them—have a large enough database of registered users for a business to define population segments of a meaningful size.[75] But, this still leaves a sizeable pool of user registration data to draw from to more accurately identify other potential members of a class. Media companies, like Facebook and Google, offer people-based targeting capabilities that reach around 80%

[69] *Internet Cookies*, FED. TRADE COMM'N, https://www.ftc.gov/site-information/privacy-policy/internet-cookies.

[70] Neil Patel, *Why Cookie-Based Advertising Won't Work in 2018*, NEILPATEL, https://neilpatel.com/blog/cookie-based-advertising-wont-work/.

[71] *Id.*

[72] Wendy Davis, *Study: 44% Of Adults Opt Out of Targeted Ads, 66% Delete Cookies*, MEDIAPOST (Jan. 23, 2013), https://www.mediapost.com/publications/article/191809/study-44of-adults-opt-out-of-targeted-ads-66-d.html.

[73] *WTF Is People-Based Marketing?*, DIGIDAY , https://digiday.com/wp-content/uploads/2016/12/WTF_PeopleBasedMarketing_Final_V4.pdf.

[74] Jessica Davies, *WTF is a Persistent ID?*, DIGIDAY (Mar. 8, 2017), https://digiday.com/marketing/wtf-persistent-id/.

[75] Jeremy Haft, *What End-to-End People-Based Advertising Really Looks Like*, VIANT (June 5, 2017), https://viantinc.com/news/blog/end-end-people-based-advertising-really-looks-like/.

of internet consumers.[76]

Outside of people-based targeting that uses registration data, additional members of a class may also be identified without using cookies through forms of targeting that recognize other devices connected to the same household Wi-Fi address, for example. This is especially relevant where an entire household might be implicated in a class action. This form of targeting is referred to as "probabilistic device-linking."[77] Done right, these technologies could significantly, and more accurately, expand the reach of notice to potential members of a class.

E. Digital Media's Effect on Discretionary vs. Mandatory Notice Under Rule 23(c)(2)

As more courts approve digital modes of notice, the Advisory Committee may eventually be persuaded to adopt a mandatory certification notice standard even for (b)(1) and (b)(2) classes. Currently, Rule 23(c)(2)(A) merely provides for discretionary notice of certification for these classes, stating: "the court *may* direct appropriate notice to the class."[78] Do class members in these classes have any less of a procedural due process interest in being able to participate in the management of class action proceedings pertaining to their rights? Arguably, class members in a (b)(1) or (b)(2) class have an even greater due process concern because there is no opt-out, and these class members—who might have otherwise sought damages—would either be completely barred from, or unlikely to receive, damages.

Nevertheless, one reason for the current disparity in required notice between (b)(1), (b)(2), and (b)(3) classes could be that only (b)(3) classes are likely to produce damages when plaintiffs prevail.[79] A cost-benefit analysis would not make notice practicable in actions where there are not damage awards available to help offset the costs of certification notice that the plaintiffs bear the responsibility of paying.[80] That said, given the efficiencies of digital media, the Advisory Committee may ultimately find that the aforementioned due process concerns associated with (b)(1) and (b)(2) classes justify the low cost of administering notice in digital formats, especially when it can be proven over time that digital media is both effective *and* efficient at administering notice.

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[76] *Id.*

[77] Laura Koulet, *Probabilistic or Deterministic: What's the Best Cross-Device Methodology?*, MEDIAPOST (Aug. 4, 2015), https://www.mediapost.com/publications/article/255323/probabilistic-or-deterministic-whats-the-best.

[78] FED. R. CIV. P. 23(c)(2)(A) (emphasis added).

[79] *See supra* note 15 and accompanying text.

[80] *See* Oppenheimer Fund, Inc. v. Sanders, 437 U.S. 340, 358 (1978) (holding that "the representative plaintiff should bear this expense because it is he who seeks to maintain the suit as a class action").

III. MODERN CLASS MEMBER IDENTIFICATION METHODS RESPOND TO NEW CHALLENGES TO THRESHOLD RULE 23 REQUIREMENTS

The current discussion around notice misses the potential digital technology has to offer to parties seeking to overcome higher threshold Rule 23 requirements. In the last 20 years, the bar has been raised for plaintiffs seeking classwide relief. Not only are plaintiffs subject to more conservative judicial rulings in federal court as a result of the Class Action Fairness Act of 2005,[81] plaintiffs also face heightened evidentiary burdens to determine whether the threshold requirements of Rule 23(a) and at least one of the substantive requirements of Rule 23(b) have been satisfied.[82] Recent advances in digital technology, however, offer some hope to putative classes, specifically as it relates to meeting threshold burdens of proof for: ascertainability, numerosity, adequacy, typicality, commonality, predominance, and superiority.

A. New Digital Media Techniques Demonstrate Ascertainability & Numerosity

1. Current State of the Law

Under Rule 23(a), plaintiffs must demonstrate that "the class is so numerous that joinder of all members is impracticable."[83] In all cases, there is also an implied requirement that the class be defined based on objective criteria specifying "a particular group, harmed during a particular time frame, in a particular location, in a particular way."[84] This excludes any class definition based on a subjective belief that an individual was harmed, or based on so-called "fail-safe" classes that are defined in terms of success on the merits.[85] Although numerosity and an objective class definition will always be required, the Circuits are currently split on whether to impose an additional "ascertainability" requirement for class definition. This standard requires plaintiffs to demonstrate by a preponderance of the evidence that there is a "reliable and administratively feasible" method by which class members can be identified that avoids a series of "mini-trials" to determine class membership.[86]

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[81] ROBERT H. KLONOFF, CLASS ACTIONS AND OTHER MULTI-PARTY LITIGATION: CASES AND MATERIALS 654 (West, 4th ed. 2017).

[82] *See* Amgen Inc. v. Conn. Ret. Plans & Tr. Funds, 568 U.S. 455, 466 (2013) (noting that "[m]erits questions may be considered to the extent . . . that they are relevant to determining whether the Rule 23 prerequisites for class certification are satisfied); Wal-Mart Stores, Inc. v. Dukes, 564 U.S. 338, 350 (2011) (reasoning that "[a] party seeking class certification must affirmatively demonstrate his compliance with the Rule," meaning "he must be prepared to prove that there are *in fact* sufficiently numerous parties, common questions of law or fact, etc."). *See also* Robert H. Klonoff, *The Decline of Class Actions*, 90 WASH. U. L. REV. 729, 751 (2013).

[83] FED. R. CIV. P. 23(a)(1).

[84] Mullins v. Direct Digital, LLC, 795 F.3d 654, 660 (7th Cir. 2015).

[85] *Id.*

[86] *See, e.g.*, City Select Auto Sales Inc. v. BMW Bank of N. Am. Inc., 867 F.3d 434, 442

The First, Third, Fourth, and Eleventh Circuits impose the ascertainability requirement for class definition. In recent opinions, courts in these circuits have elaborated on what is required to meet this heightened class definition requirement.[87] In *City Select Auto Sales Inc. v. BMW Bank of N. Am. Inc.*, the Third Circuit held that affidavits alone were insufficient to identify class members, but it allowed that "[a]ffidavits, in combination with records or other reliable and administratively feasible means, can meet the ascertainability standard."[88] In so holding, the court in *City Select Auto Sales Inc.* relied on the precedent set in *Marcus v. BMW of North America, LLC*, which similarly rejected the establishment of ascertainability by member say-so alone, noting that only methods avoiding "extensive and individualized fact-finding or 'mini-trials,'" should be upheld.[89] In the *Carrera v. Bayer Corp.* products liability case, the Third Circuit rejected the plaintiff's proposal to supply affidavits in combination with purchase data, but it only did so because it found "there [was] no evidence that a single purchaser of [the product] could be identified using records of customer membership cards or records of online sales" in combination with class member affidavits.[90] This would seem to suggest, especially in light of the more recent holding in *City Select Auto Sales Inc.*, that even the Third Circuit would allow a combination of affidavits and purchase data to establish ascertainability *as long as plaintiffs can show that it is possible to identify members of the class*.

In contrast, other circuits subscribe to the weaker class definition standard that

(3d Cir. 2017) (reiterating the rule adopted by the Third Circuit that a plaintiff must show, in addition to objective criteria, that "there is a reliable and administratively feasible mechanism for determining whether putative class members fall within the class definition"); Byrd v. Aaron's Inc., 784 F.3d 154, 163 (3d Cir. 2015) (noting "[a] plaintiff seeking certification of a Rule 23(b)(3) class must prove by a preponderance of the evidence that the class is ascertainable"); Karhu v. Vital Pharm., Inc., 621 F. App'x 945, 947 (11th Cir. 2015) (noting "the plaintiff must propose an administratively feasible method by which class members can be identified"); Hayes v. Wal–Mart Stores, Inc., 725 F.3d 349, 355 (3d Cir. 2013) ("[I]f class members are impossible to identify without extensive and individualized fact-finding or 'mini-trials,' then a class action is inappropriate.") (quoting Marcus v. BMW of N. Am., LLC, 687 F.3d 583, 593 (3d Cir. 2012)).

[87] *See In re* Nexium Antitrust Litig., 777 F.3d 9, 19 (1st Cir. 2015) (specifying "the definition of the class must be 'definite,' that is, the standards must allow the class members to be ascertainable"); EQT Prod. Co. v. Adair, 764 F.3d 347, 359 (4th Cir. 2014) (concluding that "numerous heirship, intestacy, and title-defect issues . . . pose a significant administrative barrier to ascertaining the ownership classes").

[88] *City Select Auto Sales Inc.*, 867 F.3d at 441.

[89] *Marcus*, 687 F.3d at 593.

[90] Carrera v. Bayer Corp., 727 F.3d 300, 309 (3d Cir. 2013). The issue with retailer records in *Carrera* was that the plaintiff could not show that all retailers who carried the allegedly defective diet supplement possessed store loyalty card records showing purchases of the product. *Id. See also Byrd*, 784 F.3d at 163 (noting that the same "rigorous analysis" courts must apply to determining whether Rule 23 requirements have been met "applies equally to the ascertainability inquiry"); *Hayes*, 725 F.3d at 356 (finding that where Wal–Mart lacked records necessary to ascertain the class, the burden was on the plaintiff to provide more evidence proving class membership).

only requires the class to be objectively defined. These circuits reason that the ascertainability requirement renders superiority and manageability requirements for (b)(3) actions largely redundant. Most recently, opinions from the Ninth and Seventh Circuits have reiterated this stance. For example, in *Briseno v. ConAgra Foods, Inc.,* the Ninth Circuit held that Rule 23 does not require the imposition of a separate administrative feasibility requirement because that would make the "manageability criterion largely superfluous, a result that contravenes the familiar precept that a rule should be interpreted to 'give[ ] effect to every clause.'"[91] In *Mullins v. Direct Digital, LLC*, the Seventh Circuit noted that although the objective class definition is a more lenient standard, defendants may still raise a "superiority" defense for (b)(3) claims, specifically: *"district courts have discretion to insist on details of the plaintiff's plan for notifying the class and managing the action."*[92]

In addition to heightened class definition standards in some circuits, plaintiffs must also now meet a higher burden of proof to establish the Rule 23(a)(1) numerosity requirement. In *Vega v. T-Mobile USA, Inc.,* the Eleventh Circuit found that the district court abused its discretion in finding that the numerosity requirement had been met when plaintiffs failed to present evidence showing the number of retail sales associates T–Mobile employed during the class period *in Florida*.[93] The court reasoned that although T–Mobile is a large company, and "a plaintiff need not show the *precise number* of members in the class," Vega nevertheless needed to make some showing that the class as defined—T–Mobile sales representatives in Florida—was sufficiently large to make joinder impracticable, which he did not do.[94]

Similarly, in *Hayes v. Wal–Mart Stores, Inc.*, the Third Circuit found that the district court engaged in "impermissible speculation" when it inferred that the class numerosity requirement could be met if even five percent of 3,500 recorded transactions were for "as-is" merchandise that was later deemed ineligible for a Sam's Club Service Plan.[95] The problem was, the plaintiffs in that case showed no factual basis for determining how many of the 3,500 transactions actually qualified under the class definition.[96] In its reasoning, the Third Circuit clarified that "where a putative class is some subset of a larger pool, the trial court may not infer numerosity from the number in the larger pool alone."[97] Rather, the Third Circuit ultimately held that plaintiffs bore the burden of proof on remand to show via "direct

[91] Briseno v. ConAgra Foods, Inc., 844 F.3d 1121, 1126 (9th Cir. 2017) (quoting Ecuador v. Mackay, 742 F.3d 860, 864 (9th Cir. 2014).

[92] Mullins v. Direct Digital, LLC, 795 F.3d 654, 664 (7th Cir. 2015) (emphasis added).

[93] Vega v. T-Mobile USA, Inc., 564 F.3d 1256, 1267–68 (11th Cir. 2009).

[94] *Id.* at 1267 (quoting Evans v. U.S. Pipe & Foundry Co., 696 F.2d 925, 930 (11th Cir. 1983) (emphasis added).

[95] *Hayes*, 725 F.3d at 357–58.

[96] *Id.* at 357.

[97] *Id.* at 358.

or circumstantial evidence" that a sufficiently numerous group of class members purchased Service Plans for as-is items ineligible for plan protection.[98]

2. Digital Media Solutions to Ascertainability & Numerosity

Modern methods of identifying potential class members, tracking where consumers shopped, and tracking what consumers bought could be of particular relevance in light of the stricter approach that some circuits have adopted for numerosity and class definition. Furthermore, because being able to identify members of a class necessarily establishes the size of the class, plaintiffs who meet the heightened ascertainability standard in the circuits where it applies should also be able to satisfy numerosity requirements.

a. Lookalike Targeting

As noted above, it is possible to use a form of machine learning called "lookalike targeting" to identify consumers who look like known members of a class of consumers based on shared attributes. This will be useful to class plaintiffs who need to identify as many class members as possible to meet numerosity requirements. The key is that the defendant has a starting list of existing customers that a lookalike audience can be modeled from.

For example, this technology could have been used by plaintiffs in *Marcus v. BMW of North America, LLC*[99] to identify owners and lessees of 2006–2009 BMWs that were purchased or leased *in New Jersey* with Bridgestone run flat tires (RFTs) that had *gone flat and been replaced.* In *Marcus*, the Third Circuit rejected the district court's common-sense determination that there must be at least 40 owners and lessees in New Jersey with Bridgestone RFTs that had gone flat and been replaced.[100]

The court took issue with the fact that the plaintiff only supplied sufficient nationwide evidence leaving the district court to "speculate as to how many 2006–2009 BMWs were purchased or leased *in New Jersey* with *Bridgestone* RFTs that have *gone flat and been replaced*."[101] Just as it did not matter to the court in *Vega* that T-Mobile is a massive company, neither did it matter to the court in *Marcus* that BMW sells or leases numerous cars across the country, many of which would have likely been fitted with the RFTs at issue.[102] The *Marcus* court clarified that the district court cannot rely on common sense alone, foregoing "precise calculations and exact numbers," *unless* a plaintiff shows "sufficient circumstantial evidence specific to the products, problems, parties, and geographic areas actually covered by the class definition to allow a district court to make a factual finding."[103]

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[98] *Id.*

[99] Marcus v. BMW of N. Am., LLC, 687 F.3d 583 (3d Cir. 2012).

[100] *Id.* at 596.

[101] *Id.* at 596.

[102] *Id.* at 595–96.

[103] *Id.* at 596.

BMW, like many car companies, keeps emails of its customers in order to send maintenance reminders or to communicate specials on services or new models. Most car companies also keep records of what model year consumers bought to be used later to upsell newer models.[104] Thus, BMW could have very likely provided plaintiffs with a list including email addresses for owners of 2006–2009 models.

Plaintiffs could have uploaded this starting list of customer emails to a platform like Facebook that would then match emails to user profiles to build a larger audience of potential class members. This audience would have consisted of Facebook profiles matched to owners of 2006–2009 BMWs *in addition to* Facebook profiles of users that *looked like* matches to 2006–2009 BMW owners. For the latter, Facebook might have built a lookalike audience based on a finding that 2006–2009 BMW owners are more likely to follow car enthusiast Facebook pages, work in legal or medical industries, and fall between the ages of 35–54. Plaintiffs would have also been able to limit the audience targeting to *New Jersey residents only* in order to comply with the class definition.

From there, plaintiffs could have targeted Facebook promoted posts to this broader audience of matched owner Facebook profiles and owner lookalike Facebook profiles with a call to action that anyone who purchased or leased 2006–2009 BMWs *in New Jersey* with Bridgestone RFTs that had *gone flat and been replaced* should visit the class website to learn more about the action and submit contact information.

The benefit of lookalike targeting in cases like *Marcus* is that it allows plaintiffs to cast a wider net to reach *more* users who are more likely to be members of the class, thus increasing the odds of meeting numerosity requirements.

Additionally, reaching a broader audience of potential class members also increases the odds of reaching enough class members with the requisite records—e.g., receipts, service records—for purposes of meeting ascertainability requirements when a court requires evidence beyond affidavits alone to prove class membership.[105] In *Marcus*, the Third Circuit had grave concerns about the plaintiff's ability to present a "reliable, administratively feasible alternative" to BMW's records for ascertaining class members.[106] BMW's counsel argued that its client's records could not adequately address instances where customers switched out Bridgestone RFTs for an alternative brand; nor could BMW's records identify owners or lessees of

[104] *See, e.g.*, *Privacy Statement*, GEN. MOTORS, https://www.gm.com/privacy-statement.html (last modified Jan. 2018); *Privacy Rights*, TOYOTA, https://www.toyota.com/ support/privacy-rights; *Privacy*, FORD MOTOR COMPANY, https://www.ford.com/help/privacy/.

[105] *Marcus*, 687 F.3d at 594 (noting that the use of affidavits alone to prove class membership "without further indicia of reliability, would have serious due process implications").

[106] *Id.*

2006–2009 models with Bridgestone RFTs that had gone flat or been replaced, because customers may have serviced vehicles elsewhere.[107] Additionally, BMW's counsel noted that BMW did not have a parts manifest identifying 2006–2009 models that were equipped with Bridgestone RFTs in the first place.[108] Plaintiffs would have been in a stronger position had they been less reliant on BMW's records by being able to reach a sufficient number of class members who could supply their own evidence of class membership beyond say-so alone.

b. Mobile Location & Purchase Data

Mobile location and purchase data could be invaluable tools for class plaintiffs to demonstrate, via a "preponderance of the evidence,"[109] that a class is ascertainable and that there are enough potential class members to meet numerosity requirements. Since the emergence of smartphones in the 2010s, advertisers have been able to leverage signals transmitted from mobile devices via GPS, Wi-Fi, and cell tower data[110] to understand where consumers go during a typical day, the demographic makeup of consumers who frequent particular locations, and even what a defined group of consumers bought at a given location.[111] Modern mobile media companies use even more sophisticated tracking methods, including a combination of GPS, Wi-Fi, Beacons, and software development kit (SDK) signals in mobile apps to pinpoint location-aware advertising on mobile devices with even greater accuracy.[112]

There are several mobile media companies now that specialize in location-based mobile marketing. All of these companies offer advertisers rich consumer insights, as well as the means to reach consumers via paid advertising placement on mobile devices within popular apps.[113] In the most simplistic form, advertisers have used mobile location data to target contextually relevant messages to someone in the right

[107] *Id.* at 593–94.

[108] *Id.* at 593.

[109] Byrd v. Aaron's Inc., 784 F.3d 154, 163 (3d Cir. 2015) ("A plaintiff seeking certification of a Rule 23(b)(3) class must prove by a preponderance of the evidence that the class is ascertainable.").

[110] Dianna Dilworth, *A Brief History of Geolocation: INFOGRAPHIC*, AdWeek (July 25, 2013), http://www.adweek.com/digital/a-brief-history-of-geolocation-infographic/.

[111] Carl J. Schutt, *Partner Spotlight: Nielsen Catalina Solutions and NinthDecimal Combine Audience Data for Campaign Activation and Measurement*, NinthDecimal (Oct. 7, 2017), https://www.ninthdecimal.com/partner-spotlight-nielsen-catalina-solutions-ninthdecimal-combine-audience-data-campaign-activation-measurement/.

[112] *See, e.g.*, *Custom Audiences, Shopper Marketing*, inMarket, https://inmarket.com/audiences/ (explaining that inMarket uses SDK signals, Beacons, WIFI and GPS to validate the location of mobile devices).

[113] *See, e.g.*, Amobee, https://www.amobee.com/solutions; Cuebiq, https://www.cuebiq.com; Foursquare, https://enterprise.foursquare.com; GroundTruth, https://www.groundtruth.com; inMarket, https://inmarket.com; Ninth Decimal, http://www. ninthdecimal.com/marketers/location-graph/; Placed, https://www.placed.com/ targeting.

place at the right time and to understand *who* is most likely to react to the advertisement. More recently, mobile media companies have also been able to identify *how many* people *actually purchased* a product at grocery retailers to develop demographic profiles based on those who bought to find more people like them.[114]

Before getting into a hypothetical application of this technology in the context of class actions, it is worth illustrating a modern-day application of mobile location data. Let's say I am checking the weather app on my phone as I walk by a Peet's Coffee. Peet's Coffee works with a mobile media company that serves up an advertisement for a Peet's Coffee Cold Brew drink in the weather app I am using at the very moment I walk by a Peet's Coffee cafe. The mobile media company verifies my location through a combination of mobile location signals emitted from my device to pinpoint my location precisely, within a matter of meters.[115] The mobile media company also knows that I fit the description of someone more likely to frequent Peet's Coffee because it can cross demographic data associated with a persistent identifier, such as my email address, with the mobile location signals that identify places I have frequented in the past.[116] This particular mobile media company may even know based on grocery store loyalty card data that I purchased Peet's Ready To Drink Iced Espresso at the grocery store last month.[117] Or it may be able to look at other coffee shops I have frequented as far back as the previous 12 months.[118]

Now imagine how this level of insight from mobile location and purchase data might be used to demonstrate ascertainability and numerosity, particularly for a consumer products case. This technology could have, for example, led to a different result in *Karhu v. Vital Pharmaceuticals, Inc.*, where the Eleventh Circuit found that

[114] *See, e.g.*, Pamela N. Danziger, *Black Box Wines' Out-Of-The-Box Strategy to Improve Advertising Effectiveness*, FORBES (Sept. 11, 2017), https://www.forbes.com/sites/pamdanziger/2017/09/11/black-box-wines-out-of-the-box-strategy-to-improve-advertising-effectiveness/ (ability to look at characteristics of those who purchased Black Box Wine to know that women of ages 25–54 were more likely to be purchasers of the brand). Although purchase data is currently available to track individual purchases of products at grocers, it is likely to roll out for other forms of retail including apparel, consumer electronics, and automobile dealerships.

[115] *See* MEDIA RATING COUNCIL ET AL., MRC LOCATION-BASED ADVERTISING MEASUREMENT GUIDELINES 1, 28 (2017), http://www.mediaratingcouncil.org/MRC% 20Location-Based%20Advertising%20Measurement%20Guidelines%20Final%20March%202017.pdf (noting that beacons in particular are accurate within "a matter of meters").

[116] E-mail from Mark Haddow, Amobee Account Executive, to author (Mar. 19, 2018, 9:37 AM PST) (on file with the author) (noting that Amobee uses email addresses tied to site registration data to build demographic profiles of online users that can be crossed with location-based data).

[117] E-mail from Mark Haddow, Amobee Account Executive, to author (Mar. 8, 2018, 3:54 PM PST) (on file with the author) (confirming Amobee can tap into store loyalty card data).

[118] E-mail from Mark Haddow, Amobee Account Executive, to author (Mar. 8, 2018, 3:54 PM PST) (on file with the author) (confirming Amobee has a maximum "look back window" of 12 months for location-based data).

the plaintiff failed to provide any "potential identification procedure" to establish ascertainability.[119] In that case, the plaintiff, Adam Karhu, moved to certify two classes, including a nationwide and New York subclass, of consumers who purchased the dietary weight loss supplement "Meltdown."[120] Karhu's complaint alleged that Vital falsely advertised the efficacy of Meltdown insofar as it did not actually aid in weight loss.[121] The Eleventh Circuit ultimately upheld the district court's order denying certification for both of Karhu's proposed classes, because Karhu "failed to propose a realistic method of identifying the individuals who purchased Meltdown."[122] Karhu originally proposed using Vital's sales records for sales to retailers, but those records could not be used to back into the identities of most class members—*consumers who purchased from the retailers*.[123] The district court of its own accord also considered receipts as proof of class membership, but in doing so, it pointed out the fundamental flaw in most small claims actions: most consumers don't keep receipts for small ticket items.[124] Furthermore, the district court noted (and the Eleventh Circuit agreed) that any affidavits identifying class members would need to be verified somehow while avoiding "'a series of mini-trials.'"[125]

Karhu is the perfect example of the *negative value* lawsuit that Rule 23 is designed to address by aggregating claims of all injured consumers. Ordinarily, consumers like Adam Karhu would have very little recourse other than the ability to spread bad press regarding Meltdown. Individual damages would not likely justify the cost of trial to bring a false advertising claim against a large pharmaceutical company like Vital. And where consumers do not usually save their receipts for small ticket items, other evidence of purchase is needed in order to meet the threshold requirements of numerosity and ascertainability.

With regard to numerosity, mobile location data could provide circumstantial evidence that a class is "so numerous that joinder of all members is impracticable."[126] There is no definitive rule on what constitutes a sufficiently numerous class, but there is some guidance to suggest that it should be at least 40 class members[127] and that the determination can be based on "sufficient circumstantial evidence" without

[119] Karhu v. Vital Pharm., Inc., 621 F. App'x 945, 949 (11th Cir. 2015).

[120] *Id.* at 946.

[121] *Id.*

[122] *Id.* (quoting Karhu v. Vital Pharm., No. 13-60768-CIV, 2014 WL 815253, at *3 (S.D. Fla. Mar. 3, 2014)).

[123] *Id.* at 946-47.

[124] *Id.* at 947.

[125] *Id.* (quoting *Karhu*, No. 13-60768-CIV, 2014 WL 815253, at *3).

[126] FED. R. CIV. P. 23(a)(1).

[127] Marcus v. BMW of N. Am., LLC, 687 F.3d 583, 595 (3d Cir. 2012) (quoting Stewart v. Abraham, 275 F.3d 220, 226–27 (3d Cir. 2001)).

requiring precise or exact numbers.[128] In the case of *Karhu*, mobile location data could have been used to look back up to 12 months to show: (1) the number of consumers who shopped at retailers that carried Meltdown; and (2) store loyalty card data verifying how many of those consumers actually bought Meltdown at those retailers. [129] This data would not likely report all consumers who had purchased Meltdown. For example, consumers who purchased Meltdown but did not use a store loyalty card would not show up in reporting. However, reported data would have likely provide enough *circumstantial evidence* for Karhu to have fulfilled the numerosity requirement had the Eleventh Circuit reached that part of the certification inquiry.

Additionally, modern techniques used to match offline purchases to online user profiles could be used as a *reliable and administratively feasible* method of identifying class members to satisfy even the heightened ascertainability standard of the First, Third, Fourth, and Eleventh Circuits. This is increasingly possible through the same mobile media companies that could be used to determine numerosity, because these companies are also able to use persistent IDs gleaned from store loyalty card data to identify purchasers of a product when they are online. How does this work and why does this matter? Store loyalty card data is commonly tied to personally identifiable information like an email address (persistent ID).[130] Email addresses are also commonly tied to online registration data for websites or apps since emails are often used to setup a login to websites and apps.[131] Increasingly, mobile media companies can use email addresses as a common thread to link an online user profile to an in-store transaction.[132]

But what about user privacy?[133] In order to protect user privacy, modern mobile media companies make this match through a process that syncs up personally

[128] *Id.* at 596.

[129] *See Karhu*, 621 F. App'x at 950 n.6 (leaving unanswered the question of what Karhu could have shown in order to properly certify the class).

[130] *See* Paul Michael, *8 Ways Retailers Are Tracking Your Every Move*, TIME (Sept. 23, 2016), http://time.com/money/4506297/how-retailers-track-you/; *see, e.g.*, *Custom Loyalty Card Program*, BEACON PAYMENTS, https://www.beaconpayments.com/merchant-services/gift-and-loyalty-cards/loyalty-card-program.

[131] *See The Expert's Guide to Cross-Device Conversion & Attribution*, TAPAD, https://www.tapad.com/uses/the-experts-guide-to-cross-device-conversion-attribution (noting "[t]he most common [unique] identifier is an email address that is used to login to websites and apps").

[132] E-mail from Mark Haddow, Amobee Account Executive, to author (Mar. 8, 2018, 3:54 PM PST) (on file with the author) (explaining the process Amobee uses to link emails to other user behavior data like store loyalty card purchases).

[133] User privacy is a particularly timely concern. In the last year, new privacy measures have rolled out in the European Union (EU) under the Global Data Protection Regulation (GDPR). *See* Ivana Kottasová, *GDPR is here: What You Need to Know About Europe's New Data Law*, CNN (May 25, 2018), https://money.cnn.com/2018/05/24/technology/gdpr-eu-rollout/index.html.This new set of regulations currently affects any business processing the personal data of EU consumers,

identifiable information across online and in-store transaction data, then anonymizes the matched user ID so that neither the advertiser nor the media company see the personally identifiable information. All the mobile media company knows is that user X saw an advertisement on NYTimes.com and then later bought Meltdown at Walgreens *or vice versa*. (This also works in reverse, which is where it becomes useful for identifying members of a class.) For example, purchase data could be used to know that user X bought Meltdown at Walgreens, which would allow the mobile media company to target notice of the class action to an anonymized group of users including user X and others who bought Meltdown within the class period. The key, then, is to use this data to target notice directing individuals to come forward to submit their contact information on a centralized class website, because targeted users start out as anonymized IDs where all that is known initially is that they fall into a class of individuals who purchased a particular product.

The ability to match purchase data to online user profiles also ensures that only users who purchased the product would see ads. This would address concerns, like those raised by the Eleventh Circuit in *Karhu*, that some kinds of publication notice may "not establish ascertainability in part because 'certain people may respond to publication notice even though they were not [part of the class].'"[134] Between the affidavits and the ability to verify that only those who purchased product saw ads in the first place, class counsel should be able to meet their burden of proof for ascertainability. After all, even the Third Circuit has acknowledged that the ascertainability requirement "does not mean that a plaintiff must be able to identify all class members at class certification—instead, a plaintiff need only show that 'class members *can* be identified.'"[135]

so it has the potential to reach the U.S. for global media companies like Google, Facebook, and Amazon. These companies conduct business in the EU and are likely to establish global policies addressing GDPR requirements versus EU-specific policies. Among other things, GDPR regulations require greater transparency about the use of personal data (like past purchase behavior or location data) to target advertising or other communications. Notably, the GDPR defines "personal data" as: "any information that relates to an identified or identifiable living individual. Different pieces of information, which collected together can lead to the identification of a particular person, also constitute personal data." *FAQ: What is Personal Data?*, EUR. COMM'N, https://ec.europa.eu/info/law/law-topic/data-protection/reform/what-personal-data_en (emphasis omitted); s*ee What Data Can We Process and Under Which Conditions?*, EUR. COMM'N, https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/principles-gdpr/what-data-can-we-process-and-under-which-conditions_en; *Who Does the Data Protection Law Apply To?*, EUR. COMM'N, https://ec.europa.eu/info/law/law-topic/data-protection/reform/rules-business-and-organisations/application-regulation/who-does-data-protection-law-apply_en.

[134] *Karhu*, 621 F. App'x at 948 (quoting LeBauve v. Olin Corp., 231 F.R.D. 632, 684 (S.D. Ala. 2005)).

[135] Byrd v. Aaron's Inc., 784 F.3d 154, 163 (3d Cir. 2015) (quoting Carrera v. Bayer Corp., 727 F.3d 300, 308 n. 2 (3d Cir. 2013)).

Savvy class-notice firms armed with this purchase data would do well to leverage digital ad formats other than banner ads to reach class members who are targeted using mobile location and purchase data.[136] For example, promoted social-media posts as well as sponsored posts that appear in the main content well of popular news sites and that look like editorial content can be targeted using this kind of data. These digital ad formats look and feel like the content on the page, so they are less likely to annoy and more likely to garner attention. Furthermore, digital ad formats such as these can be efficiently priced so that charges for the ad placements only accrue when someone actually clicks on the ad to visit the class website.

B. Solving for Adequacy, Typicality, Commonality, Predominance, and Superiority

1. Current State of the Law

Rule 23(a) also requires that plaintiffs demonstrate the following: "(2) there are questions of law or fact common to the class; (3) the claims or defenses of the representative parties are typical of the claims or defenses of the class; and (4) the representative parties will fairly and adequately protect the interests of the class."[137] In *Dukes*, the Court recognized that there is significant overlap between the commonality, typicality, and adequacy of representation requirements. The Court reasoned: "'[t]he commonality and typicality requirements of Rule 23(a) tend to merge'" because both help determine'" whether under the particular circumstances maintenance of a class action is economical and whether the named plaintiff's claim and the class claims are so interrelated that the interests of the class members will be fairly and *adequately* protected in their absence.'"[138]

There is also overlap between the predominance and superiority requirements and the proof required for typicality, commonality, and adequacy of representation. In addition to the Rule 23(a) requirements, classes brought under Rule 23(b)(3) must meet the additional burden of proving that "questions of law or fact common to class members predominate over any questions affecting only individual members, and that a class action is superior to other available methods for fairly and efficiently adjudicating the controversy."[139] The overlap between Rule 23(a) and

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[136] *See supra* Part II.A.

[137] FED. R. CIV. P. 23(a).

[138] Wal-Mart Stores, Inc. v. Dukes, 564 U.S. 338, 350 n.5 (2011) (emphasis added) (quoting Gen. Tel. Co. of Southwest v. Flacon, 457 U.S. 147, 157 n.13 (1982)).

[139] FED. R. CIV. P. 23(b)(3). The predominance inquiry supports underlying principles of judicial efficiency associated with class actions. *See, e.g.*, Amgen Inc. v. Conn. Ret. Plans & Tr. Funds, 568 U.S. 455, 460 (2013) (noting that "the office of a Rule 23(b)(3) certification ruling . . . is to select the 'metho[d]' best suited to adjudication of the controversy 'fairly and efficiently'").

Rule 23(b)(3) requirements exists because "[t]he Rule 23(b)(3) predominance inquiry tests whether proposed classes are sufficiently *cohesive* to warrant adjudication by representation."[140] A class cannot be deemed cohesive unless the plaintiff can show "questions of law or fact common to the class" in the first place.[141] And plaintiffs that can show the class is cohesive would also necessarily be able to prove typicality and adequacy of representation requirements, because in a cohesive class, the class representatives, as much as the class members, would also need to "'possess the same interest and suffer the same injury.'"[142]

Lastly, plaintiffs who can establish the requisite cohesiveness required for predominance and inherent in Rule 23(a)'s common question requirement are also more likely to prove superiority. In *Tyson Foods, Inc. v. Bouaphakeo*, the Court clarified that "a common question is one where 'the same evidence will suffice for each member to make a prima facie showing [or] the issue is susceptible to generalized, class-wide proof.'"[143] If a plaintiff can demonstrate such common questions capable of classwide proof exist, they will likely also prove the class is a superior device for adjudication because resolution of such a "common contention" would "resolve an issue that is central to the validity of each one of the claims in one stroke," making the class device a highly efficient method for adjudicating the issue.[144]

2. Lead Ads Address Adequacy, Typicality, Commonality, Predominance, and Superiority

New, mobile-friendly "lead ads" that allow immediate feedback from users without requiring them to visit a separate website or mail in a form will help evaluate the cohesiveness of a class, which is crucial for (b)(3) classes. The reality is, people are less likely to visit a website or fill out a lengthy form, particularly on mobile devices, which now account for 70% of digital media consumption time.[145]

a. Facebook Lead Ads

The best modern example of this type of mobile-friendly ad format is the Facebook Lead Ad.[146] Not only can Lead Ads be used to collect contact information from potential class members in the first place, Lead Ads are a useful tool for plaintiff lawyers to collect immediate info about class members without requiring targeted

[140] Amchem Prods., Inc. v. Windsor, 521 U.S. 591, 623 (1997) (emphasis added).

[141] FED. R. CIV. P. 23(a)(2).

[142] *Dukes*, 564 U.S. at 348–49 (quoting East Tex. Motor Freight Sys., Inc. v. Rodriguez, 431 U.S. 395, 403 (1977)).

[143] Tyson Foods, Inc. v. Bouaphakeo, 136 S. Ct. 1036, 1045 (2016) (quoting WILLIAM B. RUBENSTEIN, 1 NEWBERG ON CLASS ACTIONS § 4:50, 196–97 (5th ed. 2012)).

[144] *Dukes*, 564 U.S. at 350.

[145] *See* Greg Sterling, *Mobile Now Accounts for Nearly 70% of Digital Media Time [comScore]*, MARKETING LAND (Mar. 29, 2017), https://marketingland.com/mobile-now-accounts-nearly-70-digital-media-time-comscore-210094.

[146] *Lead Ads*, FACEBOOK BUS., https://www.facebook.com/business/ads/lead-ads.

users to leave the Facebook newsfeed. Lead Ads appear in the Facebook newsfeed like any other promoted post, and they can be targeted to reach specific audiences.[147]

Class counsel could, for example, target an email list of a defendant's customer database or an email list based on people who have already come forward as potential class members. Lead Ads could also target people who have expressed interest in the class action. For example, there may be as-yet-unknown class members who have clicked through to the class website previously but did not yet submit contact information. These individuals have expressed an interest in the action and could be re-targeted in the Facebook newsfeed with Lead Ads to verify their identities and collect additional information in an opt-in, user-privacy-friendly way.

The user experience with Lead Ads is designed to simplify the process of filling out forms on mobile devices. This addresses both the increasing time consumers spend on their mobile phones as well as the fact that the time to complete a form on a mobile device is usually 38.5% longer on mobile than on desktop devices.[148] When someone taps on the lead ad from the Facebook newsfeed, they instantly see a form with pre-populated fields containing info they have already supplied Facebook, such as their name, email address, and phone number. Users can edit contact information as needed to ensure only the most current information is submitted. Class notice firms could customize other parts of the lead ad form to provide a brief description of the action, open-ended or multiple-choice questions, and custom disclaimers.[149]

Once a class member submits the form, data collected is available in real-time, and all the information in the form can be downloaded by the class notice firm into an excel spreadsheet.[150] Information can also be directly uploaded to a database if the class notice firm subscribes to a Customer Relationship Management (CRM) platform.[151]

To illustrate how this might look in the class action context, consider how this tactic might have aided plaintiffs in *Marcus v. BMW of North America, LLC*. During pre-certification discovery, BMW could have supplied an email list of customers who leased or purchased 2006–2009 BMWs. The class notice firm retained by plaintiff class counsel also could have implemented a Facebook tracking tag on the

[147] *How to Use Facebook Lead Ads*, HUBSPOT, https://www.hubspot.com/facebook-marketing/facebook-lead-ads.

[148] James Hemingway, *The Benefits of Facebook Lead Ads*, TECHWYSE, (June 29, 2017), https://www.techwyse.com/blog/social-media-marketing/benefits-facebook-lead-ads/.

[149] *Id.*

[150] *Id.*

[151] *Id. See, e.g.*, *Facebook Lead Capture for Sales Cloud*, SALESFORCE, https://www.salesforce.com/content/dam/web/en_us/www/documents/datasheets/Facebook-Lead-Capture-for-Sales-Cloud-DataSheet-2017.pdf; *Setup Facebook Lead Ads*, MARKETO, https://docs.marketo.com/display/public/DOCS/Set+Up+Facebook+Lead+Ads.

class website to track anyone who visited that website in the last 30 days. (Facebook would have been able to cross-reference and target Lead Ads to user accounts that matched the BMW email list along with accounts that matched to users who were tracked on the class website within the last 30 days, but who did not yet submit contact information).[152]

In the Lead Ads, the class notice firm could have included a brief description of the action including the definition of the class—consumers who purchased or leased 2006–2009 BMWs *in New Jersey* with Bridgestone RFTs that have *gone flat and been replaced*. Lead Ads could have also included fields allowing recipients to verify their name, email, phone number, date of birth, and address. Additionally, Lead Ads could have included a brief questionnaire asking recipients the following questions: (1) Can you verify that you are a member of the class as defined with purchase or service records?; (2) How much research did you conduct prior to purchasing your BMW with the RFTs in question?; (3) Include a brief description of the event that caused your RFTs to go flat; and; (4) How many flat tires have you had each year for the last five years?

For purposes of this hypothetical, let's assume over 1,000 responses were submitted. From these, perhaps class counsel would have been able to deduce that at least 100 class members have documentation proving the purchase or lease of a BMW equipped with RFTs in the State of New Jersey and that those tires did in fact go flat and require replacement. Of those, let's say 80 class members reported that they conducted very little research and instead relied primarily on BMW's representations. Furthermore, assume those 80 class members also noted that they suffered flats during the course of regular commuting with no obvious cause (such as driving over a hunk of metal or bed of nails).[153] Additionally, assume the same 80 class members also reported low incidences of flats annually, thereby supplying plaintiff counsel with evidence to argue that reckless driving is less likely an alternative cause for flat tires. Responses would have, therefore, allowed class counsel to demonstrate the cohesiveness of the class in order to meet the burden of proof for commonality, typicality, adequacy of representation, predominance, and ultimately prove that a class action was the superior device for litigating claims.

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[152] *How to Reach Existing Customers With Facebook Ads*, FACEBOOK BUS., https://www.facebook.com/business/learn/facebook-ads-reach-existing-customers; *Create a Custom Audience Using Events*, FACEBOOK ADS HELP CENTER (Dec. 14, 2018), https://www.facebook.com/business/help/666509013483225.

[153] One of the issues in *Marcus* was the plaintiff's inability to combat arguments by BMW and Bridgestone that flat tires could have resulted from alternate causes. Digital media that enables an efficient survey of class members such as Facebook Lead Ads could help to head off this issue by gathering responses that clarify how individual injuries came to be. Marcus v. BMW of N. Am., LLC, 687 F.3d 583, 604 (3d Cir. 2012) (noting that "*any* tire can 'go flat' for myriad reasons" and finding that the district court should have pressed the point of proximate cause before certifying the class).

IV. ADVANCES IN DIGITAL PAYMENT METHODS ENHANCE CLAIMS ADMINISTRATION

Websites through professional claims administrators are increasingly used to administer claims.[154] Once a settlement is approved by the court, a third-party claims administrator is typically retained by plaintiff counsel to handle all steps of the claims process including: (1) notifying class members of the settlement; (2) handling claims website development and design, including claim form development; (3) addressing class member questions during the submission period; (4) validating and processing claim and opt-out forms submitted by class members; and (5) distributing funds to class members.[155] These claims websites can now facilitate all of these steps and have streamlined the process to allow for direct processing of claims forms.[156] However possible, plaintiffs want to try to maximize settlement funds or damages awarded by making the claims administration process as efficient as it can be, and a potential pitfall is the cost of actually distributing funds.

Claims administration firms regularly send millions of paper checks to class member recipients.[157] This requires both a significant investment of time as well as the expense to print and mail checks. Negative value lawsuits brought as a class have a particularly strong interest in trying to mitigate the expense of distributing funds to maximize the individual returns that will go to class members.[158] Although claims administration websites are making progress toward distributing class action settlement funds more efficiently,[159] there is still room for improvement.

Not only do efficiencies ensure more money gets to more class members; potential cost savings from digital forms of claims administration may also help to avoid *cy pres* class settlements, which typically involve distributing settlement funds

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[154] Robert H. Klonoff et al., *Making Class Actions Work: The Untapped Potential of the Internet*, 69 U. PITT. L. REV. 727, 742 (2008).

[155] *Id.* at 738–42.

[156] *Id.* at 742; *see also Class Action Administration Services,* JNDLA, http://www.jndla.com/class-action-administration; *Class Action Administration*, EPIQ, http://www.epiqglobal.com/en-us/how-we-help/class-action-administration; *Class Action Settle with the Experts*, ANGEION GRP., http://www.angeiongroup.com/class_action.htm.

[157] *Landmark Class Action Distribution Utilized Digital Checks from Checkbook.io Saving Time and Cost*, PR NEWSWIRE (Nov. 8, 2017), https://www.prnewswire.com/news-releases/landmark-class-action-distribution-utilized-digital-checks-from-checkbookio-saving-time-and-cost-300551739.html.

[158] *See* Linda S. Mullenix, *Complex Litigation: Negative Value Suits*, 26 NAT'L L. J. 1, 1–2 (2004) (discussing the irrationality of bringing negative-value lawsuits because—after transaction costs and attorney's fees—judgments are so small that litigation is usually not worthwhile).

[159] Klonoff, *supra* note 6, at 1653 (discussing the fact that a "growing number of claims administrators are using websites to administer claim payments, thus avoiding the expense of mailing checks.").

to a charity when awards to individual class members would not be worth claiming.[160]

In addition to using websites to administer claims, recent innovations in mobile payment technology and digitized checks will further support plaintiffs seeking to justify bringing a class action in the face of the old defense-superiority argument that "no action is superior to one in which class members recover little, if anything,"[161] especially where individual yields could be less than the cost of printing and mailing checks. In fact, there was a proposal submitted to the Advisory Committee in 1996 that would have required evaluating whether the potential recovery by class plaintiffs justified the cost of the class action, and, fortunately for small claims consumer products actions, that proposal was ultimately tabled.[162]

Nevertheless, it is possible that defendants will continue to raise the "it's not worth it" argument; maybe more so now in light of the recent scrutiny given to class actions. Consider, for example, that plaintiff classes also once assumed that the numerosity requirement was a given that required only a very low threshold of proof.[163] A prudent plaintiff can no longer assume much it seems. Therefore, any measures that can produce efficiencies in the class action procedure are advisable and will help strengthen class plaintiffs' positions against defendant arguments challenging the superiority of the class action device.

A. Mobile Payment Apps Address Modern Mobile-First Behavior & Streamline Fund Transfers

Since the launch of the iPhone ten years ago, mobile phones are now like appendages that go where we go.[164] Thus, our mobile phones have become just as

[160] At the time of this writing, the Court has granted cert to determine the limits of such *cy pres* settlements in *Frank v. Gaos*. The question presented is: "Whether, or in what circumstances, a *cy pres* award of class action proceeds that provides no direct relief to class members supports class certification and comports with the requirement that a settlement binding class members must be 'fair, reasonable, and adequate.'" Frank v. Gaos, 869 F.3d 737 (9th Cir. 2017), *petition for cert. filed*, 2018 WL 347810, at *i (U.S. Jan. 3, 2018) (No. 17-961).

[161] Klonoff, *supra* note 6, at 1621 (emphasis omitted).

[162] *Id.*

[163] *See* Vega v. T-Mobile USA, Inc., 564 F.3d 1256, 1267 (11th Cir. 2009) (noting that the district court found that even classes between 21–40 could be considered "based on other factors" and classes larger than forty were "adequate").

[164] Lee Rainie & Kathryn Zickuhr, *Americans' Views on Mobile Etiquette*, PEW RES. CTR. (Aug. 26, 2015), http://www.pewinternet.org/2015/08/26/americans-views-on-mobile-etiquette/ (reporting that "90% of those cell owners say that their phone is frequently with them"). This is up from the 82% of Americans surveyed in a 2009 study who said they "never leave home without their phones." Jack Loechner, *Four Out of Five Never Leave Home Without It*, MEDIAPOST (Oct. 23, 2009), https://www.mediapost.com/publications/article/115634/four-out-of-five-never-leave-home-without-it.html.

necessary as our wallet and keys.[165] It should, therefore, not be surprising that our wallets and our phones continue to become one and the same. Mobile-first consumer behavior has led to the emergence of mobile person-to-person (P2P) payment apps that allow users to store bank account information securely in their mobile device so that they can easily complete transactions—either involving the sending or receiving of funds.[166] And herein lies the opportunity for plaintiffs who are looking for more efficient ways to administer settlements.

In 2017, eMarketer reported that 63.5 million U.S. adults used mobile P2P payment apps.[167] This is projected to increase to 113.5 million U.S. adults—roughly one third of the current U.S. population—by the year 2021.[168] Other sources have predicted this will go as high as 126 million consumers by as soon as 2020.[169] Some of the most established mobile P2P apps include: PayPal, Venmo (owned by PayPal), Square Cash, and more recently, Zelle.[170]

Although mobile P2P apps were originally adopted among millennials,[171] mobile P2P technology is increasingly being adopted into the mainstream, particularly with the introduction of Zelle (formerly clearXchange),[172] which has become the backend fund transfer technology behind leading U.S. banking apps, including, *inter alia*: Bank of America, Wells Fargo, U.S. Bank, and USAA.[173] Zelle's parent company, Early Warning, has said that Zelle is designed to appeal to a broad target market that ranges from adults ages 18–54.[174] This greater mass appeal is even more likely given Zelle's ability to tap into the existing payment infrastructure of banks and the trust that banking app users already have in transferring money through

[165] Katie Holdefehr, *5 Clever Gadgets So You'll Never Lose Your Phone, Keys, or Wallet Again*, REAL SIMPLE, https://www.realsimple.com/work-life/technology/bluetooth-gps-gadgets#tile-mate-tracker (reviewing gadgets that help prevent people from losing their necessary personal items).

[166] Amber Murakami-Fester, *What Are Peer-to-Peer Payments?*, NERDWALLET (Aug. 28, 2018), https://www.nerdwallet.com/blog/banking/p2p-payment-systems/.

[167] *Number of Adult Mobile Phone Peer-to-Peer (P2P) Payment Users in the United States from 2016 to 2021 (in Millions)*, STATISTA, https://www.statista.com/statistics/630538/number-of-us-adult-p2p-payment-users/.

[168] *Id.*

[169] Lori Breitzke, *P2P Payments Are Becoming a Force to be Reckoned With*, TSYS (July 25, 2017), https://www.tsys.com/news-innovation/whats-new/Articles-and-Blogs/nGenuity-Journal/p2p-payments-push-forward.html.

[170] Ben Patterson, *The Best Mobile Payment Apps: We Test PayPal, Venmo, Square Cash and More*, PCWORLD (Nov. 13, 2017), https://www.pcworld.com/article/3230298/apps/the-best-mobile-payment-apps-paypal-venmo-square-cash-and-more.html.

[171] Maya Kosoff, *America's Biggest Banks Unveil Their Venmo Killer*, VANITY FAIR (Oct. 24, 2016), https://www.vanityfair.com/news/2016/10/zelle-venmo-killer.

[172] Suman Bhattacharyya, *Why Zelle is More than Just a Venmo Clone*, TEARSHEET (Mar. 6, 2017), http://www.tearsheet.co/payments/why-zelle-is-more-than-just-a-venmo-clone.

[173] *Partners*, ZELLE, https://www.zellepay.com/partners.

[174] Bhattacharyya, *supra* note 172.

their banking apps. Bank of America was the first major bank to announce the Zelle integration into its mobile banking app in February 2017.[175] Zelle officially launched in banking apps in June 2017, and within five months, Zelle was already among the top mobile P2P apps according to PCWorld.[176] Zelle is also investing in building its user base among consumers. In 2018, Zelle ran a 60 second Super Bowl ad promoting itself as "the new way to send money from your banking app."[177]

Notably, Zelle boasts unique attributes not found in other mobile P2P apps that will further drive adoption. For one thing, transfers through Zelle are nearly instantaneous, because payments are sent directly from one financial institution to another, allowing funds to be credited to accounts in minutes as long as both the sender and recipient are enrolled Zelle users.[178] Additionally, Zelle does not charge a transaction fee to transfer funds,[179] and it only requires a phone number and email address to transfer funds between enrolled Zelle users.[180] Based on the banks who have signed on to use Zelle as their backend fund transfer technology, there are more than 95 million customers who can access the payment service, and Zelle reportedly gets 100,000 new enrollments a day.[181]

Zelle aside, there are other market forces driving mainstream adoption of mobile P2P solutions. In December 2017, Apple rolled out its own P2P system in iOS 11.2 that allows users to send and receive funds via iMessage.[182] This could be a game-changer considering there are over 85 million iPhone owners who are 13-and-older in the U.S.[183] In order to transfer funds, both the sender and recipient would need to use an iOS 11.2 enabled iPhone.[184] Both would also need to load a debit card onto Apple Wallet, and the sender must of course have sufficient funds tied to

[175] *Id.*

[176] Patterson, *supra* note 170.

[177] Erin M. Sarris, *From Mysterious to Mainstream: An Update on Zelle*, TSYS (Feb. 27, 2018), https://www.tsys.com/news-innovation/whats-new/Articles-and-Blogs/nGenuity-Journal/from-mysterious-to-mainstream-an-update-on-zelle.html.

[178] *Id.*; *see* ZELLE, https://www.zellepay.com/ (noting that transactions between enrolled Zelle users typically occur in minutes unless a recipient is not yet enrolled with Zelle, in which case, it may take between one and three business days after they enroll).

[179] Ben Patterson, *Zelle Review: Instant Cash, as Long as You've* [sic] *Using the Right Bank*, ZELLE (Nov. 13, 2017), https://www.pcworld.com/article/3231223/apps/zelle-review.html.

[180] ZELLE, *supra* note 173.

[181] Sarris, *supra* note 177.

[182] Ayoub Aouad, *Apple's P2P Payment Option Has Finally Arrived*, BUS. INSIDER (Dec. 5, 2017), http://www.businessinsider.com/apples-p2p-payment-option-has-finally-arrived-2017-12.

[183] Adam Lella, *U.S. iPhone Ownership Reaches All-Time High on Strength of iPhone 7*, COMSCORE (Apr. 19, 2017), https://www.comscore.com/Insights/Blog/US-iPhone-Ownership-Reaches-All-Time-High-on-Strength-of-iPhone-7.

[184] *Send, Receive, and Request Money with Apple Pay*, APPLE, https://support.apple.com/en-us/HT207875.

their debit card before transferring money, as well as the mobile number of the recipient.[185] The major limiting factor on user adoption of Apple Cash Pay is the requirement that the sender and recipient have "a compatible device [iPhone 6 and above] with iOS 11.2 and later or watchOS 4.2 and later."[186] In order to avoid text message rates, a class settlement administrator would also want to make sure they were sending iMessages over a Wi-Fi connection to avoid cellular data plan SMS rates.[187]

In the class action context, mobile P2P payment solutions like Zelle and Apple would allow for a no-cost method of administering settlement funds that comports with growing consumer inclination toward mobile devices. For purposes of illustration, consider again the *Karhu* case involving the Meltdown dietary supplement. This is the quintessential use case for this technology, because it involves consumer products purchased at grocery retailers—much more likely to involve very low individual damages—but this could just as easily apply to any class action involving classwide damage awards. That said, let's say plaintiffs had managed to obtain a final judgment award against Vital Pharmaceuticals involving damages of $5,725,714. Assuming class counsel would have taken a 30 percent contingency fee, this would have left $4,008,000 to be divided among the class. For purposes of this hypothetical, let's say the class ended up totaling 501,000 opt-in members. As it is, each member only stands to receive $8 each. It would seem unjust to diminish this award further, by even $1, if a settlement administration company could employ a no-cost settlement distribution method instead of mailing checks.

As with any emerging technology, however, there are still some challenges associated with using mobile P2P solutions to administer claims. First of all, the actual logistics involved in sending payments to thousands (or millions) of different opt-in class members could require claims administrators to craft creative solutions in order to maintain an efficient process that does not result in more time spent administering payments, thereby defeating the purpose of using these emerging technologies in the first place.

Zelle, for example, is primarily for transfers between individuals or between consumers and businesses. This is not to say there will not eventually be a mechanism to seamlessly transfer funds en masse through Zelle; only that Zelle, like other emerging technologies, is first working to perfect its service on a smaller scale before rolling out an enterprise-level solution. There may, however, be a more near-term solution for settlement administrator firms through Apple Pay Cash. Since Apple Pay Cash relies on text messaging, it is possible that a settlement administration firm

185 *Id.*

186 *Id.*

187 *How is iMessage Free?*, APPLE COMMUNITIES (June 18, 2013), https://discussions.apple.com/thread/5113727.

could use one of the many bulk text messaging services available[188] to efficiently send funds to each class member over iMessage.

Second, most mobile P2P solutions have maximum transfer limits which could be problematic when damages are in the millions. This is even problematic for small claims class actions where damages are much lower, because these transfer limits appear to be *aggregate limits*, not limits on individual transfers. Thus, even though a consumer products class action might involve individual transfers of only $20 per claimant, if there are more than 125 class members, there might be an issue with daily fund transfer limits barring aggregate transfers above $2,500 per day.

Zelle's limits vary by bank, so there is no clear guidance on this,[189] but Wells Fargo, for example, currently imposes daily send limits of $2,500 and 30-day send limits of $20,000, but limits may also vary depending on whether the transferee is a new recipient and what type of bank account the transferor is transferring funds from.[190] Some banks are better than others about specifying the number of transfers allowed in addition to the maximum transfer limit. USAA, for example, notes that customers can send up to three payments per day and conduct up to 21 transactions per week, and within that, consumers can send up to $1,000 every 24 hours and $2,500 every seven days.[191] Bank of America has some of the clearest guidelines on transfer limits. In its terms of use, Bank of America provides that consumer users may send up to 10 transfers for no more than $2,500 a day and that consumers may send up to 30 transfers not to exceed $20,000 in any 30-day period.[192]

Although this initially seems discouraging for purposes of transferring millions in settlement funds to hundreds of thousands of recipients, there is some suggestion based on Bank of America's terms of use that different standards apply to institutional transferors. For example, the terms provide: "If you are a U.S. Trust or Merrill Lynch Wealth Management client you may have higher limits for this type of transfer."[193] Claims administration firms should contact the financial institution they work with to discuss available options.

There is, however, an immediate solution already available to address the fund

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[188] *SMS Marketing Software*, CAPTERRA, https://www.capterra.com/sms-marketing-software/.

[189] *FAQ: Is There a Limit to How Much Money I Can Send?*, ZELLE, https://www.zellepay.com/support/is-there-a-limit-to-how-much-money-i-can-send.

[190] *Zelle Transfer Service Addendum to Wells Fargo Online Access Agreement*, WELLS FARGO (March 18, 2019), https://www.wellsfargo.com/online-banking/transfers/zelle-terms/.

[191] FAQ: *Send Money with Zelle*, USAA, https://www.usaa.com/inet/wc/ mobile_banking_send_money_zelle_faqs_index??akredirect=true.

[192] *Online Banking and Transfers Outside Bank of America Service Agreement and Electronic Disclosure*, BANK OF. AM. (Feb. 9, 2018), https://www.bankofamerica.com/online-banking/service-agreement.go.

[193] *Id.*

transfer limit issue: Digital Checks. One company in particular, Checkbook.io,[194] specializes in this area and has already powered payments on behalf of the Angeion Group, a claims administration firm, for a recent class action suit.[195] Unlike the scalability issues of current mobile P2P technology, Checkbook.io enables businesses or institutional senders to securely distribute "hundreds of thousands of checks almost instantaneously" while also being able to confirm receipt of payments through a real-time dashboard.[196]

Similar to mobile P2P payment systems, Digital Checks are sent using recipient email addresses, the sender does not need to collect bank account information for recipients, and recipients have immediate access to the funds.[197] Unlike mobile P2P solutions, Checkbook.io's Digital Checks do not require the recipient to download an app (e.g., Venmo, Square Cash, or PayPal), or enroll to use the service—as in the case of Zelle.[198] Nor do recipients need to own a particular mobile device using a particular operating system—as in the case of Apple Pay Cash.[199] This might, therefore, be the most practical solution for claims administration firms looking to minimize the cost of distributing claims due to class members. At least, this might be the best near-term solution as mobile P2P technology continues to mature.

CONCLUSION

In summary, class actions represent a powerful tool to promote judicial efficiency and remedial justice where plaintiffs would otherwise have no recourse either through government regulation or individual claims. This is especially true for small claims class actions involving consumer products where the cost to bring individual claims would not be justified by the damages. By allowing plaintiffs to aggregate claims, class actions thus serve another important public policy goal: furthering corporate responsibility by deterring bad behavior or advantage-taking by corporate entities.

In light of these important goals, recent trends demanding higher burdens of proof at the certification stage are disconcerting. As one author has noted, "the emergence of myriad cases that cut back the ability to pursue classwide relief represents a troublesome trend that undermines the compensation, deterrence, and efficiency functions of the class action device."[200]

There may, however, be hope for class plaintiffs yet. Digital technology has

194 Checkbook.io, https://www.checkbook.io/.

195 *See* PR Newswire, *supra* note 157.

196 *Id.*

197 *Id.*

198 *Id.*

199 Apple, *supra* note 184.

200 Klonoff, *supra* note 82, at 735.

grown increasingly sophisticated during the very time that challenges to class action treatment has mounted. Beyond effectuating notice, digital technology now offers unparalleled opportunities to arm plaintiffs with the necessary evidence to overcome barriers raised in recent years by the defense bar as it relates to demonstrating class definition as well as requirements under Rule 23(a) and Rule 23(b).

Furthermore, digital technology offers efficient ways to pay out claims thereby maximizing returns to class members and combatting potential arguments against class treatment based on the proportionality of the cost to administer a class action relative to the potential damages.

As Alexander Graham Bell famously said: "When one door closes another door opens; but we so often look so long and so regretfully upon the closed door, that we do not see the ones which open for us."[201] The key will be for class plaintiffs to look beyond the recent barriers erected against class certification in favor of exploring the potential these new digital technologies have to offer.

[201] *Alexander Graham Bell Quotes*, GOOD READS, https://www.goodreads.com/quotes/1435-when-one-door-closes-another-door-opens-but-we-so.